

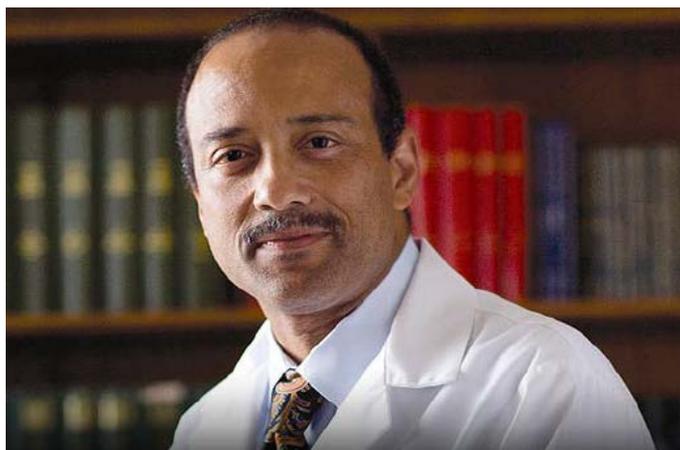


**ANNUAL INSTITUTIONAL PROFILE**  
**September 1, 2011**



**WE TEACH. WE DISCOVER. WE HEAL. WE CARE.**

**Office of Institutional Research  
University Office of Academic Affairs**



## **INTRODUCTION**

The University of Medicine and Dentistry of New Jersey (UMDNJ) is New Jersey's public research university dedicated to excellence in the health sciences.

As a statewide health, education and research resource, UMDNJ benefits every region of New Jersey. Since it was created in 1970, the University has expanded to better serve our state with eight schools on five geographically distinct campuses across the state. We conduct research and offer graduate degrees, certificates, and undergraduate degrees in multiple fields of study including: medical, dental, allied health, nursing, public health and biomedical sciences disciplines.

The University also owns a teaching and safety-net hospital that is accessible to all; New Jersey's only NCI-designated comprehensive cancer center; a statewide network of behavioral healthcare providers; and has scores of partnerships and affiliations with leading healthcare facilities, institutions of higher learning, and agencies throughout New Jersey.

UMDNJ is a truly unique and wonderful statewide asset, and as our credo states, "We embrace our responsibility to the people of New Jersey." In this spirit, we proudly present this year's report to the Commission on Higher Education and to the people of New Jersey.

A handwritten signature in black ink that reads "William F. Owen, Jr." with a period at the end. The signature is fluid and cursive.

William F. Owen, Jr., MD  
President

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## MISSION STATEMENT

The University of Medicine and Dentistry of New Jersey (UMDNJ), the state's university of the health sciences, is dedicated to the pursuit of excellence in:

- ▶ the undergraduate, graduate, postgraduate and continuing education of health professionals and scientists;
- ▶ the conduct of biomedical, psychosocial, clinical and public health research;
- ▶ health promotion, disease prevention and the delivery of health care; and
- ▶ service to our communities and the entire state.

Providing educational, research and service programs at campuses in Camden, New Brunswick/Piscataway, Newark, Scotch Plains and Stratford, in communities throughout the state, and nationally and internationally through advanced communication and information technologies, UMDNJ seeks to meet the needs of our diverse constituencies and improve the health and quality of life of the citizens of New Jersey and society at large.

*Approved by the Board of Trustees  
March 18, 2003*



## **UMDNJ CREDO**

We believe in the pursuit of excellence in education, research, patient care, and community service with integrity, ethical behavior and respect for all.

We take pride in the dedication and commitment of our compassionate healthcare providers, talented educators, internationally recognized researchers and hard-working staff who make countless contributions at UMDNJ every day.

We value humanism and compassion for all people.

We are committed to working collaboratively with our University colleagues, partners and communities to fulfill our Mission.

In all aspects of University life we will foster professionalism, fairness, honesty, sincerity, collegiality and an open exchange of ideas. We will ensure high standards that will nurture faculty, students and staff in a vibrant environment.

As a statewide asset, we embrace our responsibility to the people of New Jersey.

***WE TEACH. WE DISCOVER. WE HEAL. WE CARE.***

***WE ARE UMDNJ.***



## **GOVERNANCE**

The governance of the University is vested in a 20-member Board of Trustees. Nineteen voting trustees are appointed by the Governor, with the advice and consent of the Senate, for a term of five years. Board of Trustees members serve until their successors are sworn in. The Commissioner of Health and Senior Services serves *ex-officio*, without vote. The Board has the power to appoint committees from its members and to regulate the duties, functions and procedures of the committees, standing or special, and such advisory committees or bodies as it deems necessary to conduct the efficient management and operation of the University, consistent with the laws of the state. Among its various powers, the Board of Trustees has authority to:

- determine educational policies and programs of the University and approve the educational curricula of the various Schools;
- study the educational and financial needs of the University, and annually acquaint the Governor and Legislature with the condition of the University;
- appoint the president of the University and appoint, upon nomination by the president, such deans, vice presidents and faculty as shall be required;
- fix and determine tuition rates and other fees to be paid by students;
- acquire, dispose of, use and operate property, whether real, personal or mixed or any interest therein, that is necessary or desirable for University purposes;
- borrow money for the needs of the University; and
- exercise the right of eminent domain pursuant to the provisions of the Eminent Domain Act of 1971 to acquire any property or interest therein.

A complete list of the powers and duties of the Board is found in P.L. 1985, chapter 514, section 1 (N.J.S.A. 18A:64G-6 and 7).

The governance of UMDNJ-University Hospital is vested in a 9-member separate board of directors.



**BOARD OF TRUSTEES**

[http://www.umdj.edu/about/about04\\_trustees.htm](http://www.umdj.edu/about/about04_trustees.htm)

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*Chairperson*

Mary Ann Christopher, RN, MSN  
*Vice Chairperson*

Bradford W. Hildebrandt  
*Secretary*

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James H. Coleman, Jr., Esq.

Kevin M. Covert, Esq.

David Critchley

Michael Critchley, Jr., Esq.

Robert J. Del Tufo, Esq.

Christine Grant, JD, MBA

Mary Sue Henifin, JD, MPH

Marilyn M. Joseph

Ira P. Monka, DO, MHA,

Jonathan H. Orenstein, DMD

Mary E. O'Dowd, MPH  
*Commissioner, New Jersey Department of Health and Senior Services  
(ex officio, non-voting)*



**OFFICERS OF THE UNIVERSITY**

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*President*

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*Executive Vice President for Academic and Clinical Affairs*

**Lester Aron, Esq.**  
*Senior Vice President and General Counsel*

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*Senior Vice President/Chief Ethics and Compliance Officer*

**Christopher O. Kosseff, MS**  
*Senior Vice President for Administration and  
President and CEO of UMDNJ-University Behavioral HealthCare*

**Julane W. Miller-Armbrister**  
*Senior Vice President for Government and Community Affairs*

**James J. Rowan, Jr., CPA**  
*Chief of Staff*

**Denise Mulkern**  
*Acting University Chief Financial Officer and  
Senior Vice President for Finance*

**Diane Weathers**

*Senior Vice President for University Advancement and Communications*

**Francis X. Colford, CPA**

*Vice President for Finance and Treasurer*

**Gerard Garcia**

*Acting Vice President for Human Resources*

**James R. Gonzalez, MPH**

*Acting President and CEO of UMDNJ-University Hospital*

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*Vice President for Supply Chain Management*

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*Vice President for Information Services and Technology*

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*Vice President of Investigations Group*

**Kathleen W. Scotto, PhD**

*Vice President for Research*

**Freda Zackin, Esq.**

*Vice President for Academic Affairs*

## DEANS



**Peter S. Amenta, MD, PhD**  
*Dean, UMDNJ-Robert Wood Johnson Medical School*



**Thomas A. Cavalieri, DO**  
*Dean, UMDNJ-School of Osteopathic Medicine*



**Cecile A. Feldman, DMD, MBA**  
*Dean, UMDNJ-New Jersey Dental School*

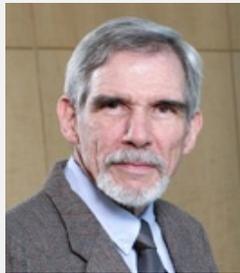


**Robert L. Johnson, MD**  
*Dean, UMDNJ-New Jersey Medical School*

## DEANS



**Julie O'Sullivan Maillet, PhD**  
*Interim Dean, UMDNJ-School of Health Related Professions*



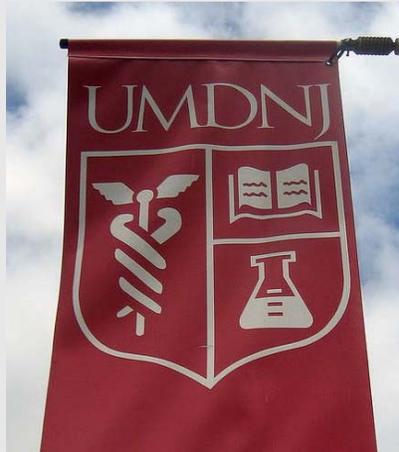
**George Rhoads, MD, MPH**  
*Interim Dean, UMDNJ-School of Public Health*



**Susan W. Salmond, EdD, RN**  
*Dean, UMDNJ-School of Nursing*



**Kathleen W. Scotto, PhD**  
*Dean, UMDNJ-Graduate School of Biomedical Sciences*



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## **SCHOOLS**

### **UMDNJ-Graduate School of Biomedical Sciences (GSBS)**

#### **GSBS at New Jersey Dental School**

973-972-4511  
185 South Orange Avenue, MSB C-696  
Post Office Box 1709  
Newark, New Jersey 07101-1709

#### **GSBS at New Jersey Medical School**

973-972-4511  
185 South Orange Avenue, MSB C-696  
Newark, New Jersey 07101-1709

#### **GSBS at Robert Wood Johnson Medical School**

732-235-5016  
675 Hoes Lane  
Piscataway, New Jersey 08854-8021

#### **GSBS at School of Osteopathic Medicine**

856-566-6282  
42 East Laurel Road  
University Doctors Pavilion  
Suite 2200  
Stratford, New Jersey 08084-1350

### **UMDNJ-New Jersey Dental School (NJDS)**

973-972-4633  
110 Bergen Street  
Post Office Box 1709  
Newark, New Jersey 07101-1709

### **UMDNJ-New Jersey Medical School (NJMS)**

973-972-4538  
185 South Orange Avenue, MSB C-671  
Post Office Box 1709  
Newark, New Jersey 07101-1709

**UMDNJ-Robert Wood Johnson Medical School (RWJMS)**

732-235-6300

**Piscataway Campus**

675 Hoes Lane  
Piscataway, New Jersey 08854-5635

**New Brunswick Campus**

Clinical Academic Building  
125 Paterson Street  
New Brunswick, New Jersey 08903-0019

Medical Education Building  
1 Robert Wood Johnson Place  
New Brunswick, New Jersey 08903

**Camden Campus**

401 Haddon Avenue  
Camden, New Jersey 08103-1506

**UMDNJ-School of Health Related Professions (SHRP)**

973-972-4276

**Newark Campus**

65 Bergen Street  
Post Office Box 1709  
Newark, New Jersey 07101-1709

**Scotch Plains Campus**

1776 Raritan Road  
Scotch Plains, New Jersey 07076-2997

**Stratford Campus**

University Educational Center  
40 East Laurel Road  
Stratford, New Jersey 08084-1350

**Piscataway Campus**

675 Hoes Lane  
Piscataway, New Jersey 08854-5635

**UMDNJ-School of Nursing (SN)**

973-972-4307

**Newark Campus**

65 Bergen Street, 11<sup>th</sup> Floor  
Post Office Box 1709  
Newark, New Jersey 07101-1709

**Stratford Campus**

University Educational Center  
40 East Laurel Road, Suite 2025  
Stratford, New Jersey 08084-1350

**UMDNJ-School of Osteopathic Medicine (SOM)**

856-566-6764

Academic Center  
One Medical Center Drive  
Stratford, New Jersey 08084-1501

**UMDNJ-School of Public Health (SPH)**

732-235-9700

**New Brunswick Campus**

335 George Street  
Liberty Plaza, Suites 2100 and 2200  
Post Office Box 2688  
New Brunswick, New Jersey 08903

Tobacco Dependence Program  
125 Paterson Street, Suite 2300  
New Brunswick, New Jersey 08903

**Piscataway Campus**

683 Hoes Lane West  
Piscataway, New Jersey 08854-5635

**Newark Campus**

65 Bergen Street  
Post Office Box 1709  
SSB, Room 701  
Newark, New Jersey 07101-1709

**Stratford/Camden Campus**

University Educational Center  
40 East Laurel Road, Suite 1114  
Stratford, New Jersey 08084-1350

## **DEGREE AND CERTIFICATE PROGRAMS**

The University of Medicine and Dentistry of New Jersey offers the following degrees and certificates in a total of 52 programs: MD, DO, DMD, PhD, DCN, DNP, DPT, DrPH, MS, MBS, MSN, MPH, Master, BS, BSN, AS, AAS, Post-doctoral certificates, Post-master's certificates, Post-baccalaureate certificates and Undergraduate certificates.

Field	Degree/Certificate	UMDNJ School(s)	Partner Institution (if any)
<b>Medicine</b>	MD MD DO	NJMS RWJMS SOM	
<b>Dentistry/Dental Science</b>	DMD MS Master	NJDS NJDS NJDS	
<b>Graduate Dental Education*</b>	Certificate	NJDS	
<b>Biodefense</b>	Certificate	GSBS	
<b>Biomedical Sciences</b>	PhD PhD MS, MBS MS Certificate	GSBS GSBS GSBS GSBS GSBS	Rutgers University  Rutgers University
<b>Biomedical Programs**</b>	PhD, MS PhD, MS	GSBS GSBS	Rutgers University
<b>Biomedical Engineering</b>	PhD, MS PhD	GSBS GSBS	Rutgers University NJIT
<b>Clinical and Translational Science</b>	MS Certificate	GSBS GSBS	
<b>Environmental Sciences – Exposure Science</b>	PhD	GSBS	Rutgers University
<b>Neurosciences</b>	Certificate	GSBS	

\* Includes Endodontics, Oral Medicine, Orthodontics, Pediatric Dentistry, Periodontics and Prosthodontics.

\*\* Includes Anatomy, Biochemistry, Biomedical Engineering, Cell & Developmental Biology, Cell and Molecular Biology, Cellular & Molecular Pharmacology, Microbiology & Molecular Genetics, Molecular Pathology & Immunology, Neurosciences, Oral Biology, Pharmacology, Physiology, Physiology & Integrative Biology, Stem Cell Biology, and Toxicology.

Field	Degree/Certificate	UMDNJ School(s)	Partner Institution (if any)
<b>Pharmacological Sciences</b>	Certificate	GSBS	
<b>Stem Cell Biology</b>	Certificate	GSBS	
<b>Public Health</b>	PhD DrPH MPH Certificate	SPH SPH SPH SPH	Rutgers University Rutgers University Rutgers University and NJIT
<b>Biostatistics</b>	MS	SPH	
<b>Health Care Management</b>	MS	RWJMS	Rutgers University
<b>Urban Systems - Urban Health</b>	PhD	SN	Rutgers University and NJIT
<b>Nursing Practice</b>	DNP	SN	
<b>Advanced Practice Nursing*</b>	Post-master's Certificates	SN	
<b>Nursing</b>	MSN BSN BSN	SN SN SN	Rowan University
<b>Nursing Informatics</b>	MSN Post-master's Certificate	SN SN	
<b>Allied Health Technologies</b>	BS BS	SHRP SHRP	Bloomfield College Fairleigh Dickinson University Felician College Georgian Court University New Jersey City University Ramapo College of NJ Rutgers University
<b>Biomedical Informatics</b>	PhD MS	SHRP SHRP	
<b>Cardiac Sonography</b>	Certificate	SHRP	

\*Includes Acute Critical Care, Adult Health, Adult Psychiatric and Mental Health, Clinical Trials Research Nurse, Family Nurse Practitioner in Emergency Care, Family Health, Gerontology, Nursing Education, Nursing Informatics, Nurse Anesthesia, Nurse Midwifery, Oncology and Women's Health.

Field	Degree/Certificate	UMDNJ School(s)	Partner Institution (if any)
<b>Clinical Laboratory Sciences</b>	BS BS	SHRP SHRP	Bloomfield College Caldwell College College of Saint Elizabeth Fairleigh Dickinson University Felician College Georgian Court University Kean University Monmouth University New Jersey City University Ramapo College of NJ Rutgers University Saint Peter's College
<b>Clinical Nutrition</b>	DCN MS	SHRP SHRP	
<b>Clinical Trial Sciences</b>	MS	SHRP	
<b>Cytotechnology</b>	Certificate	SHRP	
<b>Dental Assisting</b>	Certificate Certificate	SHRP SHRP	Brookdale Community College Essex County College Middlesex County College Raritan Valley Community College Thomas Edison State College Union County College
<b>Dental Hygiene</b>	Certificate AAS	SHRP SHRP	Brookdale Community College Essex County College Raritan Valley Community College Thomas Edison State College Union County College
<b>Diagnostic Imaging Technologies</b>	Certificate	SHRP	
<b>Diagnostic Medical Sonography</b>	Certificate	SHRP	
<b>Dietary Management</b>	Certificate Certificate	SHRP SHRP	Essex County College Hudson County Community College
<b>Dietetic Internship</b>	Certificate MS/Certificate	SHRP SHRP	Rutgers University (MS)

Field	Degree/Certificate	UMDNJ School(s)	Partner Institution (if any)
<b>Health Care Informatics</b>	Certificate	SHRP	
<b>Health Information Management</b>	Certificate BS BS	SHRP SHRP SHRP	Georgian Court University Fairleigh Dickinson University Felician College Felician College Kean University Saint Peter's College Thomas Edison State College
<b>Health Sciences</b>	PhD MS BS BS	SHRP SHRP SHRP SHRP	New Jersey City University Thomas Edison State College
<b>Health Care Management</b>	MS	SHRP	
<b>Medical Coding</b>	Certificate	SHRP	
<b>Medical Imaging Sciences</b>	BS BS	SHRP SHRP	Thomas Edison State College
<b>Medical Laboratory Science</b>	Certificate	SHRP	
<b>Nuclear Medicine Technology</b>	Certificate	SHRP	
<b>Physical Therapy</b>	DPT DPT	SHRP SHRP	Rutgers University
<b>Physician Assistant</b>	MS	SHRP	
<b>Professional Counseling</b>	Certificate	SHRP	
<b>Psychiatric Rehabilitation</b>	PhD MS	SHRP SHRP	
<b>Psychiatric Rehabilitation &amp; Psychology</b>	BS BS	SHRP SHRP	Felician College Georgian Court University Kean University

Field	Degree/Certificate	UMDNJ School(s)	Partner Institution (if any)
<b>Psychosocial Rehabilitation &amp; Treatment</b>	AS	SHRP	Burlington County College Cumberland County College Essex County College Middlesex County College Union County College Warren County Community College
<b>Radiologist Assistant</b>	MS	SHRP	
<b>Rehabilitation Counseling</b>	MS	SHRP	
<b>Respiratory Care</b>	AS	SHRP	Essex County College Hudson County Community College Middlesex County College Raritan Valley Community College Union County College Warren County Community College
<b>Respiratory Therapy</b>	AAS	SHRP	Atlantic Cape Comm. College Burlington County College Camden County College Cumberland County College Gloucester County College Salem Community College
	Certificate	SHRP	
<b>Vascular Sonography</b>	Certificate	SHRP	

## **DUAL-DEGREE PROGRAMS**

<b>Degree/Certificate</b>	<b>UMDNJ School(s)</b>	<b>Partner Institution (if any)</b>
<b>MD/PhD</b>	NJMS/GSBS RWJMS/GSBS NJMS RWJMS	Rutgers University Rutgers University Princeton University
<b>DO/PhD</b>	SOM/GSBS	
<b>DMD/PhD</b>	NJDS/GSBS	
<b>MD/MPH</b>	NJMS/SPH RWJMS/SPH	Rutgers University and NJIT Rutgers University and NJIT
<b>MD/MBA</b>	RWJMS NJMS	Rutgers University Rutgers University
<b>MD/JD</b>	RWJMS RWJMS NJMS	Rutgers University Seton Hall University Rutgers University
<b>MD/MS in Biomedical Informatics</b>	RWJMS/SHRP	
<b>MD/MS in Clinical &amp; Translational Science</b>	RWJMS/GSBS	
<b>MD/MS in Health Care Management</b>	RWJMS	Rutgers University
<b>MD/MSJ</b>	RWJMS	Seton Hall University
<b>MD/Certificate in Oral &amp; Maxillofacial Surgery</b>	NJMS/NJDS	
<b>DO/MPH</b>	SOM/SPH	Rutgers University and NJIT
<b>DO/JD</b>	SOM	Rutgers University
<b>DO/MBA</b>	SOM	Rowan University
<b>DO/MS</b>	SOM/GSBS	

<b>Degree/Certificate</b>	<b>UMDNJ School(s)</b>	<b>Partner Institution (if any)</b>
<b>DMD/MPH</b>	NJDS/SPH	Rutgers University and NJIT
<b>DMD/MS in Biomedical Informatics</b>	NJDS/SHRP	
<b>PsyD/MPH</b>	SPH	Rutgers University and NJIT
<b>MS in Community Health Nursing/MPH</b>	SPH	Rutgers University and NJIT
<b>MSN/MPH</b>	SN/SPH	Rutgers University and NJIT
<b>MS/MPH</b>	GSBS/SPH	
<b>MS in Biomedical Informatics/ Certificate in Graduate Dental Education</b>	SHRP/NJDS	
<b>MS in Oral Biology/ GDE Certificate</b>	GSBS/NJDS	
<b>Master of Biomedical Science/MPH</b>	GSBS/SPH	Rutgers University and NJIT
<b>MPH/JD</b>	SPH	Rutgers University
<b>MPH/MS in Physician Assistant</b>	SPH/SHRP	
<b>MPH/MBA</b>	SPH	Rutgers University and NJIT
<b>PharmD/PhD</b>	GSBS	Rutgers University
<b>MBA/MS</b>	GSBS	Rutgers University

## ARTICULATED EDUCATIONAL PROGRAMS

Degree	Affiliated Institution	Program Length (years)
<b>UMDNJ-New Jersey Medical School</b>		
BS/MD	Stevens Institute of Technology	7
	New Jersey Institute of Technology	7
	The College of New Jersey	7
	The Richard Stockton College of New Jersey	7
	Montclair State University	7 or 8
BA/MD	St. Peter's College	7
	Caldwell College	7
BA or BS/MD	Drew University	7
	Rutgers, The State University of New Jersey College of Arts and Sciences	7 or 8
<b>UMDNJ-Robert Wood Johnson Medical School</b>		
BA or BS/MD	Rutgers, The State University of New Jersey (any School on any campus)	7 or 8
	Rutgers, The State University of New Jersey (New Brunswick campus) (ACCESS-MED)	8
	Seton Hall University (ACCESS-MED)	8
<b>UMDNJ-New Jersey Dental School</b>		
BS/DMD	Stevens Institute of Technology	7
	New Jersey Institute of Technology	7
	Rowan University	7
	New Jersey City University	7
	Ramapo College of New Jersey	7
	Fairleigh Dickinson University	7
	Montclair State University	7
	Caldwell College	7 or 8
Baccalaureate/DMD	Saint Peter's College	7
	Rutgers, The State University of New Jersey	7 or 8
	North Carolina Central University	7 or 8
<b>UMDNJ-School of Osteopathic Medicine</b>		
BA or BS/DO	The Richard Stockton College of New Jersey	7 or 8
	Kean University	8
	William Paterson University of New Jersey	8
	Ramapo College of New Jersey	8
	Rowan University	7 or 8
	New Jersey City University	8
Baccalaureate/DO	Rutgers, The State University of New Jersey-Camden	7
	Monmouth University	8
<b>UMDNJ-Graduate School of Biomedical Sciences</b>		
BA or BS/PhD	New Jersey City University	
BS/PhD	Montclair State University	
MS/PhD	Montclair State University	
	University of Puerto Rico, Mayaguez Campus	

Degree	Affiliated Institution	Program Length (years)
<b>UMDNJ-School of Health Related Professions</b>		
BS/MS in Physician Assistant	Rutgers University	
	Montclair State University	
	New Jersey Institute of Technology	6
BA in Biology/MS in Physician Assistant	Kean University	6
	Ramapo College of New Jersey	6
BS in Biology/MS in Physician Assistant	Saint Peter's College	6
	Felician College	6
	Saint Peter's College	6
BS in Biology/Doctor of Physical Therapy*		
BS/Doctor of Physical Therapy*	Kean University	
	Ramapo College of New Jersey	
BS/Doctor of Physical Therapy	Montclair State University	
	Felician College	
	William Paterson University	
	Fairleigh Dickinson University	6
	New Jersey Institute of Technology	6
BA/Doctor of Physical Therapy	Yeshiva University	7
BS/MS in Biomedical Informatics	Ramapo College of New Jersey	6
<b>UMDNJ-School of Public Health</b>		
BS/MPH and BA/MPH	Rutgers, The State University of New Jersey	
BS/MPH	William Paterson University	

\* formerly BS/MS PT program

## ***PIPELINE AND ACADEMIC SUPPORT PROGRAMS AT UMDNJ***

UMDNJ offers numerous pipeline programs to non-UMDNJ students and other participants. These programs prepare students for future enrollment in a health professions school or program.

Academic support programs for UMDNJ students are also offered that supplement the academic curriculum with special projects or activities.

Following is a list of UMDNJ pipeline and academic support programs. Many of these programs are described in more detail in the Public and Community Service Section of this Profile beginning on page 117.

Name of Program	Program Sponsor	Collaborating or Cooperating Facility	Program Site
<b>UMDNJ PIPELINE PROGRAMS</b>			
Access Med Program	RWJMS Office of Multicultural Affairs/Special Academic Programs	Seton Hall University; Rutgers University- New Brunswick	New Brunswick/Piscataway (NB/P)
Biomedical Careers Program	RWJMS Office of Multicultural Affairs/Special Academic Programs	Seton Hall University; Rutgers University - New Brunswick; Robert Wood Johnson University Hospital	(NB/P)
Decision for Dentistry	NJDS		Newark
Gateway to Dentistry	NJDS		Newark
Health Science Careers	SHRP	High Schools in New Jersey	Scotch Plains
Mini Med Program	NJMS		Newark
Mini Medical School for High School Students Achieving Excellence in the Sciences	RWJMS		NB/P
National Youth Leadership Forum on Medicine	SOM	National Youth Leadership Forum on Medicine	Stratford
Northeast Regional Alliance (NERA) MedPrep Research Component	NJMS	Health Careers Opportunity Program (HCOP) grant	
Pre-Medical Honors Program	NJMS		Newark
Research in Science and Engineering (RISE)	GSBS at RWJMS	Rutgers Graduate School - New Brunswick	NB/P
S.H.A.R.E. (Early Start Mentoring Program)	NJMS		Newark
Science Scholars Academy	RWJMS Office of Multicultural Affairs/Special Academic Programs		NB/P
SMART (Science, Math and Related Topics) Program	NJMS Department of Family Medicine		Newark

Name of Program	Program Sponsor	Collaborating or Cooperating Facility	Program Site
<b>UMDNJ PIPELINE PROGRAMS (Continued)</b>			
SURP - Summer Undergraduate Research Program in Neuroscience	RWJMS Department of Neuroscience and Cell Biology	Rutgers University	NB/P
Summer Medical and Dental Education Program (SMDEP)	NJMS	AAMC; Robert Wood Johnson Foundation & American Dental Education Assoc.	Newark
Summer Pre-Medical Research and Education Program (PREP)	SOM	NJ Commission on Higher Education - Educational Opportunity Fund (EOF)	Stratford
Summer Youth Scholars Program	NJMS	NJMS Hispanic Center of Excellence (HCOE)	Newark
TNT School-Based Youth Service Program	University Hospital – Ambulatory Care Services	Essex County Vocational Technical Schools	
The Public Health Research Institute (PHRI) Summer High School Program	NJMS, PHRI Center	National Institute of Health (NIH)	Newark
UMDNJ-SOM Medical Science Academy	SOM and SHRP		Stratford
UMDNJ-School of Osteopathic Medicine DO ShaDOw Program	SOM	Cherry Hill East High School, Cherry Hill West High School, Charles Brimm Medical Arts High School	Stratford

Name of Program	Program Sponsor	Collaborating or Cooperating Facility	Program Site
<b>UMDNJ ACADEMIC SUPPORT PROGRAMS</b>			
Freshman Introduction to Skills and Training (FIRST) Program	NJMS	NJMS Hispanic Center of Excellence (HCOE)  Health Careers Opportunity Programs (HCOP)	Newark
National Heart, Lung and Blood Institute Short-Term Training for Minorities	NJMS, Department of Cell Biology and Molecular Medicine		Newark
Pre-Matriculation Summer Program	RWJMS Office of Multicultural Affairs/Special Academic Programs		NB/P.
SOM PreMatric Program	SOM Center for Teaching and Learning		Stratford

Source: *UMDNJ Pipeline and Academic Support Programs Surveys*, UMDNJ-Office of Institutional Research, November 2010.

**GRADUATE MEDICAL AND DENTAL  
EDUCATION PROGRAM TOTALS, 2010-11\***

<b>School</b>	<b>Number of Active GME or GDE Programs</b>
New Jersey Medical School	45
Robert Wood Johnson Medical School	41
School of Osteopathic Medicine	23
New Jersey Dental School	3
<b>Total Active Programs</b>	<b>112</b>

\* Active programs only. See "Housestaff Totals by Program" beginning on page 110 for a list of programs by School.

Source: Survey of UMDNJ GME and GDE Programs and Housestaff, UMDNJ-Office of Institutional Research. Data as of September 1, 2010

## **ACCREDITING AGENCIES**

The University is accredited by the **Middle States Commission on Higher Education**. In addition, the University's Schools, educational programs and post-graduate training programs are also accredited where pertinent accrediting agencies exist (see list below).

<b>Program</b>	<b>Accrediting Agency</b>
<b><i>UMDNJ-New Jersey Medical School UMDNJ-Robert Wood Johnson Medical School</i></b>	
MD	Liaison Committee on Medical Education (LCME)
Allopathic residency programs	Accreditation Council for Graduate Medical Education (ACGME)
Podiatric Medicine and Surgery (NJMS)	Council on Podiatric Medicine Education of the American Podiatric Association (CPME)
OB/GYN Maternal Fetal Medicine	American Board of Obstetrics and Gynecology
Reproductive Endocrinology & Infertility	American Board of Obstetrics and Gynecology
Psychology Internship - Adult and Child and Adolescent Behavioral Medicine	American Psychological Association
<b><i>UMDNJ-School of Osteopathic Medicine</i></b>	
DO	American Osteopathic Association (AOA) - Commission on Osteopathic College Accreditation (COCA)
Osteopathic internship & residency programs	American Osteopathic Association (AOA)
<b><i>UMDNJ-New Jersey Dental School</i></b>	
DMD	Commission on Dental Accreditation (CODA) of the American Dental Association
Dental residency programs & postgraduate certificates	Commission on Dental Accreditation (CODA) of the American Dental Association or American Board of Oral Medicine
<b><i>UMDNJ-School of Public Health</i></b>	
PhD, DrPH, MS, MPH	Council on Education for Public Health (CEPH)
<b><i>UMDNJ-School of Nursing</i></b>	
BSN, MSN & post-master's certificates	National League for Nursing Accrediting Commission (NLNAC)
MSN - Nurse Anesthetist Track	Council on Accreditation (COA) of Nurse Anesthesia Educational Programs
MSN - Nurse Midwifery Track	Accreditation Commission for Midwifery Education (ACME)

<b>UMDNJ-School of Health Related Professions</b>	
Cardiac Sonography	Commission on Accreditation of Allied Health Education Programs (CAAHEP) - Joint Review Committee for Diagnostic Medical Sonography
Coordinated Dietetic Program	Commission on Accreditation for Dietetics Education (CADE)
Cytotechnology	Commission on Accreditation of Allied Health Education Programs (CAAHEP)
Dental Assisting	Commission on Dental Accreditation (CODA) of the American Dental Association
Dental Hygiene	Commission on Dental Accreditation (CODA) of the American Dental Association
Diagnostic Medical Sonography	Commission on Accreditation of Allied Health Education Programs (CAAHEP) - Joint Review Committee for Diagnostic Medical Sonography
Dietary Management	Dietary Managers Association (DMA)
Dietetic Internship	Commission on Accreditation for Dietetics Education (CADE)
Health Information Management	Commission on Accreditation for Health Informatics and Information Management Education
Medical Laboratory Science	National Accrediting Agency for Clinical Laboratory Sciences (NAACLS) - Commission on Allied Health Education and Accreditation
Nuclear Medicine Technology	Commission on Accreditation of Allied Health Education Programs (CAAHEP) - Joint Review Committee on Educational Programs in Nuclear Medicine Technology (JRCEPNMT)
Physical Therapy	Commission on Accreditation in Physical Therapy Education (CAPTE/APTA)
Physician Assistant	Accreditation Review Commission on Education for the Physician Assistant (ARC-PA)
Radiologist Assistant	American Registry of Radiologic Technologists (ARRT)
Rehabilitation Counseling	Council on Rehabilitation Education (CORE) Council for Accreditation of Counseling & Related Educational Programs (CACREP)
Respiratory Therapy/Respiratory Care	Commission on Accreditation for Respiratory Care (COARC) and CAAHEP
Vascular Sonography	Commission on Accreditation of Allied Health Education Programs (CAAHEP) - Joint Review Committee on Education in Cardiovascular Technology

**UMDNJ MEDICAL / DENTAL FIRST-YEAR TUITION HISTORY**

<i>Academic Year</i>	<i>Resident Tuition</i>	<i>Percent Increase in Resident Tuition</i>	<i>Non-Resident Tuition</i>	<i>Percent Increase in Non-Resident Tuition</i>
1971 - 1972	\$750	--	\$1,000	--
1972 - 1973	\$1,100	46.7%	\$1,750	75.0%
1973 - 1974	\$1,100	0.0%	\$1,750	0.0%
1974 - 1975	\$1,100	0.0%	\$1,750	0.0%
1975 - 1976	\$1,750	59.1%	\$3,000	71.4%
1976 - 1977	\$3,000	71.4%	\$4,000	33.3%
1977 - 1978	\$4,000	33.3%	\$5,000	25.0%
1978 - 1979	\$4,000	0.0%	\$5,000	0.0%
1979 - 1980	\$4,500	12.5%	\$5,625	12.5%
1980 - 1981	\$5,000	11.1%	\$6,240	10.9%
1981 - 1982	\$5,500	10.0%	\$6,875	10.2%
1982 - 1983	\$6,325	15.0%	\$7,905	15.0%
1983 - 1984	\$6,825	7.9%	\$8,530	7.9%
1984 - 1985	\$7,175	5.1%	\$8,965	5.1%
1985 - 1986	\$7,535	5.0%	\$9,860	10.0%
1986 - 1987	\$8,000	6.2%	\$10,500	6.5%
1987 - 1988	\$8,250	3.1%	\$10,825	3.1%
1988 - 1989	\$8,660	5.0%	\$11,365	5.0%
1989 - 1990	\$9,093	5.0%	\$11,933	5.0%
1990 - 1991	\$10,457	15.0%	\$13,723	15.0%
1991 - 1992	\$11,053	5.7%	\$14,505	5.7%
1992 - 1993	\$11,550	4.5%	\$15,158	4.5%
1993 - 1994	\$12,128	5.0%	\$15,916	5.0%
1994 - 1995	\$12,795	5.5%	\$16,791	5.5%
1995 - 1996	\$13,295	3.9%	\$17,445	3.9%
1996 - 1997	\$14,492	9.0%	\$22,679	30.0%
1997 - 1998	\$14,927	3.0%	\$23,359	3.0%
1998 - 1999	\$15,509	3.9%	\$24,270	3.9%
1999 - 2000	\$16,052	3.5%	\$25,119	3.5%
2000 - 2001	\$16,694	4.0%	\$26,124	4.0%
2001 - 2002	\$17,362	4.0%	\$27,169	4.0%
2002 - 2003	\$18,143	4.5%	\$28,392	4.5%
2003 - 2004	\$19,776	9.0%	\$30,947	9.0%
2004 - 2005	\$20,567	4.0%	\$32,185	4.0%
2005 - 2006	\$21,390	4.0%	\$33,472	4.0%
2006 - 2007	\$22,246	4.0%	\$34,811	4.0%
2007 - 2008	\$23,136	4.0%	\$36,203	4.0%
2008 - 2009	\$25,218	9.0%	\$39,461	9.0%
2009 - 2010	\$26,227	4.0%	\$41,039	4.0%
2010 - 2011	\$30,948	18.0%	\$49,657	21.0%
2011 - 2012	\$32,805	6.0%	\$52,636	6.0%

Sources: UMDNJ Tuition Rates Schedule, Academic Year 2011-2012

## **UNIVERSITY LIBRARIES**

The University of Medicine and Dentistry of New Jersey's University Libraries exist in a rapidly changing environment. Like all academic libraries of the 21<sup>st</sup> century, we are hybrid facilities, preserving past knowledge while offering the latest electronic resources, information services and enabling technologies. To do this well necessitates acquiring and licensing extensive scholarly resources, enabling ready and straightforward access to them, and using both traditional and cutting-edge methods of acquisition, access and delivery of service to users. New scholarly material is produced at a pace that requires dynamic research libraries to be more nimble and flexible than ever before to insure ubiquitous access. New emphases in research and teaching, and the heightened expectations of the UMDNJ user community, require that our libraries be proactive in anticipating needs, customizing information services that respond to user requirements and designing facilities that enable new kinds of interaction.

The UMDNJ Libraries embrace the 21<sup>st</sup> century concepts of knowledge management. These include the systems and processes used to acquire, organize, store, access, retrieve, teach and disseminate knowledge and information in a variety of digital formats, while preserving access to print books and journals as well as other unique archival resources. The University Libraries provide a critical portal, where scholarship is discovered and used, where collaborative education takes place, and where students, faculty and staff can find the expert assistance of highly trained librarians. The scholarly resources made available by the UMDNJ Libraries, combined with effective knowledge management, are crucial competitive assets in an era of massive change in health care and information technology.

Reliable access to scholarly resources and provision of timely information services to the students, housestaff, faculty, and staff remains our primary goal. The Libraries provide information access, in particular, to electronic scholarly resources both onsite and remotely. Currently, UMDNJ faculty, students and staff have access to 84 electronic databases, 703 major electronic books in the health sciences and 4,610 of the most highly rated scholarly electronic journals in the health sciences. Utilization of licensed electronic resources, online books and journals exceeded 2 million uses in FY2011.

The University Libraries aggressively support electronic journal subscriptions, having cancelled all but a few print journals at each of our campus libraries. As a result of this change, retaining access to high quality electronic content and archival collections is a major priority. Despite any cost savings associated with the migration from print to digital, decreasing or flat funding has reduced buying power resulting in cancellation of select electronic content.

Currently, all UMDNJ libraries are fully wireless environments. The libraries strive to provide flexible learning and study spaces for all users. After a seven-month hiatus, full library hours were restored and were well received by students who study at Smith Library in Newark.

Technologies are currently being implemented that will enhance digital library services to the University community. Last year, a new Quick Search feature was introduced on all of the campus libraries' Websites. Ease of use of electronic resources from mobile handheld devices utilizing QR code was implemented with grant funding this year.

The UMDNJ Libraries contribute to the University's community service goal with the availability of **HealthyNJ**, an extensive consumer health Website (<http://www.healthynj.org>). **HealthyNJ** assists consumers to rapidly identify authoritative, patient/consumer information tailored to a wide range of cultural, education, and language needs. HealthyNJ celebrates its 10<sup>th</sup> anniversary this year, with newly added features and content. Currently, there are over 400 total topics in the Diseases and Conditions and Health and Wellness portals. Of these, over 200 topics are fully available in Spanish. The site has recently been enhanced with "Read Me First" entries for simple, plain language text.

The University Libraries continue to work collaboratively to enhance knowledge management in the clinical practice, education, research, and community service to meet the increasing challenges facing UMDNJ as a major academic health center. The Libraries play a critical support role in supporting learning and the creation and dissemination of new scholarly resources. The libraries strive to be an active catalyst for scholarly communication and knowledge management.

## [UNIVERSITY LIBRARIES](http://libraries.umdj.edu/)

<http://libraries.umdj.edu/>

### **NEWARK CAMPUS**

#### **UMDNJ – George F. Smith Library of the Health Sciences**

30 Twelfth Avenue, P.O. Box 1709, Newark, NJ 07101-1709  
(973) 972-4580

<http://libraries.umdj.edu/newarklib/>

### **NEW BRUNSWICK/PISCATAWAY CAMPUS**

#### **UMDNJ-Robert Wood Johnson Library of the Health Sciences**

One Robert Wood Johnson Place, New Brunswick, NJ 08903-0019  
(732) 235-7610

<http://libraries.umdj.edu/rwjlweb/>

### **STRATFORD CAMPUS**

#### **UMDNJ-Health Sciences Library at Stratford**

One Medical Center Drive, Stratford, NJ 08084-1501  
(856) 566-6800

<http://www.umdj.edu/stlibweb/>

### **CAMDEN CAMPUS**

#### **The Reuben L. Sharp Health Science Library**

The Cooper Health System, One Cooper Plaza, Camden, NJ 08103-1489  
(856) 342-2525

<http://libraries.umdj.edu/camlbweb/>

**UMDNJ and Coriell Library (Study Annex)**

401 Haddon Avenue, Camden, NJ 08103-1505

(856) 757-7740

<http://www.umdnj.edu/camlbweb/index.html>

Library resources and services are provided to the University community at the Scotch Plains campus by means of electronic linkages.

**UNIVERSITY LIBRARIES-STATISTICAL HIGHLIGHTS-FISCAL YEAR 2010****Access to Libraries' Resources**

Gate Count	422,407
Circulation	19,903

**Information Services**

Database Accesses/End User	1,777,956
Database Accesses/Librarian Mediated	1,871
Reference Questions Answered	9,168
Education Session (Formal Teaching) Participants	3,144

**Interlibrary Cooperation**

Lending to Libraries	8,828
Borrowing from Libraries	6,894

**Collection**

Book Volumes	91,050
Electronic Books	733
Journal Volumes	172,401
Print Journal Subscriptions	99
Electronic Journal Subscriptions	5,216
Database Subscriptions	84

**Personnel**

Professional Staff (FTE)	36.0
Support Staff (FTE)	24.0

## **CENTER FOR CONTINUING & OUTREACH EDUCATION (CCOE)**

### **Purpose**

Consistent with its responsibility as an academic medical center, the University of Medicine and Dentistry of New Jersey (UMDNJ), through the Center for Continuing and Outreach Education (CCOE), provides a comprehensive program of continuing education with the goal of improving the quality of patient care by providing lifelong educational opportunities for physicians and other healthcare providers. Using the vast resources of UMDNJ's eight (8) medical, science, and health-related schools, UMDNJ-CCOE serves as the University's focal point for providing continuing education to physicians and other healthcare providers. In doing so, UMDNJ-CCOE supports UMDNJ's commitment to facilitate the translation of discoveries at the basic science level to the actual treatment, management, and prevention of disease.

### **Content**

The content of the UMDNJ-CCOE continuing education program addresses gaps between best practices and current practices, with the intention of improving practitioner competence or performance, and/or patient outcomes and encompasses a broad range of primary and specialty topics. In the context of nationally-established competencies for health care professionals, the content of UMDNJ educational interventions is derived from the needs of learners, experts, national specialty guidelines and consensus statements, and observed quality management indicators. The content of continuing education is matched to those assessed gaps and addresses strategies to close those gaps.

### **Target Audience**

CCOE serves several principal audiences. Our local audience includes the staff of internal or affiliated institutions that participate in our regularly scheduled series (RSS) programs (including grand rounds, M&M conferences, tumor boards, and other series).

Regional learners participate in off-site activities throughout the State of New Jersey planned and sponsored by CCOE. These activities provide education on new developments in medicine, and those competencies necessary for re-licensure and recertification.

CCOE also reaches national and international audiences who look to UMDNJ as a source of expertise based on the reputation of the University and the distinctions earned by distinguished faculty. Such programs often involve web-based partnerships with specialty societies and joint sponsors.

### **Types of Activities**

UMDNJ-CCOE chooses its educational design as a means to assure that the education offered matches the learning styles of its learners, is appropriate to the learning objectives, and provides the mechanisms and processes to sustain change in clinician behavior. When possible, educational interventions include interactive learning methods such as case studies and question-and-answer sessions to address adult learning styles and to reinforce desired outcomes. Non-educational interventions, including tools to enhance the potential for successful outcomes, are employed. When an activity is delivered in UMDNJ's academic centers, options such as simulation and multimodal sequential layering of information are incorporated.

UMDNJ's options for activity delivery include:

- Live conferences, workshops and teleconferences
- Regularly scheduled series (RSS)
- Enduring materials
- Performance Improvement
- Internet-based education

### Expected Results

Educational outcomes measurements (EOM) are determined based on the intended result of the activity. Our activities are developed with the expectation of improving competence and/or performance in health care professionals, or for improving patient outcomes.

The analysis of EOM data is conducted to determine the degree to which our mission has been met, which forms the basis of improvements to UMDNJ's overall continuing education program. A process of continuous quality improvement is fundamental to UMDNJ-CCOE, and the determination of improvements and active management of the implementation of planned improvements is a part of all staff meetings, management meetings, and meetings of the CME committees at both the New Jersey Medical School and Robert Wood Johnson Medical School.

### Accreditations

UMDNJ-CCOE holds the following accreditations:

- UMDNJ-CCOE is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to provide continuing medical education for physicians. UMDNJ-CCOE holds an Accreditation with Commendation (six-year term), adhering to all 22 of the ACCME updated criteria for providers.
- UMDNJ-CCOE is accredited by the Accreditation Council for Pharmacy Education as a provider of continuing pharmacy education.
- UMDNJ-CCOE is an approved provider of continuing nursing education by the New Jersey State Nurses Association, an accredited approver by the American Nurses Credentialing Center's Commission on Accreditation.
- UMDNJ-CCOE is an approved provider for social work continuing education by the Association of Social Work Boards, through the Approved Continuing Education program.

### CCOE History

CCOE was originally established as The Office of Continuing Medical Education in 1970. In 1991, UMDNJ realized the critical nature of the continuing education function and reorganized the office as the Center for Continuing Education in the Health Professions (CCE), with several focused educational divisions.

In early 2001, CCE was further strengthened by the addition of the Division of Outreach and a change in name to the current Center for Continuing and Outreach Education (CCOE). Today, CCOE has expanded its role by providing leadership in developing

educational activities to serve learners external to the UMDNJ community, in addition to the learners within the University and local region.

Today, CCOE is a vital part of the university community and employs an experienced staff of professionals, some having advanced educational credentials. The Center works closely with voluntary physician leadership in two active CME committees to oversee a comprehensive regularly scheduled series (RSS) program that covers most clinical disciplines of medicine throughout both New Jersey and Robert Wood Johnson medical schools. The Outreach portion of our organization coordinates online activities through our website, and partner websites, to bring access to many CME interventions to learners and planners alike.

CCOE maintains a vital presence in the communities of the University's school locations, providing educational services throughout the State of New Jersey. Through our Outreach programs, CCOE has extended education opportunities to learners throughout the United States and the world.

### **CCOE Staff**

UMDNJ-Center for Continuing and Outreach Education (CCOE) is currently staffed by a group of approximately 25 professionals. The organization consists primarily of program management and central administrative and support staff. Program Management staff work with UMDNJ schools and faculty from UMDNJ's campuses and units and other educational partners to develop and implement educational activities. Central administrative and support staff for the various business resources provide services that support the continuing education programming, including registration, finance/accounting, marketing, and information technology (IT) services. These internal resources allow greater efficiencies in workflow, control of data and financial management of continuing education activities and the overall continuing education program.

### **Division of AIDS Education**

The Division of AIDS Education at UMDNJ-CCOE is the largest provider of HIV/AIDS continuing professional education in New Jersey. Based in Newark, one of the national epicenters of the epidemic, the Division's mission is to create a continuum of education, training consultation and technical assistance in the care, treatment and prevention of HIV and AIDS for healthcare providers primarily in New Jersey.

The Division conducts targeted, multi-disciplinary education and training programs for health care providers treating persons with HIV/AIDS. It also conducts chart review and related training and technical assistance to HIV care providers to improve the quality of care they provide.

The Division of AIDS Education has been a partner since 1989 in the national AIDS Education and Training Centers (AETCs), whose goal is to increase the number of health care providers who are effectively educated and motivated to diagnose, treat, and manage individuals with HIV infection. The AETC program in Northern New Jersey is currently managed by the FXB Center of UMDNJ School of Nursing, and the Division supports AETC activities under their auspices.

The Division holds two grants from the New Jersey Department of Health and Senior Services, and one from Ryan White Part A through the Newark Department of Family and Child Well-Being, for training and quality improvement in HIV/AIDS healthcare in New Jersey. These programs link training to health disparities and healthcare quality gaps, through on-site intensive case-based workshops and lecture sessions, as well as regional conferences, interactive educational activities, and print and web-based enduring materials. In addition to training healthcare clinicians, the Division also provides or coordinates training for HIV case managers and HIV prevention workers.

## **CENTERS AND INSTITUTES**

### **UNIVERSITY**

Center for Continuing and Outreach Education  
Institute for the Elimination of Health Disparities  
International Center for Public Health, Inc.  
New Jersey AIDS Education and Training Center  
New Jersey Center for Biomaterials  
Samuel L. Bailey Huntington Disease Center at UMDNJ  
UMDNJ Informatics Institute

### **NEW JERSEY MEDICAL SCHOOL AND UNIVERSITY HOSPITAL**

AIDS Education and Training Center (AETC) National Resource Center  
Cardiovascular Research Institute  
Carroll M. Leevy Center for Liver Diseases  
Center for Advanced Proteomics Research  
Center for Bloodless Surgery and Medicine  
Center for Healthcare Ethics  
Center for Human Development and Aging  
Center for Macular Degeneration Treatment and Research  
Center for Neuromuscular Disorders  
Center for Rehabilitation Services  
Center for Reproductive Medicine  
Center for Skull Base Surgery  
Center for Vascular Disease  
Center for Ventilatory Support Alternatives & Pulmonary Rehabilitation  
Cochlear Implant Center  
Community Training Center  
Cornea and Laser Vision Institute  
Cystic Fibrosis Center  
Eye Institute of New Jersey  
Global Tuberculosis Institute at UMDNJ  
Institute for Ophthalmology and Visual Science  
Institute of Genomic Medicine  
Low Back Pain Rehabilitation Center  
Multiple Sclerosis Diagnosis and Treatment Center  
Neurofibromatosis Center of New Jersey  
Neurological Institute of New Jersey  
New Jersey Breast Imaging Center  
New Jersey Medical School Center for BioDefense  
New Jersey Medical School Center for Immunity and Inflammation  
New Jersey Medical School Hispanic Center of Excellence  
New Jersey Medical School Spine Center  
New Jersey Medical School Sports Medicine Center  
New Jersey State Trauma Center  
North Jersey Orthopaedic Institute  
Northern New Jersey Spinal Cord Injury Center  
Ophthalmic Center for Minimally Invasive Treatment  
Ophthalmic Clinical Trials Center

Pediatric Comprehensive Epilepsy Center  
 Peripheral Nerve Center  
 Psychiatric Screening Center  
 Ruy V. Lourenço Center for the Study of Emerging and Re-emerging Pathogens  
 Ruy V. Lourenço Student Health Advocates for Research and Education  
 (SHARE) Center  
 Sickle Cell Disease Center  
 The Autism Center  
 University Center for Plastic and Reconstructive Surgery  
 University Craniofacial Center of New Jersey  
 University Hospital Comprehensive Pain Management Center  
 University Hospital Comprehensive Stroke Center  
 University Transplantation Center  
 University Women's Health Center  
 Women's Wellness Center  
 Young Fathers Program

## **ROBERT WOOD JOHNSON MEDICAL SCHOOL**

Advanced Center for Parkinson's Disease Research (Richard E. Heikkila Center  
 of Excellence)  
 Antenatal Diagnostic Center (Camden)  
 Biliary-Pancreas Disease Center  
 Cancer Institute of New Jersey  
 Cardiac Arrhythmia Center  
 Cardiovascular Institute of New Jersey  
 Center for Advanced Biotechnology and Medicine  
 Center for Biomedical Imaging and Informatics  
 Center for Biostatistics  
 Center for Child and Reproductive Environmental Health  
 Center for Clinical and Translational Science  
 Center for Coronary Artery Disease Reversal  
 Center for Healthy Families and Cultural Diversity  
 Center for Hematopoietic Stem Cell Transplantation  
 Center for HIV Infection  
 Center for Molecular Therapeutics  
 Center for Neurodegenerative and Neuroimmunologic Diseases  
 Center for Neuroscience  
 Center for Psychopharmacology Research  
 Center for Stress Management and Behavioral Medicine  
 Child Health Institute of New Jersey  
 Clinical Center of EOHSI  
 Colorectal Care Center (Camden)  
 Comprehensive Epilepsy Center  
 Comprehensive Services on Aging (COPSA) Institute for Alzheimer's Disease  
 and Related Disorders (with UBHC)  
 Comprehensive Sleep Disorders Center  
 Cooper Center for In Vitro Fertilization (Camden)  
 Corporate Wellness Center  
 Crohn's and Colitis Center of New Jersey  
 Cystic Fibrosis Center  
 Dean and Betty Gallo Prostate Cancer Institute at CINJ

Digestive Disease Center  
Elizabeth M. Boggs Center on Developmental Disabilities-The University  
    Affiliated Program of New Jersey  
Environmental & Occupational Health Sciences Institute  
Eric B. Chandler Health Center  
Gastrointestinal and Liver Tumor Center  
Genitourinary Tumor Study Group Center  
Geriatric Assessment Service  
Gerontological Institute  
Heart Center of New Jersey  
Heart Failure Center  
Hypertension Outpatient Center  
Infant APNEA Center (Camden)  
Institute for Reproductive and Perinatal Genetics  
Institute for the Study of Child Development  
Ira B. Black Center for Stem Cell Research  
Leukemia/Lymphoma Study Center  
Lipid Disorder Center  
Lyme Disease Center  
Melanoma and Sarcoma Center  
National Institute of Environmental Health Sciences Center of Excellence  
Neuromuscular and ALS Center  
New Jersey Comprehensive Breast Care Center  
New Jersey Pain Institute  
New Jersey Regional Hemophilia Program  
Osteoporosis Center  
Ozone Research Center  
Perinatal Institute  
Regional Cleft/Craniofacial Programs of Southern New Jersey (Camden)  
Psoriasis Clinic Research Disease Center  
Robert Wood Johnson Dialysis Center  
Scleroderma Program  
SIDS Center of New Jersey  
Sports Medicine Center  
Stem Cell Institute of New Jersey  
The Robert Wood Johnson Autism Center  
Thoracic Tumor Study Group Center  
Thrombosis Center  
Trauma Center  
University Center for Disaster Preparedness and Emergency Response  
University Center for Reproductive Endocrinology and Fertility  
Vascular Center of New Jersey  
Women's Health Institute

#### **NEW JERSEY DENTAL SCHOOL**

Advanced Technology Education Center  
Center for Oral Infectious Diseases  
Center for Pharmacogenomics & Complex Disease Research  
Ina and Howard Drew Maxillofacial Imaging Center  
Special Care Treatment Center

Northeastern Minority Oral Health Research Center  
University Craniofacial Center of New Jersey

### **SCHOOL OF OSTEOPATHIC MEDICINE**

Cell and Gene Therapy Center  
Center for Information Mastery (CIM)  
Center for Mental Health Treatment for Persons with Intellectual Disabilities  
Center for Teaching and Learning  
Center for Vascular Surgery and Vein Care  
Center for Wellness  
Child Abuse Research Education and Service (CARES) Institute  
Geriatric Education Center  
NeuroMusculoskeletal Institute (NMI)  
New Jersey Institute for Successful Aging (NJISA)  
Pain and Headache Center

### **SCHOOL OF HEALTH RELATED PROFESSIONS**

Center for Advanced and Continuing Education  
Center for Health Informatics  
Center for the Study and Promotion of Recovery from Severe Mental Illness  
Institute for Complementary and Alternative Medicine  
Institute for Nutrition Intervention  
Integrated Employment Institute  
Multimedia Health Care Teaching Center

### **SCHOOL OF NURSING**

Center for Life Long Learning  
François Xavier Bagnoud Center  
New Jersey Center for Evidence-Based Practice at UMDNJ-School of Nursing  
Stanley S. Bergen, Jr., MD Center for Multicultural Education, Research and Practice

### **SCHOOL OF PUBLIC HEALTH**

Centers for Education and Training  
Center for Health Economics and Health Policy  
Center for School and Community-Based Research and Education  
Center for Tobacco Surveillance & Evaluation Research  
Global Public Health Center  
New Jersey Center for Public Health Preparedness at UMDNJ

### **UNIVERSITY BEHAVIORAL HEALTHCARE**

Behavioral Research and Training Institute  
Institute for Alzheimer's Disease and Related Disorders  
Institute for Chemical Dependency  
Technical Assistance Center  
Violence Institute of New Jersey at UMD

## **MAJOR TEACHING FACILITIES**

### **NEW JERSEY MEDICAL SCHOOL**

- UMDNJ-University Hospital
- Department of Veterans Affairs, New Jersey Health Care System – East Orange
- Saint Barnabas Health Care System/Saint Barnabas Medical Center
- Saint Barnabas Health Care System/Newark Beth Israel Medical Center
- Saint Joseph's Regional Medical Center
- Hackensack University Medical Center

### **ROBERT WOOD JOHNSON MEDICAL SCHOOL**

- The Cooper Health System
- Robert Wood Johnson University Hospital
- Raritan Bay Health Services Corporation/Raritan Bay Medical Center
- Somerset Medical Center
- Meridian Hospitals Corporation/Jersey Shore University Medical Center
- University Medical Center at Princeton

### **SCHOOL OF OSTEOPATHIC MEDICINE**

- Kennedy Memorial Hospitals-University Medical Center
- Lourdes Health System

## **UNIVERSITY HEALTH CARE FACILITIES**

### **Cancer Institute of New Jersey**

195 Little Albany Street  
New Brunswick, New Jersey 08901

### **New Jersey Medical School-University Hospital Cancer Center**

205 South Orange Avenue  
Newark, New Jersey 07101

### **Child Health Institute of New Jersey**

89 French Street  
New Brunswick, NJ 08901

### **Eric B. Chandler Health Center**

277 George Street  
New Brunswick, New Jersey 08901

### **Eric B. Chandler Health Center Church Street Annex**

123 Church Street  
New Brunswick, NJ 08901

### **New Jersey Medical School Doctors Office Center**

90 Bergen Street  
Post Office Box 1709  
Newark, New Jersey 07101-1709

### **New Jersey Medical School - The North Jersey Orthopaedics Institute**

33 Overlook Road  
MAC Suite L02  
Summit, New Jersey 07901

### **UMDNJ – North Jersey Orthopaedics Institute**

142 Palisades Avenue, Suite 205  
Jersey City, New Jersey 07306

### **New Jersey Medical School - The Institute of Ophthalmology and Visual Science**

556 Eagle Rock Avenue, Suite 206  
Roseland, New Jersey 07068

### **New Jersey Medical School - National Tuberculosis Center**

225 Warren Street, 1st Floor  
Newark, New Jersey 07101  
(Pulmonology)

### **Robert Wood Johnson Medical School Clinical Academic Building**

125 Paterson Street  
New Brunswick, New Jersey 08901-1977

**UMDNJ-University Hospital**  
150 Bergen Street  
Post Office Box 1709  
Newark, New Jersey 07101-1709

**UMDNJ-Ambulatory Care Center**  
140 Bergen Street  
Newark, New Jersey 07103

**University Behavioral HealthCare at Newark**  
183 South Orange Avenue  
Post Office Box 1709  
Newark, New Jersey 07101-1709

**University Behavioral HealthCare at Piscataway**  
671 Hoes Lane  
Piscataway, New Jersey 08854-1392

**Robert Wood Johnson Medical Group**  
Department of OB/GYN – MFM  
292 Bloomfield Avenue – 2<sup>nd</sup> Floor  
Montclair, New Jersey 07042

**Robert Wood Johnson Medical Group Family Practice at  
Monument Square**  
317 George Street  
New Brunswick, New Jersey 08901

**Robert Wood Johnson Medical Group in Monroe**  
18 Centre Drive, Suite 104  
Monroe Twp., New Jersey 08831

**Robert Wood Johnson Medical Group – Pediatrics Subspecialties**  
4056 Quakerbridge Road, Suite 101  
Lawrenceville, New Jersey 08648

**Robert Wood Johnson Medical Group in Princeton**  
800 Bun Drive, Suite 303  
Princeton, New Jersey 08540

**Robert Wood Johnson Medical Group at Somerset**  
One Worlds Fair Drive  
Somerset, New Jersey 08873

**Robert Wood Johnson Medical Group at Monroe**  
18 Centre Drive  
Monroe, New Jersey 08831

**School of Osteopathic Medicine – The University Doctors at Cherry Hill**

Rutgers Casualty Building  
2250 Chapel Avenue, Suite 110 – Family Medicine  
Cherry Hill, New Jersey 08002

2250 Chapel Avenue, Suite 100 – Psychiatry  
Cherry Hill, New Jersey 08002

**School of Osteopathic Medicine – The University Doctors at Hainesport**

310 Creek Crossing Blvd. – Family Medicine  
Hainesport, New Jersey 08036

**School of Osteopathic Medicine – The University Doctors at Hammonton**

373 White Horse Pike – Family Medicine  
Hammonton, New Jersey 08037

**School of Osteopathic Medicine – The University Doctors at Stratford**

University Doctors' Pavilion – New Jersey Institute for Successful Aging,  
NeuroMusculoskeletal Institute, Headache Center, CARES Institute,  
Family Medicine, Surgery, Obstetrics & Gynecology, Medicine, Physical  
Therapy, Orthopedics, Osteopathic Manipulative Medicine, and Sports  
Medicine  
42 East Laurel Road  
Stratford, New Jersey 08084-1350

Academic Center – Wellness Center/Nutrition & Weight Loss  
One Medical Center Drive  
Stratford, New Jersey 08084-1350

109 East Laurel Road – Center for Excellence for the Mental Health Treatment of  
Persons with Intellectual Disabilities  
Stratford, New Jersey 08084

**School of Osteopathic Medicine – The University Doctors at Voorhees**

Pavilions at Voorhees – Internal Medicine  
2301 Evesham Road, Suite 202  
Voorhees, New Jersey 08043

**School of Osteopathic Medicine – The University Doctors at Washington Township**

570 Egg Harbor Road – Family Medicine, Medicine, Obstetrics & Gynecology,  
Orthopedics, Surgery, and NeuroMusculoskeletal Institute  
Suite C2  
Sewell, New Jersey 08080

400 Medical Center Drive – Internal Medicine  
Suite – E  
Sewell, New Jersey 08080

405 Hurffville-Cross Keys Road – Pediatrics/Adolescent Medicine  
Suite 203  
Sewell, New Jersey 08080

**School of Osteopathic Medicine – Hospital-Based Units**

Lourdes Medical Center of Burlington County  
218 Sunset Road  
Willingboro, New Jersey 08046

Our Lady of Lourdes Medical Center  
1600 Haddon Avenue  
Camden, New Jersey 08101

Kennedy Memorial Hospital – Stratford Division  
18 East Laurel Road  
Stratford, New Jersey 08084

Kennedy Memorial Hospital – Washington Township Division  
435 Hurffville-Cross Keys Road  
Turnersville, New Jersey 08012

Kennedy Memorial Hospital – Cherry Hill Division  
2201 Chapel Avenue West  
Cherry Hill, New Jersey 08002

**New Jersey Dental School (334 operatories)**

110 Bergen Street  
Newark, New Jersey 07101-1709

**New Jersey Dental School Center for Dental and Oral Health**

90 Bergen Street, Suite 7700  
Post Office Box 1709  
Newark, New Jersey 07101-1709

**New Jersey Dental School Statewide Network for Community Oral Health**

University Dental Center at Galloway  
4 East Jimmy Leeds Road  
Building 2, Suite 6  
Galloway, New Jersey 08205

University Dental Center at Matheny Medical and Educational Center  
Post Office Box 339 Main Street  
Peapack, New Jersey 07977

University Dental Center at Somerdale Square  
13 Somerdale Square  
Somerdale, New Jersey 08083

University John H. Cronin Dental/Medical Center  
235 Dolphin Avenue  
Northfield, New Jersey 08225

**School of Health Related Professions Allied Dental Clinic**

1776 Raritan Road  
Scotch Plains, New Jersey 07076

**School of Nursing Mobile Health Project**

65 Bergen Street  
Newark, New Jersey 07101-1709

**The Jordan and Harris Community Health Center**

11 Hawkins Court  
Newark, NJ 07105

## CLINICAL AFFILIATES

### UMDNJ-NEW JERSEY MEDICAL SCHOOL

Atlantic Health Systems Hospital Corp./Morristown Memorial Hospital (Affiliated Residency Program)	Jersey City Medical Center (Affiliated Residency Program)
Atlantic Health Systems Hospital Corp./Overlook Hospital (Affiliated Residency Program)	Kessler Institute for Rehabilitation Affiliated Residency Program)
Bergen Regional Medical Center Care Alternatives (Hospice)	Merit Health Systems, LLC/Mountainside Hospital Affiliated Residency Program)
Children's Eye Care Center with Clara Maass Medical Center	Methany Medical and Educational Center (Affiliated Residency Program)
Children's Specialized Hospital (Affiliated Ophthalmology Residency Program)	New Community Extended Care Facility (Nursing Home)
Chrill Visiting Nurse Association (Home Care Agency)	North Hudson Community Action Corporation
Clara Maass Medical Center (Affiliated Residency Program)	Robert Wood Johnson University Hospital (Affiliated Residency Program)
Compassionate Care Hospice (Home Care Agency) (UME)	St. Joseph's Visiting Health Services of NJ (Home Care Agency)
Englewood Hospital and Medical Center (Affiliated Residency Program)	St. Michael's Medical Center
Essex Valley Visiting Nurse Association (Home Care Agency)	Trinitas Hospital (UME and Affiliated Residency Program)
Greystone Park Psychiatric Associates	UMDNJ-University Behavioral HealthCare
	University Reproductive Associates (Affiliated Residency Program)
	Vitas (Home Care Agency)

### UMDNJ-ROBERT WOOD JOHNSON MEDICAL SCHOOL

Atlantic Health System/Morristown Memorial Hospital	Mercer Medical Center
Atlantic Health System/Mountainside Hospital (Affiliated Family Practice Residency Program)	New Jersey Department of Health and Senior Services
Atlantic Health System/Overlook Hospital	Robert Wood Johnson University Hospital at Rahway
Bayshore Community Hospital	Robert Wood Johnson University Hospital at Hamilton
Care One	Southern Ocean County Hospital
Carrier Foundation	St. Francis Medical Center
CentraState Medical Center	St. Joseph's Medical Center (Affiliated Family Practice Residency Program)
Children's Specialized Hospital	St. Peter's University Hospital
Deborah Heart and Lung Center	The New York and Presbyterian Hospital
Francis E. Parker Memorial Home	Rutgers University Health Services
Helene Fuld Medical Center	Staten Island University Hospital
Hunterdon Medical Center (Affiliated Family Practice Residency Program)	UMDNJ-University Behavioral Health Care
John F. Kennedy Medical Center	Warren Hospital (Affiliated Family Practice Residency Program)
Lyons VA Medical Center	West Jersey Hospital (Affiliated Family Practice Residency Program)
Matheny School and Hospital	
Memorial Hospital for Cancer and Allied Diseases, Inc.	

### UMDNJ-SCHOOL OF OSTEOPATHIC MEDICINE

Albert Einstein Medical Center	Christ Hospital
Ancora Psychiatric Hospital	Christiana Care Health Services
Atlantic Health System	Cooper University Hospital
Camden County Health Services Center	Keystone Mercy Health Plan

Deborah Hospital Heart and Lung Center  
 Dupont Hospital for Children  
 Fox Chase Cancer Center  
 Health South Surgical Mt. Laurel  
 Innova Health and Rehabilitation  
 Lions Gate  
 Masonic Hospice Services  
 Ocean Medical Center/Meridian/Jersey Shore  
 Medical Center  
 Mid Atlantic Stone Center  
 Reading Hospital and Medical Center

St. Christopher's Hospital  
 St. Joseph's Regional Medical Center  
 South Jersey Healthcare  
 Summit Surgical Center  
 Surgical Center of South Jersey, LLC  
 Thomas Jefferson University Hospital  
 University of Pennsylvania Health System  
 V.A. Hospital, Wilmington, Delaware  
 Virtua – West Jersey Health System, Inc.  
 Vitas Healthcare Corporation

### UMDNJ-NEW JERSEY DENTAL SCHOOL

Access One, Inc. (Atlantic County)  
 Atlantic County Contract  
 Cooper Health System, Early Intervention Program  
 Gloucester County Special Services School District  
 Kennedy Health Systems, Early Intervention Program  
 Matheny Medical and Educational Center (Peapack)

Metropolitan Area Neighborhood Nutrition Agreement  
 (MANNA) Alliance  
 South Jersey AIDS Alliance  
 Southern New Jersey Regional Family HIV Treatment  
 Center  
 University Hospital

### UMDNJ-SCHOOL OF NURSING

Acelero Learning Center Early Head  
 Alder Alphasia Center  
 Atlantic Health System  
 Amboy Memorial Hospital Ancora Psychiatric Hospital  
 Ancora County Division of Public Health  
 Babyland Family Services, Inc.  
 Bergen Regional Medical Center  
 Bobbie's Babies  
 Broadway House for Continuing Care  
 Burlington County Department of Health  
 Camden County CDI Head Start  
 Camden County Department of Health & Human  
 Services  
 Camden County OEO Head Start  
 Cancer Institute of New Jersey  
 Capital Health  
 Casa Israel  
 Center for Family Guidance  
 Center for Woman's Health  
 Central New Jersey Child and Mental Health  
 Consortium  
 Children's Health Fund  
 Children's Specialized Hospital  
 Chilton Memorial Hospital  
 Christ Hospital  
 Christian Healthcare Center  
 City of Newark Department of Health and Human  
 Services  
 Clinton Hill Community & Early Childhood Center, Inc.

Community YMCA Services  
 Compassionate Care Hospice  
 Cooper Health System  
 County of Middlesex  
 Covenant House  
 DCF-DYFS  
 Delaware Valley Urology  
 Dominican College  
 Drexel University  
 Drexel University College of Nursing and Health  
 Professions  
 East Orange General Hospital  
 East Orange Health & Human Services  
 Eastern Children's Christian Retreat  
 Elijah's Soup Kitchen  
 Englewood Hospital and Medical Center  
 Englewood Hospital and Medical  
 Center/Englewood Home Care  
 Eric B. Chandler Health Center  
 Essex County Hospital Center  
 Essex Valley Visiting Nurses Association  
 Fairview Urban Renewal Associates, LP  
 Fairleigh Dickinson University Henry P. Bection  
 School of Nursing  
 Felician College Division of Health Sciences  
 Professional Nursing Program  
 FOCUS  
 Garfield Board of Education  
 Gateway Northwest Maternal Child Consortium

Gittens, Colin  
 Greystone Park Psychiatric Hospital  
 Hackensack University Medical Hospital  
 Henry J. Austin Health Center  
 Hillsdale Health Department  
 Hispanic Development Corporation  
 Holy Name Hospital-School of Nursing  
 Holy Redeemer Home Care  
 Home Health Agency of Hackensack Medical Center  
 Horizons Health Center  
 Housing Authority of Plainfield  
 Housing Authority of the Township of Irvington  
 Hudson Healthcare, Inc.  
 Hunterdon Medical Center  
 Integrity House  
 Internet Medical Group  
 Ironbound Community Corporation  
 Jefferson Park Ministries, Inc.  
 Jefferson University Physicians and Thomas Jefferson  
 University Hospital, Inc.  
 Jersey City Medical Center  
 Jersey Shore Medical Center  
 Jewish Home at Rockleigh  
 JFK Medical Center  
 Joslin Center  
 Kennedy Memorial Hospitals-University Medical  
 Center, Inc.  
 Kessler Memorial Hospital  
 Kindred Hospital of New Jersey-Rahway  
 Laurel Springs Elementary School  
 Lawnside School District  
 Leaguers, Inc.  
 Livingston Health Department  
 Long Island Jewish Medical Center  
 Masonic Home of New Jersey  
 MCOSS  
 Medical Center of Ocean County  
 Memorial Hospital of Burlington County  
 Memorial Hospital for Cancer and Allied  
 Diseases/Memorial Sloan  
 Mental Health Resource Center  
 Middlesex County Public Health Department  
 Minute Clinic Diagnostic  
 Mogodin, Mpho Saie MBChB, MPH  
 Montefiore Medical Center  
 Morristown Memorial Hospital  
 Newcomb Medical Center  
 New Jersey Veterans Home - Paramus  
 New Jersey Veterans Memorial Home  
 New York Methodist Hospital  
 New York Presbyterian Hospital  
 New York University Hospitals Center  
 Newark Beth Israel Medical Center  
 Newark Community Health Center  
 Newark Now/Family Success Center  
 Newark Preschool Council, Inc.  
 North Shore University Hospital  
 Offender Aid and Restoration of Essex County  
 Our Lady of Lourdes Medical Center  
 Overlook Family Practice  
 Palisades Medical Center  
 Pasack Valley Hospital  
 Phelps Memorial Hospital Center  
 Physicians and Nurse Practitioners Group, PC  
 Piscataway Senior Center  
 Planned Parenthood of Metropolitan New Jersey  
 Planned Parenthood/Great Camden Area  
 Precious Littles Early Childhood Development Center,  
 Inc.  
 Rahway Hospital  
 Rancocas Hospital  
 Raritan Bay Medical Center  
 Ready Healthcare  
 Reliance Medical Group, LLC  
 Robert Wood Johnson University Hospital  
 Robert Wood Johnson University Hospital-Hamilton  
 Rowan University  
 Royal Adelaide Hospital  
 Ryan White Treatment Modernization Act-Part A  
 Salerno Medical Associates, LIP  
 Samaritan Hospital  
 Second Home Adult Medical Center  
 Shore Memorial Hospital  
 Silver Care Center  
 Silver Court Nursing Center, Inc.  
 Somerset Medical Center  
 Southern Ocean County Hospital  
 SSM Ambulatory Care  
 St. Barnabas Medical Center  
 St. Barnabas HealthCare System  
 St. Claire's Hospital  
 St. Francis Medical Center  
 St. James Hospital  
 St. John of God Health Center  
 St. Joseph's Hospital and Medical Center  
 St. Lukes-Roosevelt Hospital Center  
 St. Mary's Hospital  
 St. Mary's Hospital Community Mental Health Center  
 St. Mary's Hospital in Passaic  
 St. Michael's Medical Center  
 St. Peter's University Hospital  
 Sterling High School

Summit Oaks Hospital  
 Sunset Road Medical Associates, PA  
 Thomas Edison State College  
 Township of Edison and Edison Department of Health  
 and Human Services  
 Trenton Psychiatric Hospital  
 Trinitas Hospital  
 Underwood Hospital-Family Practice Center  
 Underwood Memorial Hospital  
 Union Hospital  
 Union Township Public Schools  
 United Health Care System  
 United Hospitals Medical Center-Children's Hospital of  
 New Jersey  
 University Correctional HealthCare  
 University Health Services-Princeton University

VA New Jersey Health Care Systems  
 Valley Diagnostics  
 Valley Hospital  
 Veterans Affairs Medical Center Office of Research  
 and Development  
 Veterans Memorial Home  
 Virtua Health  
 Virtua Health, Inc  
 Visiting Nurse Affiliates  
 Visiting Nurse Association of Central Jersey  
 Voorhees Pediatric Facility  
 Weisman Children's Rehabilitation Hospital  
 West Jersey Occupational Health Services  
 Wiley Christian Retirement Community  
 Women's Health & Counseling Center  
 YCS

### UMDNJ-SCHOOL OF HEALTH RELATED PROFESSIONS

A.R. Rehabilitation and Physical Therapy Associates  
 Abilities Center of Southern NJ, Inc.  
 Abraham Clark High School  
 Act Institute  
 Active Care Physical Therapy  
 Ad House  
 Adams Center at Long Island University  
 Adena Health System  
 Advance Housing, Inc.  
 Advanced Medical Imaging  
 Advanced Physical Therapy Associates  
 AFYA, Inc.  
 Alamos-Belmont Rehab Hospital  
 Albert Einstein Healthcare  
 Alfred I. DuPont Institute  
 All Care Physical Therapy Center  
 All Children's Hospital  
 All Saints Health Care System, Inc.  
 Allegheny Graduate Hospital  
 Allergan Medical  
 Alliance Hand & PT, Inc.  
 Allied Healthcare Services, Inc.  
 Alternatives, Inc.  
 American Dietetic Association  
 American Society for Clinical Laboratory Sciences  
 Anatomy Gifts Registry  
 Applied Nutrition Corp.  
 Arbor Glen Center & Genesis Eldercare Network  
 ARC-Somerset County  
 ARC Kohler School  
 Archway School  
 Arlington Hospital  
 Ashbrook Nursing Home  
 Ashland Facility Operations, LLC  
 ASK Rehab.

Aspen Physical Therapy  
 AtHome Medical  
 Atlantic Behavioral Health  
 Atlantic Cape Community College (ACCC)  
 Atlantic City Medical Center  
 Atlantic County Institute of Technology  
 Atlantic Health Systems (AHS) Hospital Corp.  
 Atlantic Orthopedic & Sports Physical Therapy  
 Atlantic Rehabilitation Services  
 Atlantic Shore Sports Rehabilitation  
 AtlanticCare Behavioral Health  
 Atrium at Matawan LLC dba Victoria Healthcare  
 Center  
 Atrium at Park Ridge dba Plaza Regency at Park  
 Ridge  
 Atrium at Princeton LLC dba Pavilions at Forrestal  
 Atrium at Wayne  
 Atrium Medical Center  
 Bancroft NeuroHealth  
 Banner Health  
 Baptist Medical Center  
 Barnegat Sports Rehabilitation & Physical Therapy  
 Barnert Hospital  
 Barstow Community Hospital  
 Bay Sport Physical Therapy  
 Bayonne Medical Center  
 Bayshore Community Hospital  
 BCS Physical Therapy Services, PA  
 Bellin Hospital  
 Berkshire Physical Therapy  
 Beth Israel Medical Center - NY  
 Betty Bacharach Rehab Hospital  
 Bio-Medical Applications of Fredericksburg Dialysis  
 Inc.  
 BioMedical Applications of Maine (BMA) a.k.a.

S'Maine Dialysis  
 Bloomfield College of New Jersey  
 Bloomfield High School  
 Bloomfield School District  
 Board of Physical Therapy Examiners-Division of  
 Consumer Affairs State of NJ  
 BREAKTHRU Physical Therapy  
 Broadway Physical Therapy  
 Brookdale Community College  
 Brooke Army Medical Center  
 Burdette Tomlin Memorial Hospital  
 Burke Rehabilitation Hospital  
 Burke Rehabilitation Hospital PT  
 Burlington County Special Services School District  
 Burlington County College (BCC)  
 Caldwell College  
 Caldwell Therapy Center  
 Camcare  
 Camden County College  
 Cape Cod Hospital  
 Cape May County Special Services  
 Cape May County Technical School District  
 Capital Care-Psych Rehab  
 Cardinal Health System, Inc.  
 Cardinal Health Radiopharmacy  
 Cardiovascular Care Group  
 CareOne at Morris  
 CareOne at Teaneck  
 CareOne, LLC  
 Carillion Medical Center  
 Carolinas Medical Center-Lincoln  
 Carrier Foundation  
 Carroll Hospital Center  
 Catholic Charities  
 Catholic Charities Diocese of Metuchen  
 Catholic Charities Diocese of Trenton  
 Catholic Charities Special Education Schools Division  
 Catholic Community Services  
 Center for Advanced Wound Care  
 Center for Family Services  
 Center for Physical Therapy & Sports Rehabilitation  
 Center State Renal Dialysis Center  
 Central New Jersey Jewish Home for the Aged  
 CentraState Healthcare System  
 CentraState Medical Center  
 Century City Doctors Hospital  
 Cerebral Palsy Center in Edison, NJ  
 Cerebral Palsy Center of Camden County  
 Cerebral Palsy Center of Essex & West Hudson  
 Cerebral Palsy Center of Gloucester and Salem  
 Cerebral Palsy Center of North Jersey  
 Cerebral Palsy Center of Union County  
 Certified Medical Representatives Institute  
 Children's Hospital of Philadelphia  
 Children's Medical Center of Dayton  
 Children's Specialized Hospital  
 Children's Therapy Services  
 Children's Center for Therapy  
 Chilton Memorial Hospital  
 Christ Hospital  
 Churchill Orthopedic Rehabilitation  
 Clara Maass Medical Center  
 Clin Lab Management Assoc. (CLMA)  
 Collaborative Support Programs  
 College of Saint Elizabeth  
 Colonial Rehabilitation & Nursing  
 Columbia River Mental Health Services (CRMHS)  
 Columbia St. Mary's, Inc.  
 Columbia University  
 Community Food Bank of New Jersey  
 Community General Hospital  
 Community Hospital Group  
 Community Medical Center (St. Barnabas Health Care  
 System)  
 Community Physical Therapists  
 Comprehensive Sports Care Specialists  
 Concentra Medical Centers  
 Concord Hospital  
 Cooper Health System  
 Covenant Health  
 CPC Behavioral Healthcare  
 Cranford Health and Extended Care  
 Crozer Chester Medical Center  
 Cumberland County College  
 Cumberland County Guidance Center –Psych Rehab  
 Cumberland County Technical Education Center  
 (Licensed Practical Nursing LPN)  
 Cumberland County Technical Education Center  
 (Dental Assisting)  
 Cybergistics, Inc.  
 Davies Medical Center  
 DaVita, Inc. (DVA Healthcare Renal Care)  
 Deborah Heart & Lung Center  
 Delaire Nursing Home and Convalescent Center  
 Delaware Division of Vocational Rehabilitation  
 Department of Human Resources  
 Department of Veterans Affairs (VA)  
 Diabetes and Endocrinology Associates  
 Diabetes Health center/Hunterdon Medical Center  
 Dialysis Clinic, Inc.  
 District 1199C  
 Dover General Hospital  
 Drexel University  
 Drexel University-Psych  
 Durham County General Hospital  
 Early Childhood  
 East Orange General Hospital  
 East Penn Sports Medicine  
 Easter Seal Rehabilitation Center  
 Eastern Long Island Hospital

Eastern, Joseph, MD  
 El Paso County Hospital District  
 Empi  
 Employment Horizons  
 Englewood Cliffs Physical Therapy  
 Englewood Hospital & Medical Center  
 Essex County College  
 Essex County Vocational/Technical Schools  
 Fairfield Physical Therapy Center  
 Fairleigh Dickinson University, Henry P. Becton  
     School of Nursing & Allied Health  
 Fairleigh Dickinson University, Madison  
 Fairleigh Dickinson University, Teaneck/Hackensack  
 Family Connections  
 Family Service of Burlington County  
 FEDCAP Rehabilitation Service, Inc.  
 Felician College  
 Francis E. Parker Memorial Home  
 Fresinius Medical Services, Inc.  
 Garden Manor Extended Care Facility  
 Garden/Sullivan Hospital  
 Gateway Day Treatment Program  
 General Hospital Corporation  
 Genesis Hospital Services  
 George Washington University  
 Georgetown University Hospital  
 Georgian Court University  
 Gerber Products Company  
 Gloucester County College  
 Gloucester County Department of Health and Senior  
     Services  
 Gloucester County Institute of Technology  
 Gloucester County Institute of Technology HSC  
 Gloucester County Special Services School District  
 Goleta Valley Community Hospital  
 Good Samaritan Hospital  
 Goodwill Industries of Greater NY & Northern NJ, Inc.  
 Grandview Hospital  
 Greater Trenton Behavioral HealthCare  
 Greenbrook Manor  
 Hackensack University Medical Center – Community  
     Nursing Services  
 Hackensack University Medical Center  
 Hackettstown Community Hospital  
 Hackettstown Regional Medical Center  
 Hamilton Hospital  
 Hanover Park Regional HS-HSC  
 Harrisburg Hospital  
 Harry Moore School  
 Harvard Community Health Plan  
 Hasbro Children's Hospital  
 HCA – HealthOne, LLC  
 Health Barn USA  
 Health Center of Galloway  
 Health Central  
 Healthcare Services Group, Inc.  
 HealthSouth Corporation  
 Heartland Rehab. Services  
 Helen Hayes Hospital  
 Helene Fuld Medical Center  
 Helping Hand Behavioral Health - Galloway  
 Hershey, Milton S. Medical Center  
 Hilltop Manor of Niskayuna  
 Holy Name Hospital  
 Home Health Agency of Hackensack  
 HoMed Convalescent Equipment Co., Inc.  
 Hoover Hospital  
 Horizon House  
 Hospital Center at Orange  
 Hospital of the University of Pennsylvania  
 Hudson County Community College  
 Hudson Heights Physical Therapy Associates  
 Hudson Physical Therapy  
 Hunterdon County Polytech  
 Hunterdon Medical Center  
 Hunterdon Physical & Sports Therapy  
 IHC Health Services dba. Pocatello Regional Medical  
     Center  
 In Motion Physical Therapy  
 Independence Rehabilitation  
 Inglemoor Rehabilitation and Care Center  
 Inglis House  
 Institute for Therapeutic Massage, Inc.  
 Integra Life Sciences, Inc.  
 Integrated Health Services at Somerset Valley  
 IOM Health System, LP  
 Irvington General Hospital  
 Ivy Rehab  
 Jamestown Hospital  
 Jersey Central Physical Therapy & Fitness  
 Jersey City Medical Center  
 Jersey City Public School  
 Jersey Coast Vascular Institute  
 Jersey Shore Medical Center  
 Jersey Shore University Medical Center  
 Jewish Family & Vocational Service of Middlesex  
     County  
 Jewish Hospital & Rehab. Center  
 JFK Medical Center/Community Hospital Group  
 John G. Leach School Colonial School District  
 John Heinz Institute of Rehabilitation Medicine  
 Johns Hopkins Hospital  
 Johnson & Johnson Healthcare Products  
 Jordan Hospital  
 Joyner Sports Medicine Institute  
 Kean University  
 Kean University, Communication Disorders &  
     Deafness Dept.

Kennedy Health Systems  
 Kennedy Hospitals at Cherry Hill  
 Kennedy Hospitals at Stratford  
 Kennedy Memorial Hospital/University Medical Center  
 Kessler Institute for Rehabilitation  
 Keystone Human Services MidAtlantic  
 Kinetic Physical Therapy  
 Kline, David, MD  
 Korea University  
 LACADIN Network, Inc.  
 Lady of Lourdes Medical Center  
 Lakeview Subacute Care Center  
 Laurence M. Seitz  
 Lawnwood Regional Medical Center  
 Lawrence OB/GYN, PC  
 Lee Memorial Hospital  
 Lehigh Valley Hospital & Health  
 Lenape Valley Foundation  
 Lenox Hill Hospital  
 Lewis – Gale Medical Center  
 Liberty Health Systems  
 Life Care Medical Center  
 Lock Haven Hospital  
 Logan Health Care Center  
 Lombardi, Anthony (Dr.)  
 Louisiana State University Health Sciences Center  
 Lourdes of Burlington County  
 Lower Bucks County Hospital  
 Lung Diagnostics  
 Lutheran Medical Center  
 Lutheran Musculoskeletal Center, LLC  
 Lynchburg Health Department  
 Madison Spine and Physical Therapy  
 Magee Rehab  
 Magee Rehab at Voorhees  
 Manasquan High School  
 Manor by the Sea  
 Manor Care Corporation  
 Maple Leaf Physical Therapy  
 Margate Physical Therapy  
 Maria Joseph Living Care Center  
 Mariner Health Pendleton  
 Marlboro Physical Therapy  
 Marietta Center for Rehabilitation  
 Marshfield Clinical Cytotechnology Program  
 Matheny Medical & Educational Center  
 Matheny School and Hospital  
 Maven Physical Therapy  
 Meadowlands Professional Sports Care  
 Meadowview Nursing & Respiratory Care Center  
 Medi Fit  
 Medical Center of Princeton  
 Medical Imaging of Teaneck  
 Medicorp Health System  
 Medina County Health Department  
 Med Star dba Georgetown Medical Center  
 Memorial Medical Center at South Amboy  
 Memphis-Shelby County Health Department  
 Mental Health Association of Essex County  
 Mental Health Association of Southeastern  
 Pennsylvania  
 Mercer Bucks Sports Medical Center  
 Mercer Medical Center  
 Mercy College  
 Mercy Fitzgerald Hospital  
 Mercy Hospital  
 Meridian Hospitals Corporation  
 MeritCare Hospital dba MeritCare Medical Center  
 MeritCare Hospital and MeritCare Medical Group  
 Merit Mountainside, LLC d/b/a Mountainside Hospital  
 Mesa County Board of Health  
 Methodist Healthcare  
 Methodist Healthcare System of San Antonio, Ltd.  
 Metpath, Inc.  
 Miami's Children's Hospital  
 Middlesex County Academy of Allied Health  
 Middlesex County College  
 Millennium Respiratory Services  
 Monmouth County Academy of Allied Health &  
 Science  
 Monmouth Medical Center  
 Monmouth University  
 Montclair and Nutley High School  
 Montclair Public School  
 Montclair State University  
 Morris County School of Technology  
 Morris School District  
 Morristown Memorial Hospital  
 Morristown Sports Medicine Center  
 Morse Geriatric Center  
 Moss Rehab Hospital /Albert Einstein Medical Center  
 Mountainside Hospital  
 MRI of Woodbridge  
 Muhlenberg Regional Medical Center  
 Mullaney & Associates Physical Therapy  
 Multiple Handicapped Program – Special Services  
 National Naval Medical Center  
 Nebraska Medical Center  
 Neilson Place  
 Nevada System of Higher Education  
 New Jersey Cancer Institute  
 New Jersey Center of Physical Therapy  
 New Jersey City University  
 New Jersey Dept. of Human Services  
 New Jersey Hospital Association  
 New Jersey Institute of Technology  
 New Jersey Office of the Medical Examiner  
 New Jersey Veterans Memorial Home  
 New York University Medical Center –  
 Rusk Institute for Rehab.

Newark Public Schools CHS  
 Newton Memorial Hospital  
 North County Regional Hospital  
 North, Inc.  
 North Jersey Developmental Center  
 North Jersey Physical Therapy Institute  
 North Jersey Rehab Service  
 North Ridge Hospital  
 Northeast Arkansas Baptist Memorial Health Care  
 Northern Hills Physical Therapy Associates  
 Northern Westchester Hospital  
 Northwest Covenant Medical Center  
 Northwest Essex Community Healthcare Network  
 Northwestern Human Services of Delaware County  
 Northwoods Rehab & Extended Care at Hilltop  
 NovaCare Outpatient Rehab  
 Ocean County Vocational Technical School-Health  
     Careers  
 Omni - Fit  
 Optimum Physical Therapy Center  
 Ortho Biotech  
 Orthopedic Specialty Hospital  
 OSI Pharmaceuticals Inc.  
 Our Lady of Lourdes Health Care Services, Inc.  
 Our Lady of Lourdes Medical Center  
 Oxford Consulting Services, Inc.  
 Palisades General Hospital  
 Palisades Medical Center  
 Palomar Pomerado Hospital  
 Paragon at Brookhaven  
 Paragon at Morris View Nursing Home  
 Paragon Rehabilitation Incorporated  
 Paragon, Inc.  
 Park Center  
 Park Nicollet Health Services  
 Passaic County Technical Institute  
 Passaic Pediatrics  
 Passaic Valley Hospital  
 Paterson Catholic High School  
 Paterson Public School  
 Pathmark Stores, Inc.  
 Pathways to Independence, Inc.  
 Paul Schweitzer's Therapy and Rehab  
 Pediatric Rehabilitation of North Jersey  
 Pediatric Workshop  
 Peninsula Regional Medical Center  
 Pennsylvania Hospital  
 Pennsylvania Rehab  
 Pfizer, Inc.  
 Philadelphia Hospital & Healthcare District 1199C  
 Philadelphia VA Medical Center  
 Physical Solutions  
 Physical Therapy Center  
 Physical Therapy Services of Jersey Cape  
 Physical Therapy Sports Rehabilitation  
 Physio Therapy Associates  
 Physiofitness  
 Physiotherapy Corporation  
 Pinnacle Health Hospitals  
 Pitt County Memorial University  
 Polyclinic Medical Center  
 Presbyterian Healthcare Services  
 Presbyterian Hospital in the City of New York  
 Primary Children's Medical Center  
 Procure Rehabilitation  
 Professional Pulmonary Services  
 Professional Sports Care  
 Project Live, Inc.  
 Promise  
 Prospect Heights Care Center  
 Providence Hospital  
 Psychosocial Rehabilitation/Readaptation  
     Psychosociale (PSR/RPS) Canada  
 PT Sports Medicine at Quest I  
 Public Health Dayton & Montgomery County  
 Pzena & Null Nutrition Center  
 Quest Diagnostics  
 Rahway Hospital  
 Ramapo College of New Jersey  
 Rancocas Hospital  
 Rapid City Regional Hospital  
 Raritan Bay Medical Center  
 Raritan Valley Physical Therapy Assoc.  
 Regent Care Center  
 Regents of the University of California  
 Regional Mental Health Care  
 Regional Women's Health Management, LLC  
 Rehab Works  
 Renal Treatment Centers-Illinois, Inc.  
 Request Physical Therapy  
 Resources for Human Development, Inc. (Burlington)  
 Resources for Human Development, Inc. (Ocean City)  
 Richard Stockton College  
 Richmond University Medical Center  
 Rickard Rehab Services Inc.  
 Riptide Physical Therapy, Inc.  
 Riverview Medical Center  
 Riverview Rehabilitation Center  
 Robert Wood Johnson Hamilton Diabetes &  
     Endocrinology Group PA  
 Robert Wood Johnson Medical Center  
 Robert Wood Johnson Medical School  
 Robert Wood Johnson University Hospital  
 Robert Wood Johnson University Hospital-Hamilton  
 Robert Wood Johnson University Hospital-Rahway  
 Roche Biomedical Laboratories, Inc.  
 Rochester General Hospital  
 Runnels Specialized Hospital  
 Rutgers Cooperative Extension of Hunterdon County  
 Rutgers University Graduate School, Camden

Rutgers University, Newark  
 Rutgers, The State University of New Jersey  
 Sai's Biosciences Research institute PVT, LTD  
 Salem Community College  
 Salem County Career and Technical High School  
 SeaView Hospital RC&H  
 Select Specialty Hospital Johnstown, Inc.  
 SERV Center of NJ  
 Seton Hall University  
 Shady Lane Home  
 Shore Memorial Hospital  
 Sierra Vista Regional Medical Center  
 Signature Home Care  
 Silver Care Center  
 Soar Physical Therapy  
 Somerset County Office of Aging  
 Somerset County Technology Institute  
 Somerset County Vocational & Technical High School  
 Somerset Hills Physical Therapy  
 Somerset Medical Center  
 South Amboy Memorial Hospital  
 South Bergen Jointure Commission  
 South Eastern Orthopedic Specialists, PA  
 South Jersey HealthCare System  
 South Jersey Hospital System.  
 South Jersey Physical Therapy Associates  
 Southampton Hospital  
 Southern New England Rehab  
 Southern Ocean County Hospital  
 Southwest Regional Medical Center  
 Spaulding - Cape Cod Hospital  
 Spine and Orthopedic Physical Therapy Center  
 Spokane Sports Medicine  
 Sports and Back Rehabilitation  
 Sports Physical Therapy at South Jersey  
 Sports Physical Therapy Center of Bergen  
 Sports Physical Therapy, Inc.  
 Sports Rehabilitation and Physical Therapy  
 Sports Rehabilitation of Manhasset  
 Sports Training Physical Therapy of New Jersey  
 Sportscare  
 St. Agnes Medical Center  
 St. Barnabas Ambulatory Care Center  
 St. Barnabas Medical Center (St. Barnabas Health Care System)  
 St. Barnabas Medical Center (Newark Beth Israel)  
 St. Barnabas Outpatient Radiology Center  
 St. Barnabas Rehabilitation Affiliates  
 St. Bernard's Healthcare  
 St. Claire's Hospital/Denville  
 St. Cloud Health Care Center  
 St. Elizabeth's Hospital  
 St. Francis Community Health Ctr.  
 St. Francis Medical Center  
 St. John of God Community Services  
 St. Joseph's Candler Health System  
 St. Joseph's Health Care London  
 St. Joseph's Health Care London, London Health Sciences Centre  
 St. Joseph's Regional Medical Center  
 St. Joseph's Wayne Hospital  
 St. Lawrence Rehabilitation Center  
 St. Lucie County Health Department  
 St. Luke's-Roosevelt Hospital  
 St. Mary's Catholic Home  
 St. Mary's Child Development Center  
 St. Mary's Hospital  
 St. Mary's Regional Medical Center – Lewiston Maine  
 St. Mary's Medical Center  
 St. Michael's Medical Center  
 St. Peter's College  
 St. Peter's University Hospital  
 St. Tammany Parish Hospital  
 St. Tammany Parish Hospital Service District  
 St. Vincent's Comprehensive Cancer Center  
 St. Vincent's Hospital and Health Care, Inc.  
 State of Florida, Dept. of Health, Palm Beach County Health Department  
 State Operated School District of the City of Paterson  
 State University of New York  
 State University of New York at Stony Brook  
 Staten Island University  
 Staten Island University Hospital  
 Strive Physical Therapy & Sports Rehab  
 Strulowitz & Garguillo  
 Summa Wadsworth Rittman Hospital  
 Tel Hai College, Israel  
 Tenet Health System Hahnemann, LLC d/b/a Hahnemann University Hospital  
 The Children's Medical Center  
 The Medical Center at Princeton  
 The Mt. Sinai School of Medicine  
 The New York and Presbyterian Facility  
 The Passaic County Elks Cerebral Palsy Center  
 Therapeutic Associates  
 Theresa Grotta Center  
 Thomas Edison State College  
 Tidewater Physical Therapy  
 Township Sports Therapy & Work Hardening – Novacare  
 Tricities Laboratory  
 Tricore Reference Laboratories  
 Trinitas Hospital  
 Turning Point, Inc.  
 Underwood Memorial Hospital  
 Union County Academy for Allied Health Sciences  
 Union County College  
 Union County Department of Human Services  
 United Cerebral Palsy of Philadelphia  
 United Healthcare System

United Hospital Orthopedic Center  
 United States Psychiatric Rehabilitation Association  
 (USPRA)  
 Universal Institute, Inc.  
 University of Cincinnati  
 University of Cincinnati Medical Center  
 University of Haifa  
 University of Hartford  
 University of Kentucky Albert B. Chandler  
 Medical Center  
 University of Maryland Med System Corp Dept  
 of Rehab  
 University of Michigan Hospitals  
 University of Pennsylvania Sports Medicine Center  
 University of Pittsburgh Medical Center  
 University of Shizuoka  
 University of South Hampton  
 University of the Sciences in Philadelphia  
 University of Utah  
 US Army Research Institute of Environmental  
 Medicine  
 US Eyecare Sales  
 VA Hospital  
 VA Medical Care Facility  
 VA Medical Center  
 VA Medical Center – Lake City, FL  
 VA Midsouth Healthcare Network VISN 9  
 VA Network – South Texas  
 VA New Jersey Health Care System  
 VA New York Harbor Healthcare System (VISN 3)  
 VA Pittsburgh Healthcare System  
 VA Stars and Stripes Healthcare Network  
 Valley Health System  
 Valley Hospital  
 Van Pelt Physical Therapy  
 Vascular Access Center  
 Vineland Developmental Center  
 Virtual Health - PT  
 Virtua Health, Inc. (FHAP)  
 Visiting Nurse Association of Central Jersey, Inc.  
 Visiting Nurses Association of NJ  
 Visiting Nurses Association of Southern NJ  
 Volunteers of America  
 Volunteers of America Greater NY  
 Voorhees Pediatric Facility  
 Wakefern Food Corporation  
 Warren County Community College  
 Warren County Technical School  
 Warren Hospital  
 Warren Manor  
 Wasatch Valley Rehabilitation  
 Waterbury Hospital  
 Waterville Osteopathic Hospital  
 Wayne Memorial Hospital  
 Wayne View Care Center  
 Wayneview Corp. dba Wayneview Care Center  
 Weisman Children's Rehabilitation Hospital  
 Welkind Rehab Hospital  
 WellStar Health System, Inc.  
 West Arm Therapy Services  
 West Bergen Mental Healthcare  
 West Caldwell Care Center  
 West Hudson Hospital  
 West Jersey Health System  
 West Orange High School - HSC  
 West Palm Beach VA Medical Center  
 Westport Physical Therapy  
 Woodbridge Developmental Center  
 Woodrow Wilson Rehab Center  
 WVHCS Hospital  
 Yeshiva University  
 Young Adult Institute, Inc.

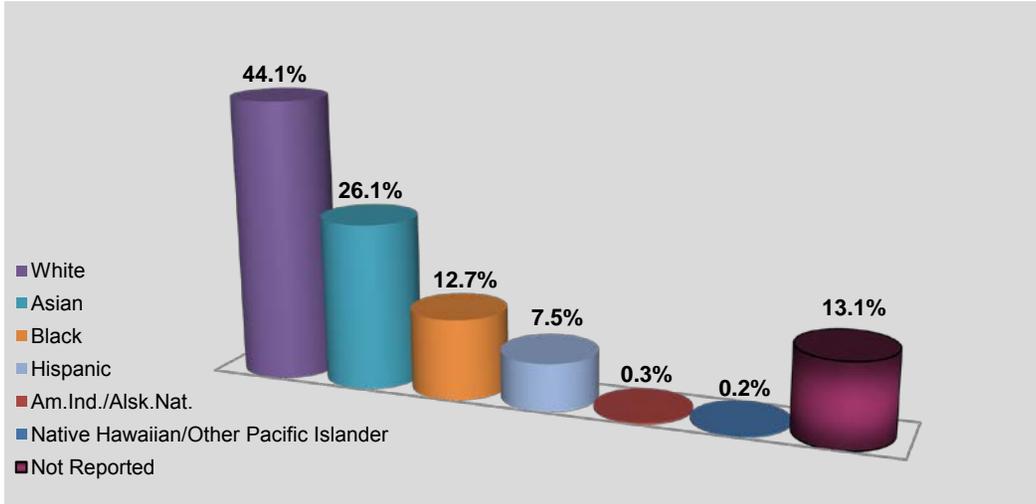


## PROFILE OF THE STUDENT BODY

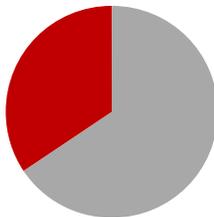
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## PROFILE OF UMDNJ'S STUDENT ENROLLMENT FALL 2010 (N=6,813)\*

### Race / Ethnicity\*\*

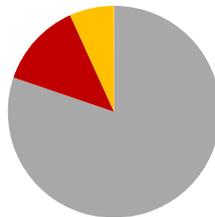


### Gender



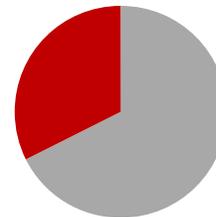
■ Female - 65.6%  
■ Male - 34.4%

### Residency



■ New Jersey - 80.3%  
■ Other States - 13.0%  
■ Foreign Countries - 6.8%

### Time Status



■ Full-Time - 67.6%  
■ Part-Time - 32.4%

\* Unduplicated headcount

\*\* Beginning in 2009 and following U.S. federal guidelines, students may self-identify in more than one racial category. Students who selected more than one category (N= 254) are included in each category reported. Thus, percents reported do not add to 100 and are not directly comparable to percents reported prior to 2009.

Source: Office of the University Registrar: Data as of October 1, 2010

## ENROLLMENT IN SCHOOLS BY GENDER AND RACE / ETHNICITY FALL 2010

	<i>Total Number Enrolled</i>	<i>% Black</i>	<i>% Hispanic</i>	<i>% Asian</i>	<i>% Women</i>	<i>% NJ Resident</i>
<b>NEW JERSEY MEDICAL SCHOOL</b>	<b>754</b>	<b>8.9</b>	<b>11.0</b>	<b>41.0</b>	<b>42.8</b>	<b>99.2</b>
<b>ROBERT WOOD JOHNSON MEDICAL SCHOOL</b>	<b>665</b>	<b>9.2</b>	<b>4.7</b>	<b>33.2</b>	<b>55.0</b>	<b>98.9</b>
<i>New Brunswick/Piscataway Campus</i>	<i>550</i>	<i>7.6</i>	<i>4.5</i>	<i>34.7</i>	<i>53.5</i>	<i>98.9</i>
<i>Camden Campus</i>	<i>115</i>	<i>16.5</i>	<i>5.2</i>	<i>26.1</i>	<i>62.6</i>	<i>99.1</i>
<b>SCHOOL OF OSTEOPATHIC MEDICINE</b>	<b>510</b>	<b>12.7</b>	<b>7.1</b>	<b>24.9</b>	<b>52.9</b>	<b>93.1</b>
<b>NEW JERSEY DENTAL SCHOOL</b>	<b>481</b>	<b>5.0</b>	<b>8.7</b>	<b>32.2</b>	<b>53.6</b>	<b>75.1</b>
<b>GRADUATE SCHOOL OF BIOMEDICAL SCIENCES**</b>	<b>1,262</b>	<b>8.6</b>	<b>7.1</b>	<b>40.3</b>	<b>56.1</b>	<b>55.3</b>
<i>Newark Division</i>	<i>581</i>	<i>7.4</i>	<i>7.2</i>	<i>39.2</i>	<i>58.5</i>	<i>58.2</i>
<i>Piscataway Division</i>	<i>513</i>	<i>6.4</i>	<i>8.8</i>	<i>43.9</i>	<i>52.6</i>	<i>48.5</i>
<i>Stratford Division</i>	<i>168</i>	<i>19.0</i>	<i>1.8</i>	<i>33.3</i>	<i>58.3</i>	<i>66.1</i>
<b>SCHOOL OF HEALTH RELATED PROFESSIONS</b>	<b>1,467</b>	<b>11.1</b>	<b>8.7</b>	<b>14.6</b>	<b>76.4</b>	<b>73.0</b>
<b>SCHOOL OF NURSING</b>	<b>1,390</b>	<b>22.5</b>	<b>6.3</b>	<b>10.9</b>	<b>87.5</b>	<b>89.4</b>
<b>SCHOOL OF PUBLIC HEALTH</b>	<b>380</b>	<b>20.0</b>	<b>5.3</b>	<b>30.8</b>	<b>66.6</b>	<b>78.7</b>
<i>Newark Campus</i>	<i>109</i>	<i>33.9</i>	<i>8.3</i>	<i>22.0</i>	<i>61.5</i>	<i>74.3</i>
<i>New Brunswick/Piscataway Campus</i>	<i>243</i>	<i>14.4</i>	<i>4.1</i>	<i>36.2</i>	<i>70.0</i>	<i>78.2</i>
<i>Stratford Campus</i>	<i>28</i>	<i>14.3</i>	<i>3.6</i>	<i>17.9</i>	<i>57.1</i>	<i>100.0</i>
<b>GRAND TOTAL***</b>	<b>6,909</b>					
<b><i>Unduplicated Headcount</i></b>	<b>6,813</b>	<b>12.7</b>	<b>7.5</b>	<b>26.1</b>	<b>65.6</b>	<b>80.3</b>

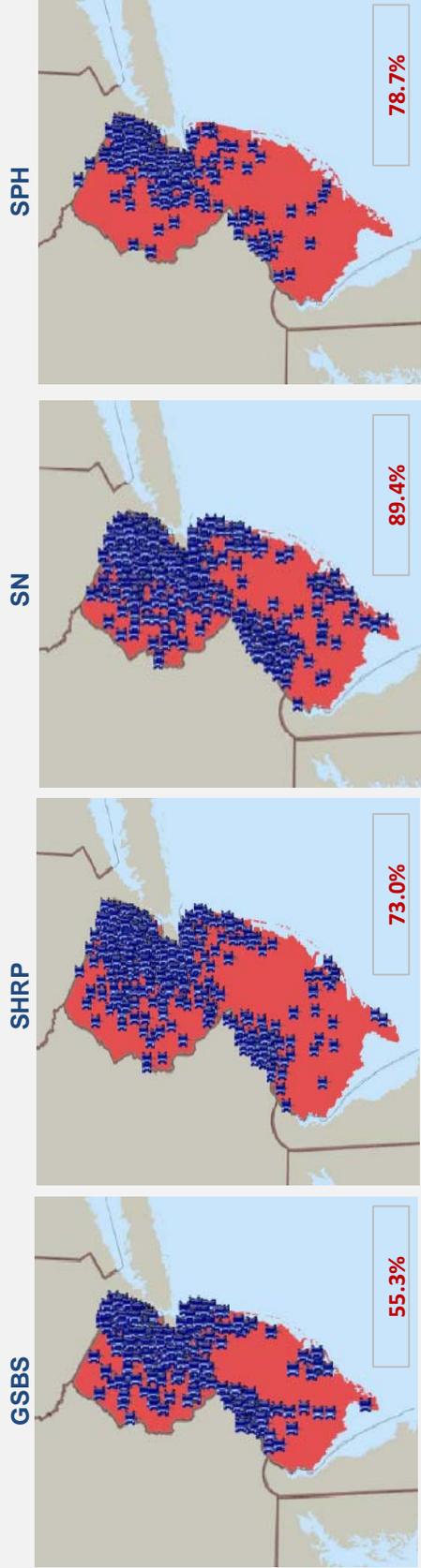
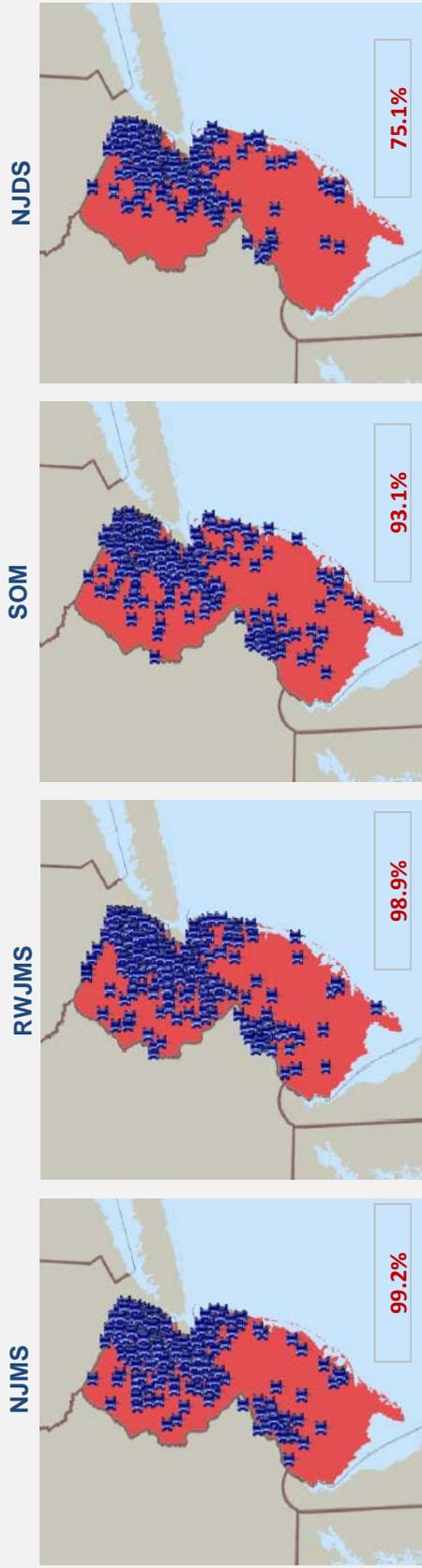
\* Beginning in 2009 and following U.S. federal guidelines, students may self-identify in more than one racial category. Students who selected more than one category (N=254) are included in each category reported. Thus, percents reported do not add to 100 and are not directly comparable to percents reported prior to 2009.

\*\* Forty-five students in the Newark Division are in the GSBS joint program with NJIT. All matriculated students in the Piscataway Division are in the GSBS joint program with Rutgers, except students in the master's level programs in Clinical and Translational Science and Biomedical Science.

\*\*\* Students with dual enrollment are counted in each School/program in which they are enrolled.

Source: Office of the University Registrar: Data as of October 1, 2010

UNIVERSITY OF MEDICINE AND DENTISTRY OF NEW JERSEY  
 FALL 2010 ENROLLMENT BY ZIP CODE  
 NJ RESIDENCY



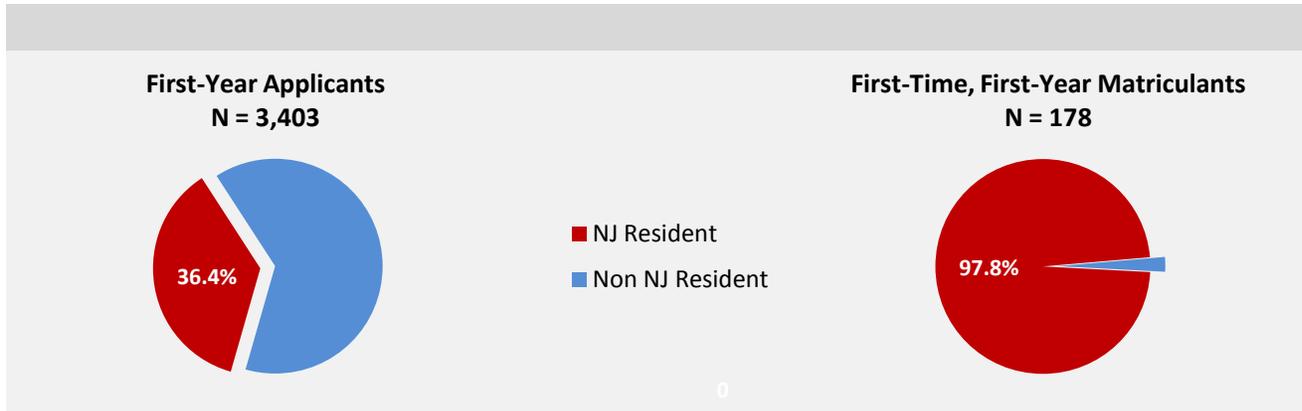
NJMS:	New Jersey Medical School	GSBS:	Graduate School of Biomedical Sciences
RWJMS:	Robert Wood Johnson Medical School	SHRP:	School of Health Related Professions
SOM:	School of Osteopathic Medicine	SN:	School of Nursing
NJDS:	New Jersey Dental School	SPH:	School of Public Health

## **ADMISSIONS DATA**

The following figures provide data by School on the characteristics of entering classes in 2010-2011.

The Schools of UMDNJ do not use SAT scores in the admissions process. GPAs and graduate or professional school entrance exams are considered. Therefore, the following pages report average GPA for the entering graduate-level class within each School and the average entrance examination scores where such examinations are required.

### NEW JERSEY MEDICAL SCHOOL ADMISSIONS FALL 2010



#### MATRICULANTS RACE/ETHNICITY AND GENDER

Ethnicity*	Matriculants 178	National Matriculants 18,384**
Hispanic	11.2%	8.4%
Black	10.7%	7.2%
Asian	42.1%	22.7%
White	36.0%	65.6%
Unknown	7.3%	5.8%
American Indian/ Alaska Native	—	0.9%
Native Hawaiian/ Other Pacific Islander	—	0.2%
<b>Gender</b>		
Female	47.2%	47.0%
Male	52.8%	53.0%

#### MATRICULANTS MEDICAL COLLEGE ADMISSION TEST (MCAT) SCORES AND GRADE POINT AVERAGES (GPA)

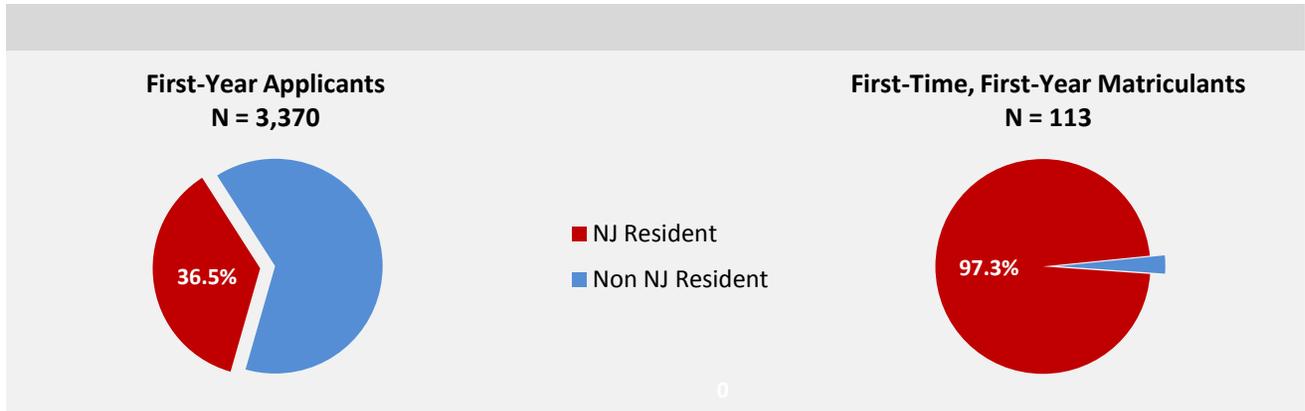
	NJMS Class Average	National Average
Verbal Reasoning	10.0	9.9
Physical Sciences	10.8	10.4
Biological Sciences	11.0	10.8
Science GPA	3.58	3.61
Total GPA	3.64	3.67

\* Beginning in 2009, students who selected more than one racial category are included in each category reported. Thus, percents reported do not add to 100 and are not directly comparable to percents reported in previous academic years.

\*\*Does not include 281 Non-U.S. Citizens/Permanent Residents.

Source: UMDNJ Report on Admissions, 2010-2011, UMDNJ-Office of Institutional Research

**ROBERT WOOD JOHNSON MEDICAL SCHOOL  
ADMISSIONS  
FALL 2010**



**MATRICULANTS  
RACE/ETHNICITY AND GENDER**

Ethnicity*	Matriculants	National Matriculants
	113	18,384**
Hispanic	3.5%	8.4%
Black	10.6%	7.2%
Asian	38.9%	22.7%
White	50.4%	65.6%
Unknown	1.8%	5.8%
American Indian/ Alaska Native	—	0.9%
Native Hawaiian/ Other Pacific Islander	—	0.2%

Gender		
	Matriculants	National Matriculants
Female	52.2%	47.0%
Male	47.8%	53.0%

**MATRICULANTS  
MEDICAL COLLEGE ADMISSION TEST (MCAT) SCORES  
AND GRADE POINT AVERAGES (GPA)**

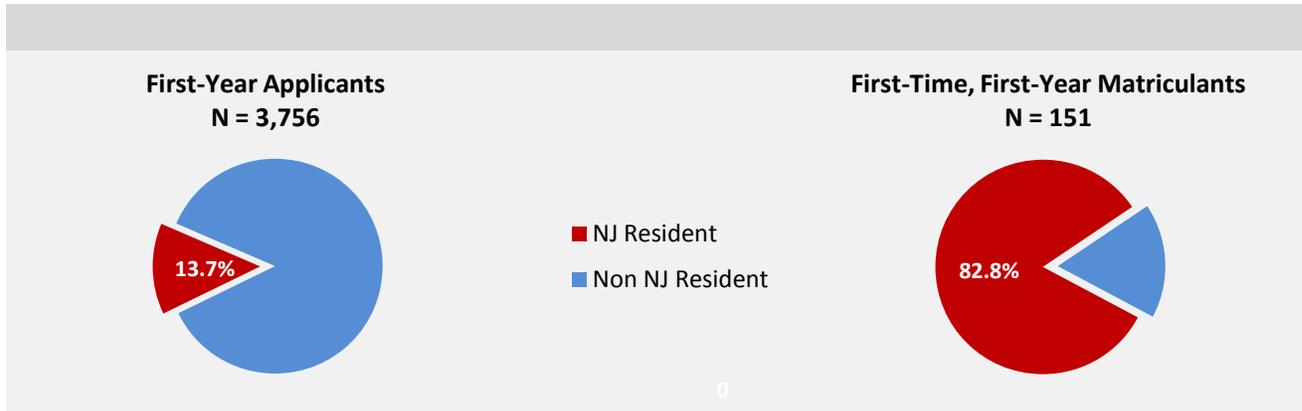
	RWJMS Class Average	National Average
Verbal Reasoning	9.7	9.9
Physical Sciences	10.7	10.4
Biological Sciences	10.7	10.8
Science GPA	3.64	3.61
Total GPA	3.69	3.67

\* Beginning in 2009, students who selected more than one racial category are included in each category reported. Thus, percents reported do not add to 100 and are not directly comparable to percents reported in previous academic years.

\*\*Does not include 281 Non-U.S. Citizens/Permanent Residents.

Source: UMDNJ Report on Admissions, 2010-2011, UMDNJ-Office of Institutional Research

**SCHOOL OF OSTEOPATHIC MEDICINE  
ADMISSIONS  
FALL 2010**



**MATRICULANTS  
RACE/ETHNICITY AND GENDER**

Ethnicity*	Matriculants	National Matriculants
	151	5,215**
Hispanic	9.3%	3.7%
Black	8.6%	2.9%
Asian	31.8%	21.9%
White	55.6%	70.2%
Unknown	0.7%	0.0%
American Indian/ Alaska Native	—	1.0%
Native Hawaiian/ Other Pacific Islander	—	0.3%

Gender		
Female	55.0%	46.0%
Male	45.0%	54.0%

**MATRICULANTS  
MEDICAL COLLEGE ADMISSION TEST (MCAT) SCORES  
AND GRADE POINT AVERAGES (GPA)**

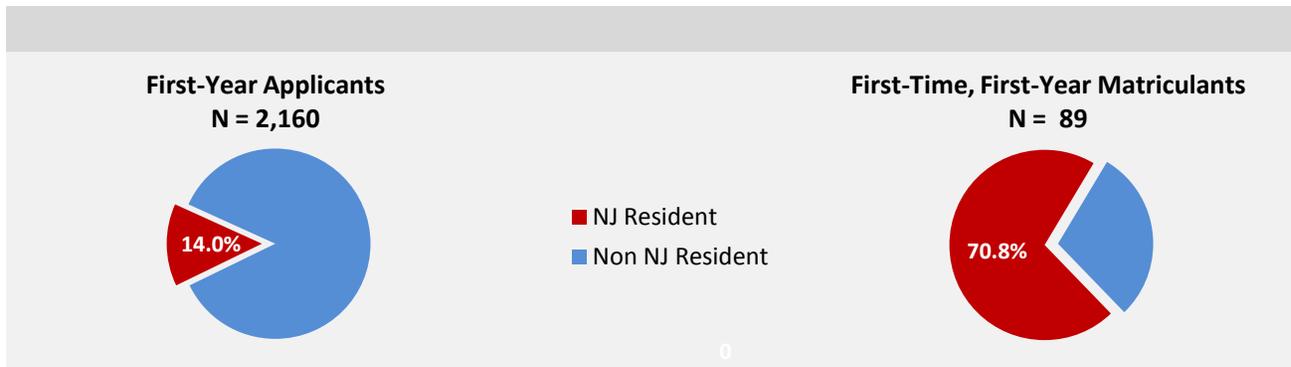
	SOM Class Average	National Average
Verbal Reasoning	9.0	8.7
Physical Sciences	9.2	8.5
Biological Sciences	9.6	9.3
Science GPA	3.50	3.4
Total GPA	3.58	3.5

\* Beginning in 2009, students who selected more than one racial category are included in each category reported. Thus, percents reported do not add to 100 and are not directly comparable to percents reported in previous academic years.

\*\*Does not include 32 non-U.S. citizens and temporary residents.

Source: UMDNJ Report on Admissions, 2010-2011, UMDNJ-Office of Institutional Research

**NEW JERSEY DENTAL SCHOOL  
ADMISSIONS  
FALL 2010**



**MATRICULANTS  
RACE/ETHNICITY AND GENDER**

Matriculants	
Ethnicity*	89
Hispanic	11.2%
Black	9.0%
Asian	33.7%
White	55.1%
Unknown	0.0%
American Indian/ Alaska Native	0.0%
Native Hawaiian/ Other Pacific Islander	—

Gender	
Female	52.8%
Male	47.2%

**MATRICULANTS  
DENTAL ADMISSION TEST (DAT) SCORES  
AND GRADE POINT AVERAGES (GPA)**

	NJDS Class Average
Quantitative Reasoning	17.3
Reading Comprehension	20.6
Biology	19.4
Inorganic Chemistry	19.9
Organic Chemistry	20.5
Total Science**	19.8
Academic Average***	19.5
Perceptual Ability Test	19.0
Science GPA	3.42
Total GPA	3.51

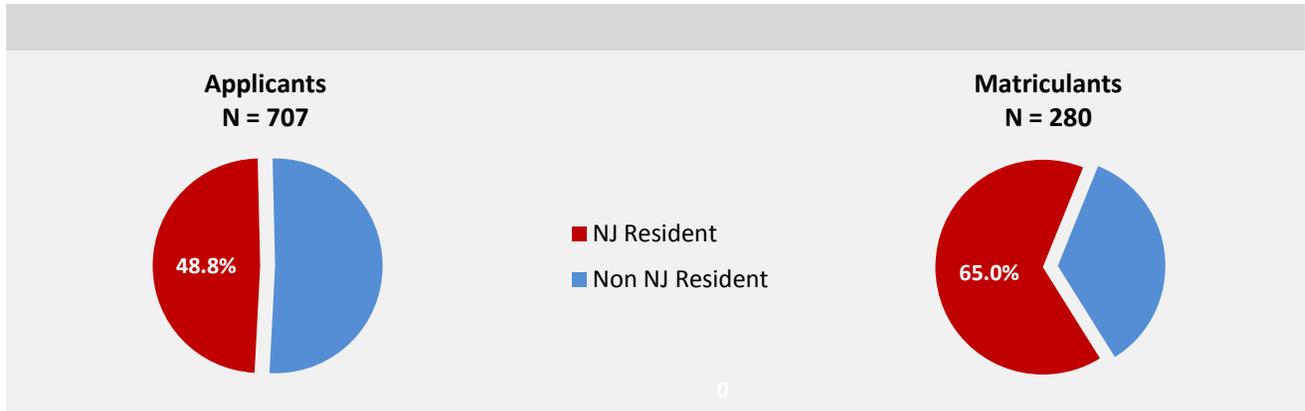
\* Beginning in 2009, students who selected more than one racial category are included in each category reported. Thus, percents reported do not add to 100 and are not directly comparable to percents reported in previous academic years.

\*\* Total Science is the average score of its three subsections: Biology, General Chemistry and Organic Chemistry.

\*\*\* Academic Average is the average score of the Quantitative Reasoning, Reading Comprehension, Biology, General Chemistry and Organic Chemistry test scores.

Source: UMDNJ Report on Admissions, 2010-2011, UMDNJ-Office of Institutional Research

**GRADUATE SCHOOL OF BIOMEDICAL SCIENCES  
NEWARK AND STRATFORD DIVISIONS  
ADMISSIONS  
FALL 2010**



**MATRICULANTS  
RACE/ETHNICITY AND GENDER**

Ethnicity*	Matriculants
	280
Hispanic	5.0%
Black	12.1%
Asian	32.9%
White	29.6%
Unknown	24.3%
American Indian/ Alaska Native	0.7%
Native Hawaiian/ Other Pacific Islander	0.4%

Gender	
Female	57.9%
Male	42.1%

**MATRICULANTS  
GRADUATE RECORD EXAMINATION (GRE) SCORES  
AND GRADE POINT AVERAGES (GPA)**

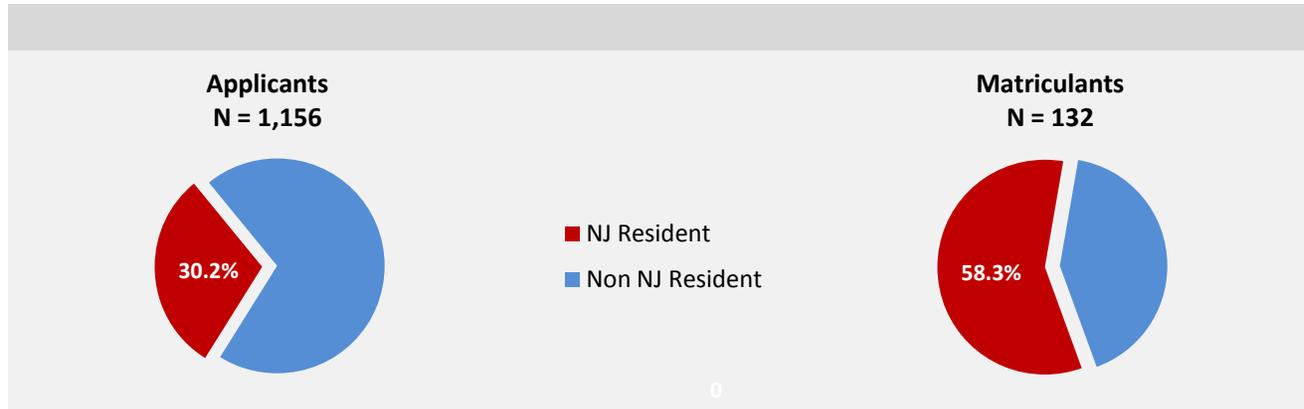
	PhD		Masters and Certificate	
	Students Reporting	Class Average	Students Reporting	Class Average
Verbal	33	502	59	470
Quantitative	33	689	59	604
Analytical Writing	32	3.84	58	3.85
GPA**	17	3.40	231	3.16

\* Beginning in 2009, students who selected more than one racial category are included in each category reported. Thus, percents reported do not add to 100 and are not directly comparable to percents reported in previous academic years.

\*\*Includes baccalaureate degree GPAs only.

Source: UMDNJ Report on Admissions, 2010-2011, UMDNJ-Office of Institutional Research

**GRADUATE SCHOOL OF BIOMEDICAL SCIENCES  
PISCATAWAY DIVISION  
ADMISSIONS  
FALL 2010**



**MATRICULANTS  
RACE/ETHNICITY AND GENDER**

Matriculants	
Ethnicity*	132
Hispanic	11.4%
Black	9.8%
Asian	42.4%
White	43.9%
Unknown	0.0%
American Indian/ Alaska Native	--
Native Hawaiian/ Other Pacific Islander	--
Gender	
Female	52.3%
Male	47.7%

**MATRICULANTS  
GRADUATE RECORD EXAMINATION (GRE) SCORES  
AND GRADE POINT AVERAGES (GPA)**

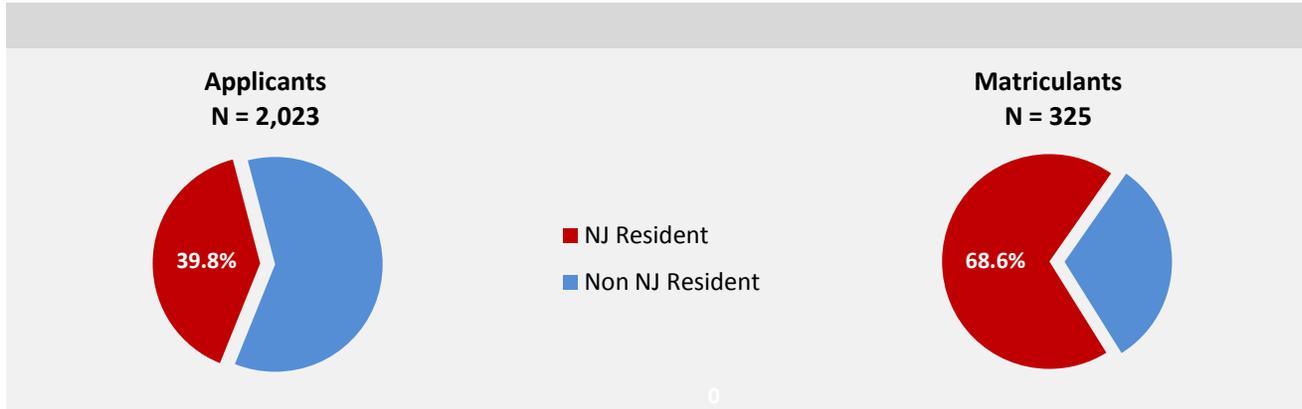
	PhD		Masters and Certificate	
	Students Reporting	Class Average	Students Reporting	Class Average
Verbal	49	527	35	523
Quantitative	49	704	35	680
Analytical Writing	27	4.17	11	3.86
GPA**	41	3.48	58	3.28

\* Beginning in 2009, students who selected more than one racial category are included in each category reported. Thus, percents reported do not add to 100 and are not directly comparable to percents reported in previous academic years.

\*\*Includes baccalaureate degree GPAs only.

Source: UMDNJ Report on Admissions, 2010-2011, UMDNJ-Office of Institutional Research

**SCHOOL OF HEALTH RELATED PROFESSIONS  
GRADUATE PROGRAMS  
ADMISSIONS  
SPRING, SUMMER AND FALL 2010**



**MATRICULANTS  
RACE/ETHNICITY AND GENDER**

Matriculants	
Ethnicity*	325
Hispanic	6.5%
Black	10.5%
Asian	9.8%
White	56.0%
Unknown	19.1%
American Indian/ Alaska Native	0.0%
Native Hawaiian/ Other Pacific Islander	0.9%
Gender	
Female	69.8%
Male	30.2%

**MATRICULANTS  
GRADE POINT AVERAGES (GPA)**

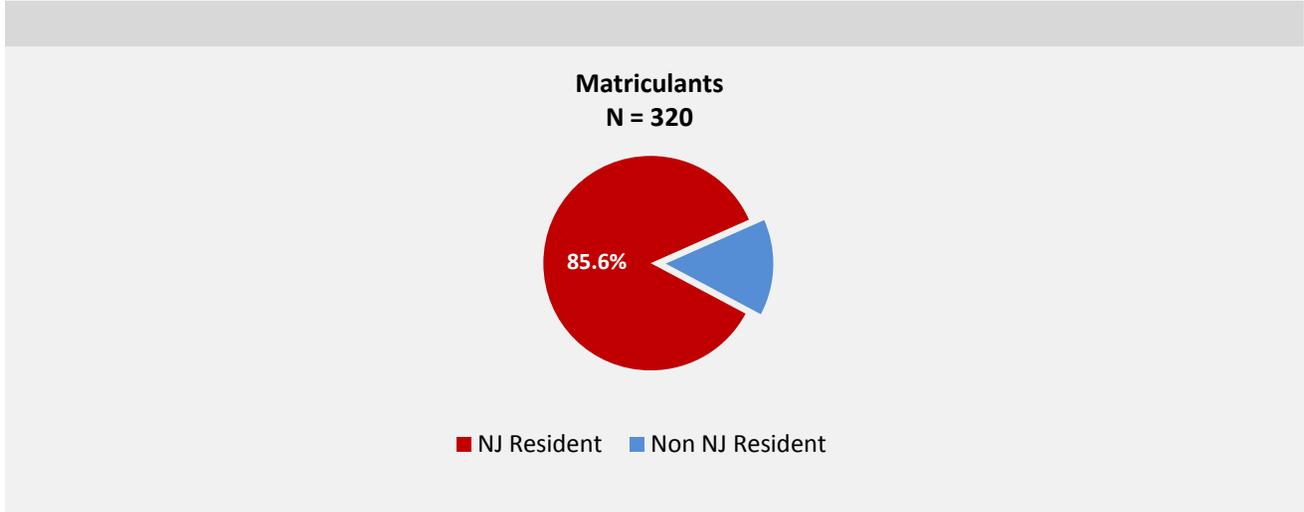
	Students Reporting	Class Average
GPA**	194	3.30

\* Beginning in 2009, students who selected more than one racial category are included in each category reported. Thus, percents reported do not add to 100 and are not directly comparable to percents reported in previous academic years.

\*\*Includes baccalaureate degree GPAs only.

Source: UMDNJ Report on Admissions, 2010-2011, UMDNJ-Office of Institutional Research

**SCHOOL OF HEALTH RELATED PROFESSIONS  
UNDERGRADUATE PROGRAMS  
ADMISSIONS  
SPRING, SUMMER AND FALL 2010**



**MATRICULANTS  
RACE/ETHNICITY AND GENDER**

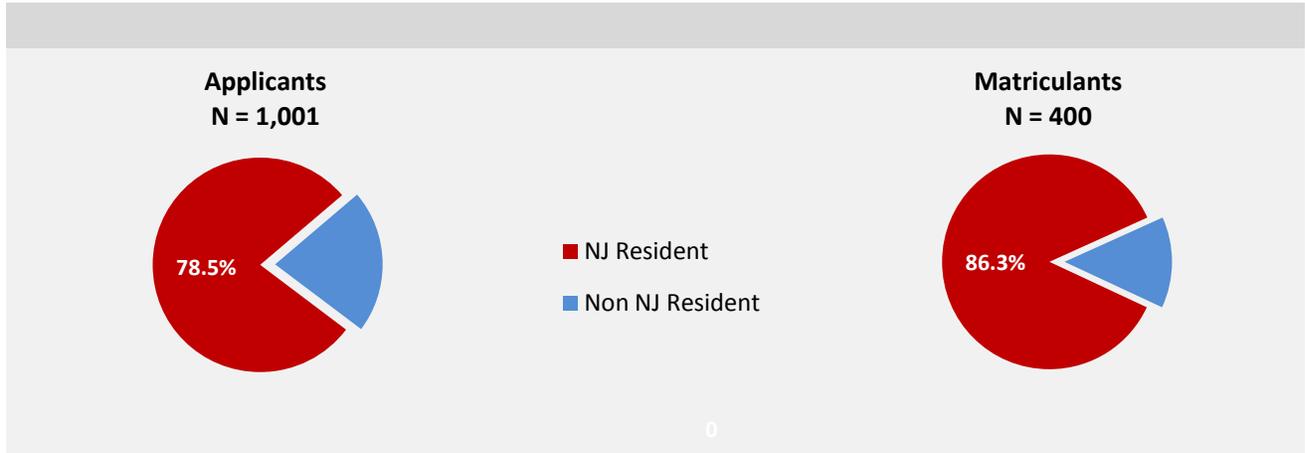
Ethnicity*	Matriculants 320
Hispanic	11.6%
Black	13.8%
Asian	12.2%
White	47.8%
Unknown	15.3%
American Indian/ Alaska Native	0.0%
Native Hawaiian/ Other Pacific Islander	0.9%
<b>Gender</b>	
Female	80.0%
Male	20.0%

Most undergraduate programs at the School of Health Related Professions are joint-degree programs with other institutions. In some joint-degree programs, students apply initially through the partner institution, and UMDNJ receives information only for applicants who are accepted. Since information on all applicants is unavailable, undergraduate application information is not reported.

\* Beginning in 2009, students who selected more than one racial category are included in each category reported. Thus, percents reported do not add to 100 and are not directly comparable to percents reported in previous academic years.

Source: UMDNJ Report on Admissions, 2010-2011, UMDNJ-Office of Institutional Research

**SCHOOL OF NURSING  
GRADUATE PROGRAMS  
ADMISSIONS  
SPRING, SUMMER AND FALL 2010**



**MATRICULANTS  
RACE/ETHNICITY AND GENDER**

Ethnicity*	Matriculants
	400
Hispanic	7.5%
Black	24.5%
Asian	13.0%
White	36.0%
Unknown	21.8%
American Indian/ Alaska Native	--
Native Hawaiian/ Other Pacific Islander	0.3%

Gender	
Female	86.5%
Male	13.5%

**MATRICULANTS  
GRADE POINT AVERAGES (GPA)**

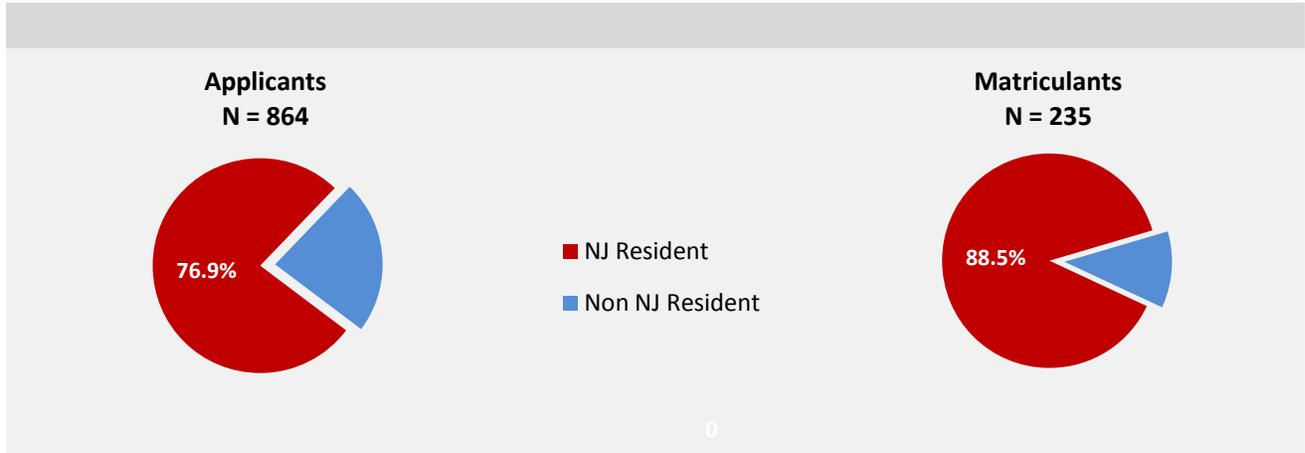
	Students Reporting	Class Average
GPA**	228	3.39

\* Beginning in 2009, students who selected more than one racial category are included in each category reported. Thus, percents reported do not add to 100 and are not directly comparable to percents reported in previous academic years.

\*\*Includes baccalaureate degree GPAs only.

Source: UMDNJ Report on Admissions, 2010-2011, UMDNJ-Office of Institutional Research

**SCHOOL OF NURSING  
SECOND BACHELOR'S DEGREE PROGRAM  
ADMISSIONS  
SPRING, SUMMER AND FALL 2010**



**MATRICULANTS  
RACE/ETHNICITY AND GENDER**

Matriculants	
Ethnicity*	235
Hispanic	6.0%
Black	14.0%
Asian	8.5%
White	35.7%
Unknown	37.4%
American Indian/ Alaska Native	--
Native Hawaiian/ Other Pacific Islander	--

Gender	
Female	80.4%
Male	19.6%

**MATRICULANTS  
GRADE POINT AVERAGES (GPA)**

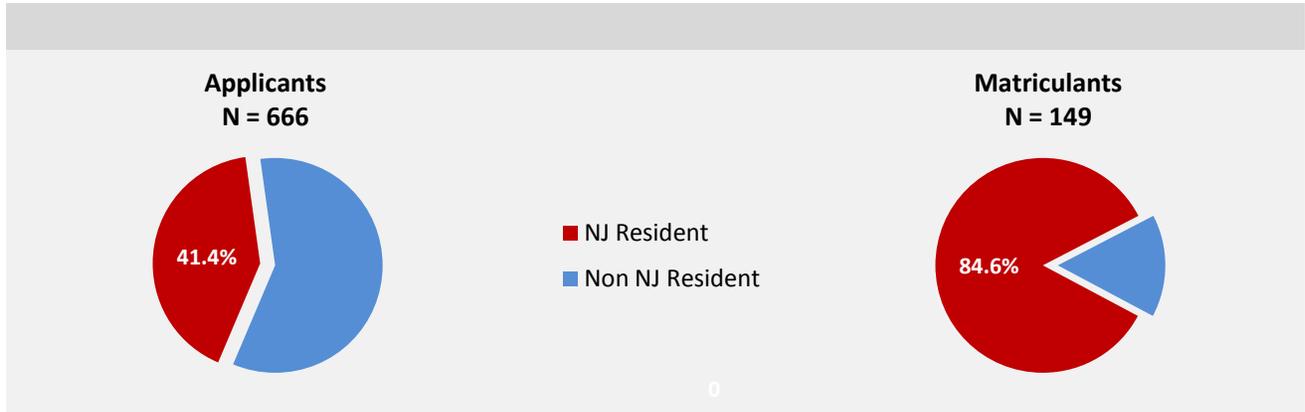
	Students Reporting	Class Average
GPA**	204	3.31

\* Beginning in 2009, students who selected more than one racial category are included in each category reported. Thus, percents reported do not add to 100 and are not directly comparable to percents reported in previous academic years.

\*\*Includes baccalaureate degree GPAs only.

Source: UMDNJ Report on Admissions, 2010-2011, UMDNJ-Office of Institutional Research

**SCHOOL OF PUBLIC HEALTH  
ADMISSIONS  
FALL 2010 AND SPRING 2011**



**MATRICULANTS  
RACE/ETHNICITY AND GENDER**

Matriculants	
Ethnicity*	149
Hispanic	7.4%
Black	28.2%
Asian	26.8%
White	29.5%
Unknown	11.4%
American Indian/ Alaska Native	--
Native Hawaiian/ Other Pacific Islander	0.0%

Gender	
Female	66.4%
Male	33.6%

**MATRICULANTS  
GRADUATE RECORD EXAMINATION (GRE) SCORES  
AND GRADE POINT AVERAGES (GPA)**

	Students Reporting	Class Average
Verbal	64	499
Quantitative	64	605
Analytical Writing	59	3.99
GPA**	103	3.17

\* Beginning in 2009, students who selected more than one racial category are included in each category reported. Thus, percents reported do not add to 100 and are not directly comparable to percents reported in previous academic years.

\*\*Includes baccalaureate degree GPAs only.

Source: UMDNJ Report on Admissions, 2010-2011, UMDNJ-Office of Institutional Research

**FINANCIAL AID INFORMATION****STATE, FEDERAL, AND INSTITUTION FUNDED PROGRAMS**  
**Academic Year 2010/2011**

<b>Programs</b>	<b>Number of Recipients</b>	<b>Total Disbursed Amount</b>
<b>STATE-FUNDED LOANS</b>		
NJCLASS	120	\$1,755,270
<b>STATE-FUNDED SCHOLARSHIPS/GRANTS</b>		
Educational Opportunity Fund	101	\$272,075
Tuition Aid Grant	83	\$348,758
Martin Luther King Scholarship	26	\$452,000
Disadvantaged Student Fund	496	\$669,035
<b>FEDERAL FUNDED LOANS<sup>1</sup></b>		
Direct Loan-Unsubsidized	3,243	\$63,122,403
Direct Loan-Subsidized	2,907	\$23,634,320
Direct Loan Graduate PLUS	762	\$12,737,311
Direct Loan-Subsidized Undergraduate	626	\$2,561,832
Direct Loan Parent PLUS Undergraduate	10	\$140,410
Graduate PLUS	505	\$6,918,681
Federal Perkins Loans	849	\$2,403,257
Loans for Disadvantaged Students	156	\$3,671,349
Primary Care Loan	4	\$34,500
Health Professions Student Loans	88	\$527,208
<b>FEDERAL FUNDED SCHOLARSHIP/GRANTS<sup>1</sup></b>		
Federal Work Study	175	\$408,597
Federal Pell Grant	197	\$607,910
Federal Supplemental Educational Opportunity Grant	136	\$35,238
Scholarship for Disadvantaged Students	192	\$590,569
Scholarship for Disadvantaged Students-ARRA	175	\$390,087
Advance Education Nursing Award	30	\$89,454
AmeriCorp Program	8	\$32,376
Armed Services Grants	20	\$457,803
Nurse Anesthetist Traineeship	19	\$22,639
Robert C. Byrd Honor Scholarship	1	\$1,500
<b>INSTITUTION FUNDED SCHOLARSHIP/GRANTS<sup>2</sup></b>		
Scholarships	576	\$3,018,577
Grants	32	\$125,100
Loans	190	\$2,480,356

1. The source of these funds is from both the Department of Education (Title IV Programs) and Department of Health and Human Services (Title VII programs)
2. These remaining funds are from sources other than Federal and State

Source: UMDNJ-Office of Financial Aid

**DEGREES AND CERTIFICATES AWARDED  
ACADEMIC YEAR 2009-2010**

<b>Degree</b>	<b>Total</b>	<b>Black</b>	<b>Hispanic</b>	<b>Asian</b>	<b>White</b>	<b>AI/AN*</b>	<b>NH/PI**</b>	<b>Unknown</b>
Doctor of Medicine	<b>319</b>	33	27	113	129	1	0	20
Doctor of Osteopathic Medicine	<b>100</b>	18	8	18	57	1	0	0
Doctor of Dental Medicine	<b>103</b>	5	7	42	50	1	0	0
Doctor of Clinical Nutrition	<b>5</b>	0	1	0	4	0	0	0
Doctor of Nursing Practice	<b>21</b>	4	2	1	14	0	0	1
Doctor of Physical Therapy	<b>89</b>	7	12	18	51	1	0	3
Doctor of Public Health	<b>1</b>	0	0	0	1	0	0	0
Doctor of Philosophy	<b>121</b>	6	11	48	50	2	0	4
Master's Degrees <sup>1</sup> /Post- Baccalaureate Certificates	<b>492</b>	86	39	131	211	2	0	36
Post-Master's / Post- Doctoral Certificates	<b>35</b>	4	2	11	19	0	0	1
Undergraduate Degrees <sup>2</sup> / Certificates	<b>397</b>	75	39	62	164	2	1	58
<b>TOTAL<sup>3</sup></b>	<b>1,683</b>	238	148	444	750	10	1	123

**Degrees and Certificates Awarded  
By Gender<sup>4</sup>**

<b>Men</b>	<b>Women</b>	<b>Total<sup>4</sup></b>
<b>548</b>	<b>1,123</b>	<b>1,671</b>

Note: Beginning in 2009 and following U.S. federal guidelines, students may self-identify in more than one racial category. Students who selected more than one category (N= 28) are included in each category reported. Thus, the numbers reported in each category are not directly comparable to the numbers reported prior to 2009.

- \* American Indian/Alaska Native
- \*\* Native Hawaiian/Other Pacific Islander

<sup>1</sup> Includes MS, Master, MSN, and MPH

<sup>2</sup> Includes AAS, AS, BS and BSN

<sup>3</sup> Duplicated Headcount

<sup>4</sup> Unduplicated Headcount

Source: University Graduation Statistics Report, AY 2009-2010 UMDNJ-Office of Institutional Research.

## **GRADUATION RATES**

The following tables provide historical data on student graduation rates by School/Program. Please note that these tables track groups of students (cohorts) entering together in the same academic or calendar year.

**GRADUATION RATE BY ENTERING COHORT  
AS OF JUNE 2010**

**NEW JERSEY MEDICAL SCHOOL - MD PROGRAM  
STUDENTS BEGINNING IN AY 2001-02 THROUGH AY 2005-06**

	Number in Beginning Cohort <sup>2</sup>	Number/Percent Graduated <sup>1</sup>									
		In Five Years		In Six Years		In Seven Years		In Eight Years		In Nine Years	
<b>2001-02</b>	170	158	92.9	159	93.5	162	95.3	165	97.1	166	97.6
<b>2002-03</b>	170	162	95.3	165	97.1	166	97.6				
<b>2003-04</b>	170	154	90.6	155	91.2	159	93.5				
<b>2004-05</b>	170	150	88.2	154	90.6						
<b>2005-06</b>	170 <sup>1</sup>	155	91.7								

<sup>1</sup>Percent graduated is an adjusted percent based on the number in the beginning cohort minus transfers to another medical program outside UMDNJ (one in 2005-06).

<sup>2</sup>The beginning cohort includes the following numbers of students in dual degree programs. These programs (MD/PhD, MD/MPH and MD/MBA) take longer to complete than the MD program:

Year	Total
2001-02	10
2002-03	7
2003-04	8
2004-05	16
2005-06	13

**GRADUATION RATE BY ENTERING COHORT  
AS OF JUNE 2010**

**ROBERT WOOD JOHNSON MEDICAL SCHOOL - MD PROGRAM  
STUDENTS BEGINNING IN AY 2001-02 THROUGH AY 2005-06**

	Number in Beginning Cohort <sup>2, 3</sup>	Number/Percent Graduated <sup>1</sup>									
		In Five Years		In Six Years		In Seven Years		In Eight Years		In Nine Years	
2001-02	153	140	91.5	144	94.1	147	96.1	149	97.4		
2002-03	153 <sup>1</sup>	129	88.4	137	93.8	140	95.9	142	94.0		
2003-04	151	138	91.4	143	94.7	146	96.7				
2004-05	156 <sup>1</sup>	143	92.3	144	92.9						
2005-06	156 <sup>1</sup>	139	89.8								

<sup>1</sup>Percent graduated is an adjusted percent based on the number in the beginning cohort minus transfers to another medical program outside UMDNJ (two in 2002-03, one in 2004-05 and one in 2005-06.)

<sup>2</sup>Numbers in beginning cohorts were revised in 2010 to include MD/MPH students previously reported separately (six in 2001-02, five in 2002-03, three in 2003-04, and three in 2004-05).

<sup>3</sup>The beginning cohorts include the following numbers of students in dual degree programs. These programs (MD/MPH, MD/MS, MD/PhD and MD/MBA) take longer to complete than the MD program:

Year	Total
2001-02	13
2002-03	9
2003-04	10
2004-05	10
2005-06	15

**GRADUATION RATE BY ENTERING COHORT  
AS OF JUNE 2010**

**SCHOOL OF OSTEOPATHIC MEDICINE - DO PROGRAM  
STUDENTS BEGINNING IN AY 2001-02 THROUGH AY 2005-06**

	Number in Beginning Cohort <sup>2</sup>	Number/Percent Graduated <sup>1</sup>									
		In Five Years		In Six Years		In Seven Years		In Eight Years		In Nine Years	
2001-02	87 <sup>1</sup>	81	94.2	83	96.5						
2002-03	87	81	93.1	83	95.4	83	95.4	83	95.4		
2003-04	95	91	95.8	92	96.8	93	97.9				
2004-05	96	88	91.7	92	95.8						
2005-06	99 <sup>1</sup>	89	91.8								

<sup>1</sup>Percent graduated is an adjusted percent based on the number beginning minus transfers to another medical program outside UMDNJ (one in 2001-02 and two in 2005-06).

<sup>2</sup>The beginning cohort includes the following numbers of students in dual degree programs. These programs (DO/MPS, DO/MS, DO/PhD, DO/MBS and DO/JD) take longer to complete than the DO program:

Year	Total
2001-02	2
2003-04	2
2004-05	6
2005-06	4

**GRADUATION RATE BY ENTERING COHORT  
AS OF JUNE 2010**

**NEW JERSEY DENTAL SCHOOL - DMD PROGRAM  
STUDENTS BEGINNING IN AY 2001-02 THROUGH AY 2005-06**

	Number in Beginning Cohort	Number/Percent Graduated									
		In Five Years		In Six Years		In Seven Years		In Eight Years		In Nine Years	
2001-02	78	70	89.7	71	91.0	71	91.0	72	92.3		
2002-03	83	79	95.2								
2003-04	79	74	93.7								
2004-05	82	73	89.0	74	90.2						
2005-06	89	78	87.6								

Note: The DMD program is normally four years in length but may be extended to five or six years depending on various circumstances (e.g., Five Year Program, repetition, etc.). Leaves of absence are not considered in the calculation of length of time.

**GRADUATION RATE BY ENTERING COHORT  
AS OF JUNE 2010**

**GRADUATE SCHOOL OF BIOMEDICAL SCIENCES - PHD PROGRAM  
DURATION: 7 YEARS  
STUDENTS BEGINNING IN AY 1999-00 THROUGH AY 2003-04**

	Number in Beginning Cohort <sup>1,2</sup>	Number/Percent Graduated <sup>3</sup>									
		In Seven Years		In Eight Years		In Nine Years		In Ten Years		In Eleven Years	
1999-00	64	50	78.1	55	85.9	55	85.9	55	85.9	57	89.1
2000-01 <sup>4</sup>	59	42	71.2	45	76.3						
2001-02 <sup>4</sup>	68	45	66.2	46	67.6	49	72.1				
2002-03	69	52	75.4	54	78.3						
2003-04	76	50	65.8								

<sup>1</sup>Number in beginning cohort includes students in dual-degree programs such as MD/PhD.

<sup>2</sup>Number in beginning cohort does not include students in the joint PhD program with Rutgers University whose advisor was a Rutgers faculty member.

<sup>3</sup>Total number graduated includes eight students with terminal master's degrees in 1999-2000, four in 2000-01, six in 2001-02, five in 2002-03 and one in 2003-04.

<sup>4</sup>Number in beginning cohort revised in 2009.

**GRADUATION RATE BY ENTERING COHORT  
AS OF JUNE 2010**

**SCHOOL OF PUBLIC HEALTH – MPH PROGRAM  
DURATION: 6 YEARS<sup>1</sup>  
STUDENTS BEGINNING IN AY 2000-01 THROUGH AY 2004-05**

	Number in Beginning Cohort <sup>2</sup>	Number/Percent Graduated									
		In Six Years		In Seven Years		In Eight Years		In Nine Years		In Ten Years	
<b>2000-01</b>	56	47	83.9	48	85.7	49	87.5	49	87.5	49	87.5
<b>2001-02</b>	106	85	80.2	88	83.0	89	84.0	89	84.0		
<b>2002-03</b>	95 <sup>3,4</sup>	70	73.7	73	76.8	73	76.8				
<b>2003-04</b>	67	54	80.6	55	82.1						
<b>2004-05</b>	79	63	79.7								

<sup>1</sup>The program duration was changed from five years to six years in 2007.

<sup>2</sup>Number in beginning cohort does not include students who completed less than 15 credit hours during the program's six-year usual duration.

<sup>3</sup>Does not include one deceased student.

<sup>4</sup>Includes one student who graduated with an MS degree.

**GRADUATION RATE BY ENTERING COHORT  
AS OF JUNE 2010**

**SCHOOL OF PUBLIC HEALTH – PHD AND DrPH PROGRAMS  
DURATION: 9 YEARS<sup>1</sup>  
STUDENTS BEGINNING IN AY 1997-98 THROUGH 2001-02**

	Number in Beginning Cohort	Number/Percent Graduated									
		In Nine Years		In Ten Years		In Eleven Years		In Twelve Years		In Thirteen Years	
1997-98	3	0	0.0	1	33.3						
1998-99 <sup>2</sup>	11	4	36.4	4	36.4	5	45.5	5	45.5		
1999-00 <sup>2</sup>	5	4	80.0	4	80.0	4	80.0				
2000-01	2	1	50.0	1	50.0						
2001-02	6	4	66.7								

<sup>1</sup>The program duration was changed from eight years to nine years in 2008.

<sup>2</sup>Includes two students who completed the MPH degree while enrolled in the PhD or DrPH program.

**GRADUATION RATE BY ENTERING COHORT  
AS OF JUNE 2010**

**SCHOOL OF NURSING – MSN PROGRAM  
DURATION: 6 YEARS<sup>1</sup>  
STUDENTS BEGINNING IN CALENDAR YEARS 2000 THROUGH 2004**

	Number in Beginning Cohort	Number/Percent Graduated									
		In Six Years		In Seven Years		In Eight Years		In Nine Years		In Ten Years	
2000	95	44	46.3	45	47.4	46	48.4	46	48.4	46	48.4
2001	83	37	44.6	39	47.0	41	49.4				
2002	62	38	61.3	38	61.3	38	61.3				
2003	79	53	67.1	55	69.6						
2004	122	77	63.1								

**SCHOOL OF NURSING  
SECOND BACHELOR'S DEGREE PROGRAM  
DURATION: 3 YEARS  
STUDENTS BEGINNING IN CALENDAR YEARS 2005 THROUGH 2007**

	Number in Beginning Cohort	Number/Percent Graduated									
		In Three Years		In Four Years		In Five Years		In Six Years		In Seven Years	
2005	135	116	85.9	116	85.9	117	86.7				
2006	154	130	84.4	130	84.4						
2007	162	137	84.6								

<sup>1</sup>The program duration was changed from five years to six years in 2007.

**GRADUATION RATE BY ENTERING COHORT  
AS OF JUNE 2010**

**SCHOOL OF HEALTH RELATED PROFESSIONS  
BIOMEDICAL INFORMATICS – MS PROGRAM  
DURATION FOR F/T STUDY 5 YEARS**

**STUDENTS BEGINNING IN CALENDAR YEARS 2001 THROUGH 2005**

	Number in Beginning Cohort <sup>1</sup>	Number/Percent Graduated									
		In Five Years		In Six Years		In Seven Years		In Eight Years		In Nine Years	
2001	44	28	63.6	30	68.2	30	68.2	30	68.2	30	68.2
2002	34 <sup>2</sup>	18	52.9	18	52.9	18	52.9	19	55.9		
2003	33	14	42.4	14	42.4	15	45.5				
2004	13	7	53.8	7	53.8						
2005	4	3	75.0								

**SCHOOL OF HEALTH RELATED PROFESSIONS  
CLINICAL NUTRITION – MS PROGRAM  
DURATION FOR F/T STUDY 5 YEARS**

**STUDENTS BEGINNING IN CALENDAR YEARS 2001 THROUGH 2005**

	Number in Beginning Cohort	Number/Percent Graduated									
		In Five Years		In Six Years		In Seven Years		In Eight Years		In Nine Years	
2001	5	4	80.0								
2002	5	5	100.0								
2003	17	10	58.8								
2004	24	14	58.3	19	79.2						
2005	20	7	35.0								

<sup>1</sup> Does not include students who transferred to the SHRP-Biomedical Informatics Ph.D. program (two in 2001).

<sup>2</sup> Number in beginning cohort changed in 2009 to omit one student who transferred to and graduated from the SHRP-Health Care Informatics certificate program.

**GRADUATION RATE BY ENTERING COHORT  
AS OF JUNE 2010**

**SCHOOL OF HEALTH RELATED PROFESSIONS  
CYTOTECHNOLOGY – BS AND CERTIFICATE PROGRAMS  
DURATION FOR F/T STUDY 3 YEARS**

**STUDENTS BEGINNING IN CALENDAR YEARS 2005<sup>1</sup> THROUGH 2007**

	Number in Beginning Cohort	Number/Percent Graduated									
		In Three Years		In Four Years		In Five Years		In Six Years		In Seven Years	
2005	10	10	100.0								
2006	10	10	100.0								
2007	10	8	80.0								

**SCHOOL OF HEALTH RELATED PROFESSIONS  
DENTAL ASSISTANT - CERTIFICATE PROGRAM  
DURATION FOR F/T STUDY 2 YEARS**

**STUDENTS BEGINNING IN CALENDAR YEARS 2004 THROUGH 2008**

	Number in Beginning Cohort	Number/Percent Graduated									
		In Two Years		In Three Years		In Four Years		In Five Years		In Six Years	
2004	8	7	87.5								
2005	10	8	80.0								
2006	19	13	68.4								
2007	12	6	50.0								
2008	14	12	85.7								

<sup>1</sup>The 2003 and 2004 cohorts are not reported because the reporting format has changed.

**GRADUATION RATE BY ENTERING COHORT  
AS OF JUNE 2010**

**SCHOOL OF HEALTH RELATED PROFESSIONS  
DENTAL HYGIENE – AAS PROGRAM  
DURATION FOR F/T STUDY 4 YEARS<sup>1</sup>**

**STUDENTS BEGINNING IN CALENDAR YEARS 2002 THROUGH 2006**

	Number in Beginning Cohort	Number/Percent Graduated									
		In Four Years		In Five Years		In Six Years		In Seven Years		In Eight Years	
2002	44	38	86.4	38	86.4	38	86.4	38	86.4	38	86.4
2003	36	30	83.3								
2004	30	23	76.7								
2005	38	31	81.6								
2006	43	32	74.4								

**SCHOOL OF HEALTH RELATED PROFESSIONS  
DIAGNOSTIC IMAGING TECHNOLOGIES – CERTIFICATE PROGRAM  
DURATION FOR F/T STUDY 3 YEARS**

**STUDENTS BEGINNING IN CALENDAR YEARS 2003 THROUGH 2007**

	Number in Beginning Cohort	Number/Percent Graduated									
		In Three Years		In Four Years		In Five Years		In Six Years		In Seven Years	
2003 <sup>2</sup>	6					2	33.3				
2004 <sup>2</sup>	4			0	0.0						
2005	3	0	0.0								
2006	7	0	0.0	0	0.0						
2007	11	0	0.0								

<sup>1</sup>The maximum program duration was changed from five years to four years in 2006.

<sup>2</sup>The 2003 and 2004 cohorts were first reported in 2008.

**GRADUATION RATE BY ENTERING COHORT  
AS OF JUNE 2010**

**SCHOOL OF HEALTH RELATED PROFESSIONS  
DIAGNOSTIC MEDICAL SONOGRAPHY – BS AND CERTIFICATE PROGRAM  
DURATION FOR F/T STUDY 3 YEARS**

**STUDENTS BEGINNING IN CALENDAR YEARS 2005<sup>1</sup> THROUGH 2007**

	Number in Beginning Cohort	Number/Percent Graduated									
		In Three Years		In Four Years		In Five Years		In Six Years		In Seven Years	
2005	15	14	98.3								
2006	14	9	64.3								
2007	16	14	87.5								

**SCHOOL OF HEALTH RELATED PROFESSIONS  
DIETETIC INTERNSHIP - CERTIFICATE PROGRAM  
DURATION FOR F/T STUDY 2 YEARS**

**STUDENTS BEGINNING IN CALENDAR YEARS 2004 THROUGH 2008**

	Number in Beginning Cohort	Number/Percent Graduated									
		In Two Years		In Three Years		In Four Years		In Five Years		In Six Years	
2004	15	14	93.3								
2005	16	16	100.0								
2006	14	14	100.0								
2007	15	15	100.0								
2008	16	15	93.8								

<sup>1</sup>The 2003 and 2004 cohorts are not reported because the reporting format has changed.

**GRADUATION RATE BY ENTERING COHORT  
AS OF JUNE 2010**

**SCHOOL OF HEALTH RELATED PROFESSIONS  
HEALTH SCIENCES - BS PROGRAM  
DURATION FOR F/T STUDY 8 YEARS**

**STUDENTS BEGINNING IN CALENDAR YEARS 1998 THROUGH 2002**

	Number in Beginning Cohort <sup>1</sup>	Number/Percent Graduated									
		In Eight Years		In Nine Years		In Ten Years		In Eleven Years		In Twelve Years	
1998 <sup>1</sup>	13			5	38.5	7	53.8				
1999	15	8	53.3	10	66.7	10	66.7	10	66.7		
2000	24	15	62.5	15	62.5	15	62.5				
2001	24	13	54.2	13	54.2						
2002	35	21	60.0								

**SCHOOL OF HEALTH RELATED PROFESSIONS  
MEDICAL LABORATORY SCIENCE – BS AND CERTIFICATE PROGRAMS  
DURATION FOR F/T STUDY 3 YEARS**

**STUDENTS BEGINNING IN CALENDAR YEARS 2005<sup>1</sup> THROUGH 2007**

	Number in Beginning Cohort <sup>2</sup>	Number/Percent Graduated									
		In Three Years		In Four Years		In Five Years		In Six Years		In Seven Years	
2005	13	11	84.6								
2006	22	17	77.3								
2007	27	27	100.0								

<sup>1</sup>The 1998 cohort was first reported in 2007.

<sup>2</sup>The 2003 and 2004 cohorts are not reported because the reporting format has changed.

**GRADUATION RATE BY ENTERING COHORT  
AS OF JUNE 2010**

**SCHOOL OF HEALTH RELATED PROFESSIONS  
NUCLEAR MEDICINE TECHNOLOGY – BS AND CERTIFICATE PROGRAM  
DURATION FOR F/T STUDY 2 YEARS**

**STUDENTS BEGINNING IN CALENDAR YEARS 2006<sup>1</sup> THROUGH 2008**

	Number in Beginning Cohort	Number/Percent Graduated									
		In Two Years		In Three Years		In Four Years		In Five Years		In Six Years	
2006	14	10	71.4	11	78.6						
2007	14	13	92.9								
2008	10	9	90.0								

**SCHOOL OF HEALTH RELATED PROFESSIONS  
PHYSICAL THERAPY SOUTH  
MASTER OF PHYSICAL THERAPY (MPT) PROGRAM<sup>2</sup>  
DURATION FOR F/T STUDY 5 YEARS**

**STUDENTS BEGINNING IN CALENDAR YEARS 2001 THROUGH 2005**

	Number in Beginning Cohort	Number/Percent Graduated									
		In Five Years		In Six Years		In Seven Years		In Eight Years		In Nine Years	
2001	9	9	100.0								
2002	20	16	80.0								
2003	13	11	84.6								
2004	11	8	72.7								
2005	9	8	88.9								

<sup>1</sup>The 2004 and 2005 cohorts are not reported because the reporting format has changed.

<sup>2</sup>This program became a DPT (Doctorate in Physical Therapy) program in June 2006. The last MPT cohort entered in the summer 2005 term.

**GRADUATION RATE BY ENTERING COHORT  
AS OF JUNE 2010**

**SCHOOL OF HEALTH RELATED PROFESSIONS  
PHYSICAL THERAPY NORTH  
DOCTOR OF PHYSICAL THERAPY (DPT) ENTRY-LEVEL PROGRAM  
DURATION FOR F/T STUDY 5 YEARS**

*STUDENTS BEGINNING IN CALENDAR YEARS 2001 THROUGH 2005*

	Number in Beginning Cohort	Number/Percent Graduated									
		In Five Years		In Six Years		In Seven Years		In Eight Years		In Nine Years	
2001	34	34	100.0								
2002	30	29	96.7								
2003	37	35	94.6								
2004	38	29	76.3								
2005	46	40	87.0								

**SCHOOL OF HEALTH RELATED PROFESSIONS  
PHYSICAL THERAPY NORTH  
DOCTOR OF PHYSICAL THERAPY (DPT) POST-PROFESSIONAL PROGRAM  
DURATION FOR F/T STUDY 8 YEARS**

*STUDENTS BEGINNING IN CALENDAR YEARS 2000 THROUGH 2002*

	Number in Beginning Cohort	Number/Percent Graduated									
		In Eight Years		In Nine Years		In Ten Years		In Eleven Years		In Twelve Years	
2000	29	28	96.6								
2001	44	40	90.9	40	90.9						
2002	48	46	95.8								

**GRADUATION RATE BY ENTERING COHORT  
AS OF JUNE 2010**

**SCHOOL OF HEALTH RELATED PROFESSIONS  
PHYSICIAN ASSISTANT – MS PROGRAM<sup>1</sup>  
DURATION FOR F/T STUDY 4 YEARS**

**STUDENTS BEGINNING IN CALENDAR YEARS 2002 THROUGH 2006**

	Number in Beginning Cohort	Number/Percent Graduated									
		In Four Years		In Five Years		In Six Years		In Seven Years		In Eight Years	
2002	50	41	82.0	41	82.0	41	82.0				
2003	53	47	88.7	49	92.5						
2004	54	44	81.5	44	81.5	45	83.3				
2005	44	39	88.6								
2006	35	28	80.0								

**SCHOOL OF HEALTH RELATED PROFESSIONS  
PSYCHIATRIC REHABILITATION - BS PROGRAM  
DURATION FOR F/T STUDY 8 YEARS**

**STUDENTS BEGINNING IN CALENDAR YEARS 1998 THROUGH 2002**

	Number in Beginning Cohort	Number/Percent Graduated									
		In Eight Years		In Nine Years		In Ten Years		In Eleven Years		In Twelve Years	
1998 <sup>2</sup>	18			11	61.1						
1999	14	4	28.6								
2000	9	5	55.6	5	55.6	5	55.6				
2001	13	11	84.6	11	84.6						
2002	22	14	63.6								

<sup>1</sup>The program duration was changed from three years to four years in 2006.

<sup>2</sup>The 1998 cohort was first reported in 2007.

**GRADUATION RATE BY ENTERING COHORT  
AS OF JUNE 2010**

**SCHOOL OF HEALTH RELATED PROFESSIONS  
PSYCHOSOCIAL REHABILITATION – AS PROGRAM  
DURATION FOR F/T STUDY 4 YEARS<sup>1</sup>**

**STUDENTS BEGINNING IN CALENDAR YEARS 2002 THROUGH 2006**

	Number in Beginning Cohort	Number/Percent Graduated									
		In Four Years		In Five Years		In Six Years		In Seven Years		In Eight Years	
2002	17 <sup>2</sup>	6	35.3	6	35.3	6	35.3	6	35.3	6	35.3
2003	33 <sup>3</sup>	10	30.3	11	33.3	11	33.3	11	33.3		
2004	7	5	71.4								
2005	7	4	57.1								
2006	13 <sup>3</sup>	5	38.5								

<sup>1</sup> The program duration was changed from five years to four years in 2006.

<sup>2</sup> Two additional students transferred to the SHRP Psychiatric Rehabilitation and Psychology BS program.

<sup>3</sup> One additional student transferred to the SHRP Psychiatric Rehabilitation and Psychology BS program.

**GRADUATION RATE BY ENTERING COHORT  
AS OF JUNE 2010**

**SCHOOL OF HEALTH RELATED PROFESSIONS  
RESPIRATORY THERAPIST – AAS PROGRAM – SOUTH  
DURATION FOR F/T STUDY 4 YEARS<sup>1</sup>**

**STUDENTS BEGINNING IN CALENDAR YEARS 2002 THROUGH 2006**

	Number in Beginning Cohort	Number/Percent Graduated									
		In Four Years		In Five Years		In Six Years		In Seven Years		In Eight Years	
2002	19	11	57.9	12	63.2						
2003	16	10	62.5								
2004	20 <sup>2</sup>	13	65.0								
2005	23	19	82.6								
2006	25	17	68.0								

**SCHOOL OF HEALTH RELATED PROFESSIONS  
RESPIRATORY THERAPIST – AS PROGRAM – NORTH  
DURATION FOR F/T STUDY 4 YEARS<sup>1</sup>**

**STUDENTS BEGINNING IN CALENDAR YEARS 2002 THROUGH 2006**

	Number in Beginning Cohort	Number/Percent Graduated									
		In Four Years		In Five Years		In Six Years		In Seven Years		In Eight Years	
2002	18	7	38.9								
2003	16	9	56.3								
2004	25	16	64.0								
2005	35	21	60.0								
2006	41	20	48.8								

<sup>1</sup> The program duration was changed from three years to four years in 2006.

<sup>2</sup> Does not include one student who transferred to the SHRP Allied Health Technologies BS Program.

**GRADUATION RATE BY ENTERING COHORT  
AS OF JUNE 2010**

**SCHOOL OF HEALTH RELATED PROFESSIONS  
VASCULAR TECHNOLOGY – BS AND CERTIFICATE PROGRAMS  
DURATION FOR F/T STUDY 2 YEARS**

**STUDENTS BEGINNING IN CALENDAR YEARS 2006<sup>1</sup> THROUGH 2008**

	Number in Beginning Cohort	Number/Percent Graduated									
		In Two Years		In Three Years		In Four Years		In Five Years		In Six Years	
2006	9	8	88.0	9	100.0						
2007	13	13	100.0								
2008	7	6	85.7								

<sup>1</sup>The 2004 and 2005 cohorts are not reported because the reporting format changed,

**2010 UMDNJ MEDICAL GRADUATES PLACED IN  
FIRST-YEAR HOUSESTAFF PROGRAMS  
As of June 20, 2011**

UMDNJ School	Number Seeking Placement	Percent Placed in the Match	Percent Placed Outside the Match	Number (Percent) Placed	Number Not Placed
NJMS	177 <sup>1</sup>	93.8	6.2	177 (100.0)	0
RWJMS-NB/P	98 <sup>2</sup>	98.0	2.0	98 (100.0)	0
RWJMS-C	57 <sup>3</sup>	93.0	7.0	57 (100.0)	0
SOM	108	79.6	20.4	108 (100.0)	0
<b>TOTAL</b>	<b>440</b>	<b>91.1</b>	<b>8.9</b>	<b>440 (100.0)</b>	<b>0</b>

UMDNJ School	Number (Percent) Placed in NJ Programs	Number (Percent) Placed in UMDNJ Programs	Percent Placed in Primary Care Programs †	Percent Placed in Specialty Programs	Percent Placed in Trans/Trad. Rotating Prog. ††
NJMS	63 (35.6)	48 (27.1)	40.1	57.6	2.3
RWJMS-NB/P	23 (23.5)	11 (11.2)	31.6	61.2	7.1
RWJMS-C	11 (19.3)	9 (15.8)	40.4	54.4	5.3
SOM	50 (46.3)	28 (25.9)	58.3	25.9	15.7
<b>TOTAL</b>	<b>147 (33.4)</b>	<b>96 (21.8)</b>			

Note: Numbers may not add due to rounding.

† Primary care includes internal medicine, family medicine, pediatrics and OB/GYN programs.

†† Osteopathic traditional (rotating) internships are considered primary care within the osteopathic profession. Some of the transitional placements hold a commitment for a second-year placement in a specialty.

<sup>1</sup>Four additional graduates did not participate in the match. One will enter a one-year general surgery residency as part of the NJMS oral and maxillofacial surgery program; two are deferring residency this year; and one is pursuing research.

<sup>2</sup>Two additional graduates did not participate in the match because they are delaying their postgraduate training.

<sup>3</sup>One additional graduate did not participate in the match because he is delaying his postgraduate training.

Source: 2011 Report on Medical/Dental Intern and Resident Placements of UMDNJ Graduates and Recruitment into UMDNJ-Sponsored Housestaff Programs, UMDNJ-Office of Institutional Research, revised June 20, 2011

**2010 UMDNJ DENTAL GRADUATES PLACED IN  
GRADUATE DENTAL EDUCATION PROGRAMS  
As of April 5, 2011**

UMDNJ School	Number Seeking Placement in a Graduate Dental Education Program	Number (Percent) Placed	Number Not Placed
<b>NJDS</b>	76 <sup>†</sup>	76 (100.0)	0

UMDNJ School	Number (Percent) Placed in NJ Programs	Number (Percent) Placed in UMDNJ-Sponsored Programs	Percent Placed in General Practice Programs	Percent Placed in Specialty Programs
<b>NJDS</b>	35 (46.1)	6 (7.9)	80.3	19.7

Note: Data as of April 5, 2011

†Twenty-five additional graduates did not seek placement in a graduate dental education program. Twenty-one plan to enter practice, one is entering the U.S. Army, one is entering the U.S. Navy, and two are deferring placement this year.

Source: 2011 Report on Medical/Dental Intern and Resident Placements of UMDNJ Graduates and Recruitment into UMDNJ-Sponsored Housestaff Programs, UMDNJ-Office of Institutional Research.

**POSTDOCTORAL APPOINTEES, 2010-2011\***

<b>School</b>	<b>Number</b>
New Jersey Medical School	87
Robert Wood Johnson Medical School	76
School of Osteopathic Medicine	1
New Jersey Dental School	4
School of Health Related Professions	7
<b>Total</b>	<b>175</b>

\* As of October 1, 2010

Source: Enrollment Statistics Report, Fall 2010 UMDNJ-Office of the University Registrar.



**PROFILE OF FACULTY, STAFF, INTERNS & RESIDENTS**

Faculty

Paid Faculty, AY 2010-11 .....	99
Master Educators.....	100
Endowed Chairs.....	105
Medical & Dental Interns, Residents and Fellows.....	109
Non-Faculty Employees.....	116

## UMDNJ FACULTY Academic Year 2010 - 2011

SCHOOL	Paid Faculty*				Volunteer Faculty**		
	Tenured	Tenure Track	Non-Tenured	Total	Male	Female	Total
New Jersey Medical School	143	55	568	766	477	289	766
Robert Wood Johnson Medical School	143	72	908	1,123	654	469	1,123
School of Osteopathic Medicine	22	11	192	225	126	99	225
New Jersey Dental School	29	8	162	199	155	44	199
School of Health Related Professions	12	11	386	409	125	284	409
School of Nursing	6	11	122	139	11	128	139
School of Public Health	12	13	50	75	36	39	75
<b>UMDNJ Total</b>	<b>367</b>	<b>181</b>	<b>2,388</b>	<b>2,936</b>	<b>1,584</b>	<b>1,352</b>	<b>2,936</b>

Note: Faculty of the Graduate School of Biomedical Sciences hold appointments in the medical or dental schools.

\*Includes 100% coterminous faculty

\*\*Duplicated Headcount (unduplicated headcount = 4,201)

Source: UMDNJ Annual Faculty Data Report, Academic Year 2010-2011  
Data as of October 1, 2010

## **MASTER EDUCATORS' PROGRAM AT UMDNJ**

### **BACKGROUND**

**Purpose:** Educating future health care providers and researchers is a key mission of the University. However, faculty members more often garner greater recognition on a school wide, national and international basis from their research and clinical accomplishments than from their excellence as educators. Although the importance of innovative, effective teachers is being recognized by a broader audience today than in the recent past, the master teacher's accomplishments are typically subordinated to research and clinical achievements in promotion and tenure decisions at this university as well as at others.

To emphasize the value placed upon faculty excellence in teaching, consistent with the University's strategic goals, Stuart D. Cook, MD formally proposed the UMDNJ Master Educators' Program at his inauguration as the second President of UMDNJ on April 9, 1999. Shortly thereafter, a University-wide committee chaired by the Dean of the UMDNJ-School of Health Related Professions (SHRP) was convened to outline the scope of the program and the general criteria to be employed in selecting Master Educators throughout the Schools of the University. The committee recommended the creation of a UMDNJ Master Educators' Guild, with the vision to enhance the University's goal of excellence in education throughout its Schools and to provide leadership in the continuous improvement of the teaching/learning continuum of the University's educational mission. In June 2004, the Guild was officially named the Stuart D. Cook, M.D. Master Educators' Guild, in honor of its founder. Six years later, in 2010, a Master Educators Guild permanent office was dedicated in the President's suite of the Bergen Building in Newark. Also inaugurated at this time were "Focus Groups" with UMDNJ President William F. Owen, Jr., M.D. Periodically the President, his executive staff and the leadership of the Guild meet to discuss global issues of education and how the Guild can effectively contribute to the educational mission of all eight schools.

The Stuart D. Cook, M.D. Master Educator Award elects those faculty as members who have demonstrated a long history of commitment to excellence in education and who have a proven track record of recognition as a skilled educator. Guild membership moves beyond the concept of excellence in teaching to the more global concept of education, which includes the considerations of learning and teaching styles, and of the broad range of settings (basic science lab, ambulatory clinic, in-patient unit, class room, etc.) in which education occurs at UMDNJ. Toward this purpose, the recipients of the Stuart D. Cook, M.D. Master Educator Award collaborate with each other to continuously examine and improve the educational venues at UMDNJ, not only for the learners at each of the eight schools, but also for junior faculty. Through a formal structure and bylaws that were first approved in September 2001 and revised in 2005, the Guild provides a stable foundation for the Master Educators to address educational needs throughout the Schools of UMDNJ and to share their expertise with educators in health sciences venues here as well as nationally and internationally. For example, in 2010 Muralidhar Mupparapu, DMD, who recently completed a two year term as Guild treasurer brought his educational skills to Thailand as a Fullbright scholar and assisted in the educational effort of dentists who educate and practice there.

**Criteria:** Faculty proposed for Master Educator designation must demonstrate:

- Exceptional teaching skills in either a traditional modality of education (lecture, laboratory or clinical teaching) or an alternative form of teaching such as web-based education or another form of distance learning.
- Creativity in curricular design or innovation in the delivery of education to students; currency in knowledge.
- The requisite level of scholarship.
- Efficiency and effectiveness in teaching.
- The ability to engender enthusiasm among students, such that they are motivated to master the relevant subject matter or clinical competency.
- High regard as an excellent educator by his/her peers.

At the beginning of academic year 2010-2011, the MEG membership process was finalized so it is now congruent across the schools and was initiated during this year. One candidate is selected by each school and the application portfolio is reviewed by the MEG executive Board and forwarded to the Administration for final approval.

In September 2000, the first class of twelve Master Educators were selected and inducted into the Master Educators' Guild. Additional classes have been inducted annually, with a current total of 70 members from the eight Schools of the University. The Guild members are a diverse group of educators in regard to their professional background and focus. As well, not only clinical and research faculty are inducted. In 2006 the first librarian was inducted into the Guild because of the unique teaching skills she contributed to the educational mission of the University. The MEG leadership consists of five officers and eight members at large, with one member representing each school. The Guild leadership for 2010-2011 was:

President: Dr. Elaine Diegmann (SN)  
 VP for Finance: Dr. Asha Samant (NJDS)  
 Secretary: Dr. Nancy Kirsch (SHRP)  
 Past President: Dr. Gloria Bachman (RWJMS)

***At-Large Members:***

GSBS: Dr. Céline Gélinas  
 NJDS: Dr. Louis DiPede  
 NJMS: Dr. Marian Passannante  
 RWJMS: Dr. Stephen Moorman  
 SHRP: Dr. Barbara Gladson  
 SN: Dr. Ginette Lange  
 SPH: Dr. Bernadette West  
 SOM: Dr. Anita Chopra

**ACCOMPLISHMENTS - UPDATE:**

The Guild was actively engaged in several ongoing projects as well as new accomplishments during this past academic year. These projects are described below.

**Educational research grants**

No Educational Research grants were awarded this year. The MEG is still in the planning phase of developing criteria for an international visiting scholar's program. The aim of this program is to select through a competitive application process qualified educators from developing countries who will benefit from a 3-4 week fellowship at one or more of the UMDNJ campuses – Newark, New Brunswick and Stratford. The MEG believes that this program will promote effective teaching methodologies via a direct one-on-one mentorship program at UMDNJ campuses, which should ultimately increase the pool of effective teachers in the participants' respective country. Effective teaching in the classroom, by remote access, basic science lab and a group setting, will be emphasized. Use of technology for effective teaching also will be introduced. The overall goal of this program continues to be to prepare the participant to become a leader-educator in their chosen field. The MEG expects that these leader-educators will return to their countries and continue the mission and goals of the Master Educators Guild of UMDNJ.

**Office hours**

With the dedication of the new MEG office space in the Presidential suite, Guild members have been using the space to mentor not only students, but also junior faculty. The space is also used for leadership and planning meetings by the MEG officers. The first official use of the space was at the ribbon cutting ceremony on January 26, 2010. The office was also part of the festivities for the Welcoming Reception for the First Visiting Professor in February 2011. A strategic plan to determine how to use the space more effectively and to arrange for a more organized physical presence at the office is being planned for A.Y. 2011-2012.

**Online Resource Center for Professionalism and Academic Integrity**

The Guild continues to be involved in an Online Resource Center for Professionalism and Academic Integrity. The overall goal of the Resource Center is to promote academic integrity and professionalism both within and outside the UMDNJ community via the online provision of appropriate information resources and training. This is a work in progress and will be reviewed during the next academic year.

**University life**

The Guild is also involved in other aspects of University life in which professionalism and academic integrity issues are voiced. This year, the MEG secretary met with the newly formed Student Senate to discuss their needs and suggestions for topics for future education sessions/symposiums. The MEG membership is planning to review each school's compliance in regard to teaching integrity, and several members will work on reviving this initiative in each of the schools for AY 2011-2012.

**Master Educator's Website (<http://meg.umdj.edu>)**

The website provides Guild members online access to documents and minutes pertaining to the operation and structure of the Guild. It also serves as a forum for its members to share ideas related to promoting excellence in teaching. This site is undergoing revisions.

**Online Center for Excellence in Health Sciences Education and Teaching**

(<http://cte.umdj.edu>) This center was one of the formats the Guild used to promote educational excellence through the innovative use of information technologies. The Center was established and funded through the University's Educational Technology

Mini-Grant Program. The Center is in the process of revision and transfer to an updated user friendly program. When the work on the site has been completed, it is hoped that the Center will continue to fulfill its three primary goals: to support, promote and enhance School and University-wide faculty development, furthering collaboration across the University by overcoming the barriers of time and place; to serve as a comprehensive resource center for the health sciences teaching community at large, projecting the University's educational expertise outward to the worldwide Internet community; and to provide a "virtual home" for the Master Educators' Guild. The Center was officially launched on University Day (2004). Once the Center's website has been totally revamped, it's function and purpose will be clarified, and activities will be planned and made available.

### ***Faculty Mentoring Initiative***

Academic mentoring is an ongoing initiative of the Guild, since a fundamental principle of the Guild is that an organized system of mentoring promotes educational improvement of all faculty members, especially junior faculty. The Guild will provide information about and access to faculty mentorship through its Online Center once it has been updated and made accessible to all university faculty. Early in its history, the Guild developed some basic guidelines that provided an overview of some mentoring models, including the roles and responsibilities of both mentors and mentees.

This year, focus groups were convened on each of the three campuses facilitated by UMDNJ Provost and Executive Vice President, Denise Rodgers, MD. These meetings focused on identifying the educational needs and frustrations of junior faculty. Each campus had different issues, but a common theme was a discussion of technology and how the University can update its technological options to be more competitive. The Guild will work on developing and addressing ways to strengthen the mentoring process for young faculty at this institution.

### ***The First Visiting Professorship***

This year (2010-2011) the Guild sponsored its first Annual Visiting Professorship. Dr Margaret Rees, Reader in Reproductive medicine, Nuffield Department of Obstetrics and Gynecology, University of Oxford, Oxford England. Dr Rees was with us from February 7 to 10, 2011. She presented at each of the three campuses. Her presentation was titled: "Research Publication Ethics: What to do and What not to do". Dr. Rees also did a special presentation on February 9<sup>th</sup> to the Postdoctoral students on the Piscataway campus titled: "Mentoring, Publication and Career Development: a Practical Guide". The week was a success. This special event took the place of the annual 2011 spring symposium. Since 2002, the Guild has sponsored a series of annual symposia open to all faculty of the University on timely topics in the sphere of education. Each of the symposia featured distinguished speakers as well as workshops, demonstrations, discussion groups or poster sessions led by Master Educators and other faculty members. A symposium is being planned for Spring 2012. The place and the theme have not been decided as yet.

### ***Annual University Day Induction of New Guild Members***

University Day is not only a day when the University celebrates its accomplishments in research, clinical care and education, but also a time when new members of the Guild are officially inducted. In 2010 new Guild members were again introduced by a student or a colleague who made a few comments about the faculty's dedication to education and the profession, and the reason why the faculty member was chosen for induction

into the Guild. In 2010, seven faculty members were inducted into the Guild. The new MEG members are:

Pamela M. Basehore EdD, MPH  
Assistant Professor of Medicine and Associate Director of Education  
New Jersey Institute for Successful Aging  
UMDNJ School of Osteopathic Medicine

Howard Drew, DMD  
Clinical Associate Professor, Periodontics  
UMDNJ New Dental School

Stephen Garrett, PhD  
Associate Professor  
Department of Microbiology and Molecular Genetics  
UMDNJ Graduate School of Biomedical Sciences at New Jersey Medical School

Sarang Kim, MD  
Clinical Assistant Professor of Medicine  
Associate Clerkship Director  
Division of General Internal Medicine  
UMDNJ Robert Wood Johnson Medical School

Neil Kothari, MD, FACP  
Assistant Professor of Medicine  
UMDNJ New Jersey Medical School

James H. Millonig, PhD  
Associate Professor  
Department of Neuroscience and Cell Biology  
UMDNJ Robert Wood Johnson Medical School  
Resident Faculty Member Center for Advanced Biotechnology and Medicine

Dula F. Pacquiao, EdD, RN, CTN  
Professor and Director  
Stanley S. Bergen Center for Multicultural Education, Research and Practice  
UMDNJ School of Nursing

***Educational Grand Rounds in conjunction with University Day***

Beginning in 2003, the Master Educators' Guild instituted another innovative approach to the attainment of its mission: Educational Grand Rounds during the annual University Day program in September. The 2010 educational program featured Mel L. Kantor, DDS, MPH, PhD, Hunterdon Professor of Dental Public Health, UMDNJ New Jersey Dental School and School of Public Health, whose talk was entitled, "Evidence-based Healthcare Education."

## **ENDOWED CHAIRS**

### **UMDNJ-NEW JERSEY MEDICAL SCHOOL**

Wesley J. Howe Chair in Trauma Surgery (1987)  
Department of Surgery  
*David Livingston, MD*

Harris L. Willits Chair in Urology (1987)  
Department of Surgery  
*Mark L. Jordan, MD*

Francois-Xavier Bagnoud Chair in Pediatric Allergy (1990)  
Department of Pediatrics  
*James M. Oleske, MD*

Ledyard H. Pfund Chair in Medicine (1993)  
*Dorothy Vatner, MD*

UMDNJ Endowed Professor of Geriatric Medicine (1994)  
*(Vacant)*

UMDNJ Endowed Professor of Emerging and Re-Emerging Infectious Diseases  
(1998)  
*(Vacant)*

Ruth Dunietz Kushner and Michael Jay Serwitz Chair in Multiple Sclerosis (1999)  
*Stuart D. Cook, MD*

Frederick F. Buechel, M.D. Chair for Joint Replacement (2003)  
*(Vacant)*

Rena Warshow Chair in Multiple Sclerosis (2003)  
*Teresa L. Wood, PhD*

The Sharon L. and Joseph Muscarelle Endowed Dean (2005)  
*Robert L. Johnson, MD*

The Thomas P. Infusino Endowed Chair (2005)  
*Andrew P. Thomas, PhD*

The Alphonse A. Cinotti, MD/Lions Eye Research Chair  
*Marco A. Zarbin, MD, PhD*

## UMDNJ-NEW JERSEY DENTAL SCHOOL

Robert and Susan Carmel Chair in Algesiology (1995)  
*Eli Eliav, DMD, MSc, PhD*

UMDNJ Endowed Professor of Community Health (1993)  
*(Vacant)*

UMDNJ Endowed Professor of Dental Public Health (2000) *(jointly with SPH)*  
*(Vacant)*

## UMDNJ-ROBERT WOOD JOHNSON MEDICAL SCHOOL

John G. Detwiler Professor of Cardiology (1985)  
Department of Medicine  
*John B. Kostis, MD*

William H. Conzen Chair in Clinical Pharmacology (1987)  
CABM (Center for Advanced Biotechnology and Medicine)  
*(Vacant)*

UMDNJ Endowed Professor of Public Health (1988)  
*George Rhoads, MD, MPH*

William Dow Lovett Chair in Neurology (1990)  
Department of Neurology  
*Mary Maral Mouradian, MD*

Richard C. Reynolds Chair in General Internal Medicine (1996)  
Department of Medicine  
*Jeffrey L. Carson, MD*

Philip D. Gilbert Chair in Radiology (1997)  
Department of Radiology-Camden  
*(Vacant)*

The Laura Gallagher Chair in Developmental Biology at the Child Health Institute of New Jersey (2000)  
*Arnold B. Rabson, MD*

The Unilever Chair for the Study of Diet and Nutrition in the Prevention of Chronic Diseases at the Cancer Institute of New Jersey (2000)  
*(Vacant)*

The Harold L. Paz, M.D. Chair in Developmental Biology at the Child Health Institute of New Jersey (2000)  
*(Vacant)*

Melvyn and Ab Motolinsky Chair in Medicine for Hematology (2000)  
Department of Medicine  
*(Vacant)*

Takara Endowed Chair in Bioinformatics (2001)  
Department of Biochemistry  
*Masayori Inouye, PhD*

The James W. Mackenzie, M.D. Chair in Surgery (2001)  
*Peter Scholz, MD*

Norman and Ruth H. Rosenberg Chair in Vascular Surgery (2002)  
Department of Surgery  
*Alan M. Graham, MD.*

Richard Harvey Professorship in Innovative Teaching (2002)  
*Stephen F. Lowry, MD*

Norman Edelman Professorship in Bioinformatics (2002)  
Department of Pharmacology  
*William J. Welsh, PhD*

Thomas Strax, MD/JFK Johnson Rehabilitation Institute Professorship (2004)  
*(Vacant)*

Merck Research Laboratories Professorship in Clinical Pharmacology (2004)  
*(Vacant)*

UMDNJ Endowed Professor of Community Health and Health Policy (2006)  
*Eric G. Jahn, MD*

Janis and Gary Grover Endowed Professor in Physiology and Biophysics  
*(Vacant)*

## **UMDNJ-SCHOOL OF OSTEOPATHIC MEDICINE**

UMDNJ Endowed Professor of Gerontology (1991)  
*Rachel A. Pruchno, PhD*

Osteopathic Heritage Endowed Chair for Primary Care Research (2005)  
*Thomas Cavalieri, DO*

## **UMDNJ-SCHOOL OF NURSING**

Francois-Xavier Bagnoud Chair in Community Pediatric Nursing  
*(Vacant)*

UMDNJ Endowed Professor of Oncology (2004)  
*(Vacant)*

## **UMDNJ-SCHOOL OF PUBLIC HEALTH**

UMDNJ Endowed Professor of Dental Public Health (2000) *(jointly with NJDS)*  
*(Vacant)*

## **UMDNJ-SCHOOL OF HEALTH RELATED PROFESSIONS**

UMDNJ Endowed Professor of Complementary and Alternative Medicine (2002)  
*(Vacant)*

**MEDICAL AND DENTAL INTERNS, RESIDENTS AND FELLOWS**

**HOUSESTAFF TOTALS BY SCHOOL, 2010-2011**

<b>School</b>	<b>Number of Housestaff</b>
New Jersey Medical School	578
Robert Wood Johnson Medical School	432
School of Osteopathic Medicine	258
New Jersey Dental School	23
<b>Total</b>	<b>1,291</b>

Source: Survey of UMDNJ GME and GDE Programs and Housestaff, UMDNJ-Office of Institutional Research. Data as of September 1, 2010

**HOUSESTAFF TOTALS BY PROGRAM, 2010-2011****UMDNJ-NEW JERSEY MEDICAL SCHOOL**

<b>Program</b>	<b>Total Housestaff</b>
Allergy/Immunology	5
Anesthesiology	27
Cardiology	10
Child Psychiatry	4
Dermatology	6
Dermatopathology	1
Diagnostic Radiology	18
Emergency Medicine	24
Endocrinology	2
Gastroenterology	9
Geriatrics	1
Hepatology	3
Infectious Diseases	6
Internal Medicine-Pediatrics	15
Medicine	110
Nephrology	6
Neurology	16
Neurology-Pediatric	3
Neuromuscular Medicine	1
Neurosurgery	12
Neurosurgery-Endovascular Neuroradiology	2
OB/GYN	24
OB/GYN-Maternal Fetal Medicine	2
OB/GYN-Reproductive Endocrinology & Infertility	3
Ophthalmology	15
Orthopedics	27
Orthopedics-Hand Surgery	1
Otolaryngology	10
Pathology	13
Pediatrics	49
Pediatrics-Infectious Diseases	3
Pediatrics-Medical Genetics	1
Plastic Surgery	4
Physical Medicine & Rehabilitation	28
PM&R-Musculoskeletal Medicine	3
PM&R-Pediatric	1
PM&R-Spinal Cord Injury Medicine	1
PM&R-Traumatic Brain Injury	1
Podiatry	6
Psychiatry	28

**UMDNJ-NEW JERSEY MEDICAL SCHOOL (Continued)**

<b>Program</b>	<b>Total Housestaff</b>
Pulmonary Critical Care	9
Surgery	55
Trauma	2
Urology	8
Vascular Surgery	3
<b>Total</b>	<b>578</b>

Percent American Medical Graduates = 67.0%

Source: Survey of UMDNJ GME and GDE Programs and Housestaff, UMDNJ-Office of Institutional Research. Data as of September 1, 2010

**HOUSESTAFF TOTALS BY PROGRAM, 2010-2011****UMDNJ-ROBERT WOOD JOHNSON MEDICAL SCHOOL**

<b>Program</b>	<b>Total Housestaff</b>
Anesthesiology	32
Anesthesiology-Cardiac	1
Anesthesiology-Pain Management	2
Cardiology	11
Cardiology-Interventional	1
Cardiology-Congestive Heart Failure	0
Colon-Rectal Surgery	3
Cranio-Facial Surgery	0
Dermatology	3
Emergency Medicine	7
Endocrinology	4
Family Practice	41
FP/Geriatric Medicine	3
FP/Sports Medicine	1
Gastroenterology	6
Health Policy	1
Hematology/Oncology	11
Infectious Diseases	4
Internal Medicine	72
Neonatal/Perinatal Medicine	8
Nephrology	4
Neurology	8
OB/GYN	19
OB/GYN-Maternal/Fetal	1
Orthopaedics	18
Pathology	9
Pathology/Hematology	1
Pediatric Critical Care	2
Pediatric Hematology/Oncology	1
Pediatrics	33
Preventive Medicine/Occupational Medicine	4
Psychiatry	22
Psychiatry-Child	7
Psychiatry-Forensic	2
Psychiatry-Geriatric	0

**UMDNJ-ROBERT WOOD JOHNSON MEDICAL SCHOOL (Continued)**

<b>Program</b>	<b>Total Housestaff</b>
Pulmonary Critical Care	6
Radiology/Diagnostic	20
Radiology/Oncology	7
Radiology-Interventional	0
Rheumatology	2
Surgery	43
Surgery-Breast	1
Thoracic Surgery	1
Urology	8
Vascular Surgery	2
<b>Total</b>	<b>432</b>

Percent American Medical Graduates = 77.3%

Source: Survey of UMDNJ GME and GDE Programs and Housestaff, UMDNJ-Office of Institutional Research. Data as of September 1, 2010

**HOUSESTAFF TOTALS BY PROGRAM, 2010-2011**

**UMDNJ-SCHOOL OF OSTEOPATHIC MEDICINE**

<b>Program</b>	<b>Total Housestaff</b>
Bariatric*	1
Cardiology	10
Critical Care	3
Emergency Medicine	25
Endocrinology	1
Family Medicine	33
Gastroenterology	3
Geriatrics (FM)	0
Geriatrics (IM)	0
Geriatrics (Psych)	1
IM/Emergency Medicine	10
Infectious Diseases	3
Internal Medicine	45
Internship (Traditional Rotating)	25
Nephrology	4
OB/GYN	11
Osteopathic Manipulative Medicine/ Neuromusculoskeletal Medicine	2
Oncology	0
Orthopedics	21
Otolaryngology	8
Psychiatry	13
Psychiatry-Child	1
Pulmonary Critical Care	4
Sleep Medicine	1
Surgery	25
Urology	8
<b>Total</b>	<b>258</b>

Percent American Medical Graduates = 100.0%

\*New program starting 2010-2011 (first fellow started 8/9/10)

Source: Survey of UMDNJ GME and GDE Programs and Housestaff, UMDNJ-Office of Institutional Research. Data as of September 1, 2010

**RESIDENT TOTALS BY PROGRAM, 2010-2011**

**UMDNJ-NEW JERSEY DENTAL SCHOOL**

<b>Program</b>	<b>Total Housestaff</b>
Dentistry-General Practice	6
Dentistry-Oral/Maxillofacial Surgery	11
Dentistry-Pediatric	6
<b>Total</b>	<b>23</b>

Percent American Medical Graduates = 100.0%

Source: Survey of UMDNJ GME and GDE Programs and Housestaff, UMDNJ-Office of Institutional Research. Data as of September 1, 2010

**NON-FACULTY FULL- AND PART-TIME EMPLOYEES**  
(As of July 1, 2011)

<b>Job Category</b>	<b>Total</b>	<b>% Amer. Ind./ Alas. Nat.</b>	<b>% Asian</b>	<b>% Black</b>	<b>% Hisp.</b>	<b>% Other*</b>	<b>% White</b>	<b>% Women</b>	<b>% Men</b>
Executive/Administrative/ Managerial	826	0.2	7.4	21.7	5.1	1.5	64.2	60.7	39.3
Professional Non-Faculty	5,979	0.1	26.1	21.3	6.7	1.4	44.4	69.6	30.4
Secretarial/Clerical	1,933	0.2	5.7	46.8	16.5	1.3	29.5	86.9	13.1
Technical/ Para-Professional	1,848	0.1	12.8	39.4	12.1	1.5	34.0	67.9	32.1
Skilled Crafts	201	0.4	8.0	36.3	15.4	0.0	39.8	2.5	97.5
Service/Maintenance	799	0.5	4.5	58.9	15.4	1.4	19.4	49.6	50.4
<b>Total All Categories</b>	<b>11,586</b>	<b>0.2</b>	<b>17.5</b>	<b>31.3</b>	<b>9.8</b>	<b>1.4</b>	<b>39.9</b>	<b>69.0</b>	<b>31.0</b>

Note: Does not include student assistants and graduate students (N=787).

\*Other (N=158) includes Not Reported, Two or More Races & Native Hawaiian/Pacific Islander.

Source: UMDNJ-Office of Workplace Diversity



## MEETING THE STATE'S NEEDS

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## **PUBLIC AND COMMUNITY SERVICE AT UMDNJ**

Community service is a distinct component of the University's four-part mission, and also plays an integral role in the educational, research and health care endeavors of UMDNJ. The University offers a myriad of programs and activities that serve our State and advance the health and quality of life of its residents.

By providing more than 240 community service programs throughout the State, UMDNJ extends prevention, health care and related services to all of New Jersey's communities. Many of these programs target medically needy populations or those at high risk of particular health problems. A Community Resource Directory outlining all major community programs, activities and initiatives offered to the public, including health promotion, disease prevention, educational enrichment, neighborhood development and economic empowerment, is on UMDNJ's Urban and Community Development Website: [www.umdj.edu/comreweb](http://www.umdj.edu/comreweb).

All of the Schools of UMDNJ provide students with opportunities for clinical education in community-based programs and settings, and foster cultural sensitivity and competence.

Many sponsored research programs at UMDNJ focus on New Jersey's most urgent health problems. University faculty and scientists are helping to advance prevention and treatment in such areas as cancer; the effects of environmental agents on human health; biodefense; HIV/AIDS; tuberculosis; heart disease; neurological diseases; women's health; child and adolescent health; mental health; oral health; health disparities; and aging.

UMDNJ faculty and staff also participate in numerous boards and organizations, volunteering many hours to address health, education and other issues affecting New Jersey.

UMDNJ's commitment to public service is further exemplified by our substantial employment of urban and minority residents, the purchase of goods and services from minority-owned and special vendors, and partnerships with community-based organizations. These activities contribute to the redevelopment and economic growth of the cities and regions that host the University's campuses.

Provided here are highlights of a few of the many University programs and services that continue to make a positive impact in New Jersey. For more offerings and updated information, visit UMDNJ's Urban and Community Development Website at [www.umdj.edu/comreweb](http://www.umdj.edu/comreweb) and select "Community Resource Directory."

## **EXAMPLES OF PUBLIC / COMMUNITY SERVICE ACTIVITIES**

### **ALLIED DENTAL EDUCATION (SHRP)**

The Department of Allied Dental Education (ADE) provides preventive clinical dental services to veterans in New Jersey through affiliation with the Veteran's Administration Hospital in Orange, N.J. Dental hygiene students also provide preventive services to members of the public through clinical rotations at New Jersey Dental School (NJDS) in Newark and at SHRP's dental hygiene clinical facility on the Scotch Plains campus. Dental assisting students work side by side with dental students in providing dental patient services at NJDS. Faculty members and students from ADE also provide community service programs to thousands of participants at over 30 events annually at various locations throughout New Jersey. These events include health fairs, classroom presentations, career fairs, shadowing programs, and special events during Children's Dental Health Month in February, such as the national Give Kids A Smile program and other related clinical activities.

### **ANCORA AND GREYSTONE PARK CLINICAL AFFILIATION (SHRP)**

The overall purpose of the Ancora and Greystone Park affiliations are to enhance the quality of patient care services at these State psychiatric hospitals by improving the competencies of direct care staff. To that end, five faculty members from the Department of Psychiatric Rehabilitation provide a variety of programming and technical assistance initiatives that impact over 250 patients annually. These initiatives include on-site undergraduate psychiatric rehabilitation course work, in-service training to improve staff group work skills, and specialized programs like the Program Readiness Mall for patients unable to use traditional hospital programs.

### **ANTI-STIGMA INITIATIVE**

#### **"MEETING AND LEARNING FROM PEOPLE WITH MENTAL ILLNESS" (SHRP)**

In collaboration with persons with serious mental illness and Collaborative Support Programs of New Jersey, SHRP faculty provide 30 presentations annually to over 800 children and adults in middle schools, high schools, colleges, and community groups. Those attending meet people with mental illness and learn from them about their recovery and the importance of seeking help.

### **ASIAN RISK ASSESSMENT COURSE AND ENOH TRAINING (SPH)**

Since 2001 the UMDNJ-School of Public Health (SPH), in collaboration with Rutgers University, has offered a month-long environmental risk assessment course. The course was originally funded by the Asian Development Bank and is now self sustaining. The course is taught in alternate years in Bangkok, Thailand at Chulalongkorn University. The School also continues to assist the faculty at Prince of Songkla University in Hat Yai, Thailand in furthering development of the Center for Toxicology and Risk Management, which was established in 2001.

Through collaborative funding from the Environmental Health Sciences Center at UMDNJ and working with the Prince of Songkla University faculty, two studies have

been initiated in Southern Thailand looking at lead and arsenic contamination in children in two villages. This collaboration continues and additional support is being sought via NIH and the Thai government.

In 2007, UMDNJ-SPH with Rutgers and Chulalongkorn University was awarded an NIH Fogarty ITREOH (International Training and Research Program in Environmental and Occupational Health) grant. This provided funding for the Thai Fogarty Center. The center, located at Chulalongkorn University, provides training and research opportunities relating to environmental and occupational health and exposure to pesticides. The ITREOH site is at <http://thaitreoh.rutgers.edu/>.

For more information on these projects contact Mark Robson at [robson@aesop.rutgers.edu](mailto:robson@aesop.rutgers.edu).

### **BAM! THE BRAIN AND MEMORY PROGRAM OF THE NEW JERSEY INSTITUTE FOR SUCCESSFUL AGING (SOM)**

The New Jersey Institute for Successful Aging (NJISA) was awarded an educational grant from Novartis Pharmaceuticals to expand the BAM! Program. A total of seven "Healthy Body, Healthy Minds" (BAM!) programs were presented during the past year in Camden, Burlington, Essex and Morris counties to a total of 250 community-residing older adults. The program is designed to empower seniors and includes content on strategies to improve brain function, nutrition to support body function and lifestyle behaviors to promote brain health. An interactive computer memory game is included as part of the program to engage participants and provide an example of brain stimulating activities that anyone can use to challenge the mind.

### **BRAIN BEE COMPETITION (SOM)**

As part of an outreach program that shares our science expertise with K-12 educational institutions, this year, several faculty members of SOM and the Graduate School of Biomedical Sciences at SOM served as judges for the National Finalist Competition of the North South Foundation Brain Bee. This is a neuroscience competition for students in grades 9 through 12. The regional winner proceeds to the US National Brain Bee coordinated by the University of Maryland and, potentially, to the International Brain Bee Championship.

### **BRIDGING THE GAPS (SPH)**

In the summer of 2010, UMDNJ-School of Public Health again participated in Bridging the Gaps. This consortium of universities from around Pennsylvania and Delaware was established in 1988 to encourage service learning. SPH in Stratford created three interdisciplinary teams of students from public health (SPH), medicine (SOM) and SHRP. The students, who were paid a summer stipend, were placed at three Camden sites: Camden Coalition of Healthcare Providers, Hope Community Outreach Center, and Project HOPE. The students worked for seven weeks on service projects of benefit to the Camden community. In addition to working four days a week at their site, students participated in workshops once a week in Philadelphia on various community issues ranging from violence to oral health to approaches to working with youth. At their sites, students worked with youth, adult and senior populations, providing health education. They assisted with a summer camp program, the local farmer's market, and

the syringe exchange project. They also helped provide outreach for homeless populations in the city. For more information on Bridging the Gaps, contact Dr. Bernadette West at [westbm@umdnj.edu](mailto:westbm@umdnj.edu).

### **CAMDEN CITY HEALTHY FUTURES COMMITTEE (SPH)**

The Camden City Healthy Futures Committee, whose membership includes representation from the UMDNJ-School of Public Health, the UMDNJ-School of Osteopathic Medicine and the UMDNJ-School of Nursing, is dedicated to improving the health of the citizens of Camden. The objectives of the Committee are to promote a continuing dialogue among Camden health care and other organizations and to initiate a process that promotes a sustainable network for future joint planning and health delivery in the city.

SPH faculty and students on the Stratford/Camden Campus continued to participate in the Camden City Healthy Futures Committee. Faculty and students serve on the committee and are assisting with health planning around targeted public health issues. An MPH student completed a fieldwork project that involved an update of data prepared in 2007 for a community health assessment focusing on family health, obesity and diabetes, gangs and street violence, mental health, and environmental concerns including asthma. For more information on this project, contact Dr. Bernadette West at [westbm@umdnj.edu](mailto:westbm@umdnj.edu) or Dr. Sherry Pomerantz at [pomerash@umdnj.edu](mailto:pomerash@umdnj.edu).

### **CAMDEN COMMUNITY HEALTH CENTER (SN)**

The city of Camden, NJ truly represents an underserved population. Almost 33% of *families* in Camden live below the poverty level (compared to 9.2% nationwide) and 35.5% of *individuals* live below the poverty line compared to 12.4% nationwide. With one percent of the city's population accounting for 30 percent of its health costs, programs such as the CCHC have the ability to make a major impact on the health of an underserved community. When health care is neglected, it is reported that children in America miss more than 51 million hours in school each year; many eventually require treatment in emergency departments. Childhood obesity is considered an epidemic in the United States; as children age, their future risk of heart disease and stroke increases. Obesity, which impacts more than 15% of American children, is a leading cause of fatty liver disease that can progress to liver failure. According to the New Jersey Childhood Obesity Study funded under New Jersey Partnership for Healthy Kids Study, children in Camden are more likely to be overweight or obese compared to their counterparts around the country. The rates are highest among Hispanic children and among the youngest (3–5 years) and the oldest (12–18 years) age groups. The majority of children in Camden does not meet recommendations for vegetable consumption and frequently consume energy-dense foods (fast food, sugar-sweetened beverages, and sweet and salty snacks)—non-Hispanic Black children tend to consume these energy-dense foods most frequently. The Camden Community Health Center is an active partner with organizations such as Head Start and the County Department of Health. In addition, child safety presentations, immunizations, and nutritional programs were provided by prelicensure nursing students and UMDNJ-SN faculty. Funding from the Hearst endowment was used to support these efforts.

During the period of January 2010 through September 2010, the CCHC had five-hundred and sixty-nine patient encounters. Of these patients, 495 (86.9%) were

uninsured. Three patients were from ages 0-3, 67 patients (13.5%) were between the ages of 11-20, 129 patients (26%) were between the ages of 21-30, 276 patients were between the ages 31-60, and patients over the age of 61 years represented 11.3% of the total population served.

### **CAMDEN COUNTY HEALTH SERVICES CENTER AT LAKELAND (SOM)**

The UMDNJ-School of Osteopathic Medicine, under a professional services contract, provides mental health and primary care services for the Camden County Health Services (CCHS) Center at Lakeland. The Department of Psychiatry provides staffing for all units in behavioral services. This includes psychiatrists, advanced practice nurses and psychologists. Department faculty are responsible for evaluation, medication monitoring and treatment team leadership for all psychiatric patients. The UMDNJ-SOM New Jersey Institute for Successful Aging continues to provide primary care medical services to more than 208 older residents at Camden County's long-term care facility at Lakeland, with over 2,172 visits logged in the past year. This facility is 99 per cent Medicaid supported.

### **CAMDEN SATURDAY HEALTH CLINIC (SOM)**

Established in 2003, the primary goal of the clinic, which is held every Saturday from 9 AM to 12 PM, is to provide urgent, primary and preventive healthcare, as well as health education, to the medically underserved population of Camden. To foster an interdisciplinary environment, the Camden Saturday Health Clinic (CSHC) is managed and operated by UMDNJ-SOM students in collaboration with practitioners from an array of healthcare disciplines. The Chairman of the UMDNJ-SOM Department of Medicine, Dr. H. Timothy Dombrowski, provides physician oversight of students on a regular basis.

Services offered include acute care for walk-ins; immunizations; school physicals; gynecological testing and pap smears; birth control; HIV testing and counseling; STD education; screening tests for chronic diseases (i.e., high blood pressure, diabetes, obesity, asthma, anemia, and depression); chronic disease management; and health education. The UMDNJ-SOM chapter of the Latino Medical Student Association (LMSA) provides Spanish interpretation services on Saturdays. Translation service helps patients avoid a miscommunication with health staff, further ensuring they receive the appropriate care. Not only does the CSHC provide service to the community, but it also promotes cultural awareness and interdisciplinary experiences for medical students as part of their educational experience. The CSHC is supported by school-sponsored fundraising events as well as by grants and donations.

### **The CANCER INSTITUTE OF NEW JERSEY (RWJMS)**

The Cancer Institute of New Jersey (CINJ) is committed to expanding its capacity to provide exceptional and innovative outreach to New Jersey's medically underserved populations. The CINJ Office of Community Outreach works in conjunction with the Gallo Prostate Cancer Center, the Middlesex Country Cancer Coalition, the Healthier New Brunswick 2010 Community Health Advisory Group, the New Jersey Comprehensive Cancer Control Plan members and the New Jersey Cancer Education and Early Detection program to meet the cancer education and outreach needs of its community constituents.

### **The Dean and Betty Gallo Prostate Cancer Center**

The Center has developed many strong community ties that have been instrumental in increasing prostate cancer screening and education programs throughout the State, including screenings held at churches, clinics, and village gatherings and advertised through local papers, radio stations, bulletins, food stores, and community centers. The Gallo Center's advocacy has a national reputation, and this year also began new outreach and advocacy programs for women who suffer as those they love deal with prostate cancer and its treatment.

### **Continuing Umbrella for Research Education**

The Continuing Umbrella for Research Education (CURE), originally established in 2003 with a grant from the National Cancer Institute, is now funded by Johnson & Johnson. The program enrolls eight students each year – four from Rutgers and four from the New Brunswick Health Science Technology High School – to conduct research at CINJ. Running for two summers and the academic year in between, the program provides students with an excellent opportunity to experience the research environment and develop and pursue opportunities for careers in science.

### **Community Activities**

CINJ Community Outreach staff work with Robert Wood Johnson University Hospital and other area institutions to offer annual free screenings for prostate, breast and skin cancer. The Office of Outreach also designs curricula for cancer prevention and screening educational programs as well as informative treatment-related lectures to community organizations. Information on cancer screening and clinical trials is offered in both English and Spanish, and the Office of Community Outreach is enhancing its translation service to provide additional patient educational materials on other topics.

The **Office of Community Outreach** (OCO) maintains an Outreach Calendar to help plan, coordinate and track CINJ outreach and screening activities. In 2010, staff and faculty of CINJ have:

- participated in 24 outreach activities (including cancer-related community education presentations, health fairs and community festivals) attended by almost 6,000 individuals;
- educated 1,584 community members about CINJ, cancer, its early detection, prevention (including prevention trials) and clinical trials;
- participated in a radio interview regarding the harms of tobacco use and the importance of cessation, reaching more than 1 million listeners; and
- conducted 519 free (prostate) screenings for the community.

### **Other CINJ Activities**

- A patient-relief fund was established with patient donations to assist with transportation, parking, etc., for indigent individuals.
- CINJ is active in New Jersey Cancer Education and Early Detection (NJCEED), a program sponsored by the Centers for Disease Control that provides cancer screenings for uninsured individuals in all 21 New Jersey counties. Our physician faculty members serve actively on NJCEED's Medical Advisory Board, most recently chaired by CINJ's Deputy Director for Extramural Affairs. The CINJ Outreach Director co-chairs the NJCEED educational committee.

- CINJ collaborates with the NJ Commission on Cancer Research and the American Cancer Society on a project funded by Aventis entitled IMPACT, Improving Minority and Medically Underserved Participation and Access in Clinical Trials. It is targeted to the Newark, Camden, Trenton, Jersey City, and Paterson communities.
- In an effort to increase colorectal cancer screening awareness in populations with low literacy, OCO developed a brief video outlining current screening options in lay terms, delivered to patients using a tablet laptop. Awards have been made to seven community hospitals within the CINJ Network to test the usefulness of this media to increase patient understanding of colorectal cancer screening.
- CINJ received a multi-year grant from Johnson & Johnson Pharmaceuticals, Inc. to develop a program to increase nutrition education and physical activity within houses of worship in the Greater New Brunswick area. Approximately 20-25 houses of worships will be selected to participate in this program, scheduled to launch in 2012.

Through funding from the Robert Wood Johnson Foundation, OCO hired a full-time bilingual Program Development Specialist to oversee the development and translation of relevant materials for diverse audiences. More specifically, the grant uses the following strategies to increase cancer awareness:

**Translation services:** OCO provides no cost translation services for community partners, CINJ departments, and CINJ network institutions. To date, OCO has served more than 75 internal and external organizations and institutions.

**Materials development:** Through the use of Cancer Control P.L.A.N.E.T. and OCO's Community Education Review Committee (CERC), and in partnership with the CINJ Network Colorectal Cancer Task Force, OCO developed patient education fact sheets regarding colonoscopy and fecal occult blood testing (FOBT). To meet the needs of New Jersey's culturally and linguistically diverse audiences, fact sheets were developed at the lowest reading level possible and translated into five initial languages: Spanish, Portuguese, French/Creole, Vietnamese, and Hindi. Initial feedback was very positive, and in response, documents will also be translated into: Gujarati, Urdu, Chinese, Korean, and Arabic. In addition, two educational PowerPoint presentations – one community-based, one clinical – have been developed for health professionals to provide setting-appropriate instruction on colorectal cancer. The community PowerPoint presentation has also been translated into Spanish for use in the Spanish-speaking community with bilingual health educators and/or clinicians.

The success of the colorectal cancer materials developed in 2007-2008 led to the development of an educational PowerPoint, specifically addressing melanoma in communities of color. "Everyone, Regardless of Skin Color, Can Get Skin Cancer" was developed in 2009 and has been subsequently translated into Spanish for use in Spanish-language audiences.

**Health Education Materials Archive:** The OCO is developing a health education materials archive for clinically accurate and culturally appropriate materials from sources across the United States. As a joint initiative between OCO and CINJ's Bioinformatics team, this interactive portal will allow for searching via keyword,

population, and cancer site, as well as submission of materials for inclusion and ordering of materials. Information is provided in multiple languages, and the portal is the first search engine known to offer comprehensive cancer educational materials in multiple languages.

OCO is committed to supporting the objectives contained within the New Jersey Comprehensive Cancer Plan. Moreover, the work of New Jersey's Cancer Education and Early Detection Program (NJCEED) is aligned with OCO's charge to ensure education and screening is provided to all New Jerseyans. Members of CINJ's OCO and OEA serve on several statewide committees sponsored by the NJDHSS, such as the New Jersey Cancer Education and Early Detection (NJCEED) – Public and Professional Education Subcommittee, Statewide Melanoma Workgroup, and various County Cancer Awareness Coalitions. Samples of statewide projects include:

- **Choose Your Cover:** Sponsored by the Statewide Melanoma Workgroup, a multi-site melanoma screening held over two days at the Jersey Shore. CINJ provided promotional and educational materials for more than 1,000 participants screened. In 2010, this program was expanded as a statewide initiative for all outdoor areas (park, pools, and beaches) throughout all 21 counties in New Jersey.
- **HPV Update (January 2010):** A statewide professional education activity was held to educate health professionals on current screening and treatment modalities related to cervical cancer. CINJ provided staff support and faculty expertise in the delivery of this one day program, reaching 100 health professionals across the state of New Jersey.
- **Metastatic Breast Cancer Lunch and Learn (October 2010):** Held at the State House in Trenton, CINJ faculty provided a keynote address to the lay community on metastatic breast cancer.

### CARES INSTITUTE (SOM)

The Child Abuse Research Education and Service (CARES) Institute at SOM provides state-of-the-art medical and mental health services to children and families who have experienced child abuse and neglect. The CARES Institute has a long history of providing expert training on medical and mental health issues involved in child abuse or neglect to many professionals and disciplines. The Institute's pediatricians regularly provide training to the caseworkers at the Division of Youth and Family Services (DYFS) and law enforcement officials about the medical indicators of abuse and neglect. The mental health clinicians at the Institute also provide training to DYFS, law enforcement, schools, parents and foster parents about the traumatic impact of child abuse. The CARES Institute is the only child abuse diagnostic and treatment center for the southern third of New Jersey and integral to the success of the Division of Youth & Family Services in meeting its statutory mandate to investigate allegations. The Institute has a national and international reputation for its state of the art research, contributions to the literature and service delivery.

The Institute is also dedicated to disseminating evidence-based treatment models and best practices in handling child abuse cases on a local, regional, national and international level. The clinicians provide introductory and advanced clinical training on

both the Trauma Focused-Cognitive Behavioral Therapy (TF-CBT) model and the Combined Parent-Child CBT model.

The Institute helps to improve the quality of services provided to children who have suffered abuse and neglect by educating professionals about best practices in diagnosis and treatment. CARES holds the Annual Statewide Best Practice Symposium, the Experts in Child Abuse and Neglect Lecture Series each year that bring internationally recognized experts in the field of child abuse and neglect to New Jersey. It also provides a wide variety of training and educational services to the community, directed towards children, parents, teachers, social workers, law enforcement, mental health clinicians, and/or medical professionals.

In fiscal year 2011, CARES offered approximately 45 training sessions and professional presentations to a broad array of audiences. These included

- Training to physicians on suspected child abuse and neglect and the prevention of child abuse and neglect, through the New Jersey Pediatric Council on Research and Education (NJ PCORE);
- "The making of medical diagnosis of Child Sexual Abuse: understanding the importance of a medical evaluation and interpreting consultative reports," at the University of Pennsylvania "One Child, Many Hands Conference";
- "Identification and Evaluation of the Sexually Abused Child," at the 61st Annual NJ Obstetrical and Gynecological Society in Atlantic City, NJ;
- "Understanding sexual victimization of children: the role of the medical evaluation," and the "Medical Evaluation of Child Sexual Abuse: Pearls and Pitfalls," at the International Conference - "Kaleidoscope of Child Maltreatment" in Haifa, Israel;
- "Evidenced-based Solutions: Helping Families Develop Healthy Outlooks and peaceful Home Environments - An Introductory Learning Session on Combined Parent Child Cognitive Behavioral Therapy," at the Children's Center in Salt Lake City, Utah and in Biloxi, Mississippi;
- Introduction to Trauma Focused-Cognitive Behavioral Therapy (TF-CBT) Training to the Project Best in Charleston, South Carolina and to Community Behavioral Health in Philadelphia, PA.;
- Advanced TF-CBT to project Innocent Heart in NYC;
- Camden County and Gloucester County Police Academy training on physical abuse, sexual abuse, failure to thrive, and abusive head trauma;
- Training for the Division of Youth and Family Services on the topics of physical abuse, sexual abuse, failure to thrive, and abusive head trauma; and

- Sexual Assault Nurse Examiner training

### **CENTER FOR ACADEMIC SUCCESS (SN)**

**The Apostle House of Newark Food Pantry** - The School of Nursing Community Ambassadors and the Student Government Association jointly sponsored a food drive for The Apostles' House Food Pantry during the 2010/11 holiday season. Both faculty and students participated in this very successful campaign to raise awareness and to bring holiday cheer to many families in need. The SN Community Ambassadors also participated in the Apostle House Adopt a Family Program, providing age-appropriate holiday gifts for families that submitted a wish list to staff at Apostle House.

**The Apostle House of Newark Teen Mom Program** – The School of Nursing Level 3 Pediatric Clinical students participate in 10 programs each year for the Program's mothers and staff on topics such as infant, toddler and adolescent growth and development; infant, toddler and adolescent nutrition; self esteem; anger management; and HIV and Human Sexuality.

### **CENTER FOR BIODEFENSE (NJMS)**

UMDNJ established the Center for BioDefense in 1999 in anticipation of bioterrorism attacks taking place in the United States. Since its founding, the Center has grown into a leading entity in the area of biodefense research, policy, and emergency management. In light of the terrorist attacks in 2001 and of the President's commitment to protect America against future attacks, we are proud that New Jersey is able to join national efforts through the Center for BioDefense at UMDNJ. The Center has gained a state and national reputation. Since October 2001, members of the Center have embarked on an ambitious schedule of seminars, conferences, and other training sessions to educate scientists, clinicians, first responders, public health professionals, and the general public on bioterrorism and biodefense. Its members testify in Congress, deliver briefings, and serve on committees of the National Academies of Science and the American Association for the Advancement of Science. Finally, the Center has been the recipient of funding by the National Institutes of Health and the Defense Threat Reduction Agency in bacterial drug discovery to identify novel broad spectrum antibiotics for the treatment of acute infectious disease.

### **CENTER FOR SCHOOL AND COMMUNITY-BASED RESEARCH AND EDUCATION (SPH)**

The Center for School and Community-Based Research and Education (CSCBRE), headquartered in New Brunswick, follows a mission to empower diverse populations to make informed decisions about their health and the environment through applied field research, creative partnerships and innovative outreach like trainings, risk communication and educational interventions. Collaborations through CSCBRE include innovative programs that translate leading scientific research into educational materials for schools, industry, professionals, and the general public.

## Professional Development

Training workshops support the use of CSCBRE materials and the integration of health-based topics into school curricula. Through hands-on workshops, participants experience the curricular materials as both students and teachers, promoting teachers as learners. Participants familiarize themselves with the activities, discovering how the lessons and activities are interrelated and build upon one another, ultimately preparing them for the classroom. CSCBRE workshops are designed to meet the specific needs of each target audience. To achieve this goal, CSCBRE employs several teacher training models, including national train-the-trainer programs; regional teacher workshops held primarily during the summer; and both short- and long-term district collaborations to train all teachers at a specific grade level(s). To date, CSCBRE's programs and services have impacted more than 7,250 teachers and 140,500 students in 29 states, the District of Columbia, Guam, Puerto Rico and overseas.

*Train-the-Trainer Programs:* Using a train-the-trainer approach to increase the number of people who have the capacity to train teachers on select curricula is the most efficient method for ensuring nationwide curriculum dissemination through professional development. This mechanism greatly increases the number of teachers/students impacted when compared to one organization acting alone. These programs may involve the collaboration of several school districts, educational/environmental organizations and universities' education and outreach programs. Trainers are trained to facilitate workshops for teachers in their area focusing on health-related curricula.

*Regional Teachers' Workshops:* The annual Health Sciences Summer Institute for Educators, Grades K-12, continues to meet the needs of teachers throughout New Jersey. The Summer Institute offers workshops facilitated by CSCBRE staff and health educators, scientists and classroom teachers. Workshop topics included toxicology, risk assessment, epidemiology, infectious diseases, real-life science and safe work practices for teenagers. Since inception, 2,182 teachers have been trained through the annual Summer Institute to use health science as a theme for learning.

*District-Specific Teacher Workshops:* With support from the National Institute of Environmental Health Sciences (NIEHS), CSCBRE conducted the SUC<sub>2</sub>ES<sub>2</sub> (Students Understanding Critical Connections between the Environment, Society and Self) program from 2000-2008. SUC<sub>2</sub>ES<sub>2</sub> was a partnership between CSCBRE and the Woodbridge Township School District, in collaboration with the New Jersey Department of Education, the Graduate School of Education at Rutgers University and Rider University. The goal was to develop three integrative, environmental health units, one for each of the district's second, fifth and seventh grades, based on the award-winning ToxRAP (Toxicology, Risk Assessment and Pollution) curriculum series. A critical project component was the implementation of a comprehensive evaluation of the ToxRAP materials and additional activities. This evaluation determined the effectiveness of the curriculum in increasing environmental health literacy and in improving science attitudes among students. To date, all three curriculum guides have been developed and implemented in all of the district's elementary and middle schools. Student pre- and post-tests were conducted in treatment and comparison schools at each of the district's three grade levels. Preliminary results for all grades showed significant improvement in student learning.

### Curriculum Development

Lesson plans containing current and impartial information increase public health literacy, with an emphasis on environmental health, while enhancing educational resources in elementary, secondary and vocational school classrooms (grades K-12). Teaching techniques include problem-based learning, games, graphing, hands-on experiments and case studies. Age-appropriate investigative science, math, health and language arts activities present students with real-life scenarios through which they learn problem-solving, decision-making and critical-thinking skills. These tools for learning are readily transferable to other areas of students' lives. Select modules are also available in Spanish-bilingual and all-Spanish versions. Materials, where applicable, are indexed to state and national education standards.

Working with the LIFE Center at The Cancer Institute of New Jersey (LPGA Pros in the Fight to Eradicate Breast Cancer), CSCBRE developed BioCONNECT, a new high school science curriculum that uses breast cancer as the context. The module enables both female and male high school students, through the process of scientific inquiry, to identify risk factors for breast cancer; learn how cancer develops; and make life-style changes to reduce the risk of cancer. The module targets science classrooms. The lessons follow fictional 14-year old twins, Steve and Nikki, as they discover their mother has been diagnosed with breast cancer. Via the twins' website, the students help the twins work through the associated scientific and psychological issues over time, as the twins' family moves through diagnosis and treatment. At critical decision points, students use their knowledge to share information using the twins' online forum.

### Safe Schools

The NJ Safe Schools Program (NJ SS) is a multi-faceted program supported predominantly by the New Jersey Department of Education, Office of Career and Technical Education. NJ SS assists schools in reducing risk due to occupational safety and health hazards in secondary schools and work microenvironments in which adolescents spend time. NJ SS involves a number of outreach components designed to support teachers, administrators, safety and health designees, structured learning experience/career orientation coordinators, county apprenticeship coordinators, cooperative education coordinators and those involved in school-to-careers. In addition, NJ SS includes multiple communications during the school year to keep stakeholders informed of relevant science, engineering, policy, regulatory, and injury epidemiology developments at local, state and national levels. Finally, NJ SS is in charge of the State of NJ law-based incident (injury, illness) surveillance system for youth workers involved in school-sponsored structured learning experiences on and off-campus. We have produced annual summary reports for state agencies, and peer-reviewed publications.

As one of its components, project staff developed recommendations regarding prohibited and restricted hazardous work activities for minors (youth under the age of 18) involved in school-sponsored structured learning experiences in multiple topic areas, including construction; food service (e.g., preparation and storage); health care and allied health fields; automotive and diesel engine repair; retail/business and marketing (e.g., food vendors); agricultural education; and, cosmetology (hair styling, nail salons, skin care and barbering). The 2004-08 report recommendations, developed through NJ SS Task Forces for the New Jersey Department of Education and the New Jersey Department of Labor and Workforce Development, will be guiding revisions to New Jersey child labor laws during 2010-2012. A focus on cosmetology continues in 2011; three

activities/projects are being conducted with stakeholders throughout NJ and the resulting posters and pamphlets will be piloted throughout NJ in the 2011-12 school year.

Overall, several thousand teachers and administrators in NJ have been trained during multiple courses focusing on occupational safety and health and wage and hour/child labor issues through NJ SS. Much of the training focused on preparing participants to meet the new teacher licensing requirements related to ensuring students associated with school-sponsored structured learning experiences are placed at safe work sites. In addition, teachers have attended free/in-service trainings on using the “Youth@Work: Talking Safety” curricula, violence in the workplace, and safety and health for special needs students (new training created with partners).

### **Community Outreach**

CSCBRE conducts community outreach to raise public awareness of how public health research is leading towards the prevention, detection and/or treatment of diseases/illnesses. Programs are designed to translate research information into tools and resources for community stakeholders.

For more information on CSCBRE programs and services, contact Ms. Laura Liang at [laura.liang@umdnj.edu](mailto:laura.liang@umdnj.edu) or Dr. Derek Shendell at [shendedg@umdnj.edu](mailto:shendedg@umdnj.edu).

### **CENTER FOR TOBACCO SURVEILLANCE AND EVALUATION RESEARCH (SPH)**

The Center for Tobacco Surveillance and Evaluation Research (CTSER), formerly known as the Tobacco Surveillance and Evaluation Research Program (TSERP), was first established in 2000 to evaluate New Jersey's Comprehensive Tobacco Control Program (CTCP) and is responsible for monitoring tobacco use trends in response to the State's tobacco control activities. The Center now includes multiple research projects supported by state, federal, and private foundation funding. Its overall mission is to enhance the evaluation and surveillance of tobacco control as well as industry initiatives and strategies.

A key priority of CTSER is the dissemination of its findings. Since 2000, CTSER has produced over 30 reports and briefs for NJ CTCP, delivered over 100 conference presentations, and published over 50 journal articles. In addition, CTSER faculty have previously provided testimony before state lawmakers on potential legislative action related to tobacco products and advertising. For more information on this project, contact Dr. Cristine Delnevo at [delnevo@umdnj.edu](mailto:delnevo@umdnj.edu).

### **DR. CHARLES E. BRIMM MEDICAL ARTS HIGH SCHOOL (SOM)**

UMDNJ-SOM Family Medicine third-year students and residents, through the link with the New Jersey Area Health Education Centers (AHECs), participate in a program at the Dr. Charles E. Brimm Medical Arts High School (located at Our Lady of Lourdes Medical Center in Camden) in which they discuss health-related issues with high school students, including potential careers in clinical medicine. The well-received program, part of the federal Kids in Health Care program offered through the AHECs, is being expanded to include more health prevention education programs for Camden's 7th and 8th graders by UMDNJ-SOM Family Medicine physicians. Over the past six years, the

UMDNJ-SOM Family Medicine Department has also participated in Camden's Summer Medical Youth Program, which promotes careers in the health sciences.

### **CHERRY HILL BOARD OF EDUCATION–SCHOOL HEALTH SERVICES (SOM)**

An SOM pediatrician serves as the Medical Inspector for all of the Cherry Hill schools and, in this role, is responsible for working with the school system's healthcare professionals to coordinate the Health Services Program for the Township. This program includes policy development and provision of care for mandatory immunizations, school sports physicals, communicable disease, and other community health programs.

### **CHOOSE YOUR COVER—GOING OUTDOORS IN NJ TO FIGHT MELANOMA/SKIN CANCER (SPH)**

Though most cancers have started to decline, skin cancer and, more specifically, melanoma, has continued to rise in both males and females as have associated death rates. Death rates for males have been higher because of later detection. This has been true in New Jersey as well as the United States as a whole. **Choose Your Cover** is a statewide collaborative initiative to promote risk education, early detection and skin cancer screenings at outdoor venues and increase awareness about the need for protection from UV rays which is the easiest way to eliminate the most common risk factor for melanoma.

SPH faculty developed a pilot evaluation of the initiative in 2009 which screened 1,917 beach-goers. Of these, 555 (29%) were referred for a variety of skin lesions including basal cell carcinomas (4%), squamous cell carcinomas (2%), and melanomas (3%). Since the initiative was expanded statewide in 2010 and is again planned for June, July, and a few August 2011 locations, faculty members have been working with the State on a large-scale evaluation to analyze pre- and post-measures provided by screened participants to assess whether there are changes in knowledge, attitudes, and perceived willingness to adopt sun safety behaviors as a result of participating in the events. During Chose Your Cover events in 2010 ~1400 people who were engaging in outdoor activities at beaches, lakes, pools, parks and other venues around NJ were offered free skin cancer screenings and education on a first-come, first-served basis at 28 outdoor recreational sites. This year screening and educations at least 13 locations are planned. For more information, contact Dr. Marcia Sass at [sassmm@umdnj.edu](mailto:sassmm@umdnj.edu).

### **CIRCLE OF LIFE CHILDREN'S CENTER (NJMS)**

The mission of the Circle of Life Children's Center (COLCC) is to provide a comprehensive program of palliative (comfort) care and end-of-life services for children with chronic, life-limiting illnesses and their families. James Oleske, Director of the Division of Pulmonary, Allergy, Immunology, and Infectious Diseases in the Department of Pediatrics, was instrumental in establishing the Center and is currently its director.

The COLCC Pediatric Palliative Care program provides state-of-the-art expertise in problematic pain and symptom management and family-centered end-of-life care, along with the necessary skills to assess physical condition and family needs in order to develop a plan of care.

The COLCC serves children from infancy through age 21 who are dealing with life-threatening illnesses such as AIDS, cancer and a wide variety of progressive medical conditions, many of which are congenital. This groundbreaking program concentrates on serving seriously and terminally ill children residing in the greater Newark, NJ (Essex County) area and in neighboring counties. While the focus has been in this urban area, the program has cared for children in 13 of New Jersey's 21 counties.

The goal of COLCC is to provide a wide range of services and programs to serve the ill child and his/her family on a local/regional level to include: COLCC Pediatric Palliative Care Consultation Service; In-patient Pediatric Palliative Care; Home Care; Pediatric End-of-Life Care; Respite Care; Child and Family Support Services; Quality-of-Life Programs; Bereavement Counseling; Community and Family Educational Programs; Professional Education; and Volunteer Program.

### **CLINICAL LABORATORY SCIENCES (SHRP)**

Faculty and students organized the first annual Blood Drive on the Scotch Plains campus. Students organized a bake sale with proceeds donated to the American Red Cross Haiti Relief Fund and distributed toys during the holidays to pediatric patients at a local hospital.

The Cytotechnology Program participates annually in the Breast Cancer Walk in New York City sponsored by the American Cancer Society. Money raised during this event is donated to the American Cancer Society.

### **COMMITMENT TO DIVERSITY (RWJMS)**

The UMDNJ-Robert Wood Johnson Medical School (RWJMS) has collaborated with Rutgers University and Seton Hall University in developing a number of programs aimed at increasing the enrollment of underrepresented minority students in medical school and the sciences. ACCESS-MED is a consortium program for undergraduates offered by Rutgers, Seton Hall, and RWJMS to provide academic enrichment, support and counseling for educationally and financially disadvantaged students pursuing health science careers.

The Office of Special Academic Programs administers two summer programs that it is hoped will increase the diversity of biomedical researchers, physicians and other health care professionals:

- The Biomedical Careers Program is a six-week joint RWJMS–Rutgers University program for educationally and financially disadvantaged undergraduate students interested in careers in medicine or other health professions
- The Pre-matriculation Summer Program allows educationally or financially disadvantaged incoming medical students to preview selected topics in anatomy, biochemistry, and cell biology/histology

All of these programs, as well as RWJMS' affirmative action efforts, have contributed to the School's successful diversity efforts. RWJMS has maintained a commitment to increasing diversity within the medical school class by recruiting underrepresented students in medicine. The School is also collecting data about faculty diversity and is

actively seeking to increase the recruitment, retention and promotion of underrepresented minority and women faculty.

In recognition of the School's commitment to improving the health of the communities served and to increasing diversity, RWJMS has developed specific strategic goals and objectives related to these areas. These goals and objectives are part of the School's five-year strategic planning process. To facilitate planning and implementation of initiatives aimed at meeting these goals, the School has created subcommittees for community health and promoting diversity. Each committee has representation from faculty and administration for promoting diversity and health in the community.

### **COMMUNITY ADVISORY BOARD (SOM)**

Established by Dean Thomas A. Cavalieri in 2008, the UMDNJ-SOM Community Advisory Board brings together civic, business, academic, health care and religious leaders to advise the school on fulfilling its commitment to excellence, and, in particular, its community service mission. The Community Advisory Board focuses on communication and advocacy activities to support and help expand the school's programs, sustain its leadership in diversity, and develop new alliances. Through regular meetings, the 21-member Community Advisory Board serves as liaison for the academic, research and health care leaders at UMDNJ-SOM with individuals and groups that share an interest in and commitment to the health care and higher education needs of the region.

### **COMMUNITY BASED MENTAL HEALTH (SOM)**

The majority of UMDNJ-SOM Department of Psychiatry services are provided through contractual arrangements with community based mental health organizations. UMDNJ-SOM faculty, contracted by these agencies, treats indigent, Medicaid, Medicare and managed care patients throughout South Jersey. Patients come to these agencies from the surrounding counties in the South Jersey area. In fiscal year 2011, the Department contracted with nine community agencies and schools, along with four hospital-based systems.

### **COMMUNITY HEALTH WORKER INSTITUTE (CHWI) (SOM)**

The CHWI, based at UMDNJ-SOM, is part of the NJ AHEC Program. Initially established by the Camden Area Health Education Center (AHEC) in 2004, it receives partial support from the U.S. Department of Health and Human Services-Health Resources and Services Administration (DHHS-HRSA) under a grant to UMDNJ-SOM for the AHEC Program (2004-2011). The CHWI has completed and copyrighted a Basic Training Curriculum for Community Health Workers (CHWs) and has initiated CHW training using the evidence-based Stanford Chronic Disease Self-Management Program. It will be providing a series of webinar-based educational and information sessions for Workforce Investment Boards, the NJ Department of Labor and Workforce Development, employers of CHWs, community-based agencies, and community colleges to increase knowledge about the value of CHWs as members of the health care team and the role they play in increasing access to health services for minority and disadvantaged populations. The NJCHWI advocates for increasing roles for CHWs and is exploring issues of certification, reimbursement, and recognition of the CHW as an apprenticeable trade.

### **COMMUNITY NUTRITION INITIATIVES (SHRP)**

Annually, the SHRP-Dietetic Internship Program participates in a variety of community nutrition initiatives targeted to children and adolescents. To celebrate National Nutrition Month, culinary presentations and nutrition exhibits were presented to high school students from the Union County Academy of Health Sciences. Nutrition education was provided at multiple YMCA sites located in Bergen, Monmouth and Union counties to celebrate "Healthy Kids Day". Students from the Program also participated in Children's Oral Health Day at the Liberty Science Center and the Community Food Bank of NJ's "Pound for Pound Challenge. Education was provided in schools and as farm-based activities through "HealthBarn USA", located in Wyckoff, New Jersey. A total of 41 community outreach activities were conducted.

The Coordinated Dietetics Program provides nutrition education classes to local communities, schools, religious groups and organizations such as the NJ Metro Chapter of the Multiple Sclerosis Society. The students conduct community-based health promotion/disease prevention programs as well as provide nutritional education to WIC participants, Senior Congregate Meal Program attendees, school lunch participants or those who attend food banks or soup kitchens.

### **COMMUNITY- ORIENTED DENTAL EDUCATION PROGRAM (NJDS)**

The Community-Oriented Dental Education Program (CODE) is in its sixteenth year of having fourth-year pre-doctoral dental students deliver care under faculty supervision in NJDS' extramural dental centers in southern New Jersey. Students, who move into the area near one of the community-based facilities, participate in organized community projects throughout the year and come to Newark for didactic instruction one day each week.

### **COMMUNITY ORIENTED DENTAL EDUCATION-II (NJDS)**

A new CODE II Program established two years ago by grants allows all pre-doctoral senior students an opportunity to rotate through New Jersey Dental School's extramural dental centers in Atlantic and Camden counties for a two-week experience. These students, like the CODE students selected for the original program, participate in organized community projects.

### **COMMUNITY SERVICE REQUIREMENTS FOR UNDERGRADUATE STUDENTS (NJDS)**

All undergraduate students are required to perform four prior approved community service activities per year for each of their four years at New Jersey Dental School. Many NJDS students elect more than the sixteen required activities prior to graduation. Each student performs clinical oral health education and acquires cultural competency as well as the ability to work with variable age groups in our population. Students write a reflection paper about their experience.

### **COMPREHENSIVE SICKLE CELL CENTER (RWJMS)**

The Comprehensive Sickle Cell Center at Robert Wood Johnson Medical School, a program of the Division of Pediatric Hematology/Oncology (Department of Pediatrics) provides clinical services to patients with Sickle Cell Disease in three centrally located centers (The Cancer Institute of New Jersey in New Brunswick, Jersey Shore University Hospital in Neptune and a once-a-month clinic on the Mercer Campus of Capital Health System in Trenton.) The program works through a team approach model and is made up of a physician, a pediatric advanced nurse practitioner and a counselor. The team not only treats patients and conducts research, but it also provides educational seminars to help patients and their families cope with the complexities and complications of living with Sickle Cell Disease.

This past academic year, the team hosted an Education Night which focused on learning more about Sickle Cell Disease and how to prevent complications of the disease. The attendees were able to learn about how blood flows through blood vessels, saw red blood cells under the microscope, had the opportunity to ask questions from experts and listened to a talk about research and treatment options for those living with Sickle Cell Disease.

The program is partially funded by the State of NJ's Department of Health and Senior Services, Newborn Screening and Genetic Services, Special Child Health and Early Intervention Services. This funding allows outreach to indigent populations in underserved communities such as Trenton.

### **"COVER THE UNINSURED" FAMILY HEALTH FAIR (SOM)**

On April 16, 2011, the 3rd Annual Community Health Fair was held at the Camden Academy Charter High School in Camden, NJ, sponsored by Student National Medical Association (SNMA) and the UMDNJ-Graduate School of Biomedical Sciences at SOM's chapter of the Minority Association of Pre-Medical Students. Vendors, UMDNJ-SOM and GSBS students, as well as student volunteers from the charter school provided health information, health screenings and activities for the local residents. Activities included osteopathic manipulative medicine (OMM) demonstrations, door prizes and a Zumba class. There were also several inspirational guest speakers who provided insight on adolescent psychology and obesity issues. The goal of the event was to inform each family of the importance of maintaining a healthy lifestyle, explain that the body functions as a unit, discuss ways to maintain a state of homeostasis, and educate families on disease prevention and other services that are available to them in the Camden Area. The Health Fair provided a day of fun while giving our participants access to the many resources available to help encourage them to maintain their health.

### **CRISIS SERVICES FOR CHILDREN (SOM)**

Over recent years, public schools have focused close attention on students who exhibit at-risk behaviors. Most districts enacted policies requiring that any child who exhibits behaviors which cause suspicion of potential harm to others or self be suspended, pending an evaluation supporting their safe to return to school. As there is a dearth of child psychiatry in South Jersey, these students often are directed to a regional crisis center. The 14-bed Child and Adolescent Psychiatric Unit (CAPU) at the Cherry Hill Division of Kennedy University Hospital is in its eighteenth year as a state-designated

Children's Crisis Intervention Services facility. Since the unit's inception, the UMDNJ-SOM Department of Psychiatry has supplied medical services for this unit. It is designated as the regional unit for child and adolescent psychiatric admissions for Camden, Burlington, Gloucester, and Salem counties. The CAPU is also the secondary unit for Atlantic, Cape May, and Cumberland counties. The average length of stay is approximately one week. Over 40 percent of admissions to the CAPU are compensated by Medicaid, and approximately ten percent are services provided to children and adolescents who are either indigent or have no health insurance.

### **CULTURAL COMPETENCY AND INTERDISCIPLINARY HEALTHCARE (SOM)**

The UMDNJ-SOM Department of Family Medicine teaches a course entitled "Cultural Competency" to residents and "Interdisciplinary Team Development and Conflict Management" to third year students. Through these courses, residents and medical students are trained to be culturally competent and skilled in interdisciplinary healthcare delivery. The Department of Family Medicine, through the Center for Continuing and Outreach Education (CCOE), has online training modules for cultural competency available to physicians.

### **DEPARTMENT OF COMMUNITY HEALTH (NJDS)**

The NJDS Department of Community Health provided oral health education programs, screening and/or treatment at many sites throughout New Jersey and the nation. Here are examples of events and places visited:

- Oral Health Awareness Day, Jersey City
- Newark YMCA Healthy Kids Day
- Hispanic Coalition
- Statehouse - Oral Cancer Screening and Presentation for employees and legislators
- New Community Center, Newark, NJ – Oral Cancer Presentation
- HIV Buddies Hackensack, NJ
- Care One at Teaneck New Jersey
- Lady Liberty Academy, Newark New Jersey
- National Council of Jewish Women: Back 2 School Program –West Orange, NJ
- Oral Cancer Walk, NY
- Yeshiva Central Queens Elementary School
- World Aids Day, Atlantic City
- Moriah School, Engelwood
- Heywood Avenue School Healthfair, Orange
- Special Olympics-Special Smiles
- Jewish Family Services, Meals on Wheels
- Student Doctor for a Day, Jersey City
- Susan Komen Breast Cancer Walk (table display)
- The Congressman Donald Payne Community Health Fair
- Liberty Science Center, Oral Health Promotions and Education

### DEPARTMENT OF ENVIRONMENTAL AND OCCUPATIONAL MEDICINE (RWJMS)

Community service is at the core of many of the research and clinical activities of the Department of Environmental and Occupational Medicine and the Environmental and Occupational Health Sciences Institute (EOHSI). The **World Trade Center Medical Monitoring Program** provides outreach, diagnosis, support, and state-of-the-art-treatment to the virtual community of New Jersey responders who are still suffering after their work at this disaster site. On a smaller scale, much of the clinical work performed at the Clinical Center of EOHSI interfaces with neighborhoods, schools, and workplaces affected by exposures to toxic or hazardous pollutants, including some communities that receive ongoing medical surveillance for their prior exposures. In addition, research occurs in venues such as the New Jersey Turnpike and union halls across the region, as the Department and the EOHSI strive to understand the health hazards that affect our communities and workplaces.

Researchers in the Department advise and perform research for the New Jersey Department of Environmental Protection (DEP). A prime example is longstanding Ozone Research Center.

### DEPARTMENT OF EPIDEMIOLOGY NEWARK (CENTRAL WARD) COMMUNITY-BASED HOUSEHOLD SURVEY (SPH)

During 2009, faculty in the Department of Epidemiology designed and implemented a community-based household survey in select neighborhoods in the Central Ward of Newark, New Jersey. One adult respondent and one randomly selected child per household was interviewed. The goal of the study was to collect data on neighborhood-level structural and social conditions, including access to and use of parks, which may influence obesity and physical activity patterns in children and adults. The goal of this community survey was to identify neighborhood factors associated with adult and child health among a sample of families living in the Central Ward of Newark, NJ, a high poverty area of the city. A total of 107 eligible households were interviewed in this door-to-door survey. Health data were collected on one adult respondent and one randomly selected child per household. The majority of adult participants were female, African American, and only 5% had a college degree.

Results indicated that 60% of participants had been directly exposed to violence (gunshots, fights, or murders). Linear regression results showed that being exposed to violence was associated with increased levels of anxiety ( $\beta=0.15$ ,  $p<0.01$ ) among adults, and decreased levels of children's moderate physical activity ( $\beta=-0.08$ ,  $p=0.03$ ). Persons who reported low levels of neighborhood social cohesion reported more violence, and parental perceptions of lack of safety was significantly associated with children not visiting neighborhood parks (OR= 1.23, CI=1.04, 1.50). Few studies have documented the effect of community violence in shaping adult and child health. Findings from this study will be shared with community organizations to promote interventions that address violence as a health issue. Results have been accepted for presentation in the Epidemiology section of the American Public Health Association conference, Washington DC, Nov 2011. A manuscript is also being prepared for publication. For more information contact Dr. Sandra Echeverria at [echevese@umdnj.edu](mailto:echevese@umdnj.edu).

### DEPARTMENT OF FAMILY MEDICINE (RWJMS)

In conjunction with medical student training, faculty volunteers at The Promise Clinic in New Brunswick perform medical examinations for urban minorities. Faculty have developed a **Healthy Homes Demonstration Project** with Isles, Inc, of Trenton. Building on the previously successful efforts of *Dust Does Not Discriminate*, *Healthy Homes Mold Project* and *Arrest the Pests in Your Nest*, faculty developed a VHS and an English and Spanish language DVD training module on mold and other environmental contaminants in the home. Entitled "the Healthy Homes Video," the target audience is urban minority residents. Another ongoing Department project is the work being done in the Camden community through many churches and community groups, including Heart of Camden, to address methods of reducing community exposure and risk to toxins in the South Camden area.

The Department is also developing a pilot community assessment course for Trenton community members to learn how to recognize, assess, evaluate and remediate community hazards. In addition, a course in Community Based Sampling is being developed for students in the graduate programs in Public Health, Toxicology, and Environmental Science to learn how to assess, sample and analyze an urban site and to deliver the information to the community.

Faculty are again actively screening homes and residents for Chromium contamination in Jersey City and other Hudson County locations, a residue of past waste dumping practices.

The Department of Family Medicine's Institutional Profile involves students in community-based activities from the first year of medical school through the residency program in family medicine. The goals of the Department of Family Medicine's community-based initiatives are:

1. To encourage an ethic of community service and social responsibility in medical students and residents. This involves training them in the context of community service.
2. To equip the next generation of health professionals with the community oriented and culturally sensitive competencies needed to make a difference in the lives of their patients and clients and the communities they serve.
3. To foster partnerships between community organizations and UMDNJ-RWJMS to promote the health of underserved/vulnerable populations.

The Department of Family Medicine developed a number of community-based initiatives to help meet these goals.

At the undergraduate level, during the third-year family medicine clerkship, all medical students participate in community-based service learning that has been incorporated into the curriculum. These activities are complemented by didactic sessions on community-oriented primary care and principles of population-based health care. In addition, students may elect to participate in an eight-week **Community-Oriented Primary Care**

**(COPC) Assistantship** between the first and second year of medical school. Students in COPC, who must complete independent projects, are assigned to a community-based health care or social service organization and attend weekly seminars covering topics aimed at increasing student awareness about the principles and practice of COPC, health disparities, population assessments, and culturally competent clinical care. Students also participate in a tour of local botanicas and bodegas.

The **New Brunswick RWJMS Family Medicine Residents** provide quality primary care services to many of greater New Brunswick's uninsured and underinsured citizens, many of whom are not documented. Patients are seen in the Family Medicine Service and at clinics within RWJUH; Family Medicine at Monument Square; St. John's Clinic; soup kitchens; homeless shelters; senior citizen apartments; long-term care facilities and in patients' own homes.

Additionally, the New Brunswick RWJMS Family Medicine Residents provide primary care services to the greater New Brunswick community. As part of their training, all second-year residents participate in a cross-cultural community medicine rotation at St. John's Health Center in New Brunswick. The goal of the rotation is to encourage residents to practice in medically underserved urban areas by offering a rewarding learning experience that enhances their skills in providing culturally sensitive, community-oriented primary care to a diverse and indigent population. Residents learn about different multicultural populations and became familiar with managing clinical issues prevalent in the community (e.g. lead poisoning, immunizations, TB exposure, HIV, substance use, health problems exacerbated by poverty and homelessness). They participate in community-based health care activities including seeing patients at a child health conference, a pap/mammogram screening, and volunteering at a local soup kitchen. Community site visits included the Middlesex County Board of Social Services, a homeless shelter, a botanica and bodega, and home visits accompanied by St. John's prenatal and immunization outreach workers. In addition, residents conduct community presentations at the Edison Job Corps Academy, Ozanam Men's Homeless Shelter, and Naomi's Way, a transitional housing facility for women and their children. Presentation topics include personal hygiene, nutrition, and respiratory illnesses. As part of their longitudinal community medicine experience, residents also participate in community-based activities such as school physicals, health fairs, pap and mammogram screenings, prostate cancer screenings, and community presentations.

All residents, first year through the third year, and many faculty members provide other educational and clinical care services to local communities. The following services were provided by residents and residency faculty:

<b><u>Community Affiliation</u></b>	<b><u>Services</u></b>
St. John's Health Center, New Brunswick	Clinical care for indigent populations
American Academy of Family Physicians	Tar Wars - Anti-smoking presentations for local 4th and 5th graders
Trinity Health Center, Perth Amboy	Clinical care for indigent populations
Women's Health Center, Somerville	Women's clinical health services

Geriatric home visits	Medical care for home-bound patients in the local New Brunswick area
Jewish Renaissance Medical Center, Perth Amboy	Screenings for breast, uterine and prostate cancer
Naomi's Way, Catholic Charities, New Brunswick	Presentations on preventive health care
Old Bridge Township Elementary, Middle, and High Schools	School physicals and pre-participation examinations
Ozanam Family Shelter, Edison	Presentations on preventive health care
Ozanam Men's Homeless Shelter, Catholic Charities, New Brunswick	Presentations on preventive health care
New Jersey State Division of Developmental Disabilities	Medical care for over 250 patients and their caregivers
New Brunswick High School Parent/Infant Care Center (PIC-C)	Medical care for teenage moms and their children
Parker Nursing Home, Piscataway and New Brunswick	Continuing education on medically related topics for nurses and staff
Center for Healthy Aging – Parker Stonegate	Patient care for the elderly and employees at Parker Stonegate
Puerto Rican Action Board (PRAB) and Robert Wood Johnson University Hospital	Presentations for parents of children in PRAB's Day Care Centers about childhood health
Read Across America	Read books to local elementary and middle school students
Robert Wood Johnson University Hospital, Community Health Fairs	Health screenings, particularly for cancer
Special Olympics	Team doctors
Woodbridge Township Health Department	Screenings for breast, uterine and prostate cancer
Edison Job Corps Academy	Screening students by providing physicals and medical clearance
Martin and Edith Stein Hospice	Clinical care for the elderly
Matheny Center of Medicine and Dentistry	Patient care

The **Center for Healthy Families and Cultural Diversity**, within the Department of Family Medicine, was created in 1988 to improve the delivery of culturally responsive, family centered health care to diverse populations. Programmatic activities of the Center include technical assistance and consultation, education and training, and research and evaluation. Each year, faculty give invited lectures, seminars, and workshops on culturally and linguistically competent care to a wide variety of health care professionals and organizations, including academic medical centers, hospitals, ambulatory care facilities, community organizations, managed care plans, and governmental agencies in the United States and abroad.

**Center for Healthy Aging at Parker (CHAPS)** was launched in 2006 to enhance clinical care services to Parker residents living both within institutional settings and in the community through ambulatory care services coordinated at an outpatient office facility maintained on-campus by Parker. CHAPS will train health professionals of varied disciplines in the art and science of geriatrics and gerontology, including a geriatrics medicine training program for physicians wishing to specialize in geriatrics. It will also develop and foster coordinated multidisciplinary research between institutions such as nursing homes and the academic health sciences center.

#### **DEPARTMENT OF HEALTH SYSTEMS & POLICY** **DOMINICAN REPUBLIC HEALTH OUTREACH PROJECT (SPH)**

The Dominican Republic Health Project began in 2003 when nine students and two faculty members undertook public health projects in the Haitian bateyes of the Dominican Republic (DR) to meet the field requirement of the three-credit course, "Public Health Applications in Developing Countries." Bateyes are former sugar cane cutter camps that lack sanitary facilities, schools, and access to health and social services. The majority of Haitian women and children, although born in the Dominican Republic, are refused birth certificates so that they live like a stateless people.

Since the Project's inception, over 120 students and faculty members have worked in the bateyes providing health education and promotion programs as well as primary care. In 2010, 21 students, faculty, alumni and staff participated in the Project in January, April and July trips.

In preparation for the trip, students and faculty plan specific public health interventions and obtain the resources necessary to implement them prior to their visit to the Dominican Republic. Typical projects include parasite control programs, primary care clinics, health education programs and assistance in nutrition and sanitation projects. During the Project's existence, students have raised funds that have been used to help purchase livestock, build a medical clinic, construct a water system and provide specialized medical care. Since 2009 the Project supported the educational costs of 31 single parent Haitian children as well as a feeding program. In 2010, the project continued work on construction of a community house, adjacent bathroom and small school on donated land to provide safe housing for the children and women who care for them.

For more information on this project contact Dr. Lois Grau at [graulo@umdnj.edu](mailto:graulo@umdnj.edu) and Dr. Bernadette West at [westbbm@umdnj.edu](mailto:westbbm@umdnj.edu).

**DEPARTMENT OF OBSTETRICS, GYNECOLOGY  
AND REPRODUCTIVE SCIENCES (RWJMS)**

The Department of Obstetrics, Gynecology and Reproductive Sciences collaborates with both the UMDNJ Newark campus on community outreach programs and two federally funded health centers: EBCHC located in New Brunswick, NJ and Plainfield Health Center located in Plainfield, NJ. Department physicians provide obstetrical and gynecological services as well as high-risk pregnancy consultations and care to the women attending these health centers.

In addition to clinical services, under the leadership of the department's PhD nutritionist, the Department has:

- a. established a partnership and collaborating mechanisms with the Mt. Zion AME Church to conduct health screenings and education activities for members of the church and the New Brunswick community at large
- b. established a working relationship with the HIPHOP Promise Clinic to conduct joint health screenings for the New Brunswick communities
- c. been invited to present and participate in health activities at Rutgers University through the Willet Health Center programs
- d. provided representation to New Brunswick Tomorrow, and participated in the Get Fit Coalition, a program designed to prevent childhood obesity in the New Brunswick Public School system and New Brunswick communities
- e. been invited to participate in the New Brunswick Mayor's wellness programs that target healthy eating and increased physical activity for residents, children and adolescents, in particular, of New Brunswick
- f. been invited as regular participants in Congressman Payne's program on preventing the development of obesity among minority groups in Newark
- g. been invited as annual presenters on nutrition and health at the Caregivers Retreat for Women conducted by the Robert Wood Johnson Hamilton Center for Health and Wellness
- h. been chosen as a representative of the HHS regional (New York/New Jersey) office for women to train community leaders in nutrition and healthy living

The Department also serves the community with educational workshops directed at children and adults. The Department takes a leading role in an outreach program that extends across the State inviting young people to experience what it's like being a student doctor. The event is run by the medical and dental students studying at UMDNJ. Two of these events are coordinated annually, one in the spring and one in the fall, with each event serving over 200 children. The fall event usually takes place on the New Brunswick Campus in conjunction with National Make a Difference Day. However, to accommodate the increasing number of students interested in attending this event, the 2008 event took place at the Liberty Science Center. Over 1,000 students participated in the program, during which medical and dental students taught the student doctors for the day. During the spring event on the Newark Campus, student participants put together packets for our troops serving in Iraq. In addition to these two major State-wide outreach events, the Department holds lunch time educational seminars on the New Brunswick campus addressing women's health issues such as bone health.

The Department also participates in several health fairs such as one that is run in conjunction with National Stroke Day. Faculty and staff also participate in several fundraisers such as the Race for the Cure and the March of Dimes Walk. Faculty members work as mentors with students in the New Brunswick Health Science Technology High School in a Career Shadow program to encourage young adults to pursue careers in science. The Department offers education and alternatives to women with menstrual hemorrhage, pelvic pain and uterine fibroids, and offers an HPV vaccination program for young women. The Department also assisted in presenting programs geared at pelvic floor dysfunction and brought in as a speaker Dr. Eboo Versi, a world renowned urogynecologist. The Department also collaborates on educational events with the New Jersey magazine entitled "Garden State Woman."

## DEPARTMENT OF PEDIATRICS (NJMS)

### Division of Adolescent and Young Adult Medicine

The Division of Adolescent and Young Adult Medicine (DAYAM) is a center of excellence in all aspects of the health, development and behavior of adolescents and young adults. Since its inception in 1976, DAYAM has achieved its teaching, health care and research missions through a broad array of institutional, community-involved and community-based clinical services and psychosocial interventions. The scope of programs and services extends beyond direct clinical care to include prevention, education, advocacy and specific intervention and research in HIV and STDs, rape, sexual abuse, substance use and abuse, truancy, school failure, violence and delinquency, adolescent mental health evaluation and counseling, adolescent gynecology and family planning. Currently, the Division maintains a national reputation for its expertise in adolescent and young adult health care, and is the only inner city based comprehensive Adolescent Medicine Program in the State of New Jersey. DAYAM promotes the availability of efficacious responses to issues that adversely affect the quality of life of adolescents and young adults. DAYAM's Clinical, Community and Male Resource Programs are listed below

### Clinical Services

- **START (Screening, Treatment and Risk Reduction for Teens)** evaluates adolescents and young adults through an integrated intake process that includes medical, nutritional, substance use/abuse, mental health, and social services assessments. Each of these evaluations results in a coordinated series of services that are designed and delivered using methods that eliminate the barriers that defeat effective care.
- **MYLESTONE** provides individual and community level prevention services including health communication and public information sessions for young people and parents as well as mini teen forums. A community advisory board has been established to create an opportunity for adolescents to inform services providers of trends and issues impacting young people in the Greater Newark area.

### ***Community Interventions***

- **STOP (Spend Time On Prevention)** is a mobile testing unit where clients receive HIV information, counseling and serologic testing. After HIV testing, youth who require clinical services because of a positive serologic test (or other issues) are directly linked to the START Clinic. As needed, clients who require additional services are referred to the appropriate provider.
- **JUMP (Juveniles Understanding Methods of Prevention)** provides health education, prevention and intervention to incarcerated youth of the Juvenile Justice Commission. Services consist of risk reduction groups; safer-sex workshops; high-risk assessments; HIV counseling & testing; case management; linkages and referral services.
- **POWER (Peer Outreach Workers Educating Risk-takers)** is a peer-led education program that focuses on reducing HIV/STI transmission among African American and Latino young adults ages 13-18, through peer outreach training and certification.

### ***Male Resource Development Programs***

- **AYD (Adolescent Youth Development)** program is an intervention designed to prevent or decrease violence, risky behaviors and promote improved social and/or academic performance among young male adolescents through individual and group mentoring. Topics include: anger management, conflict resolution, college preparation, personal finance, effective communication, and career planning.

**Waiting Room Parents** is a subsidiary service of the AYD program and is an effort designed to prevent or decrease violence and risky behaviors among young male adolescents through a two-pronged approach: Strengthening families by improving the childrearing skills and capacities of parents (or parent surrogates) through a 6-week parenting training program and interventions designed to promote the social development of at-risk adolescent males.

- **YFP (Young Fathers Program)** provides counseling, parenting skills and referral services for young fathers and their partners
- **MSSP (Male Student Support Program)** offers support and counseling to enhance academic skills and success of adolescent males attending Orange Elementary and Middle Schools

### **The Division of Developmental Pediatrics**

#### **The New Jersey Medical School Autism Center**

The Autism Center uses best practice guidelines for screening, diagnosis and comprehensive developmental assessment for children suspected of having an Autism Spectrum Disorder (ASD). We also provide diagnostic clarification for children previously

diagnosed whose families are seeking guidance regarding their child's diagnosis and developmental progress.

### **The Child Evaluation Center (CEC)**

The CEC is one of eleven centers in the State of New Jersey that provide a comprehensive interdisciplinary team evaluation of children with congenital or acquired neuro-developmental and behavioral disorders. The CEC provides evidence-based recommendations for medical, behavioral and educational interventions.

### **Fetal Alcohol Syndrome Diagnostic Center**

The Northern Regional FAS Diagnostic Center uses the diagnostic system developed at the University of Washington Fetal Alcohol Syndrome Prevention and Diagnostic Network (FASPDN) to identify, diagnose and provide case management and family support to individuals who were exposed to alcohol during the mother's pregnancy

**Social Work Services** are offered to address the needs of children and their families. An initial biopsychosocial assessment reviews six areas of family functioning: living conditions, financial conditions, support to caregivers, caregiver/child interactions, and developmental stimulation and caregiver interactions. This assessment assists in generating individualized goals that are designed to enhance areas of family strength and underline areas that need support.

Support services offered include:

- Family support groups (focused on understanding, accepting, and living with the diagnosis).
- Educational workshops (topics include "Overview of Autism Spectrum Disorders and ABA" and "Managing Challenging Behavior for children with neurodevelopmental disabilities").
- Education and support for siblings of children with Neurodevelopmental disabilities.

Social workers also assist families in coordinating the myriad of services that may be required in providing the necessary supports for each family and child. Systems advocacy and coaching in techniques of self-advocacy are also a part of the service delivery system.

The **ABA Parent Training Program** provides hands-on training to teach parents to implement Applied Behavior Analysis (ABA) with their children. ABA has been shown to be successful for treatment of autism spectrum disorders and other neurodevelopmental disabilities -- and is effective for teaching new skills (including social interactions, language, and play skills) and reducing challenging behaviors. ABA works by breaking down into small steps things that children need to learn--and teaching one step at a time, using lots of practice and positive reinforcement.

Participation in the NJMS Autism Center program includes:

- An assessment attended by parent(s) and child to identify relevant goals to address during the course of the program.
- A didactic training workshop.
- Daily hands-on parent training sessions (Mon-Fri, for 1 hour each day) for a period of up to 6 months. Sessions are attended by at least one parent and

the child. During each session, the trainer works hands-on with the parent to teach the child the skills identified during the initial assessment.

- Follow-up visits (one month and three months after sessions have been completed).

This program is currently open only to children with an ASD who have been evaluated at UMDNJ. For parents who are concerned about missing work to participate in the program with their child, information can be provided that may help them to work with employers to obtain temporary leave hours.

### **Outreach & Educational Services**

The outreach and educational services developed by the Division provide systems of support for individuals with Neurodevelopmental disabilities, their families, community healthcare and education professionals in the Newark, greater Newark Region and surrounding counties. The structure of the outreach and education programs provided by the division is comprised of: 1) Family & Patient Centered Approaches, 2) School Centered Approaches and 3) Community Centered Approaches. We are currently:

- Working collaboratively with Family Support Organization of Essex County, Autism New Jersey, Statewide Parent Advocacy Network, Urban Voices for Children with Autism Special Needs and other local advocacy groups to provide information to families and professionals about the services and programs available within our division.
- Offering professional presentations and workshops to families, professionals, schools and community groups.
- Providing a forum to Newark and Greater Newark Regions School Districts for interdisciplinary discussion of current theory and evidence-based research literature concerning the evaluation of educational needs, methods used to identify effective interventions and educational programs for children with a NDD.
- Collaborating with Newark Early Intervention Programs, Preschool and School-age Child Study Teams to provide assessment, consultation and the development of evidenced-based educational intervention strategies for Children with NDDs.
- Training highly skilled allied health professionals to become culturally competent, collaborative partners with parents, other professionals, agencies, faith-based organizations, and community-based service providers in support of individuals with NDDs. Our Center's unique combination of Medical, Allied Health and Behavioral training programs uses state-of-the-art training technology to both train and disseminate evidenced-based information and intervention guidance to community professionals, and to the families of children with NDDs. Participants will experience a program consisting of combined didactic, case-based teaching modules and clinical observation/training, and involvement in community-based leadership projects and transdisciplinary collaborations in NDD. These experiences will further our mission to "improve the health of infants, children, and adolescents who have, or are at risk for developing, neuro-developmental and other related

disabilities by preparing individuals from a wide variety of professional disciplines to assume leadership roles and to ensure high levels of transdisciplinary clinical competence and a culturally diverse workforce.”

### **Family Resource Center (FRC)**

The aim of the FRC, which is under development, is to support the efforts of the health care team, family and schools by providing a comfortable place where families can find healthcare, learn about autism and other neurodevelopmental disabilities, access information about services, obtain parenting and recreational information in a variety of formats including educational videos, printed materials and computer-assisted learning tool. This will also be a place where families can gather and meet other families to support one another.

The center will be located in The Division of Developmental-Behavioral Pediatrics on the F-level of the University Behavioral Healthcare Building 183 South Orange Avenue, Newark, NJ 07305. The Center will be designed by families and professionals to provide a venue for support groups, workshops etc. for children, parents, caretakers, siblings and other relatives of our patients with NDDs. Inside, families will find a family and children's library, a learning center with computers with internet and email access and a fax and a comfortable hospitality area. The center will have a patient representative on staff during midday and evening hours.

## **DEPARTMENT OF PEDIATRICS (RWJMS)**

The **Division of Allergy, Immunology, and Infectious Disease** within the Department of Pediatrics at RWJMS provides inpatient and outpatient clinical care, trains residents and medical students, and participates in numerous public and community events. Physicians give Grand Rounds at community hospitals and provide formal lectures to medical students, serve as faculty advisors, and supervise resident rotations. Throughout the year faculty members co-host a bi-weekly radio show, “Your Child and You”, and participate in various community health fairs.

Within the Division, the **Robert Wood Johnson AIDS Program (RWJAP)**, a site of the New Jersey Family Centered HIV Care Network, provides HIV/AIDS education and training to professionals in health care, education, social services, and other disciplines. RWJAP enjoys a host of linkages with HIV and non-HIV agencies such as community-based organizations, local and regional planning boards including the NJ HIV Community Prevention Planning Group (CPG), and social service agencies. RWJAP currently provides on-site HIV counseling and testing and provides outreach prevention services to the local schools and community-based organizations. Ongoing community activities include Case Study Days, Family Day, Vision Day, weekly testing at the Middlesex County STD Clinic, DYFS Nurses Trainings, National Women HIV/AIDS Awareness Day, National Latino AIDS Awareness Day, and World AIDS Day.

**Pediatric Genetics**, a division of the Department of Pediatrics at RWJMS, is part of a comprehensive program providing a full range of clinical genetic services. The Division provides internships for genetic counseling students and electives for third- and fourth-year medical students and pediatric residents. The Division participates in the Department of Health and Human Services Metabolic Genetic Task Force and Metabolic Advisory Committee and the Human Genetics Association of New Jersey. The Division also participates in the New York Mid-Atlantic Consortium for Genetics and Newborn

Screening Services and provides community education on genetic topics through CME programs and lectures.

The **Division of Child Neurology & Neurodevelopmental Disabilities** within the Department of Pediatrics at RWJMS provides a full range of clinical services for children with all types of neurological disorders. The large patient population serves as a basis for an active teaching service for medical students, pediatric residents, neurology residents, psychiatry fellows, and child neurology fellows as well as a population base for clinical research. The Division is a site for the training of neurology residents in conjunction with the New Jersey Neuroscience Institute at JFK Medical Center, Edison, and Child Neurology fellows in conjunction with the Child Neurology Division of the New Jersey Medical School, Newark. Ongoing research projects in the section of Child Neurology include folate transport into the brain, cognitive effects of anticonvulsants, genetics of idiopathic generalized epilepsy, and new medications for migraines in children. The section of Neurodevelopmental Disabilities is actively involved in autism research, including studies of the role of environmental toxins, and the genetic similarities between language disorders and autistic disorders.

### **DEPARTMENT OF PREVENTIVE MEDICINE AND COMMUNITY HEALTH (NJMS)**

#### ***Asthma***

Dr. Weiss is co-chair of the Evaluation Task Force and serves on the Coordinating Committee of the Pediatric/Adult Asthma Coalition of New Jersey (PACNJ). The PACNJ acts as a statewide clearinghouse for asthma programs and services, working with schools, child care providers, health care providers, health insurers, community groups, and environmental agencies. The PACNJ reaches out to individuals and caregivers in New Jersey to help promote the most effective methods for managing asthma. Dr. Weiss helps design and analyze surveys for the PACNJ, evaluating the implementation of PACNJ's Asthma Action Plan in New Jersey Schools and the development and revision of educational documents and resources. He helps determine if outreach and education efforts by the PACNJ have improved compliance with state guidelines for treating asthma in schools.

On April 27, 2011 Dr. Weiss testified at an Environmental Protection Agency (EPA) hearing in Oxford New Jersey, to address dangerous pollution from the GenOn coal plant in Portland, PA. Toxic emissions from this plant are making residents of both Pennsylvania and New Jersey sick, and preventing New Jersey from meeting federal air quality standards.

#### **Comprehensive Cancer Control**

Dr. Stanley H. Weiss is the principal investigator and director of the Essex County Cancer Coalition (ECCC), and has been since its inception in 2004 (see further details below). Funded in part by the NJ Department of Health and Senior Services (NJDHSS), the ECCC provides community cancer education and outreach services and serves as the official omnibus organization to help coordinate and promote activities throughout the county.

The ECCC's Leadership Council includes Dr. Michael Festa, Essex County Health Officer. This partnership has been instrumental in promoting cancer prevention and control throughout the county, especially to public employees. The ECCC's mission statement and other details can be found at <http://www.umdnj.edu/esscaweb/>. On this

web site, the ECCC provides an innovative web-based calendar of cancer-related educational events and screening opportunities. The ECCC, with input from the American Cancer Society and representatives from other hospitals and medical centers, developed an “Essex County Cancer Resource Flyer” in both English and Spanish, which is being widely disseminated throughout the county. Among ECCC partners in this project are all of the local health officers in conjunction with the Essex County Health Officers Association, who are distributing the flyer to restaurants that they inspect and license. This flyer is also being given to barbershops in conjunction with ECCC’s Prostate Cancer Initiative (see below), as well as to other institutions and businesses that tend to have uninsured workers.

The ECCC released a major revision of its “Cancer Burden in Essex County” brochure in February 2011. This features updated incidence and mortality statistics from the NJ Cancer Registry — including key comparisons between Essex County and New Jersey overall — as well as estimates of Essex County cancer prevalence by cancer site newly updated by the ECCC leadership team based on the latest available data. The prevalence estimates were derived using a novel and simple method developed by Dr. Weiss. We also revised the ECCC introductory brochure to incorporate the revised mission and goal statement and to improve its visual clarity. Both brochures are available on the ECCC website. To better meet the needs of Essex County’s diverse population, these brochures have also been translated into Spanish, Portuguese and Haitian Creole (the major other languages in our community) through the Cancer Institute of New Jersey’s translation program.

The ECCC links many entities together in an effort to fight cancer in Essex County. Among its constituent members are individuals from the community, as well as representatives from:

- AARP West Essex Chapter
- American Cancer Society
- Bloomfield Health Department
- Cancer Care Inc.
- Cancer Institute of New Jersey
- East Orange Health Department
- Essex County Communities Against Tobacco (CAT) Coalition
- Essex County Division on Aging
- Essex County Health Department
- Essex County Hospital Center - Institute for Mental Health Policy, Research & Treatment
- Hoboken Family Planning in Hudson County
- Hudson County Cancer Coalition
- Igreja Luterana & St. Stephen's Church – UCC
- Irvington Health Department
- Livingston Health Department
- Merck Vaccines & Infectious Diseases
- Lung Cancer Circle of Hope
- METS Community Center
- Montclair Health Department
- Morris County Cancer Coalition

- Mountainside Hospital
- New Community Corporation, Newark, NJ
- New Hope Baptist Church, Newark, NJ
- New Jersey Cancer Education and Early Detection (NJCEED) Programs:
  - University Hospital's S.A.V.E. Women and Men
  - St. Michael's Medical Center's "In the Pink"
- Newark Beth Israel Medical Center
- Newark Cancer Initiative
- Newark Community Health Centers
- Newark Department for Child and Family Well Being
- Newark NOW
- Newark Police Clergy Affairs Unit
- Passaic County Cancer Coalition
- Planned Parenthood of Metropolitan NJ - Ironbound Center
- The Prostate Net
- Prudential Financial, Inc.
- St. Barnabas Hospital and Medical Center, Livingston, NJ
- Saint Michael's Medical Center's Regional Cancer Center
- Sisters Network
- South Orange Health Dept
- Susan G. Komen For the Cure North Jersey
- Union County Cancer Coalition
- UMDNJ - New Jersey Medical School, University Hospital, UH/NJMS Cancer Center, New Jersey Dental School, & New Jersey School of Public Health
- VA Hospital - East Orange

### **Free Oral Cancer Screening at UMDNJ and Essex County Cancer Health Fair**

For the fifth year in a row, in May 2011 the ECCC held its annual Health Fair, organized through the NJMS Department of Preventive Medicine & Community Health in combination with free oral cancer examinations provided by New Jersey Dental School (NJDS). Volunteer NJDS faculty and community dentists performed oral cancer examinations on all interested attendees, with appropriate follow-up (an event now in its eleventh year). The ECCC distributed educational materials about prevention and early detection of various cancers, as well as instructions on lifestyle and habit changes geared towards reducing the likelihood of developing oral and other cancers. Additionally, there were information booths from over a dozen major cancer prevention and advocacy organizations as well as other health projects. Additional free screenings were available at the Health Fair through the UH/S.A.V.E. program — breast and cervical cancer screenings for the third year in a row, and prostate cancer screenings for the fourth year.

### **New Jersey Prostate Cancer Initiative**

Dr. Weiss is Principal Investigator for the New Jersey Prostate Cancer Initiative (PCI) in the northern part of the state, a CDC-funded grant to the NJDHSS supplemental to the funding of comprehensive cancer control in NJ. The PCI is now completing its fourth year. This program, designed for the whole state, extends The Prostate Net's national Barbershop Initiative™ to enlisting barbers in NJ. The PCI has so far partnered with over 300 barbershops and unisex salons in northern and central New Jersey to educate their customers about prostate cancer in collaboration with NJ Cancer Education and Early

Detection (CEED) lead agencies, to which they can refer their customers for further education and screening. The PCI provides resources on prostate cancer prevention to cosmetologists and their patrons in barbershops and unisex salons. The PCI works with NJCEED lead agencies in 11 counties to identify sites in the community, such as barbershops and faith- and community-based organizations that can host and facilitate prostate cancer screenings. The PCI also works with the National Beauty Culturists' League, Inc and its New Jersey affiliate, the Modern Beauticians Association, and promoted the use of a cosmetologists' forum for discussing industry issues and health matters. Guest speakers at the forum have included members of the Board of Cosmetology, a former city councilman, and other barbers.

### Transportation

The ECCC is actively promoting its updated *Transportation Resource Guide* developed by our Leadership Council's Transportation Committee. Versions of this brochure are available on the ECCC web site in black and white and in color, including versions that can be customized by hospitals and other organizations by adding their own logos. The ECCC worked with the Cancer Institute of New Jersey (CINJ) to have the brochure translated into Spanish, Portuguese and French Creole. It has been distributed to all ECCC members in all four languages, and each can be downloaded from our website. These transportation brochures are also distributed at events we attend.

### Radon

The ECCC and New Jersey Medical School continue to implement the Radon Awareness Program (RAP) that began in 2009 with grant support from the NJ Department of Environmental Protection (NJDEP). The NJDEP reimburses us for purchase of radon kits and provides brochures about radon. The kits can go to any homeowner in Essex County. Kits have been distributed to six health officers in Essex County covering 17 municipalities. We continue to follow up on their progress and to replenish supplies if needed. To promote Radon Awareness Month in January 2011, the ECCC worked with the NJDEP to provide municipalities with news releases and radon awareness proclamations specific to their communities. In addition, as long as funding for radon kits remains available, we are continuing to distribute them at local health fairs.

Dr. Weiss constructed a survey instrument, with the assistance of UMDNJ staff, to measure the knowledge level of the community about radon. The survey was designed to be self-administered and to be given to persons interested in radon, but before they received education about radon or were given free radon detection kits.

The survey results suggest that more radon education is indeed needed in Essex County and that public health programs should focus on increasing general radon knowledge, including stressing the association between lung cancer and radon exposure. They strongly support the decision of the ECCC to implement radon education and radon testing programs in our region.

### Tobacco

Under the direction of Dr. Stanley H. Weiss, the Essex County Cancer Coalition (ECCC) formed a Tobacco Sub-Committee in August 2009 to identify needs and implement activities to address tobacco-related issues in Essex County. This sub-committee has met several times since and, as one of its initial projects, has created a tobacco resource directory focused on those resources that are available in Essex County. This guide contains a directory of services available to Essex County residents including *both* those

focused on smoking cessation *and* those focused on smoking prevention. The directory is available at the ECCC's website: [www.umdj.edu/esscaweb](http://www.umdj.edu/esscaweb)

Dr. Weiss and Dr. Daniel M. Rosenblum served on the American Cancer Society's New Jersey Tobacco-Free Hospital Campus Collaborative (NJTFHCC), which encourages and provides resources for hospitals to implement complete tobacco-free campus policies.

### **Heart Attack and Stroke Risk**

The ECCC and the University Hospital S.A.V.E. Program, supported by the New Jersey Department of Health and Senior Services, are launching a pilot program in New Jersey in FY 2011 designed to reduce participants' risk of heart attack and stroke. Outpatients at University Hospital who are at elevated risk of heart attack or stroke are eligible to participate in a series of six free 2.5-hour workshops, called Take Control of Your Health, which implements the Chronic Disease Self-Management Program developed at Stanford University. The workshops are being led by trained facilitators associated with the SAVE and ECCC Programs.

### **Service on State Health Department Advisory Groups**

Drs. Weiss and Rosenblum both serve on the statewide Prostate Cancer Workgroup that reports to the gubernatorially appointed Task Force on Cancer Prevention, Early Detection and Treatment in New Jersey. In addition, Dr. Rosenblum serves on the Oral & Oropharyngeal Cancer Workgroup. For five years, Dr. Weiss chaired the Evaluation Committee for the Task Force. Dr. Weiss helped write much of the first and second New Jersey Comprehensive Cancer Control Plans and the first two biennial status reports on the first plan. He also conceived and oversaw the development of cancer capacity and needs assessments for each of New Jersey's 21 counties, and developed the first comprehensive cancer resource database for New Jersey. Additional information can be found at [www.umdj.edu/EvalCweb](http://www.umdj.edu/EvalCweb).

### **National and Statewide Organization Leadership**

Dr. Weiss works with many national and state-level organizations in leadership roles. Dr. Weiss is the founding and current chair of the Epidemiology section of the NJ Public Health Association and is the longest continually serving member of its Executive Board. Dr. Weiss served on the American Public Health Association's Science Board as its vice-chair and is a past chair of the Epidemiology Section of the American Public Health Association. In 2010 he became chair of the Joint Policy Committee of the Societies of Epidemiology. He is a member of the Steering Committee, the Symposia Committee and the Awards Committee for the planning of the 2011 Congress of Epidemiology that will be held in June 2011 in Montreal, Canada, as well as the organizer of a symposium on the part of the Joint Policy Committee of the Societies of Epidemiology. Dr. Weiss served on planning committees for the 2001 and 2006 Congresses of Epidemiology, including chairmanship of the Infectious Diseases track and the Awards Committee for the 2006 Congress, and one of the four members of the Executive Committee overseeing the 2006 Congress of Epidemiology.

### **DEVELOPMENTAL DISABILITIES COMMUNITY LIVING EDUCATION PROJECT Educating Families and Staff about the Possibilities in Community Living (SPH)**

The Developmental Disabilities Community Living Education Project (CLEP) provides education and information to families of people with developmental disabilities who are

making or considering a transition from institutional to community living in New Jersey. CLEP familiarizes individuals and their families with the support coordination team process being used for community transition. The Project supports families to participate as a member of the team in choosing and helping to develop the most effective and viable community living options for their family members. In addition, CLEP provides training for staff about the support coordination transition process and the current options available for those with developmental disabilities living in the community. The CLEP team also assists in the orientation of families on the Community Services Waiting List in using a person-centered plan and individual budget to purchase supports and services in their home. Support for this Project is provided by the New Jersey Department of Human Services, Division of Developmental Disabilities.

Project activities include:

- Pictures of Community Living Events to provide families with a picture of the possibilities in community living
- New Beginnings Family Meetings on transition to community living
- New Beginnings in Community Living newsletter, a quarterly newsletter
- "My Life Now" annual magazine featuring stories of people who have transitioned to live in a community setting
- A New Beginning: Family Guide Series on Transitioning from Developmental Center to Community Living
- The project website, <http://www.umdni.edu/linkweb>
- A family HELPLINE (1-800-500-0448) for family questions and concerns on community living
- Training for Division of Developmental Disabilities staff on person-centered support coordination and community living transition.

For more information on the Developmental Disabilities Community Living Education Project, contact David Wright, Project Director at [wrightd1@umdni.edu](mailto:wrightd1@umdni.edu).

### **EARLY INTERVENTION PROGRAM (EIP) (SOM)**

In cooperation with Kennedy Health System and as part of a Ryan White Part B Grant, the UMDNJ-SOM Department of Obstetrics and Gynecology provides gynecologic preventive health screenings monthly to persons with HIV who might otherwise not have access to or ability to pay for these services. Under the same EIP, pain assessment and treatment is provided weekly to persons with HIV by the UMDNJ-SOM NeuroMusculoskeletal Institute (NMI).

### **ELIZABETH M. BOGGS CENTER ON DEVELOPMENTAL DISABILITIES (RWJMS)**

The Elizabeth M. Boggs Center on Developmental Disabilities, within the Department of Pediatrics at RWJMS, is part of a national network of University Centers for Excellence in Developmental Disabilities Education, Research, and Service. The Boggs Center is sponsored by the Administration on Developmental Disabilities, Administration for Children and Families, U.S. Department of Health and Human Services. The Center is contracted by the NJ Department of Human Services, Division of Developmental Disabilities; the NJ Department of Education, Office of Special Education Programs; and other state and local funders. The Center provides community and student training and technical assistance, conducts research, disseminates educational materials, and

responds to requests for information. The Boggs Center promotes a community-based, life span approach to the delivery of community supports for people with developmental disabilities. While it does not provide clinical services directly, it helps to increase the capacity of service providers and systems of care in New Jersey. Boggs Center personnel serve on State and national boards and committees including:

- Governor's Council on the Prevention of Mental Retardation and Developmental Disabilities (Gubernatorial Appointment)
- NJ Advisory Council on Traumatic Brain Injury (Gubernatorial Appointment)
- NJ Council on Developmental Disabilities (Gubernatorial Appointment)
- NJ Division of Medical Assistance, Medical Assistance Advisory Council (Chair)
- Rutgers University School of Social Work, Continuing Education & Professional Development Program, Certificate Program in Developmental Disabilities (Chair)
- Human Services Management Advisory Council (Member)
- Rutgers University School of Social Work Field Education Committee; Council on Quality & Leadership (Board Member)
- TASH (Board Member)

Boggs Center faculty serve as editors of the *Journal of Religion, Disability, and Health* and the *National Association for the Dually Diagnosed Bulletin* and serve on the editorial boards for the *Journal of Positive Behavior Interventions and Research and Practice for Persons with Severe Disabilities*. Ongoing projects include the Developmental Disabilities Lecture Series, Clinical Pastoral Education, Faith-Based Supports, Self-Directed Supports, Direct Support Workforce Development, Inclusive Education, Interdisciplinary Traineeship Program, Positive Behavior Supports, Transition from School to Adult Life, and Supported Employment. Participants in Boggs Center training programs include individuals with disabilities and their families, students, and professionals in health care, education, social services, and other disciplines.

### **ERIC B. CHANDLER HEALTH CENTER (RWJMS)**

The Eric B. Chandler Health Center (EBCHC) is the cornerstone of UMDNJ-RWJMS community-based programs. Founded in 1987 in memory of Eric B. Chandler, Ed.D, it is a comprehensive, family oriented community health center that opened in 1988. The Health Center is operated jointly by UMDNJ-RWJMS and the EBCHC Community Board, which together form the Health Center (co-applicant relationship). EBCHC was designated as a Federally Qualified Health Center (FQHC) in January 1991 and received CHC Section 330 funding in October 1993. The Center is dedicated to providing high quality ambulatory health care services to low-income, uninsured and under-insured residents of the Greater New Brunswick community. The Center is also a training facility for residents and medical students at RWJMS.

The primary care services provided at EBCHC include: pediatrics & adolescent services-inclusive of EPSDT (early and periodic screening, diagnostic and treatment) services-and immunizations; obstetrics & gynecology-inclusive of family planning & colposcopy; internal medicine-inclusive of preventative health services; diagnostic laboratory; urgent medical care; follow up of hospitalized patients; geriatrics; and preventative, restorative,

and emergency dentistry. Other services include podiatry, HIV counseling and testing, early intervention and treatment, addiction services, clinical social services, translation services, community outreach, case coordination, health education and emergency transportation. Services provided by contract include diagnostic radiology and pharmacy services needed for quality continuity of clinical care. Referral services provided include emergency care, mental health counseling and treatment, physical and occupational therapy, substance abuse and other medical specialties not provided on-site. Services provided on-site are offered 50 hours per week. Twenty-four hour coverage seven days per week is provided through a physician call schedule. The mission of the center is:

- To provide high quality ambulatory health care services that are culturally effective, accessible and affordable
- To promote a healthy lifestyle and educate patients to take responsibility for and participate in their health care decisions
- To serve as a community resource for health and social services
- To provide high quality educational opportunities for health professionals who train at the Center.

With the support of a federal grant, in March 2006 the Chandler Health Center opened a satellite location in New Brunswick to expand its services. The new facility, five blocks from the main building, responds to the need for more medical and dental services and health education for the under-insured and uninsured population of central New Jersey. With two medical and two dental examination rooms, a patient education room, and offices for support staff, the services at the satellite location have eased the backlogs for appointments at the main Chandler Center.

As part of an academic health center, Chandler actively participates in training medical students, residents, nursing students, and social work students. Emphasis is placed on the use of a bio-psychosocial approach to patient care, with special attention given to helping learners understand the influences of poverty, poor education, cultural diversity and family structure on the delivery of effective patient care services. One of the primary goals of the Center is to teach learners about the unique issues that confront patients in an underserved urban setting. Each year over seventy residents and medical students rotate at Chandler. Internal medicine residents and pediatric residents are assigned to Chandler for their three years of continuity care experience. OB/GYN residents provide obstetrical care as well as continuity in gynecologic care.

As part of its commitment to eliminating health disparities and improving clinical outcomes, the Center participates in the National Health Disparities Collaborative. Activities are designed to improve the overall care that each patient receives and to establish a process of improvement based on the Care Model. The Care Model fosters productive interactions between patients and a prepared practice team within a health care setting. The model is designed to maximize resources, use them effectively, and look towards the community for resources to help deliver evidence-based care.

The Center is also committed to the PDSA (Plan, Do, Study, Act) method for accelerating the change process and improving work flow, patient care, and other activities at Chandler.

As a community-based health center, Chandler also collaborates with local agencies to address both health and social needs. For example, Chandler regularly participates in community health fairs and projects sponsored by the Alliance for a Healthier New Brunswick. In addition to its core clinical services, Chandler has developed the following community-based programs:

**Family Education Program:** This outreach project features a series of health education seminars on topics such as domestic violence, family, immigration, managed care, and home safety and health maintenance.

**Prenatal Classes:** A series of classes for pregnant women is offered in English and Spanish three times a year to provide information about normal pregnancy, what to expect during labor, and normal child development. A separate series of prenatal classes is offered for expectant adolescent mothers with additional topics such as continuing education after the baby's birth and preventing unplanned pregnancies.

**Reach Out and Read Program:** To encourage reading to children from an early age, the Chandler Center participates with the National Reach Out and Read Program cooperatively with Rutgers University. At every well child visit, children are given books that are appropriate for their developmental level.

### FACULTY COLLABORATIVE INITIATIVES (SN)

**Casa Israel Newark** – Throughout the academic year faculty and students provide health education, nutrition teaching, exercise planning, physical examinations and screenings for hypertension and diabetes at this adult daycare facility.

**Healing the Children Northeast Chapter** – Dr. Clare Golden traveled to Columbia South America on her 36<sup>th</sup> medical mission as a member of the surgical team administering anesthesia for children undergoing reconstructive surgeries for birth defects and burn scars. In addition, over the past 20 years she has traveled on medical missions to Guatemala, Ecuador, Nicaragua and Bangladesh.

**Ironbound Community Corporation** - The School of Nursing has supported the mission of the Ironbound Community Corporation by providing nursing outreach to the homebound elderly, the Ironbound Child Care Center, the Hawkins Street Elementary School and the Hyatt Court and Terrell housing projects. Community health nursing students and Professor Cindy Sickora have conducted monthly blood pressure screenings at various sites in the Ironbound Community. The School of Nursing participates in Annual Community Fairs where health education and promotion are provided.

**Irvington Family Development Center** – School of Nursing associate professors Ruth Moncheck and Susan Wiedaseck provide classes on contraceptive counseling to pregnant and postpartum teenagers at the Center.

**ISLA (Instrucción en Salud Latina)** - Dr. Frances Munet-Viláro is currently implementing a health literacy program with monolingual Latinos in collaboration with the Ironbound Community Corporation (ICC). The program is funded by the RWJ New

Jersey Health Initiative. Graduate and undergraduate nursing students participate in the program as part of their community health and public health nursing field experience.

**The Bergen Volunteer Medical Initiative, Hackensack, NJ** - Dr. Mary DiGiulio currently volunteers as an Adult Nurse Practitioner in this program. She is also on the Oradell Board of Health.

**The New Jersey Board of the American Psychiatric Nurses Association (APNA)** – Professor Carrie Carretta sits on the New Jersey Board of the APNA and is also a member of the Steering committee for the Forensic Council of the National APNA.

**The New Jersey Perinatal Collaborative** – Dr Elaine Diegmann serves as a member of this collaborative, which is sponsored by the New Jersey Hospital Association (NJHA), to provide evidence-based care to reduce the caesarean section rate in New Jersey. She is also a member of NJHA's VBAC (Vaginal Birth after Cesarean) Taskforce-Epidemiology Subcommittee to study and recommend VBAC as a safe option for the women of New Jersey.

**Newark Beth Israel Medical Center** – Dr. Elaine Diegmann participates in the Nurse Midwifery Service, which serves an ethnically diverse, economically deprived population.

**Nursing Service Leadership in Dominican Republic** - UMDNJ School of Nursing faculty and 4<sup>th</sup> level nursing students, in collaboration with the College of Saint Elizabeth and the Foundation for Peace, attended lectures and educational sessions, collected medical and health supplies, and traveled to the Dominican Republic in March 2011 to provide care and outreach education to approximately 2,000 individuals in two rural clinics over the course of four days.

**Planned Parenthood of Metropolitan New Jersey** - Drs. Ginette Lange, Joyce Hyatt, Patricia Hindin, Ruth Monchek, Susan Wiedaseck, and Asunta Beardsley provide prenatal care services for Planned Parenthood of Metropolitan New Jersey. All clients are assisted with Medicare eligibility and are seen by a nutritionist and social worker at their initial assessment. Clients are referred to St. Joseph's Medical Center when the need arises for high risk care.

**Programs for Parents, Inc.** - Community health nursing students and faculty are supporting the efforts of the child care health consultants from Programs for Parents by assisting with dental education in Essex county preschools.

**RESPIRA Program** - The School of Nursing is supporting the UMDNJ RESPIRA program by providing asthma workshops (according to RESPIRA protocols) in the Newark public schools to English-speaking families. The nursing faculty and BSN students, all of whom have been IRB approved, are providing follow-up home visits to the identified families. Workshops are offered two to three times per month at schools across the city.

**Saint John's Church** - Community health nursing students and faculty participate in weekly clinic activities offered by the staff at St. John's Church. Students work in the soup kitchen and provide blood pressure screening. Nursing faculty support the project by providing respite for the church nursing staff.

**The Leaguers-Clinton Avenue, Newark, NJ and Elizabeth, NJ** - Drs. Dula Pacquiao, Frances Munet-Vilaro, and Rula Wilson, as well as an MSN student Ms. Tammy Cooper, provide monthly health education classes for parents in health nutrition, child abuse prevention and oral care. In addition, at the Elizabeth branch, Dr. Pacquiao provides weekly health promotion activities for 192 preschoolers, including

- Providing individual oral examinations and demonstrations on tooth brushing and demonstrations and supervised return demonstrations of hand washing;
- Determining individual BMI analysis and suggesting appropriate caloric allowances to parents; following up with additional information for the Center director, teachers and kitchen staff on appropriate caloric allowances and food services; and
- Collaborating with the Health Care Coordinator to refer children to the Wellness Mobile Healthcare Service of UMDNJ.

**UH American Sign Language Medical Interpreter** – Dr. Joyceann Fileccia serves as an American Sign Language interpreter at the University Hospital and at various other healthcare facilities. She also teaches the course entitled "Deaf Culture and American Sign Language for the Health Care Provider" at UMDNJ.

#### **FACULTY COLLABORATIVE INITIATIVES (SN-FXB)**

**American Dietetic Association** - Dr. Pamela Rothpletz-Puglia is a volunteer on the HIV/AIDS Working Group for Evidence analysis and Guideline Development.

**The Newark Museum** - Dr. Pamela Rothpletz-Puglia is on the Advisory Board for an exhibit opening in November, 2011 called *Generation Fit: Steps to a Healthier Lifestyle*.

**The New Jersey AIDS Partnership** - Dr. Pamela-Rothpletz-Puglia and Ms. Virginia Allread are on the Steering Committee for determining operating policies for HIV-related community initiatives supported by the Partnership.

#### **FAMILY MEDICINE CENTER FOR INFORMATION MASTERY (SOM)**

The Department of Family Medicine launched the Center for Information Mastery (CIM) in 2009 as a training center for faculty, residents and students, as well as to provide information to community-based physicians and patients. The Center was made possible by a grant from the U.S. Bureau of Health Professions, Health Resources and Services Administration, Division of Primary Care Medicine and Dentistry. The CIM concept includes mastering the information needed for the care of patients and for professional development. Under the direction of Dr. Adarsh Gupta, Assistant Professor of Family Medicine, the Center provides training, resources and tools to keep up-to-date with the high volume of medical information and research available, to answer clinical questions at the point of care, and to provide community-based providers and patients with reliable medical information on the web.

## **FRANÇOIS-XAVIER BAGNOUD (FXB) CENTER (SN)**

The François-Xavier Bagnoud (FXB) Center, School of Nursing, receives public and private funding of approximately \$40 million annually. Public funding sources are diverse and include the New Jersey Department of Health and Senior Services (NJDHSS), the New Jersey Department of Human Services, Health Resources and Services Administration (HRSA) HIV/AIDS Bureau, the National Institutes of Health (NIH), the US Centers for Disease Control and Prevention (CDC) and the World Health Organization (WHO). Beginning early in the HIV/AIDS epidemic, FXB Center's interdisciplinary clinical leadership developed a model approach to family-centered HIV care. The Center offers training and technical assistance to share this expertise with other programs in New Jersey, the US and throughout the world ([www.fxbcenter.org](http://www.fxbcenter.org)).

### **Clinical Services**

**FXB Center Ambulatory Care Center** at University Hospital in Newark meets the healthcare and social service needs of families living with HIV infection through the provision of multidisciplinary, culturally competent and comprehensive HIV services. The Ambulatory Care Center provides HIV primary medical care, intensive targeted interventions to support adherence to care and treatment and improve client outcomes to the more than 400 families currently served by the program. The Center offers clinical and social services to infants and children who are HIV-exposed and adults with HIV infection. Two clinical and social services programs of the Center, The Family Place and Health Care Connections, reach out to the community to identify, engage and facilitate comprehensive care of HIV-infected and affected persons. Care is coordinated and continuous among the hospital, ambulatory care, home and community settings.

**FXB Center Child Health Program** in collaboration with the New Jersey State Division of Youth and Family Services (DYFS) ensures that the healthcare needs of vulnerable, at-risk children are met by providing a range of community based pediatric nursing services to DYFS district and regional offices. The Program also works closely with DYFS to develop a coordinated response to specific regional and statewide health needs. Child Health Program nurses, highly experienced in pediatric care, evaluate the health needs of medically fragile children under DYFS. These nurses, with special expertise in child health and safety issues and case management, are linked to medical and community health agencies. They assess children suspected of abuse and neglect, advocate for the quality of health care for children in the child welfare system and assist DYFS staff in meeting children's health needs.

### **National Programs**

**The HIV/AIDS National Resource Center (NRC)** provides technical assistance, training and materials development to healthcare providers across the U.S. Funded by HRSA since 2002 as the AIDS Education and Training Centers (AETC) National Resource Center, NRC works closely with the eleven regional AETCs and more than 130 local performance sites. The NRC supports national working groups on timely topics and maintains a library of AETC resources through their website at [www.aidsetc.org](http://www.aidsetc.org). FXB NRC is also funded by HRSA as a National Resource Center for the Ryan White CARE Act Part D (Title IV) projects. It supports implementation of surveys, focus groups, and evaluations to improve clinical practice and provides staff support for the working groups that maintain national guidelines for treatment of pediatric HIV infection and care of pregnant women with HIV and prevention of perinatal HIV transmission. Since 1999, the

NRC at FXB Center has been funded by the CDC as a national organization working to eliminate perinatal HIV transmission. NRC has developed train-the-trainer curricula used nationally to reduce perinatal HIV transmission and innovative approaches to support the implementation of rapid HIV testing in labor and delivery for women with undocumented HIV status and routine HIV testing in medical settings.

**New York/New Jersey AIDS Education and Training Center for the Northern New Jersey Region.** As part of a national network of 11 regional and 4 national centers (and more than 130 associated sites) the NY/NJ AETC conducts targeted, multi-disciplinary education and training programs for healthcare providers treating persons living with HIV/AIDS. The NY/NJ AETC's mission is to assist health care professionals, through education and training, to provide optimum quality services and sensitive care to HIV positive persons, and to provide access to current research and treatment of HIV/AIDS. It serves the New York and New Jersey healthcare community by providing AIDS and HIV education and training to treat, manage, diagnose, or counsel individuals with HIV infection or to help prevent high risk behaviors that lead to HIV transmission. Funding is provided by Health Resources Services Administration HIV/AIDS Bureau.

### **Global Programs**

The FXB Center's Global HIV Program offers a multidisciplinary team of experts focused on building healthcare worker capacity and strengthening healthcare infrastructure to support the development and scale-up of sustainable HIV prevention, care and treatment services. The Center provides technical and operational support to strengthen existing local capacity and to foster new skills development that extend the ability of governmental and non-governmental organizations to carry initiatives forward with enhanced local ownership. The Global HIV Program has led projects supported in more than a dozen countries in Africa, Asia and the Caribbean.

The Center plays a lead role in global initiatives to support scale-up of PMTCT (preventing mother-to-child transmission) and pediatric HIV care and treatment, including partnering in the development update of the World Health Organization/CDC PMTCT Generic Training Package. Under the guidance of the CDC, the FXB Center also led the development of the Testing and Counseling for PMTCT Support Tools, and developed a set of generic evaluation tools for use by countries that have implemented the Support Tools and want to evaluate their impact. As CDC-Guyana's primary implementing partner for HIV care and treatment, the FXB Center has been working in Guyana to strengthen systems and capacity for HIV care, treatment and support for people living with HIV. In Tanzania and Botswana, ongoing technical assistance is provided to the governments to support scale-up of PMTCT services and improved quality and efficacy of PMTCT and pediatric HIV service delivery. The Botswana projects have also included capacity building for healthcare faculty for development and delivery of pre-service HIV curricula and the development of Wellness for Healthcare Workers.

Since 2003, the FXB Center has provided training for new international research sites in resource-limited settings to support a safe, quality foundation of research skills and expert clinical care for the conduct of clinical trials with funding from the International Maternal Pediatric Adolescent AIDS Clinical Trials Group (IMPAACT) Global Training.

### **FOOD STAMP EDUCATION (SHRP)**

In conjunction with Rutgers University Cooperative Extension, UMDNJ-School of Health Related Professions has been providing nutrition education sessions for food stamp recipients in Essex County since 1998. The sessions are held in schools, after-school programs and community agencies.

### **FREE ORAL CANCER SCREENING AT UMDNJ (NJDS)**

For the thirteenth year, volunteer faculty and postgraduate students performed free oral cancer examinations on New Jersey citizens with appropriate follow-up. Trained volunteer staff provided educational materials and instructions on lifestyle and habit changes to reduce the likelihood of developing oral cancer. The screenings were held on May 5<sup>th</sup> 2011 in two locations: the University Dental Center at Somerdale and the Oral Health Pavilion at the Dental School in Newark. The Newark screenings were performed in conjunction with an Essex County Cancer Fair, where all major cancer prevention advocacy organizations had information booths. The Essex County Cancer Coalition provided a mammography van and a physician to perform prostate screening as well.

### **“GIVE KIDS A SMILE” DAY AT THE NEW JERSEY DENTAL SCHOOL (NJDS)**

The New Jersey Dental School, in conjunction with the New Jersey Dental Association and the American Dental Association, hosts “Give Kids a Smile Day.” This special one-day annual event began in 2003 and is part of a national month-long Children’s Dental Health Month. Offered at no cost to New Jersey youngsters ages 12 and under, the event allows the dental community to treat thousands of underserved children. NJDS volunteers - including students, dentists, hygienists, dental assistants and non-clinical support staff - as well as community dentists, performed a wide range of dental services. Throughout the day, a circus clown entertained the children while they awaited treatment. Tables were filled with educational activities, and face painting, balloon art, and other games were enjoyed.

The total number of children treated throughout the State has more than doubled since 2003. On February 4, 2011, Almost 300 children were seen by UMDNJ- New Jersey Dental School alone.

### **GLOBAL TUBERCULOSIS INSTITUTE (NJMS)**

The UMDNJ-New Jersey Medical School Global Tuberculosis Institute is a force in the effort to conquer and cure tuberculosis worldwide. The Institute plays a leading role in the international arena, providing expertise in program development, education and training, and research to ministers of health, national TB programs and healthcare providers around the globe.

#### **A History of Excellence**

TB infections in the U.S. soared to unprecedented levels in the early 1990s. The UMDNJ-New Jersey Medical School National Tuberculosis Center was established in 1993 in response to this resurgence. Under the direction of Lee B. Reichman, MD, MPH, it achieved federal designation as a national Model Tuberculosis Prevention and Control Center in 1994, indicating its success in delivering state-of-the-art treatment, conducting

cutting-edge research, and providing education and training to all levels of health care providers as well as those afflicted with this deadly, yet curable, disease. To reflect this ever-expanding commitment to stamping out the disease even in the most remote locales, the Center changed its name to the Global Tuberculosis Institute in early 2006.

### **Mission and Goals**

The mission of the Global Tuberculosis Institute is to advance state-of-the-art tuberculosis care through excellence in research, practice and teaching. The goals of the Institute are to decrease tuberculosis morbidity through state-of-the-art diagnostic, treatment and prevention programs; to create a cadre of interacting clinical and research scientists with a prime interest in the intersection of basic science, clinical and epidemiological aspects of tuberculosis; to develop and apply innovative diagnostic, therapeutic, behavioral, preventive and educational modalities for tuberculosis; and to provide an internationally recognized training center for courses and affiliations at all levels to increase the skills related to tuberculosis for physicians, nurses, epidemiologists and all other health-related professions. The Global Tuberculosis Institute's success has been achieved through the realization of these goals. The Institute has developed proven effective practices, which are shared with others involved in the fight against tuberculosis.

### **State-of-the-Art Care**

The Institute provides outpatient services at its state-of-the-art clinical facility designed from the ground up specifically for safe and effective treatment of tuberculosis. Renowned pulmonary and infectious disease specialists treat patients in the Waymon C. Lattimore Practice. Patient-centered care is provided through a multi-disciplinary team approach to address the complex clinical, social and cultural issues that impact the prevention control and elimination of tuberculosis. Specialized care is given to children with tuberculosis, patients with multi-drug resistant tuberculosis, and those co-infected with HIV/AIDS.

### **Demonstrated Effectiveness**

Since the Institute's creation, there has been a dramatic decrease in the number of tuberculosis cases within the population it serves. The Institute has an unprecedented record in patients' adherence in taking medication. Nearly all the patients--98 percent--adhere to their medication regimen. Many people in the population that the Institute serves are coping with a variety of life's challenges, and taking medicine is not a priority. To ensure that patients take their medications on time each day, the Institute implemented a widely used strategy called directly observed therapy, or DOT. As its name indicates, as part of the support system, this therapy involves public health workers visiting tuberculosis patients to watch them take their medication. It is these dedicated professionals who have been instrumental in the Institute's unprecedented success.

### **Providing Worldwide Education and Training**

The Institute's Education and Training staff uses its wealth of knowledge and experience to develop educational resources, training programs, and distance learning opportunities. Training courses and individualized programs on specific tuberculosis-related topics are presented to physicians, nurses, healthcare workers, and government leaders across the country and around the world. New, web-based educational programs are available for those who may not be able to travel, yet desire the latest tuberculosis information.

The Institute's website houses an extensive collection of downloadable and adaptable resources at <http://www.umdj.edu/globaltb/productlist.htm>, and the staff provides technical assistance to a variety of providers to develop and integrate training into their own unique circumstances.

### **Regional Training and Medical Consultation Services**

As a federally designated Regional Training and Medical Consultation Center, the Institute is required to provide training, technical assistance and medical consultation to healthcare professionals throughout the Northeastern U.S. The Institute's region includes Connecticut, District of Columbia, Delaware, Indiana, Maine, Maryland, Massachusetts, Michigan, New Hampshire, New Jersey, New York, Ohio, Pennsylvania, Rhode Island and West Virginia and the cities of Baltimore, Detroit, District of Columbia, New York City and Philadelphia. The Institute is funded by the Centers for Disease Control and Prevention, Division of Tuberculosis Elimination, with additional funds from U.S. Agency for International Development, NJ Department of Health and Senior Services and a number of non-governmental and private organizations and foundations.

### **Medical Consultation**

Individualized information is provided by senior medical staff to healthcare professionals and the public via a toll-free number, 1-800-4 TB DOCS (1-800-482-3627). This approach is well needed in the U.S. where rates of tuberculosis are declining along with the expertise and experience to deal with the disease and in high burden countries where resources may be less than adequate. When needed, the Institute provides supplementary advice to existing consultants for difficult cases of multi-drug resistant and pediatric tuberculosis, as well as for tuberculosis and HIV/AIDS co-infection and others with complex medical management issues.

### **Opening the Door to New Treatments and Practices**

The Institute is at the forefront of finding more effective ways to prevent and treat tuberculosis through groundbreaking research. As early as 1970, its staff was conducting clinical trials and doing studies in tuberculosis surveillance, patient behavior, and epidemiology. The Institute also collaborates closely with several of UMDNJ's centers and departments, including the Center for Emerging Pathogens and the Public Health Research Institute. Currently, the Institute is participating in the study of new drug regimens that could shorten tuberculosis treatment. The Institute is a member of Centers for Disease Control and Prevention Tuberculosis Trials Consortium and Tuberculosis Epidemiologic Studies Consortium.

### **An International Connection**

The Institute participates in program reviews and provides policy guidance and technical assistance on a variety of topics including tuberculosis at the primary healthcare level, co-infections of tuberculosis and HIV/AIDS, multi-drug resistant tuberculosis, and patient care in the private sector. Physicians and educators from the Institute have participated in training, presentations and symposia around the world, including the regions of Eastern Europe, Central and Eastern Asia, Sub-Saharan Africa and Central and South America. The staff is also involved in international research.

The Institute also offers individualized training programs in specific aspects of tuberculosis control for physicians, nurses, educators, government officials and others working in the field of tuberculosis. Specialized trainings can be tailored to meet the

interests and needs of international participants. Training is geared towards participants from countries with a high burden of tuberculosis and aims to build the knowledge and skills of participants in these settings. The Institute has hosted trainees from more than 25 countries all over the world. Priority is given to healthcare providers from countries with a high burden of tuberculosis that are mobilized to respond to the problem.

### **HEALTH SCIENCES CAREERS PIPELINE (SHRP)**

The Health Sciences Careers Program, formerly Tech Prep, began in the 1993-94 academic year with three high schools and 12 students. In academic year 2009-10, the program had 2,200 students. The program allows students early access to a career in the health sciences and exposes them to health care settings where they learn patient care techniques. The Health Sciences Careers Program also has a website, [http://shrp.umdj.edu/dept/health\\_careers/](http://shrp.umdj.edu/dept/health_careers/), to educate students about various health careers. Approximately two-thirds of the students receive college credit ranging from one to a maximum of 22 credits. These credits are accepted by every college in New Jersey and by a number of out-of-state colleges and universities.

### **HEALTHIER NEW BRUNSWICK INITIATIVE (RWJMS)**

Healthier New Brunswick is a collaborative coalition-building effort between the UMDNJ-Robert Wood Johnson Medical School and New Brunswick Tomorrow that is designed to emphasize systemic change that promotes health and wellness for the residents of New Brunswick. This is done in conjunction with the Alliance for a Healthier New Brunswick (Alliance) which is a community-based coalition comprised of representatives from the UMDNJ-Robert Wood Johnson Medical School, New Brunswick Tomorrow, Johnson and Johnson, and partners representing community and faith-based organizations, social service agencies, academic institutions, local government agencies, and businesses. Healthier New Brunswick aims to: 1) Strengthen community health partnerships in the City of New Brunswick by engaging leadership from the community and from health organizations while ensuring community ownership; 2) Provide a forum for discussion of the health needs of New Brunswick residents and assess the availability of resources such as funding, education, training and services to address these needs; and 3) Mobilize community health partners to address the identified health needs of New Brunswick residents.

### **HIGH SCHOOL STUDENT ShaD.O.w PROGRAM (SOM)**

The D.O. ShaD.O.w program was established to encourage local high school students with an interest in the medical profession to move toward more concrete goals. This is accomplished by immersing the students in the graduate level academic environment, encouraging them to interact with students and faculty, and exposing them to the overall experience for a day. The goals of the program are to give high school students with an interest in the medical professions the opportunity to experience a day with a medical student at UMDNJ-SOM; to increase local high school students' awareness of osteopathic medicine; and to increase high school students' awareness of UMDNJ-SOM. The D.O. ShaD.O.w program began in October 2006 with two high school students from Cherry Hill East participating in the program. Currently students from both Cherry Hill East and Cherry Hill West high schools participate. A total of 35 students shadowed medical student mentors during the 2010-2011 academic year.

### **HUNTINGTON'S DISEASE FAMILY SERVICE CENTER MONTHLY SUPPORT GROUP (SOM)**

This support group is offered by the New Jersey Institute for Successful Aging on the third Tuesday of the month as part of the Huntington's Disease Family Service Center on the Stratford campus of UMDNJ-SOM. It provides an opportunity for families and those with Huntington's disease to learn about the disease, cope with challenges, and access available resources. The program is part of the Samuel L. Bailey Huntington Disease Center, which was designated a Statewide Center of Excellence of UMDNJ in May 2011.

### **HUNTERDON ENDOWED CHAIR IN COMMUNITY HEALTH AND HEALTH POLICY (RWJMS)**

With the support of the Hunterdon Health Fund, RWJMS will recruit a distinguished professor to serve as the new Endowed Chair in Community Health and Health Policy. With the appointment of the Chair, the Medical School plans to establish an Institute for Community Health and Health Policy for the improvement of the health status of vulnerable and under served populations in the United States through innovations in patient care, medical education, and health policy. The Institute will bring together health policy and community health investigators, community-based faculty educators and providers to develop research and educational projects that use a community-based participatory model to translate health policy and primary care research into practice. The new Institute will also provide opportunities for research collaboration with other schools within UMDNJ, and with Rutgers and Princeton Universities.

### **ILLNESS MANAGEMENT AND RECOVERY (SHRP)**

Six SHRP faculty are engaged in the implementation of the evidence-based practice of Illness Management and Recovery (IMR) at all New Jersey Division of Mental Health Services facilities and select contract agencies throughout the State. These faculty train professionals and assist them in implementing this new practice.

### **THE INSTITUTE FOR THE ELIMINATION OF HEALTH DISPARITIES (SPH)**

The Institute for the Elimination of Health Disparities (IEHD) is a university wide initiative that fosters the conduct of multidisciplinary collaborative population-based research to understand the causes or mechanisms of health disparities among different ethnic groups in New Jersey and the United States. IEHD also seeks to identify interventions and strategies to minimize these disparities.

The IEHD is directed by Kitaw Demissie, MD, PhD, and its members represent various disciplines (molecular, nutritional and social epidemiology, surgical and medical oncology, and sociology and health services research). Over the past five years IEHD investigators have obtained grant support from the National Cancer Institute, American Cancer Society, and the Susan G Komen Foundation to discern the biologic and social aspects of racial disparity in breast cancer mortality. Funding support was also obtained from the Robert Wood Johnson Foundation to examine the roles of parental immigrant status and the built environment on physical activity among Latino children. Other areas of interest for IEHD investigators include disparities in preventive and medical care among obese and mentally ill patients, neighborhood, built environment and immigrant factors shaping physical activity behaviors in children and a pilot intervention to improve

diabetes control among Latinos. During the past five years IEHD investigators have published their work on several peer-reviewed journals including the *Journal of the National Cancer Institute*, *Journal of Oncology*, *Breast Journal*, *Journal of Cancer Control*, *Cancer Causes and Control*, *Cancer Epidemiology Biomarker Prevention*, and *Annals of Epidemiology*.

IEHD is working with St. Barnabas Medical Center to improve education to diverse populations on the benefits of living kidney donation. Similarly, the institute is working closely with the South Asian Total Health Initiative (SATI) on perinatal, cancer and diabetes related projects affecting the South Asian population. IEHD is engaged in education and community activities by working with the Sisters Network of Central New Jersey and continued to provide summer internships for undergraduate students from New Jersey City and Rutgers Universities, pairing them with UMDNJ faculty mentors. For more information on IEHD, contact Dr. Kitaw Demissie at [demisski@umdnj.edu](mailto:demisski@umdnj.edu).

### **INSTITUTE FOR THE STUDY OF CHILD DEVELOPMENT (RWJMS)**

The Institute for the Study of Child Development is a research center comprised of psychologists, educators, and other professionals interested in understanding and facilitating the development of children and their families. Current work includes behavioral teratology through studies of the long term effects of prenatal drug and other toxic exposures and conditions; identifying factors that affect behavioral and physiological reactions to stress and the capacity to cope with stress; the impact of deviant caregiving and traumatic events in the child's life on the development of self-worth and other self-evaluative emotions; the study of normal cognitive, social, and emotional development, and the study of brain-behavior relations in the developing child.

One of the Institute's functions related to public/community service includes giving colloquium and grand rounds presentations at various universities and medical schools across the country. In addition, faculty serve on state, county and international committees, including the Board of the Eastern Psychological Association of the American Psychological Association as well as the International Society of Early Intervention and the school board of Montgomery Township, New Jersey. Our faculty also serve as editors on various journals which include *Current Psychiatry Reviews*, *Current Pediatric Reviews*, *Infants and Young Children*, *Open Pediatric Medicine* and *the Roeper Review*. They have served as reviewers for the following journals in the past year: *Archives of Pediatric and Adolescent Medicine*, *Child Development*, *Child Maltreatment*, *Cognition and Emotion*, *Cognitive Development*, *Developmental and Behavioral Psychology*, *Developmental Psychology*, *Developmental Psychopathology*, *Emotion*, *Infant Behavior and Pediatrics*, *Journal of Reproductive and Infant Psychology*, *NeuroImage*, *Psychoneuro-endocrinology*, and *Social Development*. The Institute also provides clinical services through the Gifted Child Clinic and Neuropsychological Clinic.

### **INTEGRATED EMPLOYMENT INSTITUTE (SHRP)**

The Integrated Employment Institute is a program within the Department of Psychiatric Rehabilitation at SHRP and is funded by the New Jersey Division of Mental Health Services. The mission of the Institute is to increase employment among people with psychiatric disabilities. To this end, the Institute seeks to influence individuals, organizations, and systems. The Institute works to increase the expectation of employment outcomes and to:

- Build the capacity of individuals to achieve or support employment goals
- Develop organizational cultures, policies, and practices that promote employment outcomes
- Remove systemic barriers and advocate for effective policies, practices and resources

The Institute operates in eleven New Jersey counties. These include Atlantic, Burlington, Camden, Cape May, Cumberland, Gloucester, Mercer, Middlesex, Monmouth, Ocean, and Salem.

As a demonstration of best practices in the field, the Institute provides direct supported employment services to ten persons annually. These services include individualized career planning, competitive job development, placement, and follow-along support. The Institute provides service seminars to more than 100 persons with serious mental illness a year. These seminars are designed to build the capacity of the individual to direct his or her own career planning and acquisition. The Institute also helps mental health agencies promote employment services and employment outcomes for persons with serious mental illness through didactic and in-vivo training and on-going consultation. This includes training and technical assistance to outpatient departments, partial care programs, supported employment programs, supportive housing programs, assertive community treatment programs and others throughout the region. Nearly 2,000 professionals a year receive training on more than 40 topics. Low-cost conferences and workshops are offered throughout the State where the participants can earn continuing education credit. The Institute convenes meetings of stakeholders and providers in various counties. Six of the Department's faculty members work full-time on this initiative.

### **LA CLÍNICA MIGRATORIO MIGRANT FARMWORKER MOBILE CLINIC AND OUTREACH TEAMS (SOM)**

La Clínica Migratorio is a student-organized mobile clinic founded in 2005 by UMDNJ-SOM first-year medical students. Its goal is to improve the health of migrant agricultural workers living near the city of Hammonton, NJ. Each summer, from June to August, students volunteer four nights a week in support of the clinic in an effort to overcome the barriers to healthcare experienced by the migrant worker population. Specific aims include:

- to provide UMDNJ-SOM student volunteers with experience caring for an at-risk and underserved population;
- to address the barriers that can impede the migrant farmworker's access to healthcare;
- to expand the repertoire of screening services available to migrant workers;
- to improve farmworker access to medical professionals; and
- to provide triage services for patients seeking Osteopathic Manipulative Medicine.

Family Medicine residents and Dr. Joshua Coren, Acting Chair of the Department of Family Medicine, provide physician oversight of the program.

### **LATINO MEDICAL STUDENT ASSOCIATION (LMSA) (SOM)**

The UMDNJ-SOM chapter of the Latino Medical Student Association (LSMA) sponsored community advocacy, outreach and health education activities throughout the academic year. A team jointly organized by LMSA and the UMDNJ-SOM chapter of the Student National Medical Association (SNMA) participated in the National Kidney Foundation Walk at the Philadelphia Zoo.

### **LINKING THE CLASSROOM TO THE COMMUNITY (SPH)**

As an integral part of the MPH degree program goals and objectives, all MPH students at SPH connect with the real world environment in which public health practice and/or public health research is conducted. Fieldwork sites are selected by students with their faculty advisors among local, state and national agencies and organizations, governmental and voluntary health agencies, professional associations, hospitals and medical care services as well as international locations. The fieldwork experience is based on the student's concentration in partnership with the agency. The following examples illustrate fieldwork projects completed, and their locations, during Academic Year 2009-2010:

#### **Piscataway/New Brunswick Campus**

- Evaluation of Pesticide Use and Application Practices in a Group of New Jersey Residents, US Environmental Protection Agency, Edison, NJ
- Retrospective Outcomes Analysis Examining the Relationship between Highly Active Antiretroviral Therapy (HAART) and Progression of Human Immunodeficiency Virus Type - I (HIV-1), Robert Wood Johnson AIDS Program (RWJAP), Robert Wood Johnson Medical School, New Brunswick, NJ
- Outcomes of Trauma Patients Transported by Mechanism of Injury vs. those Transported Secondarily to Anatomical or Physiological Criteria, Robert Wood Johnson University Hospital, New Brunswick, NJ and Robert Wood Johnson Medical School, New Brunswick, NJ
- Physician Beliefs and Characteristics Related to Clinical Practice Guideline Pharmacotherapies for Smoking Cessation: Analysis of Selected Data from the 2008 NJ Health Care Providers Tobacco Survey, Center for Tobacco Surveillance and Evaluation Research, New Brunswick, NJ
- An Examination of the Processes and Procedures in Graduate Medical Education at JSUMC- An Institution in Transition, Jersey Shore University Medical Center (JSUMC), Neptune, NJ
- Assessment of Parental Attitudes and Beliefs about Pediatric Immunizations in Edison, NJ, Edison Township Department of Health and Human Services, Edison, NJ
- Comparative Cost-Effectiveness of Two Strategies for HIV Testing at 15 Publicly Funded Counseling and Testing Sites (CTS) in NJ, NJHIV Rapid Testing Program (NJHIVRTP), Robert Wood Johnson Medical School, Somerset, NJ
- Stroke Promotion in Edison Township, Edison Township Department of Health and Human Services, Edison, NJ

- Evaluation of Pest Control Practices in Childcare Settings in Staten Island, NY: Reducing the Need for Application of Spray Chemical Pesticides, US Environmental Protection Agency (EPA), Edison, NJ
- Evaluation of Pest Control Practices in Child Care Centers in Staten Island, NY, US Environmental Protection Agency (EPA), Edison, NJ
- Evaluation of Pest Control Practices in Child Care Centers - Rodenticides: Staten Island, NY, US Environmental Protection Agency (EPA), Edison, NJ
- Disparities in Sentinel Lymph Node Biopsy in Invasive Breast Cancer, Cancer Institute of New Jersey (CINJ), New Brunswick, NJ
- Quality Improvement Web-based Survey to Enhance Usability and Advance Decision Making for the Kids with Food Allergies Organization Website, Kids with Food Allergies, Inc., Doylestown, PA
- Prevalence of Potentially Inappropriate Medication Use and the Risk of Hospitalization in Medicare Recipients in New Jersey, Healthcare Quality Strategies, Inc. (HQSI), East Brunswick, NJ
- A Comparison of the Frequent and Non-Frequent Users of the Edison Senior Center, Edison Township Department of Health and Human Services, Edison, NJ
- Immunizations for the Children of the Dominican Outreach Project, UMDNJ-SPH, Piscataway, NJ and Los Cocos Maimon, Dominican Republic
- Oncotype Score and Race in Breast Cancer, Cancer Institute of New Jersey (CINJ), New Brunswick, NJ
- The BRIDGES Program for At-Risk Youth Program Evaluation Project, Edison Township Department of Health and Human Services, Edison, NJ
- Newark Public Schools Teachers' Assessment of the WalkSafe Program, The New Jersey Trauma Center at University Hospital, Newark, NJ
- Vulnerabilities of Families with Children with Early Hearing Loss and Existing Comorbid Conditions in NJ, Elizabeth M. Boggs Center on Developmental Disabilities, New Brunswick, NJ
- Implications for Trauma Triage in Patients Ambulatory after Motor Vehicle Collisions, Robert Wood Johnson University Hospital, Department of Emergency Medicine, New Brunswick, NJ
- Analysis of Fruit and Vegetable Questionnaire for Adults and Children From New Jersey Childhood Obesity Survey 2010 (NJCOS 10), Rutgers University School of Environmental and Biological Sciences (SEBS), Department of Nutritional Sciences, New Brunswick, NJ
- Assessing Obesogenic Environments in Childcare Facilities in New Brunswick, New Jersey, Rutgers University, Center for State Health Policy, New Brunswick, NJ
- A Needs Assessment of Outreach and Education Materials for Registered Environmental Health Specialists (REHS) Focused on Reporting Ill Foodservice Workers, New Jersey Department of Health & Senior Services, Food Safety Education & Outreach, Trenton, NJ
- Breaking the Cycle of Teenage Pregnancy: Can Mothers Influence Their Daughters' Contraceptive Behavior?, UMDNJ-Robert Wood Johnson Medical School, New Brunswick, NJ

- Are There Differences in the Medical Treatment of Pre-hospital Patients with DNR (Do-Not- Resuscitate) Orders vs. Pre-hospital Patients without DNRs?, Robert Wood Johnson University Hospital, Department of Emergency Medicine, New Brunswick, NJ
- Year Three Evaluation of Operation Safe Actions for Everyone (S.A.F.E.), The ARC of Warren County, Washington, NJ
- Diabetes Control among Hispanic Subpopulations Using HbA1c, Eric B. Chandler Health Center, New Brunswick, NJ
- Are Medical Students at an Increased Risk of Developing Vitamin D Deficiency?, UMDNJ-Robert Wood Johnson Medical School, Department of OB/GYN & Reproductive Sciences and the Women's Health Institute, New Brunswick, NJ
- A Game for Barbarians Played by Gentlemen: An Examination of Rugby Player Welfare and Injury Risk Factors in Amateur American Rugby, Hospital for Special Surgery, New York, NY
- Associations Between Select Hospital Characteristics and Heart Failure Readmission Rates, Healthcare Quality Strategies, Inc. (HQSI), East Brunswick, NJ
- Relationship Between Patient Perceptions of Their Health and Health Care Services with Emergency Department Use, New Jersey Hospital Association (NJHA), Health Research & Educational Trust of New Jersey (HRET), Princeton, NJ
- Exposure Assessment of Silica Dust from the Application of Resinous Seamless Flooring, New Jersey Department of Health & Senior Services, Consumer, Environmental & Occupational Health Service, Trenton, NJ
- Intraurban Variations in Cancer Staging by Neighborhood Deprivation and Racial/Ethnic Composition in Newark, NJ, Cancer Institute of New Jersey, New Brunswick, NJ
- Physical Conditions of a House and Their Effects on Measurable Radon Levels, New Jersey Department of Environmental Protection (NJDEP), Radon Section, Ewing, NJ
- Acculturation and Dating Violence in NYC Latino Adolescents, Center for Youth Violence Prevention, Columbia University, Mailman School of Public Health, New York, NY
- How Time Spent in the US Influences Perceptions Towards Mental Illness in South Asian Young Adults (18-30), Office of Global Health, UMDNJ-Robert Wood Johnson Medical School, New Brunswick, NJ
- Birth Outcomes In The South Asian Immigrant Population in New Jersey, Robert Wood Johnson Medical School- South Asian Total Health Initiative (SATHI), New Brunswick, NJ
- Cancer Incidence in the South Asian Population in the United States and Indians in the Indian Subcontinent (2001- 2007), Robert Wood Johnson Medical School- South Asian Total Health Initiative (SATHI), New Brunswick, NJ

### **Stratford/Camden Campus**

- The Cost of Violence Related Injuries in Camden, Cooper University Hospital, Camden, NJ

- Survey to Assess Influenza Immunization Practices among Philadelphia Specialty Physician Offices, University of the Sciences Philadelphia, Philadelphia, PA
- Analysis of Tourette Syndrome Across the Lifespan Study, The Richard Stockton College of New Jersey, Pomona, NJ and the UMDNJ-School of Public Health, Stratford, NJ
- Primary Health Care Needs Assessment for Elderly Residents in the City of Camden, UMDNJ-School of Osteopathic Medicine, Stratford, NJ
- Tuberculosis Curriculum Development in Health Systems and Policy, The Global Tuberculosis Institute (GTBI), Newark, NJ
- Connecting Data and Services: A Reassessment of Camden City Health Data and Camden Healthy Futures Committee Action Plans, Camden City Healthy Futures, Department of Community Affairs-UMDNJ, Camden, NJ
- Whitman Park Neighborhood Community Health Assessment, Hope Community Outreach Center, Camden, NJ

### Newark Campus

- Recognition of Commensal and Pathogenic Bacteria by Oral Epithelium, Periodontics Research Laboratory, University of Pennsylvania, Philadelphia, PA
- Survey of New Jersey Medical School Primary Care physicians to Assess Knowledge and Practices concerning Prevention of Travel related Illness, New Jersey Medical School, Department of Preventive Medicine and Community Health, Newark, NJ
- Periodontal Disease as a Risk Factor for Preterm Birth and Low-Birth Weight Amongst Infants: A Meta-analysis, New Jersey Dental School, Department of Diagnostic Sciences, Newark, NJ
- Qualitative Assessment of Barriers to Medicaid Enrollment and Retention among Pregnant Women and Children at University Hospital, Department of OB/GYN and Women's Health, New Jersey Medical School, Department of Preventive Medicine and Community Health, Newark, NJ
- Patient Perceived Alcohol and Substance Abuse Treatment Needs: An Urban Emergency Department Pilot Study, University Hospital – UMDNJ, Department of Emergency Medicine, Newark, NJ
- New Jersey Medical school (NJMS) Cancer Prevention and Treatment Demonstration for Racial and Ethnic Minorities (CPTD), A Patient Satisfaction Survey for the Latino CPTD Patient Navigation Intervention Group, Division of Academic Medicine, Geriatrics, and Community Programs, Department of Medicine, New Jersey Medical School, Newark, NJ
- The Individual Impact of Peer Health Educator Participation: A Descriptive Pilot Study, Health Outreach, Promotion & Education, Rutgers Health Services, New Brunswick, NJ
- To Access the Oral and Pharyngeal Trends in New York City from 1995 to 2007, UMDNJ-New Jersey Dental School, Newark, NJ
- Risk Assessment of Breast Feeding and Development of Early Childhood Caries: A Meta- Analysis, UMDNJ-New Jersey Dental School, Newark, NJ
- Determinants of Postpartum Adherence and Involvement of WIC Clinic, VA NJ Health Care System, East Orange, NJ
- Hospital Signage Evaluation in New Jersey: A Pilot Study, UMDNJ-New Jersey Medical School, Preventive Medicine, Newark, NJ

- Determinants of Postpartum Adherence and Involvement of WIC Clinic, UMDNJ-University Hospital, WIC Clinic, Newark, NJ
- Implementation and Assessment of the PACNJ Asthma Treatment Plan, Pediatric/Adult Asthma Coalition of New Jersey (PACNJ), Bridgewater, NJ
- Incidence of Head and Neck cancer in Florida from 1999-2006, UMDNJ-NJDS, Newark, NJ
- Disparities in Availability and Prices of Healthy Foods in Low-income Neighborhoods as a Cause for Obesity: The Case of Newark, New Jersey, UMDNJ-School of Nursing, Newark, NJ
- Differences in utilization of dental services among individuals with Down Syndrome Dental School-Special Care Treatment Center, UMDNJ-NJDS-Special Care Treatment Center, Newark, NJ
- Cost of Educating a Child with Autism, UMDNJ-NJMS, Pediatrics, Newark, NJ
- Ten Leading Causes of Years of Potential Life Loss (YPLL), UMDNJ-NJMS, Department of Preventive Medicine, Newark, NJ
- Characteristics of Adult Patients with Hypertrophic Cardiomyopathy, Hypertrophic Cardiomyopathy Association (HCMA), Hibernia, NJ
- Case Control Study of Predictive Level of Prostate Specific Antigen (PSA) Cutoff Point, UMDNJ-NJMS, Department of Preventive Medicine, Newark, NJ
- An Overview of the Health and Management of the Access to Healthcare of the Jail Inmates of the Bergen County Jail, Bergen County Jail, Hackensack, NJ
- Incidence and Mortality Rates of Oral Cancer in California from 1995-2004, UMDNJ-NJDS, Office for Clinical Affairs, Newark, NJ
- Autism Genetics – Chromosomes 3, 17 and X, UMDNJ-NJMS, Department of Preventive Medicine, Newark, NJ

For more information on fieldwork projects contact Ms. Terri Lassiter (Newark) at [lassiter@umdnj.edu](mailto:lassiter@umdnj.edu) or Ms. Michelle Kennedy (Piscataway/New Brunswick and Stratford/Camden) at [kennedmv@umdnj.edu](mailto:kennedmv@umdnj.edu)

### **M.D. WITH DISTINCTION IN SERVICE TO THE COMMUNITY (DISC) (RWJMS)**

UMDNJ-RWJMS has established the DISC program, providing students with the opportunity to earn the M.D. with Distinction in Service to the Community. Directed by the Office of Community Health, a select group of students plan, carry out and write up collaborative population health-based scholarly projects under the guidance of faculty and community mentors. The program involves students over the full four years of medical school. It includes service and didactic components, journaling, the preparation of a thesis for publication, and a presentation of the completed project to the sponsoring community organization and the RWJMS community. The DISC program adds a rigorous, scholarly component to existing community service projects, generates experience in population health scholarship, responds to health needs as defined by the community, generates partnerships with community groups, and recognizes students who distinguish themselves by independent, strong, long-term commitments to community health programs.

### **MEDICAL SCIENCE ACADEMY (SOM)**

The Medical Science Academy (formerly the High School Scholars Program) is a 28-week medical orientation program for twelfth grade honor students from Camden,

Burlington and Gloucester Counties in South Jersey. Students meet every Tuesday and Thursday afternoons from 2:00 PM to 3:30 PM on the Stratford Campus. Concluding its 27th year, the Medical Science Academy offers integrated and thematically organized presentations by UMDNJ-SOM faculty who volunteer their time to represent the medical and healthcare professions. Faculty address issues such as responsibilities to themselves, their patients, their institutions and their communities, as well as provide current information relevant to their work. Approximately 550 students have participated in the Medical Science Academy and many have either completed training in a health related profession or are attending undergraduate programs or medical schools. Students are able to participate in an optional research project sponsored by UMDNJ-SOM in collaboration with the UMDNJ-School of Health Related Professions. A total of 50 high school students participated in the Medical Science Academy during the 2010 - 2011 academic year.

### **MEDICAL STUDENT VOLUNTEER PROGRAMS (RWJMS)**

The **Homeless and Indigent Population Health Outreach Project (HIPHOP)** was established by a group of RWJMS students in 1992 to help meet the health needs of the greater New Brunswick community. HIPHOP links medical students with the community in an attempt to reduce barriers that prevent community members from accessing primary and preventive health care and education. Program objectives of HIPHOP are:

- To provide a variety of health outreach services to an underserved population
- To provide medical, physician assistant, and public health students with meaningful service-learning experiences
- To create a heightened awareness of the role that RWJMS should play within its community
- To foster an atmosphere of responsible citizenship and encourage a lifelong commitment to community service and humanism in medicine
- To expand the program locally in such a way that it might be duplicated on a national level

The project has expanded from a small *ad hoc* group of dedicated medical students to a well-structured organization involving over 300+ medical and physician assistant students, public health students, faculty/staff members, and community representatives. In 2008, HIPHOP evolved into an umbrella program containing three major initiatives: the Community Health Initiative (C.H.I.), the Promise Clinic and the MOVEN Project. These initiatives are designed to link specific learning objectives for health professional students with the health-related needs of the community.

**HIPHOP-Community Health Initiative (CHI)** consists of projects and electives that promote healthy living practices, teach preventive health education, and support and advocate for the medically underserved of the greater New Brunswick Community.

**CHI-Clinic Project** offers community members increased support and advocacy in primary care with the assignment medical students to shadow at EBCHC and the Robert Wood Johnson AIDS Program. HIPHOP student participants are exposed to indigent health care issues, their varied medical dynamics and health care systems.

**CHI-Health Workshop Project** is an educational program that develops a community mentoring relationship while providing health promotion educational workshops. This is accomplished through a series of interactive workshops presented to various community based organizations and public schools in the greater New Brunswick area. In these workshops students address issues such as HIV prevention, sexual health and responsibility, heart-healthy behaviors, environmental influences on health and behavior, nutrition, substance abuse and much more.

**CHI-Electives** program comprises Students Teaching AIDS to Students (STATS), Patients At/In Risk (PAIR), Issues in Cultural Competency and the Underserved Community Elective (ICCUCE), Supporting Wise Actions in Teens (SWAT), Patients At/In Risk (PAIR) and Literacy Initiative for Students Teaching Older Spanish Speakers (LISTOS). These programs are in place to provide students additional opportunities to support, advocate and understand the issues of at risk communities. The students who participate in these electives may volunteer to serve meals, attend lectures pertaining to issues of underserved populations, and accompany at-risk young pregnant mothers to health literacy education sessions or clinics visits, or sit through a chemotherapy session with a patient. These are some examples of elective participation among the many different forms of elective participatory options.

**Family Medicine 3<sup>rd</sup> Year Clerkship-Health Workshops** - Third year medical students provide community presentations on Nutrition at a community based organization for young adults who attend a vocational live in school as part of their community service requirement during their family medicine rotation.

**CHI-Project Outreach** offers a multitude of one-time volunteer experiences for any student who would like to get involved. Such experiences include serving at Elijah's Promise Soup Kitchen, making knot blankets for the homeless, counting the homeless, reading to children, health fair screening/participation, organizing the program's annual drives/events such as its 5k Run, Youth Science Health Day and incoming first year medical student Volunteer Day.

**HIPHOP-Promise Clinic** was started in January 2005 by a group of HIPHOP students to provide increased access to health care for the homeless who receive their meals and social services at Elijah's Promise, Inc., a multiservice Soup Kitchen in New Brunswick. In the Promise Clinic, a student doctor team of first- through fourth-year students develops and implements a plan of care for their patients. This plan is overseen by volunteer faculty members from RWJMS who are the preceptors for this experience. The students collaborate with other groups to provide a broad range of social services to their patients and promote a culture of service among future health care professionals. The clinic is housed at an existing community health center—St. John's Family Health and Services Center. The students manage an on-site medication room that provides medications free of charge under faculty supervision. Students assist clients with applying for patient prescription assistance programs and hospital Charity Care to offset the cost of: laboratory testing, imaging studies, and emergency care. Related health workshops are conducted to address topics such as nutrition and exercise to complement the care of the patient and to train participating student doctors. Students are responsible for managing the operation of this experience (scheduling patients and faculty, purchasing and tracking medication).

The **HIPHOP-MOVEN (Motivating Ourselves via Exercise and Nutrition) Project** started in September of 2008. A group of medical students work with mothers and children to promote healthy eating habits and exercise. Community participants attend 16 sessions implemented by medical students and community health promoters in which specific nutritional eating alternatives and low impact exercises are taught. The hopes are that these families will form a long-term partnership with medical students while encouraging their families to live healthier lives.

The **Urban Health Initiative (UHI)** at the RWJMS regional campus in Camden provides a broad range of services to the Camden community and is critically important to RWJMS-Camden students. UHI is an organized opportunity for third- and fourth-year medical students to become involved in the Camden community in order to improve the overall quality of life of its citizens through service, charity, and education. Programs include an Adult Health Outreach Project (HOP) Clinic, a Pediatric HOP Clinic, a Women's HOP Clinic, and many school and community outreach programs.

In August 2000, the AAMC-Pfizer Caring for Communities Project awarded funding to third- and fourth-year medical students from RWJMS-Camden to support the development of the first Adult HOP Clinic. This clinic provides free medical care to 110 uninsured adult residents of Camden in a medical student-run facility at the LEAP Academy Health Center. Twenty-nine clinical faculty volunteer as preceptors in the HOP clinics. Students staff all aspects of the clinic, from the front desk to the pharmacy. All third-year RWJMS-Camden students participate in this elective experience, and each student follows from one to three patients for the year. A Pediatric HOP Clinic, begun in 2003, now serves about 80 patients whose families are uninsured residents of Camden. A Women's Health HOP clinic, begun in 2005, serves up to 60 patients.

In addition to the free clinics, the UHI arranges for medical student volunteers to teach CPR and First Aid in schools, day care centers and churches throughout the city, as well as a comprehensive family health curriculum for students in grades K to 9 at the LEAP Academy. UHI also sponsors a Mentoring Program in which medical students provide small group and one-on-one teaching on a variety of health topics to middle school students at the Promise Charter School.

A joint program between UHI and Cooper Hospital, the **Health Science Academy** was begun in 2006 as an opportunity for Camden high school students interested in health-related careers to gain first-hand exposure to the hospital environment and to receive advanced teaching in the health sciences. After an application process, high school students are selected to participate in this year-long program, which occurs every other Wednesday afternoon. These students head straight to the hospital after school for additional lessons on a range of health topics, such as diabetes, cardiology, bone/joint fractures, and substance abuse. RWJMS-Camden students are actively involved in presenting these lessons and mentoring the participants. On alternating sessions, the students are taken onto the hospital floors for tours of various clinical departments and talks about a variety of careers within the hospital setting.

Rarely today are patients given an extended amount of time to spend with their primary care provider to ask whatever health related concerns they have. Adopted as a UHI project in 2006, the **Ask-the-Provider** program gives local Camden residents just that opportunity. Once each month, the program provides an open forum for them to ask health providers any questions they have in an informal, intimate, and relaxed setting. In

cooperation with Respond, Inc., a local day care organization, several medical students have connected Camden residents with the medical expertise of volunteer physicians. This year, the program has taken on new shape, integrating a teaching segment for medical students to present a health-related topic to the evening's audience. Teaching topics this past academic year have included nutrition, infant feeding, asthma, children's health, and gynecological care.

### **MINI-MEDICAL SCHOOL (NJMS)**

This program is designed to acquaint the community with the theory and practice of modern medicine, as well as to give them an understanding of the educational process involved in becoming a physician. NJMS public medical education programs are guided by a simple philosophical position: an educated patient is your doctor's best ally. By empowering the individual, the physician and other health care providers are better able to serve the person. The Mini-Medical School program provides an education that is meaningful and enjoyable for each of its participants. The functions of the Mini-Med school were increased in 2007 to include outreach programs for homeless and abused women, adolescent males in trouble with the law, as well as for female and male prisoners.

### **MINI-MEDICAL SCHOOL (RWJMS)**

The Mini-Medical School program has become an integral part of RWJMS' commitment to community service and education. For the past six years the Mini-Medical School for High School Students--*Achieving Excellence in the Sciences*--has served a class of over 180 students from high schools around the state. In addition to these students who share a profound interest in medicine and science, we teach their science teachers and their parents. The program provides opportunities for students to explore scientific interests and to speak at length with professionals who address patient care, research, and community service issues in their daily work. Over the sessions students attend lectures and discussion groups with faculty members who are national and international leaders in their fields – in areas as diverse as cardiac and renal transplantation, cancer biology and advanced therapeutics, stem cell research, advances in neuroscience and “the adolescent brain,” pediatric AIDS and drug development, and culturally competent patient-centered care. Students have the opportunity to practice “bedside manner” in sessions with medical students acting as patients. As a final assignment students demonstrate self-directed learning by researching a topic and presenting it to classmates at their home schools. A diploma is awarded to mark this early achievement in health sciences education.

### **NATIONAL YOUTH LEADERSHIP FORUM ON MEDICINE (SOM)**

The National Youth Leadership Forum on Medicine (NYLF) is designed to provide high school students from across the U.S. with exposure to the medical and health-related professions. Students visit the campus of UMDNJ-SOM each summer during the months of June and July. During their visit, students are exposed to osteopathic medicine and osteopathic manipulative medicine. Students participate in a Mini-Medical School enabling them to interact with medical educators, as well as to learn the admissions process and understand the rigorous academic expectations for aspiring physicians. UMDNJ-SOM has sponsored the NYLF since 1998. A total of 90 high school students visited UMDNJ-SOM during the summer of 2010.

### **NEW BRUNSWICK COMMUNITY INTERPRETER PROJECT (RWJMS)**

The New Brunswick Community Interpreter Project (NBCIP) currently provides Spanish medical interpretation and translation services at the Eric B. Chandler Health Center (EBCHC). The Interpreter Project represents a unique point in which three distinct communities come together: Rutgers students, Spanish speaking residents of New Brunswick, and doctors, nurses and medical students studying and working in the city. Through federal work study jobs and volunteer opportunities, students have the exciting opportunity to explore the emerging field of medical interpreting while they develop solid job-related skills, such as professionalism, and enhance their Spanish language skills and knowledge of medicine. Moreover, healthcare providers who partner with NBCIP interns have the opportunity to learn about issues such as cross-cultural communication, the Hispanic culture and how to work with a trained interpreter.

Founded in 1999, the program's interns have interpreted more than 100,000 patient-provider encounters, and translated over 100 vital medical documents. The EBCHC website has been translated into Spanish under the program coordinator's supervision. The NBCIP has conducted basic interpreter training for bilingual staff at the Cancer Institute of New Jersey and formerly participated in the bilingual workshop given by the Department of Family Medicine for third-year medical students before they begin their clerkships. Starting in 2009, the NBCIP has begun to offer 40-hour professional medical interpreter training to local hospitals and community organizations. In 2010, the NBCIP conducted two 40-hour trainings, one for Robert Wood Johnson University Hospital, and another for the Robert Wood Johnson University Medical Group. In 2011, a short training followed by an interpreting skills evaluation was conducted for advance medical Spanish students at RWJMS. The program is staffed by two program coordinators and 35 student interpreters.

### **NEW JERSEY AREA HEALTH EDUCATION CENTERS (AHECs) (SOM)**

In collaboration with the New Jersey Area Health Education Centers (AHECs) and with the assistance of the Community Health Worker Institute (CHWI), UMDNJ-SOM expanded its clinical experiences in underserved communities for students during their first and second years.

The Community Involved Primary Care (CIPC I & II) experience provides an opportunity for students to develop and implement interventional projects on health promotion in underserved communities. First-year medical students are introduced to CIPC through a 33-hour course on conducting community-based asset/needs assessments, accessing national and local resources, identifying and implementing a community-specific health promotion/disease prevention project. This academic year, SOM was selected as one of three sites nationally to participate in a project sponsored through the Agency for Healthcare Research and Quality (AHRQ) and American Association of Colleges of Osteopathic Medicine (AACOM), to integrate the U.S. Preventive Services Task Force (USPSTF) Guidelines into the undergraduate medical curriculum. As part of their CIPC health promotion intervention projects, students are required to implement an evidence-based health promotion project that incorporates the USPSTF Guidelines and also introduces preceptors and community-based agencies to the electronic Preventive services selector (ePss) application. During CIPC, students participate in a community immersion experience through one of the three AHECs, where they meet with a

community health worker, representatives from community-based organizations, and members of the lay community to plan their projects. Projects are developed in Year 1 (CIPC I) and are delivered by the students in the fall semester of Year 2, during CIPC II. During this academic year, 132 students delivered nine health promotion projects in underserved communities and schools, reaching hundreds of students, individuals, and families. The goal is to build on student experiences in underserved communities and forge a bond between the students and those communities, thus enriching the value of the experience and creating an ongoing relationship with the AHEC centers and the communities in which they have become involved. All third-year students also participate in expanded community service rotations at NJ AHEC sites in Camden, Gloucester, Salem, Cumberland, and Atlantic counties. Host sites for these rotations include hospices, Head Start centers, federal prisons, migrant service organizations, adult daycare, local health departments, teen pregnancy prevention centers, inpatient and outpatient substance abuse rehabilitation agencies, and Federally Qualified Health Centers. This year, the NJ AHECs developed 39 new collaborative community-based sites to provide students with valuable experiences in our underserved communities. The NJ AHEC has also linked with the federally funded Student/Resident Experiences and Rotations in Community Health (SEARCH) program offered by the NJ Primary Care Association, to promote interprofessional student experiences in conducting a health promotion project over the summer.

NJ AHEC also facilitates many Kids into Health Careers programs, such as the Medical Explorer and CSI programs in Cumberland and Salem Counties; hospital job shadowing experiences in Gloucester County; careers in healthcare school fairs; and health careers curriculum to underserved middle school students in Camden and Cumberland County schools. Students and faculty from UMDNJ-SOM have participated in these activities with a goal of increasing the number of area minority and disadvantaged youth who pursue a career in the health professions. NJ AHEC leaders serve on board of the Health Occupations Student Association (HOSA) to disseminate information about career opportunities.

### **NEW JERSEY CENTER FOR PUBLIC HEALTH PREPAREDNESS (SPH)**

The New Jersey Center for Public Health Preparedness at UMDNJ (NJCPHP), located at the UMDNJ-School of Public Health, is one of 14 Preparedness and Emergency Response Learning Centers funded by the federal Centers for Disease Control & Prevention at schools of public health across the country. The New Jersey Center, in partnership with the School of Public Health at the University at Albany, develops and provides education and training designed to ensure that public health, health care, emergency response, and other workers are prepared to more effectively respond to any biological, chemical, or nuclear threats or emergencies, as well as infectious disease outbreaks and natural disasters. At the state level, NJCPHP works closely with the NJ Departments of Health and Senior Services and Environmental Protection, the Office of Homeland Security, and member organizations representing most public health workers in NJ.

Service accomplishments for NJCPHP in the 2010-2011 academic year include the continued distribution of an online newsletter, PHLASH, to inform and to help coordinate preparedness education and training activities for the public health and healthcare workforce of New Jersey. Several education and training activities were conducted specifically targeting mid-level public health workers in all fields, including school nurses,

practicing physicians, medical students, hospital emergency room staff, and senior managers, professionals and their staffs in local, county and State public health, environmental protection, emergency management, fire, and police departments, among others. These included a major State-wide conference linking three locations by live video on emerging and re-emerging infectious diseases, and many smaller training sessions as well.

NJCPHP's formal educational work in the form of two public health preparedness courses was an important component in the successful application by Rutgers for a US Department of Homeland Security Center of Excellence in Transportation Safety and Security. For more information contact Dr. George DiFerdinando at [diferdqe@umdnj.edu](mailto:diferdqe@umdnj.edu).

### **THE NEW JERSEY CHILDREN'S HEALTH PROJECT (SN)**

The New Jersey Children's Health Project (NJCHP) provides health care to children and families in need. In its state-of-the-art Mobile Medical Clinic, trained staff members provide a wide range of services to children whose access to health care is lacking. Using the medical home model, NJCHP provides comprehensive and ongoing medical care as well as case management services, referrals to sub-specialty care, and health education.

The goals of the New Jersey Children's Health Project (NJCHP) are to:

- 1) Provide approximately 1,100-1,200 encounters each year;
- 2) Screen, identify and provide health promotion/disease management services for at-risk populations;
- 3) Foster community involvement in the health assessment and referral process; and
- 4) Provide culturally and linguistically sensitive health promotion/disease management health education.

The NJCHP provided care to over 700 patients in 2010. A state-of-the-art mobile medical unit was launched in early March 2011. During the period of March 9, 2011 through June 3, 2011 (inclusive), care was provided to 125 patients (as of June 3, 2011) with 52.8% (66 patients) representing the pediatric age demographic. Evaluating the economic impact of mobile health care and the return on investment is a precarious task. Underserved individuals with healthcare needs and a lack of a primary care provider will often seek care in hospital Emergency Departments. It has been estimated that the cost to treat non-emergent illness in an emergency department is approximately \$1,000 per visit. The total approved budget for the current operating period was \$336,865,000. There were 700 patient care visits (to-date) serviced by the NJCHP. The estimated cost per visit to the NJCHP was \$481.23. Subtracted from the cost of a preventable emergency department visit, the cost avoided per mobile clinic visit was \$519.00. The NJCHP provides care to patients at the following sites:

#### **Covenant House**

Covenant House is the largest provider in the state to homeless, runaway and at-risk youth between the ages of 16-21. They serve youth regardless of race, color, or creed, including pregnant youth and their babies. Covenant House New Jersey provides a wide

range of services, from fulfilling a youth's immediate needs of food, shelter and clothing, to providing them with medical care, educational and vocational services, counseling, legal services, life skills, education, recreation, aftercare, pastoral care, drug abuse treatment and prevention support. Covenant House New Jersey receives private and public funds to sustain its operations. They are supported by government agencies at the federal, state, county and city levels, as well as private foundations, for-profit companies and individual donors.

### **Ironbound Community Center**

The Ironbound Community Center provides preschool care for children of Newark residents holding down multiple jobs.

### **The Leaguers, Incorporated**

The mission of The Leaguers, Incorporated is to enhance the quality of life for children and families through diverse educational and cultural programs that foster self-growth, personal empowerment and pride in one's community. For the past fifty years, The Leaguers have developed programs to help children meet the goals established in this mission. The NJCHP provides services to three (3) different sites in the cities of Newark, Elizabeth, and Roselle.

### **La Casa de Don Pedro**

La Casa de Don Pedro offers free, quality, and culturally appropriate early childhood educational with an English/Spanish bilingual program. Curriculum, instruction, personnel and support standards as well as facilities are consistent with and under the auspices of Newark Public Schools. The Pre-K experience is designed to provide a welcoming learning and socializing environment. Pre-K education has been demonstrated to improve the learning performance of the children who attend. Currently the program serves 255 children ages 3 and 4 at its three centers.

### **Newark Pre-School**

To ensure that quality health care services are available and accessible to our children, the Alberta Bey Head Start Center operates a Women, Infants and Children (WIC) supplemental nutrition program at that site in cooperation with the Newark Department of Health. Newark Preschool Council also enjoys collaborating with the Newark Community Health Center to provide medical and dental screenings to the children enrolled in this program. It is desired that the NJCHP become the preferred provider of these services.

### **Hyatt Court Housing Complex**

The UMDNJ School of Nursing has been working with the tenant association for the past two years, targeting 106 seniors ages 55 and over, living in the three (3) Newark Housing and Urban Development Projects served by the Community Center for Health Empowerment and Care that is located at the Hyatt Court Housing project in providing on-site health promotion activities. The NJCHP will offer primary care to children and their families at Hyatt Court. The NJCHP is supported in part by a U.S. Department of Health and Human Services (DHHS), Health Resources Services Administration (HRSA) grant awarded to the SN's Dr. Cindy Sickora.

### **NEW JERSEY INSTITUTE FOR SUCCESSFUL AGING AND NJ GERIATRIC EDUCATION CENTER (SOM)**

Administered through the New Jersey Institute for Successful Aging (NJISA), the New Jersey Geriatric Education Center (NJGEC) provides training in geriatrics and gerontology to healthcare professionals of multiple disciplines statewide, with a focus on minority and underserved communities. Federally funded by DHHS/HRSA's Bureau of Health Professions, the NJGEC has trained over 27,000 healthcare professionals from multiple disciplines since its inception in 1990.

The current three-year grant cycle (2007-2010) focuses on "Building Capacity and Optimizing Outcomes in Geriatric Care." The UMDNJ-SOM NJISA and its NJGEC continue to work collaboratively with other institutions and organizations to provide training on a variety of aging-related topics. In September 2010, NJISA and the NJGEC joined the New Jersey Long Term Care Leaders Coalition in planning and co-sponsoring the annual statewide conference entitled "Caring for the Elderly: Current Issues and New Practices," attended by over 84 healthcare professionals from multiple disciplines from throughout the state. The NJGEC and its consortium partner, University Behavioral HealthCare (UBHC) Technical Assistance Center, continue to work with nursing home and assisted living pilot sites selected as part of the Transformational Change in Mental Health Initiative. As part of the NJGEC initiative, UBHC staff provide on-site education, consultation, technical assistance and supportive intervention strategies for behavioral management focusing on systems change in facilities, within a context that addresses tolerance and capacity, cultural sensitivity, team process, and the use of assessment tools to enhance care. During 2010-2011, four regional trainings were provided throughout the state on managing behaviors in long term care to 143 attendees of multiple disciplines. NJISA continues to offer clinical practicum experiences for nursing, social work and psychology, and nutrition students from UMDNJ sister schools, Drexel University, Rutgers School of Social Work, The College of New Jersey, and The Richard Stockton College of New Jersey.

### **NEW JERSEY POISON INFORMATION AND EDUCATION SYSTEM (NJPIES) (NJMS)**

New Jersey's first poison center was established in the late 1950s. By 1975 there were 32 "Poison Control Centers" located in acute care hospitals throughout the state. In 1978, in response to a federal initiative to develop regional emergency medical services, New Jersey developed a task force to look into how to provide poison center services. In response to this initiative, the state legislature passed enabling legislation calling upon the New Jersey Department of Health to develop a drug and poison information program for the State. In February 1983, as the result of this legislation and in a cooperative effort between the New Jersey Hospital Association and the New Jersey Department of Health the regional poison control system, New Jersey Poison Information and Education System (NJPIES) was born.

NJPIES is a member of the American Association of Poison Control Centers (AAPCC) and is designated as a regional Poison Control Center under AAPCC guidelines. Additionally, NJPIES manages the Department of Health and Senior Services AIDS/STD hotline. The Center also serves as an information source for the NJDHSS in cases of product tampering or product recall and in food-borne illness incidents, performing a valuable public service in time of crisis. NJPIES provides 24-hour, 7-days-a-week

emergency service statewide for poison exposures and for general poison and drug information. Specialists in poison information, who are physicians, registered nurses or pharmacists, handle all calls.

Many of the specialists are fluent in Spanish and several are fluent in additional languages. NJPIES also has a contract with a telephone interpretation service which allows immediate access to hundreds of languages and dialects. We offer TDD/TTY service for the hearing impaired. Specialists answer questions about adverse effects of medications, possible risks for drug interaction or the potential effects of medicines on pregnancy or breast feeding. Specialists also answer questions prior to exposure to or use of a potentially poisonous or hazardous product, such as household chemicals, plants, cosmetics or environmental contaminants like lead. They help the callers to assess the possibility for harm or damage and give recommendations for minimizing or eliminating risk. The Poison Control Center is funded through a contract with the State of New Jersey, Federal and other grants, and from private donations.

### **Lead Poisoned Children**

Lead poisoning from deteriorating paint that contains lead is a major hazard for urban children. Severe lead poisoning can lead to seizures and death, while lower levels can impair performance in school and increase encounters with law enforcement authorities.

The New Jersey Poison Information and Education System (NJPIES) has established the New Jersey Lead Consortium, a monthly meeting where individuals from varied organizations such as DYFS, Medicaid and HMO's--as well as MDs, RNs, social workers and industrial hygienists--come together to discuss prevention/treatment of lead-poisoned children. At the monthly meeting, problem childhood lead-poisoning cases are reviewed, appropriate speakers are invited, and/or current journal articles are presented and discussed.

### **OB/GYN PHYSICIAN SERVICES TO KENNEDY FAMILY HEALTH CENTER (SOM)**

Many women in the Camden County area do not have the financial resources for their healthcare, including gynecologic and obstetrical care. The UMDNJ-SOM Department of Obstetrics and Gynecology provides the physician services to those women who are patients of the Kennedy Health System Family Health Center. UMDNJ-SOM faculty physicians provide the primary care in the Somerdale-based Family Health Center and provide hospital services at Kennedy University Hospital-Washington Township.

### **OFFICE OF MULTICULTURAL AFFAIRS (RWJMS)**

The RWJMS Office of Multicultural Affairs/Office of Special Academic Programs sponsors programs to address health disparities or focus on culturally competent health care as a way of eliminating health disparities. Its goal is to educate the medical school community regarding cultural issues affecting quality health care as well as to foster diversity through recruitment and retention of students underrepresented in medicine. The Office develops, organizes and sponsors educational, cultural and summer program activities that focus on increasing awareness and sensitivity so that students, staff, and faculty gain a better appreciation and respect for the differences that exist in our society.

## **OFFICE OF PUBLIC HEALTH PRACTICE (SPH)**

### **Centers for Education and Training**

The Centers for Education and Training (CET) provides training to over 3,000 men and women at its training facility annually, offering 250 continuing education short courses. The courses focus on environmental and occupational safety and health topics. Training is provided to professionals who are responsible for occupational safety and health or environmental management. Trainees include industrial hygienists, safety professionals, occupational health nurses and occupational physicians. Courses include:

- Asbestos Training
- Confined Space
- Ergonomics
- Hazardous Materials & Waste Site Operations
- Hearing Conservation
- Indoor Air Quality
- Industrial Hygiene
- Lead Training for New Jersey and New York State
- Noise Protection
- Occupational Medicine
- Occupational Health & Safety
- OSHA Compliance
- Process Safety Management
- Respiratory Protection
- Spirometry
- Toxicology & Risk Assessment

CET courses are held at the SPH Building in Piscataway. This central New Jersey facility affords excellent accessibility by public transportation, parking facilities adjacent to the building and easy access to downtown New Brunswick. CET's courses are held in modern classrooms and a hands-on workshop room. Additionally, CET provides off-site training to industry and governmental agencies. Led by experts in the field, classes are structured to be small enough to allow active discussion and personal attention, yet large enough to provide for a diversified group of participants. The Office of Public Health Practice (OPHP) manages cooperative agreements with the National Institute of Environmental Health Sciences, the National Institute for Occupational Safety and Health, and the Occupational Safety and Health Administration.

The UMDNJ-School of Public Health received funding from the NIEHS through a supplemental award with ARRA funding. The purpose of this funding is to provide hazardous materials and green jobs training to unemployed workers. One aspect of the training included a partnership with Hope Community Outreach Center in Camden, NJ. Asbestos, lead, construction safety, and hazardous waste training were provided with the intent for these Camden residents to rehabilitate houses in Camden.

### **New Jersey Public Health Training Center**

The NJPHTC is based at the SPHs Office of Public Health Practice, and key partnerships include the UMDNJ-NJMS Department of Preventive Medicine and Community Health, the New Jersey Health Officers Association, and the New Jersey Department of Health and Senior Services. The Center's overarching aims are 1) to address through training and education the professional needs of the statewide New

Jersey public health workforce, the impending shortage of public health workers and the leadership training needs of public health professionals, and 2) to further strengthen high need/low resource communities through enhancing the essential public health competencies of public health professionals.

Through existing relationships, the NJPHTC will broaden the scope of training available to the existing public health workforce. The NJPHTC will also expand collaborative projects that involve students, faculty and community based organizations. These collaborations will focus on public health issues in medically underserved communities. The Center is supported by the Health Resources and Services Administration.

The major projects of the Center are:

- Leadership training for local health officers;
- Accreditation readiness training for local health departments;
- Course offerings in select topics for the workforce generally, reaching the entire state of NJ;
- Training of the prospective workforce through placement of SPH students in local health departments, and through dissemination of a course on public health for use in New Jersey Community Colleges;
- Web-based case-centered training for public health students and professionals;
- Public health and preventive medicine grand rounds for public health students and professionals.

### **New Jersey Collaborative for Excellence in Public Health**

The NJ Collaborative for Excellence in Public Health (NJCEPH) was created as a result of the NJ Health Officer's Association (NJHOA) receiving a three-year Multi-state Learning Collaborative (MLC) grant. The MLC is funded by the Robert Wood Johnson Foundation (RWJF) and managed by the National Network of Public Health Institutes (NNPHI). It has been implemented in tandem with the efforts toward developing a national voluntary accreditation program for public health agencies. Because this is the third year such projects are being funded, it is referred to nationally as 'MLC-3.'

NJCEPH is facilitated by a partnership of the NJ Health Officer's Association, UMDNJ-School of Public Health – Office of Public Health Practice, and the NJ Department of Health and Senior Services. Its goal, in the short term, is to provide members of New Jersey's public health system with tools, technical assistance, and training in quality improvement to help them identify ways of improving their organization's performance. In the long term, the outcomes of participation will contribute to the national standards/metrics to be used in the public health voluntary accreditation process, anticipated to begin in 2011.

For more information on the Office of Public Health Practice, please contact Mr. Mitchel Rosen at [mrosen@umdnj.edu](mailto:mrosen@umdnj.edu)

### ORIENTATION WEEK COMMUNITY SERVICE (SOM)

The Third Annual Orientation Week Community Service event took place in August 2010. As part of the student orientation for the incoming class of 2014 organized by the SOM Student Council and Office of Alumni Affairs, about 50 UMDNJ-SOM students and alumni volunteered in a community service project to improve the grounds and landscape areas at the Judith B. Flicker Center in Voorhees, NJ. This is a center providing care for adults with developmental disabilities.

### PATIENT-CENTERED MEDICINE COURSE (RWJMS)

RWJMS launched a new course in 2006, *Patient-Centered Medicine*, to provide students with more opportunities early in their education to learn in clinical settings, to integrate basic science and clinical information, to address ethical issues, to teach communication skills, to enhance cultural competency, and to strengthen community service links. All students participate in service learning activities providing health education workshops in the community. All students also visit agencies that provide care in the community for disabled and other vulnerable populations. *Patient-Centered Medicine* fosters the value of community involvement and enhances opportunities for students to engage in community health programs. The course spans the first three years of the curriculum and provides longitudinal community experiences in New Brunswick and Camden.

### PEDIATRIC CLINICAL RESEARCH CENTER (RWJMS)

The Pediatric Clinical Research Center is housed within the Child Health Institute of New Jersey (directly adjacent to the Bristol-Myers Squibb Children's Hospital) and is a fully staffed and equipped clinical research facility capable of conducting both inpatient and outpatient pediatric clinical trials. Its mission is to:

- Facilitate investigator-initiated and pharmaceutical industry-sponsored Phase I-IV clinical research efforts throughout the Pediatric Campus at UMDNJ-Robert Wood Johnson Medical School. Faculty and staff are trained and experienced in conducting clinical trials in children.
- Expand access to innovative clinical trials and novel treatments for New Jersey's children.
- Establish and support a state-of-the-art training environment for medical, nursing, and pharmacy students, residents and fellows.
- Assist investigators in acquiring and launching new studies, and provide recruitment and data collection assistance if needed.
- Assist investigators in completion of regulatory documentation, IRB submission and oversight.
- Assist investigators in developing agreements with pharmaceutical corporations, Clinical Research Organizations, and Site Management Organizations.

### **PEDIATRIC MIGRANT HEALTH PROGRAM – PHYSICALS FOR CHILDREN OF MIGRANT WORKERS (SOM)**

For many migrant families, obtaining basic preventive, primary health and dental care is beyond their reach. Each summer, the UMDNJ-SOM Department of Pediatrics contracts with the Gloucester County Special School Services Department to provide physical evaluations and screenings for the children of migrant workers. The evaluations are conducted at multiple locations throughout Southern New Jersey. The program, which typically sees 500 children each summer, is conducted in partnership with UMDNJ-New Jersey Dental School, which conducts oral health screenings on the same youngsters.

### **PHYSICAL AND OCCUPATIONAL THERAPY (SHRP) NEWARK THERAPY SERVICES**

The Department of Rehabilitation and Movement Sciences offers full physical therapy and occupational therapy evaluation and treatment services to public school children in Newark, Paterson, Morristown School Systems and Essex County Vocational School. These services are part of the faculty practice plan of the Department but also include opportunities for physical therapy and occupational therapy students to participate as part of the Department's community service expectations. The service is provided to students with Individual Education Plans or 504 Plans at all levels of primary and secondary education in the school system. This service is the largest of its kind in the country offered wholly by a physical therapy program.

### **PROJECT H.O.P.E. (SOM)**

H. Timothy Dombrowski, D.O., Chair of the UMDNJ-SOM Department of Medicine, provides primary care to the homeless of Camden one afternoon per month in collaboration with Our Lady of Lourdes Medical Center and the Volunteers of America Men's Shelter and Helen Smith House/Leavenhouse. This clinic is one aspect of the larger program that provides medical, social, outreach, and advocacy services to Camden City's homeless via a mobile outreach unit that provides health screenings, counseling, and case management. For Camden's homeless population, estimated at 10,000, Project H.O.P.E. is the only health care provider that uniquely targets this special needs population. Project H.O.P.E. is also a training site for the UMDNJ-SOM Inner City Medicine rotation.

### **PROJECT REACH (SOM)**

Project REACH (Revitalizing Education and Advancing Camden's Health) was established in 2009 by a student group at UMDNJ-SOM, under the guidance of the school's Department of Family Medicine, with support from a three-year Caring for Community grant from the Association of American Medical Colleges (AAMC). The project conducts youth-initiated community health service projects in Camden and uses a problem-based learning approach to teach preventive health to select groups of Camden middle school students. Project REACH teaches the Camden students to become project leaders with the UMDNJ students serving as "team members."

It collaborates with a number of other institutions, including the Camden Board of Education, Rutgers University and the Camden AHEC. UMDNJ-SOM students on the REACH executive board and more than a dozen other medical school students

volunteer as mentors for students from a Camden middle school. In AY 2010-2011, Project REACH was expanded by two UMDNJ-SOM students who have been chosen as Greater Philadelphia Schweitzer Fellows.

In April 2011, UMDNJ-SOM students Farhad Modarai '12 and H yun Ouk Hong '12, founders of Project REACH, received first place for the "Best Community Service Program Serving Fewer than 1,000 People" from the American Association of Colleges of Osteopathic Medicine (AACOM). Dr. Joshua Coren, Acting Chair of the Department of Family Medicine, serves as the project's administrative officer and medical reviewer for the problem-based learning modules.

### **RESPIRA (NJMS)**

The Children's RESPIRA Education Program (1-888-KID-ASMA) is a new program designed to provide bilingual medical and educational services to Latino families in Essex, Union, Hudson, Passaic, Morris and Middlesex Counties who have asthmatic children. The goal of RESPIRA is to increase compliance with therapy, decrease emergency room visits, hospitalizations and school absences, and improve quality of life for both parent and child by empowering families to be more proactive and comfortable with their child's asthma care. The program educates both parents and children about the development, triggers, and treatment of asthma. In addition, each participating child is provided with an individualized Asthma Action Plan, which is currently a state mandate. RESPIRA is a free program offered to all families, including those that do not have medical insurance.

The UMDNJ-Pediatric Pulmonology/Asthma Center in Newark has found a great need to work with Latino families who may face limitations such as language barriers and difficult socioeconomic conditions. Some families may use the emergency room as the primary way for treating their child's asthma, and therefore have inconsistent health care providers. "We have found that many families lack the knowledge necessary to manage their children's asthma conditions and some are using ineffective folk remedies to treat symptoms and/or are incorrectly using prescribed asthma medications" stated Dr. Montalvo Stanton, M.D., Principal Investigator-Assistant Professor of Pediatrics and Pediatric Pulmonologist. "As a result, we have designed 'The Children's RESPIRA Education Program.'"

The program consists of one two-hour education session, subdivided into sessions for parents and children. This program is given at several sites in each county including the schools. After the initial education session, two home visits are conducted by a bilingual Health Educator and Public Health Representatives. At the home visits the RESPIRA staff members assess the child, obtain information about any hospitalizations or emergency room visits, assess asthma triggers in the home setting and provide supplemental asthma education about avoiding allergens. Families who need social service assistance are referred for help.

### **RESPIRATORY CARE (SHRP)**

The respiratory care faculty have launched the Asthma Education Program for Inner-City Children. This program provides school-aged children and their parents/guardians with educational information about the causes, management and treatment of asthma. Thus

far, several parochial and public schools in northern New Jersey are participating in the program, and still others have expressed interest.

The Respiratory Care program in collaboration with the Department of Interdisciplinary Studies and The University Hospital sponsor the continuing education program for respiratory therapists. This program assists over 500 respiratory therapists to obtain the required continuing education units in order to maintain their licensure in the states of New Jersey and New York.

### **SAINT JUDE'S HEART HEALTH COMMUNITY EDUCATION PROGRAM (SOM)**

This community education program, funded by St. Jude's Medical Grant Committee in St. Paul, MN, emphasizes the importance of preventing heart disease, including the role of nutrition, exercise, weight loss, smoking cessation and cholesterol screening. Developed and administered through the New Jersey Institute for Successful Aging (NJISA), over 100 community-dwelling seniors attended presentations during 2010. A DVD has been produced and 400 copies were distributed at the eighth annual Senior Health and Fitness Day on June 24, 2011.

### **S.A.V.E. PROGRAM (SCREENING ACCESS OF VALUE TO ESSEX RESIDENTS) (NJMS)**

SAVE, a program of the UMDNJ-New Jersey Medical School (Department of Medicine) and the Department of Radiology at UMDNJ's University Hospital, administers the mobile mammography van. The mobile van is staffed by a physician or physician assistant and a mammography technician from UMDNJ. Radiologists and administrators interpret the mammograms for follow up by the UMDNJ-New Jersey Medical School-University Hospital Cancer Center oncologists and surgeons.

SAVE'S mobile unit brings testing to virtually any place in the county where people will come to be screened: churches, health centers, schools. An outreach staffer goes to these locations, provides cancer education and makes appointments for those who are interested. Free breast and cervical cancer screenings are available to women ages 50-64 whose annual income is three times the Federal poverty level or lower.

The SAVE Program also offers colorectal cancer screening by providing at-home stool testing kits to people 50 and over and information about symptoms of this disease and early detection guidelines. In addition, SAVE offers PSA (Prostate Specific Antigen) blood tests and digital rectal exams to check for changes in the prostate. They also offer a Pap test during the pelvic exam. It can show cancer or pre-cancer of the cervix. Women who participate in SAVE are offered this test annually. Cervical cancer is easily cured if found early.

### **SENIOR HEALTH AND FITNESS DAY AND OTHER OUTREACH TO SENIOR CITIZENS (SOM)**

The Eighth Annual Senior Health and Fitness Day sponsored by the NJISA and UMDNJ-SOM Marketing Department was held on June 24, 2011. This year's program focused on memory and brain health and featured presentations from two NJISA faculty - Robert Nagele, PhD and Robert Rushinkas, PsyD. The balance of the day included free health screenings, exercise demonstrations, lunch, entertainment, prizes and over 40 state and

local agencies providing community seniors with resources and information regarding services available throughout the state of New Jersey. Nearly 400 senior citizens participated in the day's events.

### **THE SMART (SCIENCE, MEDICINE AND RELATED TOPICS) PROGRAM (NJMS)**

The main focus of SMART (NJMS Department of Family Medicine) is to enable minority students in grades 6 – 12 who are capable of high level academic achievement (but may lack the interest, skills or resources) to reach their potential and become competitive in the pool of applicants pursuing science and medicine careers. The program focuses on youth development and academic excellence and provides opportunities to students to gain the knowledge and experiences necessary to maximize their potential for success. The program's functionality and strength arises from the fact that SMART's pre-college students are guided by a dedicated team of NJMS faculty, staff and certified science instructors within a medical school environment where medical resources are readily available. The students are afforded access to doctors, scientists, researchers, and a myriad of health care resources within UMDNJ.

SMART students are able to participate in scientific and medical experiences that are pivotal in their growth process. SMART enables students to enhance their skills and provides the tools necessary to succeed in health-related careers. Programs include:

- Hands-on Laboratory Experiments
- Problem Solving and Critical Thinking Activities
- Math Skill Enhancement
- Research Using Computers
- Interpersonal Communication Skill Enhancement
- Educational Field Trips/College Tours
- Science Related Guest Speakers
- Oral & Written Presentations
- S.A.T. Preparation
- Career Exploration
- College Recruiter Counseling
- Teamwork Activities
- Leadership Training

#### ***The Winter SMART Program***

The Winter SMART Program introduces participants to the biological sciences and provides an opportunity to learn what becoming a health professional involves. Younger students are given age appropriate creative activities to explore topics in human biology such as matter, energy and organization in human systems; diversity and biological evolution; basic anatomy; physics of motion, respiration, and injury prevention. Older students investigate connections between health, science and environment through case based learning and research. All classes incorporate computer use and field trips.

## ***The SMART Summer Programs***

### **Young Explorers-6th Grade**

*A Gentle Introduction to the Biological Sciences.*

Sample topics include: Matter, Energy and Organization in Human Systems; Genetics; Diversity and Biological Evolution; and Basic Anatomy. Field trips included.

### **ChemPros-7<sup>th</sup> Grade**

*A Gentle Introduction to Chemistry*

Sample topics: the Periodic Table, Composition and Chemical Properties of a Substance, Transformations that occur in Chemical Reactions, Atomic Chemistry, Chemical Structure of Medications that Help Cure Diseases. The program includes simple chemistry labs and write-ups and field trips.

### **Biotrek-8<sup>th</sup> Grade**

*A Program that Explores Human Biology*

Sample topics: The Structure and Function of Body Systems e.g. the Musculoskeletal System, Respiratory System and Circulatory System. The program includes use of body maps and biology labs including dissections of identified body systems. Students learn how to draw and label the body systems studied. Field Trips are also included.

### **Fantastic Voyage-9<sup>th</sup> Grade**

*A "Fantastic Voyage" into the Body to Explore the Physiology behind the Body Systems.*

Sample Topics: Physiology involved in the Respiratory and Circulatory Systems and how the Body Acquires and Distributes Oxygen, Physiology of the Gastrointestinal and Renal System and how the Human Body Handles its own Waste Management. Students develop models to demonstrate physiological concepts, e.g. oxygen exchange, circulation, filtration through the kidney etc. Field Trips are included.

### **Enviroquest-10<sup>th</sup> Grade**

*Exploration of Connections between Health, Science and the Environment.*

Sample topics: Bacteria, Composition of Water, Lead Poisoning, Radioactivity, Pollution. Labs include Investigating and Comparing the Composition of River Water (from a spring) and Tap Water. Labs also include Investigating Bacteria found on Common Surfaces. Field Trips are included.

### **Mission Health-11<sup>th</sup> Grade**

*The Concept of Providing Health Care as a Service to the Community.*

The emphasis of this program is on Community Service. Students spend a minimum of 25% of their time working at programs such as Soup Kitchens, Geriatric Day Care Centers, and Habitat for Humanity, etc. Students learn through small group problem-based learning, where they investigate various health problems. Their own investigation of topics is encouraged. This grade also participates in SAT preparation, college tours and field trips.

### **Biomedical Health-12<sup>th</sup> Grade**

Advanced placement (AP) science courses are offered with a qualifying exam at the end of the summer. Students are able to obtain up to six college credits. SAT preparation, college tours and lectures from college recruiters are offered. Students are exposed to health care professionals from many different fields who visit their classroom to describe their jobs. Field Trips are also included.

Email: [smartprogram@umdnj.edu](mailto:smartprogram@umdnj.edu)

Website: [http://njms.umdnj.edu/departments/family\\_medicine/smart/index.cfm](http://njms.umdnj.edu/departments/family_medicine/smart/index.cfm)

### **SHARE CENTER (STUDENT HEALTH ADVOCATES FOR RESOURCES & EDUCATION) (NJMS)**

In 1996, students at the UMDNJ-New Jersey Medical School created the S.H.A.R.E. Center (NJMS Department of Family Medicine), an organization dedicated to encouraging and mobilizing all medical students to become more involved with the Newark community. SHARE has three objectives:

- To establish and maintain community partnerships in order to improve the quality of outreach programs through ongoing community needs assessment.
- To encourage health promotion and disease prevention in the underserved Newark community and provide opportunities for patient and student education.
- To maintain the sustainable infrastructure that assumes responsibility for coordinating student projects and centralizes operations of existing community service programs at NJMS.

SHARE is the student run umbrella organization that supports seven different service groups, allowing NJMS students to pursue patient care, community education, youth mentoring, and more. SHARE activities provide insight into the Newark community and enhance classroom learning through Voices of SHARE, an academic elective offered to NJMS students. SHARE leaders also serve as a resource for fellow students and other student organizations interested in community outreach opportunities and plan events that help to initiate community service interest in Newark. All programs are collaborations between the Department of Family Medicine and SHARE. SHARE supports the following groups:

#### **Early Start Mentoring Program**

This is a community outreach project that places trained mentors into Newark elementary schools to promote positive social behavior and non-aggressive conflict resolution. The focus of the program is to develop self-esteem and social problem-solving skills, while offering a caring and supportive outlet for Newark's youth. ESMP is designed to help provide these children with a foundation for accomplishing their future educational and social goals.

#### **New Moms Program**

In 2002, SHARE Center launched its latest initiative to impact the care of young mothers within the city of Newark. This program is designed to increase awareness about women's health among medical students as well as future mothers, and to encourage a healthy lifestyle during and after pregnancy. As a community-based health care organization, medical students enter the Newark community and effectively communicate with pregnant women about pressing maternal and prenatal health issues, identify at-risk mothers, and provide interventional support to increase the health and well-being of mothers and children in the city.

### **Program in Advocating Community Leader Empowerment (PINACLE)**

The goal of PINACLE is to establish a collaborative partnership between NJMS students and the permanent residents of the Newark community. Specifically, PINACLE seeks to develop a comprehensive primary health prevention program within the SHARE Center. PINACLE operates under the principle that members of a community are more receptive to their religious, cultural, and social community leaders as opposed to outsiders. Therefore, PINACLE works with community leaders to educate them on pertinent health topics; the leaders can then convey these messages to their constituents. A new initiative is the “Healthy Lifestyles Peer Education” project, which involves training peer educators from a community within the Greater Newark area. The goal is to familiarize them with principles of peer education and public health so that they can communicate effectively about nutrition and exercise and conduct initiatives in their local community. The goals and objectives are as follows:

- To facilitate community access to NJMS services including those targeting the uninsured.
- To streamline efforts to avoid duplication of service by fostering collaboration between medical students, other health related students, and faculty.
- To facilitate networking among community interest groups and interested faculty and students.
- To ensure name recognition of the New Jersey Medical School within and beyond the immediate community.
- To gain a better understanding of the community including what resources are available and which populations are currently not being served.
- To better coordinate the service programs provided by University Hospital and other UMDNJ schools on the Newark campus.
- To improve the ability to identify and address which community health needs are being met and which are not.

### **Relationships in Education for the Advancement of Community Health (REACH)**

REACH is an outreach organization that serves the Newark community through health promotion and disease prevention. This organization assesses community health needs at local health fairs and addresses these needs through interactive adult workshops. REACH also holds after-school workshops for Newark’s youth to promote healthy lifestyles. Participation in REACH allows medical students to gain valuable skills in clinical medicine and patient education. REACH organizes health fairs at community sites once a month. Teams of medical students provide free screenings for hypertension, diabetes, vision and body mass index. Patients discuss their screening results with a medical student and attending physician and can request additional material on other health topics. If necessary, health fair patients are referred to the Student Family Health Care Center (SFHCC) clinic for follow-up appointments. REACH also conducts nutrition workshops to teach members of the community how to prepare healthy, low-cost meals.

### **Student Family Health Care Center (SFHCC)**

The Student Family Health Care Center (SFHCC) is a biweekly volunteer free clinic. SFHCC is the student-run clinic at UMDNJ. Running for over 40 years, it was established immediately after the 1967 riots to meet the needs of the medically underserved. The student-run clinic offers free, quality health care to individuals in the Newark community who are lacking in health insurance and the resources necessary to pay for basic healthcare needs. Services include physical examinations, chronic disease management, gynecological care, and psychosocial counseling. All services are provided by volunteer medical students under the supervision of board-certified physicians, many of whom are NJMS Alumni. The SFHCC provides free, quality medical care to the Newark community. Under NJMS faculty, teams of medical students treat individuals of all ages providing an opportunity for students to enhance their clinical skills.

SFHCC provides a unique role in the under-served population of Newark. It gives patients the opportunity to maintain continuity of care with students and physicians, ensuring consistently high quality of personalized care. A significant role of the clinic is to offer preventative care to a population that is most in need, and most often neglected, of such a crucial privilege. Over the past year, this has been accomplished through providing patients with flu vaccines, smoking cessation support, pedometers, and patient education. The clinic also gives patients access to additional resources for the uninsured, both inside and outside of the UMDNJ community.

### **Student Sight Savers**

This is an organization dedicated to eliminating preventable blindness through screening and education and to developing sustainable solutions to reduce health disparities. The NJMS chapter of Student Sight Savers is involved in the following activities:

- Preliminary vision screenings for children and adults in soup kitchens, homeless shelters, schools and at REACH health fairs.
- Enrollment in insurance and free health coverage programs (Children's Health Insurance Program, Academy of Ophthalmology's National Eye Care Projects, Academy of Optometry's VisionUSA, Sight For Students, Medicare, Medicaid, VA Insurance).
- Vision education program presentations teaching students and adults about eye anatomy and eye disease by examining the history of ophthalmology through unique perspectives, such as the comparison of ancient and modern ophthalmologic procedures, art history seminars addressing eye disease in eminent artists and discussing of the social history of eyeglasses.

### **Students Teaching AIDS to Students (STATS)**

STATS is an outreach program in which first- and second-year medical students lead sexual health workshops for Newark's middle and high school students. The workshops focus on disease prevention through education and empowerment of teens to make healthy choices. Activities include tutoring at the Academy Street Firehouse, mentoring children at the Francis Xavier Bagnoud (FXB) Center, and conducting educational events for medical students and the NJMS community. STATS also promotes HIV advocacy through World AIDS Day and World AIDS Week lectures, films, and discussions.

### SOM COMMITMENT TO ITS HOST COMMUNITY, THE BOROUGH OF STRATFORD (SOM)

UMDNJ-SOM has a strong commitment to its host community, the Borough of Stratford. The host community to the Stratford campus is a 1.6 square mile suburban community of approximately 7,000 residents located in Camden County. The campus is an asset that stabilizes the Borough of Stratford, strengthens its economy and enhances the quality of life for its citizens. Under the leadership of Dean Thomas A. Cavalieri, there is a strong school-wide commitment to being a good neighbor with Stratford. A close relationship with Stratford Mayor Dr. John Gentless has been forged. Contributions to the Borough of Stratford span involvement with K-12 education, including working with science teachers and hosting an annual Unity Tree Lighting for primary school children; the business and civic community, including hosting meetings on our campus of the Stratford Business and Civic Association and participating in the borough's annual Fall Festival; public safety, including providing the facilities for the annual police training; health and wellness, including a series of community health lectures at the Stratford Senior Center and reduced rate membership in the SOM Wellness Center for borough residents; and participating in the Green Team, focusing on environmental concerns (energy efficiency, recycling, etc.).

### SPECIAL OLYMPICS SUMMER GAMES (SHRP and NJDS)

For the 15th year, UMDNJ continues to provide services to the Special Olympics Summer Games.

**The Special Olympics-Health Promotions program:** The mission of the Special Olympics-Health Promotions program is to increase awareness in the areas of nutrition education, infection control and general healthy choices. Four health screenings occur: blood pressure screening, weight status evaluation, vascular health, and respiratory health. SHRP provides these services as part of its Special Olympics collaborative effort with NJDS. Students, staff and faculty participate in this inter-professional event.

In addition, SHRP faculty take a leadership role in the education and screenings provided by the American Physical Therapy Association.

**The Special Olympics-Special Smiles program:** The mission of the Special Olympics-Special Smiles program is to increase access to dental care for Special Olympics athletes, as well as all people with intellectual disabilities. Dental screenings, oral hygiene instruction, and the fabrication of sports mouth guards are part of a collaborative effort by SHRP and NJDS to focus attention on the dental health issues facing New Jersey's Special Olympics athletes,

The two UMDNJ Schools also sponsor a health and wellness center for the **Healthy Athletes Initiative** of New Jersey Special Olympics, providing education and community service to New Jersey residents who join in Special Olympics activities.

For the 15th year, data to be collected on June 11<sup>th</sup> and 12<sup>th</sup> 2011 at NJ Special Olympics Summer Games will help to generate a snapshot of the health of a representative sample of the hundreds of thousands of Special Olympics athletes around the world. This data is used to encourage increased education and funding. Oral and nutrition research projects identifying oral and nutrition health status of these

athletes have been presented and published on the international level, and have been used to support the need for extended services to this population.

### **STATEWIDE NETWORK FOR COMMUNITY ORAL HEALTH EXTRAMURAL DENTAL CENTERS (NJDS)**

The New Jersey Dental School has shown its commitment to Newark and to the State of New Jersey with the creation of the Statewide Network for Community Oral Health. A needs assessment was performed which revealed that access to dental care was a problem for historically underserved populations; i.e., the low income, the indigent elderly, migrant workers and their families, those physically and mentally challenged, and patients living with HIV/AIDS. The purpose of the Statewide Network for Community Oral Health is to carry out the educational and service missions of the University and the Dental School. The Statewide Network provides dental services to communities throughout the State of New Jersey, with dental centers in Atlantic, Camden, and Somerset Counties.

The Statewide Network and the New Jersey Dental School in Newark had over 130,000 patient visits this past year. The dental centers in the Statewide Network serve as a venue for increasing the number of oral health care providers in underserved communities in New Jersey; increasing access to quality oral health care; and expanding the educational component of training proficient oral health care providers who are culturally competent and sensitive to the needs of the underserved. The UMDNJ-New Jersey Dental School with its Statewide Network of Oral Health Centers is the largest single provider of oral health care to the State's Medicaid population. In addition, it also is the largest provider of oral health care to the special needs and underserved populations in New Jersey. New Jersey Dental School, the only undergraduate academic dental Institution in New Jersey, graduates 100 new dentists yearly to serve our population.

### **S.T.E.P.S. TO FIGHTING CHILDHOOD OBESITY (SOM)**

The Garden Area Health Education Center (AHEC), one of the three AHECs affiliated with UMDNJ-SOM for over 30 years, is managing a child obesity intervention program entitled Success through Exercise, Physical Fitness and Sharing Information (STEPS). STEPS is funded by a grant from the Robert Wood Johnson Foundation New Jersey Health Initiatives program, through an award to South Jersey Healthcare.

STEPS is a health intervention program to assist families in the fight against childhood obesity. Through interactive educational sessions on nutrition and exercise, families learn how to implement and sustain necessary lifestyle changes to benefit their children's health. The program is targeted to Vineland students, aged 8 -12, who are over the 85<sup>th</sup> percentile of their recommended body mass index (BMI) or overweight. Students are referred by their physicians or school nurse. However, parents and guardians can also apply directly to the program. Studies indicate that parent participation is crucial to any health intervention program. In STEPS, parent participation is mandatory. An SJH registered dietitian works directly with parents to learn how to cook traditional foods in a healthier manner. Children learn the importance of portion size. The STEPS Sports Physiologist teaches the children and their parents how to incorporate play activities into their daily lives.

### **ST. LUKE'S CATHOLIC MEDICAL SERVICES (SOM)**

Lesley A. D'Ambola, D.O., of the UMDNJ-SOM Department of Medicine provides the medical directorship and clinical care at St. Luke's Catholic Medical Services in Camden, NJ, in collaboration with Christopher Myers, M.S.N., A.P., a nurse practitioner. St. Luke's is a primary care medical practice for the poor, uninsured and underinsured community of the City of Camden; it was founded in 1983 as a joint venture of the Diocese of Camden and the Jesuit Urban Service Team (J.U.S.T.).

Since St. Luke's is one of the few medical practices with a fluent bilingual staff, it attracts a predominately Latino clientele. Forty-three percent of its patients have no health insurance. Its professional staff includes a physician, a nurse, a nurse practitioner, three nursing assistants, and administrative staff. The nurse practitioner enables St. Luke's to offer a home visit component to its service delivery model. In addition to primary care, St. Luke's staff provides individualized health education programs and preventive healthcare with a focus on cancer screening and immunizations. Annually, St. Luke's provides nearly 5,700 patient visits to over 1,000 patients with Type II diabetes mellitus, hypertension, hyperlipidemia, asthma, and anemia, the most common diagnoses.

St. Luke's is also a training site for the medical school. It provides UMDNJ-SOM's medical students, internal medicine residents, and geriatric fellows with a unique opportunity to learn about the practice of community-based, urban medicine. St. Luke's offers a training experience designed to cultivate an appreciation of cultural diversity and to impart the knowledge and skills needed to provide culturally competent medical care. In addition, St. Luke's serves as the keystone training site for the UMDNJ-SOM Medicine Residency Program to train general internists to provide primary care to medically underserved populations. Additionally, St. Luke's serves as a training site for UMDNJ-SOM third- and fourth-year medical students.

### **STUDENT NATIONAL MEDICAL ASSOCIATION (SNMA)**

The Student National Medical Association (SNMA) is the nation's oldest and largest medical student organization dedicated to ensuring culturally sensitive medical education and services, as well as increasing the number of African-American, Latino and other students of color entering and completing medical school. This year, the UMDNJ-SOM chapter of the SNMA produced four new lectures for its Community Grand Rounds Series. The Community Grand Rounds, established at UMDNJ-SOM in 2006 and jointly sponsored with the Dean's Office, focuses on addressing healthcare disparities in minority communities and ways to eliminate them.

This year, Dr. George Scott '97, Department of Family Medicine at UMDNJ-SOM, spoke about "Culturally Competent Care for the Hispanic Community" in October 2010. Dr. Keith Williams, Chair, Department of Obstetrics and Gynecology at UMDNJ-SOM, discussed "Ethnic Disparities in Birth Outcomes" in November 2010. Dr. William Anderson, Past President of the American Osteopathic Association, spoke about "Health Care in America: The Good News and the Bad News" in March 2011. Completing the four-lecture Community Grand Rounds Series, Dr. Jennifer Caudle '05, an aerospace medicine physician at Little Rock Air Force Base, discussed "Bullying and Adolescents: Defining the Problem, Exploring Solutions" in April 2011. Additionally, SNMA held events in celebration of Black History Month, including a slide show presentation, potluck dinner and several meetings and lectures.

### **SUBSTANCE ABUSE PROGRAM (SOM)**

The Community Substance Abuse Unit, started in January 1993, is a 12-bed sub-acute care inpatient unit located in Kennedy University Hospital at Cherry Hill. The Medical Director and physicians are provided by UMDNJ-SOM Department of Psychiatry. Currently, the program provides inpatient and outpatient detoxification and rehabilitation. Additionally, Intensive Outpatient Program (IOP) services ranging from daily partial hospitalization to evening outpatient therapy groups are essential components to the service. IOP services range from three times per week to once a week, stressing relapse prevention. The unit receives referrals from Camden, Burlington, Gloucester and Cumberland counties, all of which have contracts with Kennedy University Hospital to fund services for their indigent population.

### **SUMMER CLINICAL INTERNSHIPS FOR UNDERGRADUATES INTERESTED IN MEDICINE (RWJMS)**

The Summer Clinical Internship Program was initiated in 2002. Each year approximately 30 students have the opportunity to shadow clinical faculty members at the medical facilities in New Brunswick. Students are paired with faculty in specialties representing students' interests and are encouraged to keep the hours of the clinicians in order to get a real sense of the specialty, the issues in patient care and the practice of medicine. A lunchtime seminar series on issues as diverse as caring for patients with limited English proficiency to ethical issues related to patient care to barriers to organ donation, complement the clinical experiences. Students will also take part in a pedagogic exercise at the end of the program with brief presentations to their peers on topics selected and researched with the guidance of the faculty preceptors.

### **SUMMER MEDICAL AND DENTAL EDUCATION PROGRAM (SMDEP) (NJMS)**

SMDEP is one of twelve national programs funded by the Robert Wood Johnson Foundation and administered through the Association of American Medical Colleges and the American Dental Education Association. It is a free (full tuition, housing, and meals) six-week summer medical and dental school academic enrichment program that offers highly motivated college freshman and sophomores intensive and personalized medical and dental school preparation.

The SMDEP at NJMS/NJDS serves to advance the Schools' core mission of meeting society's current and future healthcare needs by preparing individuals underrepresented in medicine and dentistry and doing so while championing cultural competency and humanism in all aspects of education. SMDEP reaffirms its continued commitment and involvement in pipeline initiatives that will permit the attainment of even greater diversity. The SMDEP builds on 30 years of experience in providing academic enrichment programs geared toward attracting students into the health sciences. The curriculum has been carefully designed to enhance students' skills academically and personally, a requisite for success in medical/dental school. The program strengthens students' skills by providing the science course work, critical thinking, problem solving, and communication skills necessary to ensure that they are competitive for medical/dental school.

The content includes an introduction of academically challenging courses with an emphasis on the acquisition of skills based on principles of adult learning. By the

completion of the program, students are able to identify and apply strategies and skills that work best for them. Specifically, the ultimate goal is to make the learner responsible for their education, a requirement of the life-long learning skills expected of the medical and dental profession.

***Overall objectives of the SMDEP:***

- Involving the student in a problem-based learning model of science education used to promote critical thinking skills and the acquisition of study skills and strategies
- Improving students' writing and communication skills as they relate to success in the practice of medicine and dentistry
- Assisting each student to develop and implement a personal academic and career plan
- Increasing students' awareness of diverse and/or underserved populations and how this affects the practice of medicine and dentistry
- Providing students with a limited but informative set of clinical experiences under the direction of outstanding faculty preceptors and role models

**SUPER NEIGHBORHOOD COMMUNITY COVENANT PARTNERSHIP  
FOR HEALTH CARE (SNCCPH) (NJMS)**

Super Neighborhood Community Covenant Partnership for Health Care (SNCCPH) is a partnership between the NJMS Department of Family Medicine and the Office of Community Outreach and Engagement of the City of Newark. Under this partnership the principles of community-based participatory engagement are followed. Community-based participatory research is a collaborative approach to research and outreach that equitably involves all partners in the research process and recognizes the unique strengths that each brings. CBPR begins with a research topic of importance to the community and has the aim of combining knowledge with action and achieving social change to improve health outcomes and eliminate health disparities.

**THE TOBACCO DEPENDENCE PROGRAM (SPH)**

The UMDNJ-Tobacco Dependence Program (TDP) is a joint effort between the UMDNJ-School of Public Health, Robert Wood Johnson Medical School, and the Cancer Institute of New Jersey. The TDP had previously been an integral part of New Jersey's Comprehensive Tobacco Control Program (CTCP) until the State eliminated funding for CTCP in 2010. The program comprises a multidisciplinary team with specific expertise in treating tobacco dependence and in training other health professionals to do so effectively. More details on the work of the program can be found at [www.tobaccoprogram.org](http://www.tobaccoprogram.org).

**The Tobacco Dependence Program Clinical Activities** The Tobacco Dependence Program opened its doors in January 2001 to provide specialist assessment and treatment for people who want help to stop tobacco use. Since then, the TDP has seen over 5,500 patients, approximately 30% of whom remain abstinent six months following their quit date. The TDP serves as a tertiary referral and consultancy center for health professionals throughout the country who may need assistance.

**Tobacco Training and Consultancy for Health Professionals** The Tobacco Dependence Program offers specific consultation and training services for treatment and service providers. TDP is a nationally-recognized leader in tobacco education, having trained over 1,200 healthcare professionals from 31 states and nine countries around the world to become eligible for Certification as a Tobacco Treatment Specialist.

**Tobacco Control in the Community** The Tobacco Dependence Program also has grant support aimed at community level interventions on tobacco control from the Rutgers Community Health Foundation and aims to facilitate smoking cessation in New Brunswick's Latino and African American communities.

**Research** The TDP is active in tobacco research and has published over 100 papers in peer-reviewed journals over the past ten years, including clinical trials on pharmacotherapy, evaluation of tobacco treatment interventions in various smoking populations, predictors of abstinence (night smoking, menthol), and attitudes and practices of healthcare providers. Many of our publications have been authored by UMDNJ students on work conducted with community agencies for fieldwork placements.

**Tobacco Control Policy** One of the most important policy changes TDP is excited to be involved with is the decision to make UMDNJ a tobacco-free organization throughout all of its campuses. It is only fitting that as a leader in the fight against cancer, CINJ is representing the first step in this bold initiative, having gone tobacco-free as of June 1, 2011. This policy change at CINJ and UMDNJ and its slogan, "**Clean Air Because We Care,**" illustrates a commitment to the health and well-being not only of our patients and their families, but also to our own UMDNJ community.

For more information about the Tobacco Dependence Program, please contact Michael Steinberg, MD, MPH, FACP; Director of the UMDNJ-Tobacco Dependence Program at [michael.steinberg@umdnj.edu](mailto:michael.steinberg@umdnj.edu)

### **TRINKETS AND TRASH: ARTIFACTS OF THE TOBACCO EPIDEMIC (SPH)**

This program monitors and collects current and historic examples of tobacco products, promotional items, tobacco marketing materials and advertising. It is intended to serve as a source for scholarly research; provide a historic record of tobacco industry products, marketing and promotion; and serve as a tool for advocacy and educating the general public. The website <http://www.trinketsandtrash.org/> features a search engine and archive of downloadable images of the newest products and promotions, along with images of older, more familiar items and some rare antiques. Detailed information about the content of many items in the collection is also maintained in offline databases as part of ongoing surveillance and research activities. In addition, Trinkets and Trash develops and disseminates monthly Surveillance Updates, page-long summaries describing and linking readers to images of the latest tobacco advertising activities, and uses Twitter to highlight tobacco marketing news and new additions to the collection in real time. Examples of the collection are on display at SPH in Piscataway. For more information on this project please contact Dr. Jane Lewis at [lewismj@umdnj.edu](mailto:lewismj@umdnj.edu)

### **TUTORING CAMDEN CHILDREN (SOM)**

Members of UMDNJ-SOM Chapter of the Student Osteopathic Surgery Association (SOSA) invited parents and their children to sign up for dedicated tutoring time at the Lindenwold Elementary School in Lindenwold, NJ. The Lindenwold school represents a new location for 2010-11. The goals of this project are to encourage communication among parents and children on academic issues; foster a strong work ethic; emphasize the importance of education; and provide a resource for parents who themselves feel they cannot help their children with their homework. Tutoring sessions are held two to three times per week; two to three tutors attend each session.

### **THE UMDNJ-SN MOBILE HEALTHCARE PROJECT (SN)**

The UMDNJ School of Nursing (UMDNJ-SN), in a collaborative joint partnership initiative with the Children's Health Fund and the Healthcare Foundation of New Jersey, has implemented a Mobile Healthcare Project designed to improve access to care for the underserved residents of Newark, Irvington and Elizabeth, New Jersey. The Project staff provides primary care and screening services via a mobile healthcare facility designed to reduce the traditional barriers to health care access. This grant-funded initiative employs a collaborative approach and outcomes oriented focus for a nurse-faculty managed, university-based mobile healthcare project, in collaboration with the UMDNJ University Hospital. The Project effectively uses faculty-supervised nursing and medical students and an interdisciplinary mobile healthcare team staff, in association with the clinical affiliates of UMDNJ, community-based organizations (CBOs) and faith-based healthcare initiatives.

To foster community support, the Project uniquely creates public-private partnerships to improve access to care for urban at-risk populations. The broad objectives of this nurse-faculty managed mobile healthcare project are:

- 1) To screen, identify and provide health promotion disease management services for at-risk populations;
- 2) To foster community involvement in the health assessment and referral process; and
- 3) To provide culturally and linguistically sensitive health promotion/disease management health education.

To implement this initiative, the Project Director secured over \$2.5 million in federal and foundation grant awards from the Health Resources and Services Administration, The Robert Wood Johnson Foundation, The Healthcare Foundation of New Jersey and the Children's Health Fund. Attesting to its widespread recognition, the Project has been showcased in the lay press and is the subject of numerous articles appearing in nursing publications. To date, the Project has logged over 3,400 scheduled patient encounters, in partnership with 24 Community Based Organizations.

### **UMDNJ SN-STATE HOSPITAL CLINICAL AFFILIATION (SN)**

The UMDNJ-School of Nursing has been involved in state hospital clinical affiliations since December 1999. A School of Nursing faculty member and five advanced practice nurses are currently providing ongoing consultation, education and mentorship to

**Greystone Park Psychiatric Hospital** and **Ancora Psychiatric Hospital**. The nursing team works collaboratively with other members from UMDNJ and nursing and administrative staff and managers to improve the implementation and evaluation of the nurse directed care model, clinical nursing leadership, and clinical supervision of client care delivery. An article entitled "The Nurse Directed Care Model: A Model of Clinical Accountability" has been drafted for publication. The affiliation with **Essex County Hospital** is now in its fifth year. A nurse clinician works collaboratively with the Director of Patient Care Services and medical administration on quality improvement projects, such as monthly nursing grand rounds, reintegration program for long term care clients and the establishment of a restraint reduction program for all hospital staff.

The UMDNJ-School of Nursing's consultative collaboration with the New Jersey Division of Mental Health Services for 2011 has been very active: we have

- 1) Reviewed state of the art mental health trends and assisted in initiating best practice programs for hospital units in concert with clinical leaders;
- 2) Developed and assisted in maintaining nursing services certification and continuing education programs, i.e. CPI, Nurses Continuing Education Series, etc. in concert with Nursing Administration;
- 3) Provided a.m. observation rounds on patient care units to implement concepts presented in the classroom environment and provided feedback to nursing personnel and administration;
- 4) Assisted with initiating and maintaining student nurse affiliations;
- 5) Initiated a Nursing Services Reference Library;
- 6) Participated in implementation of hospital quality assurance/performance improvement committee initiatives to support continued quality care services;
- 7) Participated in ongoing efforts to enhance patient care services based upon priorities set by hospital administration; i.e., research, programs, training and/or evaluation projects/programs; and
- 8) Secured a mobile classroom for the Ancora site to encourage and facilitate site nurse participation in SN courses and programs. The mobile classroom is funded by an American Recovery and Reinvestment Act grant (ARRA) administered by the DHHS/HRSA.

We have completed a ten-year re-assessment of nursing staff at Greystone Psychiatric Hospital and submitted a final draft to the CEO and Nursing Administrator on the following areas: Attitudes and Perceptions of Nursing Staff at a State Psychiatric Hospital, Longitudinal Assessment and Analysis from 1999 to 2009. This involved examining several variables including burnout, critical thinking, work index for nursing and ward atmosphere. We also published a paper in the journal *Clinical Nurse Specialist* on the nurse directed care model instituted at Greystone and other psychiatric hospitals in the state.

Trainings with nursing administration are ongoing at Ancora on a monthly basis. Nursing rounds will begin with CEUs being offered. The first training will be entitled "Therapeutic Communication and Recovery: Role of the Professional Nurse."

### **THE UNIVERSITY DOCTORS COMMUNITY PROGRAMS (SOM)**

In a continued effort to improve the health and well being of the community, The University Doctors of UMDNJ-SOM presented numerous free community health opportunities between July 2010 and June 2011, including 77 health lectures, ten health screening events, and ten health fairs to Southern New Jersey residents. This year, a number of thematically-organized lecture series were offered, including a pain management series to commemorate the state-designated Pain Awareness Month in September; a woman to woman health lecture series; and extensive offerings related to weight control, including a major "Weight No More" community event held in March, which attracted over 150 attendees.

#### **2011 VACCINE PREVENTABLE DISEASES: ENSURING IMMUNITY IN YOUR COMMUNITY (SPH)**

The New Jersey Center for Public Health Preparedness (NJCPHP) at the University of Medicine & Dentistry of New Jersey-School of Public Health hosted a conference, "[Vaccine Preventable Diseases: Ensuring Immunity in Your Community](#)," on July 18, 2011. The conference provided the most current training and guidelines to public health and school nurse first responders, as well as other health professionals including physicians in pediatric and family practice, health officers, health educators, and other primary care providers. The Conference seeks to emphasize the message that immunizations are essential for all age groups, including vulnerable groups such as infants, children, and the elderly, but also for healthy adults. To reduce the outbreaks and the consequences (morbidity and mortality) of recurring diseases such as pertussis, influenza, measles, polio and other communicable diseases, the conference agenda included leaders in the public health community who addressed the most recent developments and issues related to vaccine preparedness for all populations. Other important topics for health professionals, such as an update on the NJ Immunization Information System, and New York State's Statewide Immunization Information System, were also presented. Based on previous conferences, 375-400 attendees were expected. For more information, contact Dr. Marcia Sass at [sassmm@umdnj.edu](mailto:sassmm@umdnj.edu).

#### **VOCATIONAL TRAINING PROGRAMS (SOM)**

The UMDNJ-SOM Family Medicine Department has an affiliation agreement with both Camden County Vocational and Camden County Vocational Institutes (CCVI) to complete physicals for students. Kathryn Lambert, D.O. provides these physicals.

#### **VOLUNTEER OPPORTUNITIES IN COMMUNITY- ENGAGED SERVICE (SPH)**

Volunteer Opportunities in Community-Engaged Service (V.O.I.C.E.S.) is a student and faculty community service organization established in 2004 at the UMDNJ-School of Public Health. V.O.I.C.E.S. is dedicated to working together with community groups in cities across New Jersey to identify public health needs and design useful service projects for students, faculty and staff that address these needs. Its mission is to provide a forum for public health students, faculty and staff on all three SPH campuses (Newark; Piscataway/New Brunswick; Stratford/Camden) to reach out to their communities by organizing and participating in volunteer community service projects with a public health focus.

The organization allows students to gain practical public health experience, interact with other students with similar interests, and incorporate social responsibility into their academic experience. At the same time, it provides mentoring opportunities for faculty and enables students and faculty to positively impact the communities in which they live, both locally and globally.

In 2010-2011, students and faculty worked together on a number of service projects including:

- Habitat for Humanity (October and April) involving over 25 students and faculty who worked on the construction and interior painting of a house in Asbury Park
- Workshop on Nutrition given in August to youth in transition participating in the SHIP Program at Rutgers/New Brunswick.
- A back-to-school backpack drive for children in August
- Workshop on HIV/AIDS for women and teens at the Center for Great Expectations in Somerset, NJ in October
- Two samosa fund raisers: one in October for Pakistan relief effort given to Doctors without Borders in NY and one in April for Japanese earthquake relief with funds given to the American Red Cross in Central NJ
- A hot chocolate and bake sale for the DR Health outreach Project in November
- Global health awareness documentary presentation: "A Walk to Beautiful" and discussion on the problem of fistulas in Ethiopia in December
- Holiday gift drive for families in New Brunswick
- Food drive for Catholic Charities in Trenton in December
- Coat drive for Community Outreach Center in Camden in December
- Martin Luther King Day of Service for faculty and staff January 17, 2011 with volunteers placed at Elijah Promise Soup Kitchen, Meals on Wheels of New Brunswick, Health Care Ministries of Princeton, and Ronald McDonald House in New Brunswick
- Soup fund raiser in February for Somerset Home for Temporarily Displaced Children
- Volunteers who participated representing VOICES in the New Brunswick Race for the Cure and the AIDS Walk in New York City

For more information on V.O.I.C.E.S., go to <http://sphprojects.umdj.edu/voices/> or contact Dr. Bernadette West at [westbm@umdj.edu](mailto:westbm@umdj.edu)

### **WOODROW WILSON AND CAMDEN HIGH SCHOOLS (SOM)**

Medical students with the UMDNJ-SOM Family Medicine Department assist in providing pre-participation sports physical examinations for all athletes at the public high schools in the City of Camden. These examinations provide a valuable service while enhancing

the medical students' skills at diagnosis and treatment. In addition, under the supervision of Joshua Coren, D.O., MBA, UMDNJ-SOM residents provide medical coverage for all varsity football games

### **YAFFA ROSE INTEGRATED CARE CENTER (NJMS)**

The Yaffa Rose Integrated Care Center is a collaboration between UMDNJ-University Behavioral Health Care Center (UBHC) and New Jersey Medical School, Department of Family Medicine to provide comprehensive healthcare to UBHC consumers. Integrated care is a health care approach in which primary care and mental health providers partner to manage the treatment of persons with mental health problems in the primary care setting. Two decades of research have demonstrated that the integrated care model improves primary care patients' mental health outcomes with a minimal investment of resources.



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## **RESEARCH AND EXTERNAL FUNDING**

The University of Medicine and Dentistry of New Jersey (UMDNJ) is the leading New Jersey institution in biomedical, life sciences research. As a state institution, UMDNJ recognizes its special obligation to the people of New Jersey to generate these scientific advances and to translate them into much-needed medical interventions and treatments. Thus, the overarching goal of our research efforts is to discover, develop and deliver better prevention, intervention, diagnosis and treatment for the many diseases that plague the people of New Jersey and the global community.

UMDNJ has pioneered multiple medical breakthroughs. We have been at the forefront in the understanding, diagnosis and treatment of infectious diseases, cancer, and diseases of childhood and the aging community. We have internationally recognized leaders in diverse areas ranging from the impact of environmental toxins on human health to the role of the oral cavity in prevention and diagnosis of disease. We team with the best talent locally and globally to advance the science, technology and clinical practice of medicine.

The benefits of our research efforts extend beyond our deserving patients. Research enhances the intellectual environment of the University, attracting the best faculty and students and assuring the highest level of excellence in teaching and patient care programs. External funding and other support for research also creates new jobs and benefits the state economy. Unlike most other sources of public university revenue, federal research funding represents “new” money to New Jersey.

Translating the discovery of new medical interventions and treatments into commercialized products requires a strong partnership with industry. In recognition of the need to streamline this partnership, UMDNJ has recently invested in two critical areas. Our office of Technology Transfer and Business Development works closely with biotechnology and pharmaceutical companies to license our technologies, and with venture capitalists to fund faculty start-up companies across the state. In the past five years, intellectual property (IP) revenue has increased from \$0.1M to \$6M, and there are presently 20 UMDNJ start-up companies – all focusing on new diagnostics and therapies – in New Jersey. Our new academic Clinical Research Organization was developed to oversee and support our clinical research infrastructure – the largest of its kind in New Jersey – in the conduct of industry and federally-sponsored clinical trials. There are currently over 3000 clinical studies and more than 350 clinical trials at UMDNJ.

UMDNJ is a relatively young and successful specialized health sciences university with the potential to evolve into a major national asset in this arena. Our experience with and the paradigm of conducting only biomedical research, from strategic oversight to lab research to clinical trials to community outreach, provides a competitive advantage to us and a key benefit to New Jersey.

**Research Strengths:** As an academic health center, UMDNJ has unique opportunities to translate our basic research findings into clinical applications. We have a wide breadth of research strengths, and also a great depth in research modalities that can be brought to bear on the health problems faced nationally. In addition to traditional basic research, we are well-positioned to translate our findings to the clinic and the community, and to evaluate effectiveness of therapies and use that information to inform our future research studies. Our research strengths include:

- Cancer
- Environmental Health
- Outcomes Research
- Infectious Disease
- Community Practice Research
- Neurodegenerative Disease
- Immunity/Inflammation/Wound Healing
- Health Disparities Research
- Personalized Medicine
- Cardiovascular Disease
- Proteomics
- Oral Biology
- Pharmacology
- Drug Discovery
- Physiology
- Stem Cells
- Comparative Effectiveness
- Genomics
- Aging/Geriatric Medicine
- Systems Biology
- Neuroscience
- Child Health
- Metabolomics
- Neurophysiology
- Translational Research
- Complementary Medicine
- Bioinformatics

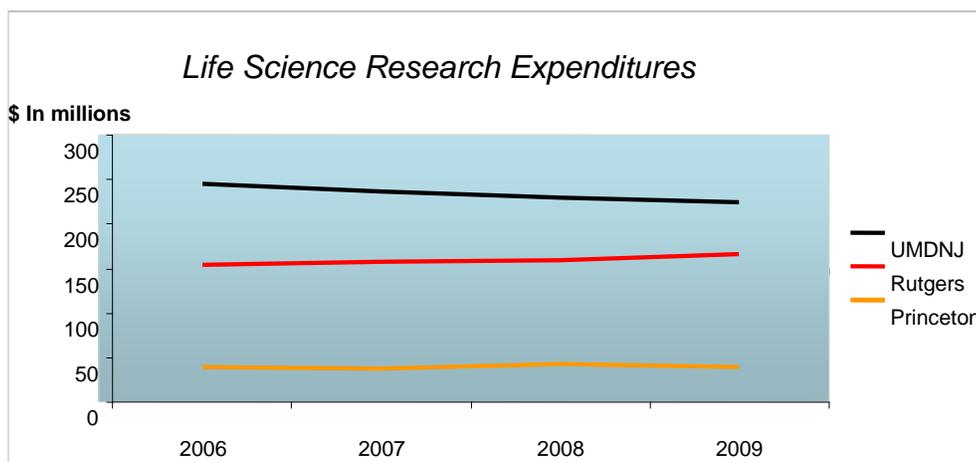
### **UMDNJ RESEARCH FAST FACTS**

- UMDNJ consistently tops all New Jersey universities in NIH awards and life sciences research expenditures.
- UMDNJ successfully obtained more federal stimulus award funding from NIH and other DHHS units in FY 2009 and FY 2010 than all other NJ educational institutions combined.
- UMDNJ faculty publish their research findings in top national and international journals, including Science, Cell, Nature, The New England Journal of Medicine, Proceedings of the National Academy of Sciences, etc.
- UMDNJ faculty have received many prestigious national and international awards for their research achievements.
- UMDNJ faculty sit on major national and international advisory panels.
- UMDNJ currently has nearly 3000 clinical studies (clinical trials, other bio-medical and social behavioral) and more than 350 active clinical trials.
- UMDNJ researchers work with more than 100 companies, including most major pharmaceutical and biotech firms.
- UMDNJ clinical research revenue will be over \$7.5 million in FY 2011.
- UMDNJ increased its intellectual property (IP) revenue from \$140K to \$6M in the last 5 years, and has the highest biomedical IP revenue of all NJ state schools.
- UMDNJ doubled the number of inventions and patents over the past 3 yrs.
- UMDNJ commercialized multiple medical technologies, including the ARISK autism test, T-Spot TB assay, and AMH fertility diagnostic test, etc.
- UMDNJ teamed with the Foundation of UMDNJ to create the first and only university venture fund in the state.
- UMDNJ created 20 new spin-out companies with 250 new NJ jobs.
- UMDNJ trains the biomedical researchers of the future, offering the most biomedical graduate degrees in the state.

### LIFE SCIENCES RESEARCH

With consistent strong financial and programmatic support for its biomedical research, UMDNJ has always performed well in attracting external funding. In the last decade our research expenditures<sup>1</sup> have totaled more than \$ 2 B. In the last five years our National Institutes of Health (NIH) awards<sup>1</sup> alone have topped \$586 M.

As of 2009, the most recent year for which National Science Foundation (NSF) research expenditure<sup>1</sup> records are available, UMDNJ was in the top 12% in science and engineering expenditures among colleges and universities listed. It must be noted, however, that NSF reports ALL research funding, including funding in non-biomedical sciences (i.e. computer sciences, physics, etc) as well as in non-science based research (humanities, business, etc). UMDNJ does only one type of research – biomedical research – and it does it well. In FY 2009 UMDNJ expended more than \$220 M in life science research, ranking #53 (top 8%) among all universities and colleges listed in that category.



More recently, UMDNJ has excelled in attracting funding under the American Recovery and Reinvestment Act (ARRA), attracting more NIH ARRA funding than all the other universities in New Jersey combined. To date, UMDNJ has received 136 NIH ARRA awards totaling more than \$47 M.

<sup>1</sup> “Research awards” refers to the \$\$ promised to an institution assuming project completion. “Research expenditures” are the actual \$\$\$ spent in a given time period. Research expenditures are always less than or equal to research awards. “Grants” can refer to external funding for research, education, service, etc. “Research grants” are \$\$\$ specified for the research mission.

## **CLINICAL RESEARCH**

### **Clinical Trials and Public Access**

Clinical trials test and validate the safety and efficacy of new drugs, diagnostics, medical devices and treatment modalities in human subjects. Academic medical centers are key contributors to this development process by providing access to highly skilled and knowledgeable clinical research faculty, experienced research staff, and depth of expertise in important therapeutic areas.

UMDNJ is active in all aspects of the clinical research process, from initial studies in humans to the management of large multi-center trials. UMDNJ faculty are active in developing new study protocols, conducting studies and data to support publication and submission of the results for regulatory approval.

Clinical research at UMDNJ is conducted with the support of the federal government, various foundations, and in partnership with industry. The university is currently conducting over 350 trials involving human subjects in a wide range of therapeutic areas.

UMDNJ was the coordinating center for two large, high-profile national trials which were recently successfully completed. The Carotid Revascularization Endarterectomy versus Stenting Trial (CREST) showed similar outcomes for carotid artery stenting and carotid endarterectomy for the treatment of carotid stenosis. The CREST trial comparing these two interventions enrolled 2502 patients from 117 US and Canadian centers.

The University was also a lead site for the Women's Health Initiative (WHI) trial. It addressed the most common causes of death, disability and impaired quality of life in postmenopausal women. The WHI was a 15 year multi-million dollar endeavor, and one of the largest U.S. prevention studies of its kind. Over 161,000 subjects were enrolled nationally.

One of the challenges of clinical research is to ensure that new therapies are tested in multiple populations to determine efficacy for everyone. UMDNJ-New Jersey Medical School was recently awarded a grant to specifically focus on improving access to cancer trials for patients of diverse ethnicities. UMDNJ has also been creating, testing, and deploying novel methodologies for individuals at risk for diseases such as hepatitis C, providing them with information to assess their risk and seek testing and treatment. In the case of the hepatitis C effort, the anticipated outcome is a significant reduction in the number of patients requiring liver transplants in the future.

The driving force for clinical research that occurs at UMDNJ is the potential benefit to patients who in many cases have exhausted other avenues of treatment or who have diseases for which inadequate treatments are available. Clinical research at UMDNJ provides local access to the newest treatments for the people of NJ.

Please visit our clinical trials website <http://www.clinicaltrials.umdj.edu> and also the clinical research organization website <http://cro.umdj.edu> for more information about our clinical trials program.

## **HUMAN SUBJECT PROTECTION PROGRAM**

The mission of UMDNJ's Human Subject Protection Program (HSPP) is to support the University's research enterprise by ensuring the protection of individuals who participate in research; ensuring compliance with all pertinent [federal](#) and [state laws](#) and regulations; fostering the ethical conduct of human subjects research; and providing [education](#) and other services to the University's researchers regarding [regulatory requirements](#) and best practices.

HSPP assures that UMDNJ fulfills its institutional responsibilities for the conduct of research involving human participants through its three University IRB Campus Systems, in [Newark](#), [New Brunswick/Piscataway](#) and [Stratford/Camden](#); a contractual relationship with [Western IRB \(WIRB\)](#) for review of industry-sponsored protocols conducted by UMDNJ faculty at UMDNJ performance sites; a program of education for faculty and other researchers; and an audit/review program for oversight of studies in progress.

UMDNJ IRB committees are comprised of physicians, nurses, pharmacists, physical and social scientists, non-scientists, and unaffiliated community members. Currently there are approximately 3000 open studies being conducted throughout the UMDNJ system. The four Newark campus IRB committees oversee approximately 1400 studies. There are 67 active IRB members (both regular and alternates); seven of whom are community members. The four New Brunswick/Piscataway IRB committees oversee approximately 1500 studies. In New Brunswick/Piscataway there are 54 active members; ten of whom are community members. The one Stratford IRB committee oversees approximately 75 studies. There are sixteen Stratford IRB members, six of whom are community members. Western IRB (WIRB) currently oversees about 175 sponsored studies.

The two HSPP Senior Analyst auditors conduct routine and "for-cause" requested reviews of research. Last year HSPP conducted approximately 35 audits.

HSPP reports to the University's [Associate Vice President for Research Regulatory Affairs](#), who is UMDNJ's Institutional Official and Research Integrity Officer.

## ***ECONOMIC IMPACT***

The economic impact of research conducted at UMDNJ reaches across the state and the country. This impact is evident not only in the direct effect of research dollars on employment and local and state tax revenue, but also is evident in the total economic product that results from the outcomes of the research. These indirect benefits include, among others, intellectual capital, company formation and revenues associated with product creation and sales.

Based on a methodology established by the Bureau of Economic Analysis with the U.S. Department of Commerce, the Association of American Universities ([www.aau.edu](http://www.aau.edu)) developed a metric to estimate local employment impact of academic research and development. The AAU calculated a multiplier of 36 jobs per \$1 million of spending. Using NSF FY 2009 data (223.7 million), we support and/or create over 8000 full and part-time jobs directly through our research activities and through the local ripple effect.

In addition to the economic benefits realized through the licensing of UMDNJ technology to industry, innovative biomedical research has led to the formation of over twenty spin-off companies. Together, these companies have created over 240 jobs and raised millions in aggregate funding. It is also worth noting that the jobs created through academic research are relatively high-skill and high-pay positions: medical doctors, PhDs, experienced lab techs, business leaders, lawyers, accountants, etc. at UMDNJ and at the local companies with close ties to the university.

Related to the creation of high-paying jobs, research funding also benefits the economy by driving increased spending. A 2004 study done at the University of North Carolina and North Carolina State University showed that for every dollar of funding attracted by those schools, \$1.70 is spent by local consumers. An extrapolation of this result estimates a minimum of approximately \$380 million dollars in local spending stemming from UMDNJ research activities.

In summary, UMDNJ is the New Jersey's leader in biomedical research. Our eight schools have developed an interconnected web of biomedical research activities that cover the spectrum from basic to clinical to community outreach, and back. With this unique collaborative structure, UMDNJ is poised to be a national leader in the discovery, development and delivery of better healthcare.

**EXTERNAL FUNDING**  
**Totals for Fiscal Year 2010**

Unit	Total Awards <sup>1</sup>	Research Awards
New Jersey Medical School <sup>2</sup>	\$117,482,551	\$82,827,261
Robert Wood Johnson Medical School-P <sup>3</sup>	\$120,389,374	\$96,214,868
Robert Wood Johnson Medical School-C	-\$312,295	-\$319,777
School of Osteopathic Medicine	\$12,081,745	\$5,808,608
New Jersey Dental School	\$8,748,653	\$4,524,795
Graduate School of Biomedical Sciences <sup>4</sup>	\$318,100	\$0
School of Health Related Professions	\$5,991,300	\$1,115,360
School of Nursing	\$43,718,404	\$1,270,681
School of Public Health	\$9,364,245	\$3,172,278
University Hospital	\$16,944,610	\$0
University Behavioral Healthcare-P	\$21,749,127	\$1,130,964
University Behavioral Healthcare-N	\$4,867,953	\$0
Central Administration and Physical Plant	\$1,028,920	\$0
University Academic Affairs (Including Continuing Education)	\$10,127,808	\$0
<b>GRAND TOTAL</b>	<b>\$372,500,495</b>	<b>\$195,745,038</b>

1 Research, educational and service awards, including indirect costs from all external sources.

2 Includes PHRI.

3 Includes Child Health Institute, CABM, EOHSI and Cancer Institute.

4 The Graduate School of Biomedical Sciences draws its faculty from that of the medical schools; grants to these faculty members are reported under the medical schools.

Source: UMDNJ-Office of Cost Analysis

**ACADEMIC R&D EXPENDITURES\***  
**Totals for Fiscal Year 2010**

<b>Expenditures*</b>	<b>Amount</b>
Total Academic R&D Expenditures	\$230,235,000
Federally Financed	\$123,399,000
Institutionally Financed	\$53,943,000

\*As reported in the 2010 National Science Foundation (NSF) Survey of Research Expenditures.

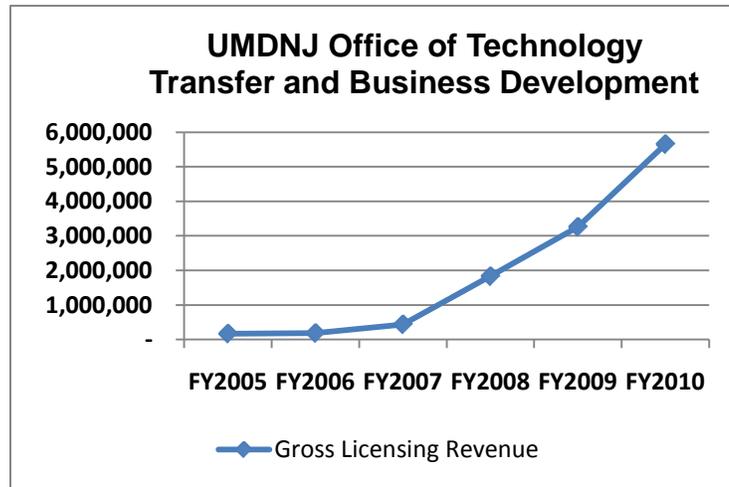
Source: UMDNJ-Office of Cost Analysis

## PATENTS AND LICENSES

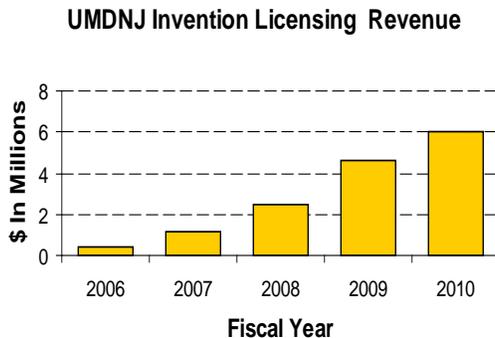
### Patents, Technology Transfer and Business Development

The mission of the UMDNJ Office of Technology Transfer and Business Development (formerly the Office of Patents and Licensing) is to work closely with research faculty at the University to develop intellectual property around the growing number of medical innovations that are discovered in UMDNJ laboratories and to create technology transfer alliances with the diagnostic, biotechnology, medical device and pharmaceutical industries to bring these technologies to market, helping to solve critical unmet medical needs.

UMDNJ has dramatically increased patenting and licensing activity over the last several years. The graph below demonstrates the explosive growth in patent revenue garnered through the licensing of UMDNJ innovations.



Some recent internal invention disclosure and licensing revenue metrics:



UMDNJ Invention Disclosures:	
FY2009:	65
FY2010:	90
FY2010:	121 (to date)

UMDNJ has a long history of innovation that has led to new company formation and beneficial health care.

Recently, Dr. Jeffrey Kaplan of our New Jersey Dental School discovered Dispersin B, which breaks up bacterial biofilms, which form during surgery and can be dangerous for patients who receive medical devices or wound healing agents. This invention was honored a few years ago as one of the top five inventions in the country by the National Institutes of Health. Dr. Kaplan's technology has been licensed to a company that is coating Dispersin B on catheters and a variety of other medical devices and the incidence of bacterial infection appears to be dramatically reduced.

Dr. James Millonig of the Robert Wood Johnson Medical School discovered a linkage between a gene called Engrail 2 and the onset of autism, a disorder with a high incidence rate here in New Jersey. This invention was patented and licensed to Integragen, a diagnostic company that has successfully launched this UMDNJ technology through ARISK as the first genetic autism screening test commercially available in the US and Europe. Autism is generally very difficult to identify in young children, and this diagnostic holds the promise of helping with early diagnosis, which could lead to early medical intervention.

At our NJMS Public Health Research Institute, a breakthrough TB test has been developed by Dr. Marila Gennaro that identifies TB faster and more efficiently than anything presently on the market. The technology has been approved by the US FDA, as well as regulatory bodies in Europe and China, and can make a difference for the millions around the world who are infected with the disease.

UMDNJ contributes to economic development here in New Jersey by serving as a launching platform for new company formation. PTC Therapeutics, headquartered in South Plainfield, NJ has formed around the innovations from the RWJMS lab of Stuart Peltz. PTC has attracted venture capital from the West coast and European venture firms and now has treatments in late stage clinical trials for Cystic Fibrosis and Duchenne's Muscular Dystrophy. In addition, PTC has established active collaborations with leading biopharmaceutical companies such as Celgene, Genzyme, Merck, Pfizer, AstraZeneca and Roche based on the application of its proprietary technologies.

A technology created in the field of collagen biomaterials was licensed to a small firm, Col-Bar, as its platform technology. After additional development, Johnson & Johnson was so impressed with the dermatological applications of the invention, it purchased the Col-Bar Company, mainly on the strength of collagen technology that was discovered at UMDNJ. We have also licensed the renowned Molecular Beacons probe technology to Becton-Dickinson Corporation, headquartered in Franklin Lakes, New Jersey. These are the types of high value alliances that demonstrate the synergies when universities work closely with local life sciences companies.

**Patents Issued Between July 1, 2010 to June 30, 2011**

<b>U.S. Patents</b>		
<b>Inventor</b>	<b>Patent Number</b>	<b>Title</b>
Maria L. Gennaro	U.S. 7,932,373	Secreted Proteins of Mycobacterium Tuberculosis and Their Use as Vaccines and Diagnostic Reagents
Q Li	U.S. 7,799,522	Specific Double-Stranded Probes for Homogeneous Detection of Nucleic Acid and Their Application Methods
Sergei Kotenko	U.S. 7,820,793	IFN-Alpha/Beta Polypeptides and Compositions
Robert Wieder	U.S. 7,749,962	Alpha 5 Beta 1 and Its Ability to Regulate the Cell Survival Pathway
Sylvia Christakos	U.S. 7,790,155	Calbindin-D28k Protection Against Glucocorticoid Induced Cell Death
Pranela Rameshwar	U.S. 7,807,462	Method for Producing a Functional Neuron
Stephen F. Vatner	U.S. 7,803,908	pDJA1, A Cardiac Specific Gene, Corresponding Proteins, and Uses Thereof
Kiran Madura	U.S. 7,811, 803	Methods and Compositions for Rapid Purification of Proteasomes and Methods of Use of Components Thereof
Alexey G. Ryazanov	U.S. 7,785,878	Mammalian Alpha-Kinase Proteins, Nucleic Acids and Diagnostic and Therapeutic Uses Thereof
Peter Lobel	U.S. 7,811,559	Methods for Reducing Storage Products Using Tripeptidyl Peptidate I (CLN2) Protein
Huizhou Fan	U.S. 7,863,335	Non-antibiotic Intervention of Chlamydial Infection
Stephen F. Vatner	U.S. 7,846,683	A Method for Identifying Agents Which Modulate Cell Growth or Survival
Carl J. Hauser	U.S. 7,879,821	Method for Modulating Inflammatory Responses by Altering Plasma Lipid Levels

<b>U.S. Patents (Continued)</b>		
<b>Inventor</b>	<b>Patent Number</b>	<b>Title</b>
Jeffrey B. Kaplan	U.S. 7,833,523	Compositions and Methods for Enzymatic Detachment of Bacterial and Fungal Biofilms
Fred R. Kramer	U.S. 7,771,949	Homogeneous Multiplex Screening Assays and Kits
Joseph Benevenia	U.S. Patent 7,763,582	Localized Insulin Delivery for Bone Healing
<b>Foreign Patents</b>		
<b>Inventor</b>	<b>Country/Patent Number</b>	<b>Title</b>
David B. Seifer	Germany DE AT E 476 663 T1	Mullerian Inhibiting Substance Levels and Ovarian Response
David B. Seifer	Europe EP 1 419 239	Mullerian Inhibiting Substance Levels and Ovarian Response
David B. Seifer	Hong Kong HK 1066243	Mullerian Inhibiting Substance Levels and Ovarian Response
David B. Seifer	Israel IL 160254	Mullerian Inhibiting Substance Levels and Ovarian Response
James Millonig	Europe EP 1649061	Genes as Diagnostic Tools for Autism
Fred R. Kramer	Japan JP 4658928	Homogeneous Multiplex Screening Assays and Kits
Fred R. Kramer	China CN 1784590-B	Optically Decodable Microcarriers, Arrays and Methods
Fred R. Kramer	Japan JP 4646904	Optically Decodable Microcarriers, Arrays and Methods
Kiran Madura	Japan JP 4547153	Diagnostic Methods for Protein Profiling
Robert Wieder	Japan JP 4667873	Alpha 5 Beta 1 and Its Ability to Regulate the Cell Survival Pathway
Sanjay Tyagi	Canada CA 2,375,027	High Specificity Primers, Amplification Methods and Kits

***License Agreements Executed Between  
July 1, 2010 and June 30, 2011***

Bio-Rad Laboratories  
EnviroLogix, Inc.  
OLINK  
QuanDx  
Celvive  
Neogen  
Millipore Corporation  
Berry & Associates  
The Innovation Factory  
ClearView Diagnostics  
medac GmbH  
Vasade Biosciences, Inc.

Longevica LLC  
Snowdon, Inc.  
Beckman Coulter  
Taxis Pharmaceuticals, Inc.  
Columbia University  
Oxford Immunotec  
Myconostica Ltd  
Longevica LLC  
Miacom Diagnostics GmbH  
WellGen  
Molecular Detection  
Alphagenics Diaco Biotechnologies  
(Alphagenics International Sarl)

Source: UMDNJ Office of Technology Transfer and Business Development

## **RESEARCH STRUCTURE**

In broad terms, direct research oversight at UMDNJ is provided by the Office of the Vice President for Research (OVPR), the Council of Research Deans (CoRDs) and the Research Administrators Council (RACs). The leadership of the OVPR includes the Vice President of Research and the Associate Vice President of Research Regulatory Affairs. Given the mandate to expand and develop biomedical and healthcare research to its fullest potential, the OVPR also has oversight of the UMDNJ Office of Human Subject Protection, the UMDNJ Office of Technology Transfer and Business Development and the UMDNJ Clinical Research Organization.

The CoRDs and RACs include the research deans and research administrators from each of UMDNJ's schools. They report directly to the Dean of each school while working closely with the OVPR, thereby providing a conduit between the individual academic units and UMDNJ central administration.

The OVPR and the CoRDs meet monthly to address evolving research administration issues and develop strategies for ensuring continued excellence and growth. This cohesive research oversight matrix of centralized and de-centralized management fosters research excellence, ensures research compliance, promotes discoveries leading to better health and well-being, and drives economic benefit for New Jersey.

### **Clinical Research Organization**

UMDNJ has always been an active leader in clinical research to advance the treatment of disease, identify the most effective methods of treatment and understand the effects of nutrition and the environment on human health. Annually, our researchers conduct over 3,000 clinical studies, with over 350 involving human subjects. All three of UMDNJ's medical schools, as well as the Schools of Nursing, Public Health, Dentistry, Health Related Professions and Biomedical Sciences lead studies on a wide range of diseases. In addition, UMDNJ has a broad range of facilities that are utilized and specialized for the purpose of conducting research, including the RWJMS-Cancer Institute of New Jersey (one of approximately 40 National Cancer Institute designated Comprehensive Cancer Centers), the Pediatric and Adult Clinical Research Centers (CRC) at RWJMS, the dental CRC at NJDS (one of only 9 Dental Clinical Research Centers in the US), the NJ Cancer Center, The Tuberculosis Institute, and the Public Health Research Institute at NJMS. Funding sources include federal and state governments, major foundations, and industry. In this past year, UMDNJ has helped more than 100 companies conduct clinical research on new therapies in almost every therapeutic category.

The UMDNJ Clinical Research Organization (UMDNJ CRO) was formed to bring these UMDNJ statewide resources together under one umbrella in order to maximize operational efficiency and compliance, leverage scarce resources and serve as an engine for growth. The CRO has created a unique model based on "local control and global coordination" which is well suited to the diverse capabilities and resources available throughout the university. This statewide resource provides leadership in clinical research, education and training to affiliates and partners across the state of New Jersey and access to the latest clinical advances for the people of New Jersey.

The CRO provides a portal into the University to select services at specific sites, or concurrent services at multiple sites across the state; it matches internal capabilities with external partners. As a result, UMDNJ is becoming a preferred strategic partner to industry (pharmaceutical, biotech, and medical device), other CROs, and the federal and state governments for the execution of clinical research and the performance of clinical research-related functions including outcomes research.

Finally, the nation is on the cusp of a healthcare revolution, integrating healthcare information technologies (HIT) such as electronic medical records, data exchanges, and huge data warehouses into the everyday practice of medicine. Clinical research is not only one of the first areas of medicine to benefit from these technologies; it also provides the mechanism for evaluating the effectiveness of different ways of using all of this information. UMDNJ, with its statewide reach and expertise in clinical research, provides leadership for the state in the use of HIT to improve outcomes and reduce treatment costs for a healthier population.

Increasingly, the FDA and payors are relying on the pharma / biotech industries to utilize biomarkers to predict the need for expensive new drugs. UMDNJ is a leader in the development of these specialized diagnostic tests to both identify and clinically validate these new biomarkers. Several research core centers across UMDNJ as well as a CLIA certified testing laboratory at NJMS support this effort and provide valuable services within the university and to the external clinical community.

This initiative provides significant benefit to the State of New Jersey by enhancing the reputation of the state in healthcare, increasing New Jersey's ability to retain and recruit pharmaceutical, medical device, diagnostic and biotechnology companies, and by providing a mechanism for training of the clinical research workforce.

## **RESEARCH HIGHLIGHTS: 2010-2011**

Every year, UMDNJ's faculty, trainees and staff make critical discoveries that have the potential to improve health and well-being worldwide. They publish these findings in premier scientific journals, present their research at national and international meetings, and receive coveted awards recognizing their scientific achievements. Below are examples of our recent research discoveries that are poised to advance the diagnosis and treatment of disease, and improve the quality of life.

### **MAJOR DISCOVERIES**

***Repair Gene MG53*** - RWJMS Professor Jianjie Ma, PhD, made a breakthrough discovery that previously eluded medical scientists. Dr. Ma discovered gene MG53, that encodes a protein responsible for cell membrane repair and regeneration throughout the human body. Studying the activity of this gene could lead to advances in wound healing, surgical trauma, geriatric medicine, cardiovascular disease, sports medicine and many other medical areas. Dr. Noah Weisleder, a postdoctoral colleague on this project, was awarded the prestigious Kauffman Foundation Outstanding Postdoctoral Entrepreneur Award.

***Rapid TB Testing*** - The driving force behind the rapid tuberculosis test that received World Health Organization (WHO) endorsement is David Alland, MD, New Jersey Medical School. The test, which uses DNA technology to diagnose tuberculosis in less than two hours, will be widely distributed to countries around the world. The test that it replaces, which is 125 years old, is far less reliable and requires three months for a diagnosis. The quicker and more accurate diagnoses produced by Dr. Alland's test will allow healthcare providers to begin TB treatment far sooner, sharply reducing the risk that infected individuals will spread the disease. It also will lead to more effective treatment of individual patients by determining whether disease-causing bacteria are drug-resistant.

"This new test represents a major milestone for global TB diagnosis and care. It also represents new hope for the millions of people who are at the highest risk of TB and drug-resistant disease." said Dr. Mario Raviglione, Director of WHO's Stop TB Department.

***Measuring Hormones for Family Planning*** - David Seifer, MD, of RWJMS discovered that human antimullerian hormone (AMH) production is directly tied to egg production. It is actually the earliest biomarker of ovarian aging, and since AMH is easily measured in simple blood tests women can know their own biological clocks and plan pregnancies accordingly. According to Dr. Siefert, "In combination or by itself, AMH will be one of the primary ways that physicians and patients will determine family planning."

***A New diagnostic for Alzheimer's Disease*** - At the School of Osteopathic Medicine, Dr. Robert Nagele has identified a unique pattern of proteins that are found in the serum of patients with Alzheimer's disease. This critical discovery will provide important information pertaining to one's risk for developing AD as well as prognostic information on the expected rate of disease progression in those already afflicted with this devastating disease.

## BASIC SCIENCES

- Discovered that the effects of Gly missense mutations on the folding of a collagen triple-helix depend on their position with respect to the trimerization domain and initiation of the helix
- Demonstrated that interruptions in the (Gly-X-Y)<sub>n</sub> repeating pattern of the collagen triple-helix lead to delays in protein folding
- Demonstrated that the natural trimerization domain of a bacterial collagen-like protein could be replaced by an engineered highly stable 3-stranded coiled coil
- Characterized the conformational, stability and folding properties of fragments of a bacterial triple-helix, which represent subdivisions one-third in length of the original triple-helix
- Correlative studies showed that HMGA2 is expressed in tumor cells that are destined to become metastatic. Mice that are null at the HMGA2 locus reveal an 80% reduction in their tumor number when crossed with various oncogenic mice. These studies demonstrate that HMGA2 is causative in tumor pathogenesis.
- Discovered a physical connection between transcription, gene loops and mRNA export from the nucleus to the cytoplasm.
- Investigated the constraints on developmental evolution, by studying the impact of genetic changes on bacterial developmental phenotypes
- Elucidated the protein-protein interaction network associated with prokaryotic protein Ser/Thr kinases. Discovered a new mechanism for protein export from the nucleus
- Established a role for nuclear targeting of proteasomes for degrading nuclear proteins
- Identified a new factor that affects proteasome assembly
- Measured that the replicative helicase uses one ATP molecule for every base pair that it unwinds during DNA replication.
- Discovered that the mitochondrial RNA polymerase recognizes its promoters by bending the DNA.
- Determined that the large N-terminal domain of the mitochondrial RNA polymerase plays a role in binding proteins to assist in transcription initiation.
- Determined the crystal structure of a human mRNA capping enzyme that is involved in an early step in gene expression and essential for viability
- Generated a transgenic mouse line useful for studying neuronal lineages and functions in the spinal cord and identified a role for Foxn4 in alveologenesis during lung development
- Demonstrated effectiveness of intrathecal enzyme replacement therapy in a mouse model of late infantile neuronal ceroid lipofuscinosis

- Developed a novel proteomics/subcellular fractionation approach to identify components of the lysosomal proteome
- Identified a unique structural feature in *Staphylococcus aureus* VraR as a target for development of antibiotics effective against MRSA
- Developed high-throughput assays for screening for inhibitors of *Staphylococcus aureus* transcription factors as leads for drug development
- Developed a statistical potential for computational modeling of the folding of Outer Membrane Proteins
- Designed collagen-like peptides that form matrices and hydrogels in a controlled manner
- Found a novel mechanism of protein-based RNA interference
- Discovered highly sequence-specific mRNA interferase recognizing and cleaving a seven-base RNA sequence
- Uncovered 34 toxin-antitoxin operons in the *E. coli* genome
- Demonstrated eradication of HIV-1 using an mRNA interferase from *E. coli* in CD4 + cell cultures
- Produced a single-membrane protein in living *E. coli* using the single protein production (SPP) system
- Developed dual inducible SPP systems achieving nearly 100% isotope incorporation
- Discovered a novel toxin targeting cytoskeleton proteins, FtsZ and MreB
- Determined the mechanism of assembly of bacterial collagens
- Demonstrated that elevated levels of ENGRAILED 2 correlates with increased autism risk
- Demonstrated that vacuolated lens mouse mutant is a multi-genic model of human neural tube defects
- Uncovered a new gene that promotes breast cancer cell invasion and anchorage-independent growth
- Identified a novel combination treatment that sensitizes AML patient specimens to anti-cancer agents ex vivo
- Discovered that immune activation signals increase the stability of key regulatory RNA molecules made by the Human T-cell Leukemia Virus type 1, thus contributing to induction of disease
- Discovered that the Human T-cell Leukemia Virus type 1 alters the fundamental immunoregulatory properties of the CD4+ T cells that it infects

- Demonstrated that PDCD2, a novel gene associated with human leukemia, is present in specific nuclear bodies that control basic aspects of gene expression in development
- Identified the expression of PDCD2, a novel gene associated with human leukemias, in early precursors of T cells in the thymus, suggesting that this gene is important for the normal development of the immune system.
- Discovered that podocytes, cells that play a critical role in filtration of urine in the kidney, exhibit key properties of innate immune function.
- Found differences in memory B cell function associated with the development of pediatric nephrotic syndrome
- Determined that Bacteroidetes, a major constituent of the gut, induce significant pro-inflammatory cytokines that cause sepsis
- Demonstrated that 2B4 (CD244), previously identified as a natural killer cell receptor, is a major biomarker of gut hematopoietic cells, and that 2B4 expression on hematopoietic cells occurs exclusively in the gut
- Demonstrated that cells from the mother's breast milk survive the neonatal gastrointestinal tract, and determined that these milk cells are found exclusively in neonatal Peyer's patches.
- Showed that mesenchymal stem cells exert their potent immunosuppressive activities through the induction of cell adhesion molecules, thus allowing for the therapeutic modulation of their effects
- Discovered that tumor associated mesenchymal stem cell promote tumor cell growth through recruitment of macrophages
- Discovered a microRNA, miR-504, that regulated the tumor suppressor p53 through its direct binding to two sites in the p53 3' untranslated region
- Discovered that the metastasis gene metadherin activation by 8q22 genomic gain promotes chemo-resistance
- Discovered that protein deacetylation is the only essential function of Sir2 in creating silenced chromatin
- Discovered that the four-jointed gene, a golgi kinase, regulates the atypical cadherin Fat signaling by phosphorylating cadherin domains of Fat and Dachshous as they transit through the Golgi
- Discovered that protein O-fucosyltransferase 1, an enzyme that glycosylates epidermal growth factor-like domains of Notch, has distinct Notch chaperone activity that promotes notch receptor folding
- Identified Nbk/Bik as the mediator of apoptosis in response to the shutoff of protein synthesis
- Found that MazF, an mRNA interferase, mediates apoptosis during Myxococcus development, discovering the regulated deployment of a toxin gene for apoptosis

- Developed highly sophisticated mouse models to study TGF- $\beta$  signaling with the finding that either turning off Smad4 in the tumor cells, or treating the animals with the TGF- $\beta$  receptor kinase inhibitor, significantly reduces the metastatic tumor burden
- Discovered that p53 regulates leukemia inhibitory factor (LIF) and alters maternal reproduction
- Demonstrated that the anti-apoptotic Bcl-2 family member Bfl-1 predisposes to lymphoma with defective ubiquitin-mediated degradation, suggesting that modulation of ubiquitination of Bfl-1 may alter predisposition to cancer
- Demonstrated that targeting the BH3 domain of Bcl-2 family members with mimetic small molecules synergized with chemotherapy
- Discovered anti-tumor activity of targeting four-stranded DNA/RNAs (G-quadruplexes) and have studied the binding and synthesis of agents that bind to human telomeric G-quadruplex DNA
- Discovered the importance of the metabotropic glutamate receptor 1 (Grm1) in melanoma
- Determined that serum levels of the organochlorine pesticide beta-hexachlorocyclohexane is associated with increased risk of Parkinson's disease
- Developed an animal model of ADHD based on developmental pesticide exposure
- Determined that the behavioral effects of developmental pesticide exposure are the result of epigenetic alterations in the dopamine system
- Determined that components of the dopamine system (D1 receptors and Dopamine Transporter) are epigenetically regulated
- Demonstrated that pyrethroid pesticides cause apoptosis through the ER stress pathway
- Developed a new method for detecting global DNA methylation
- Cloned and characterized the zebrafish dopamine transporter and demonstrated that it functions similar to the human transporter
- Determined that sodium channel activation is an early component of microglial activation and that blockade of sodium channels reduces microglial ROS generation
- Demonstrated that developmental pesticide exposures induce carboxylesterases and enhance the metabolism of methylphenidate
- Determined that brain sodium channels are developmentally regulated by proteasomal function and calpain activity
- Characterized the alteration of pesticide and drug metabolizing enzyme expression during pregnancy
- Discovered that nitrogen mustard functions by cross-linking and superoxide dismutase

- Identified amino acids in superoxide dismutase cross-linked by nitrogen mustard
- Determined that redox cycling chemicals inhibit tetrahydrobiopterin metabolism by inhibiting sepiapterin reductase
- Discovered that nitrolipids are potent activators of the heat shock family of transcription factors
- Determined the rates of hydrogen peroxide formation by recombinant cytochrome P450's in the presence of cytochrome b5
- Identified histone phosphorylation as a key mediator of DNA break repair in mouse skin exposed to bifunctional alkylating agents
- Determined that 2-chloroethylethyl sulfide is a potent inducer of autophagy in a human skin equivalent model
- Identified cytochrome b5 reductase as a potent mediator of catechol estrogen redox cycling
- Discovered amino acid linkers for non-steroidal anti-inflammatory agents
- Identified cinnamaldehydes that were potent inhibitors of thioredoxin reductase in lung tumor cells
- Discovered ibuprofen derivatives that were active in suppressing skin inflammation
- Defined mechanisms of free radical-induced signal transduction in ultraviolet light carcinogenesis
- Demonstrated that bifunctional alkylating agents induce markers of DNA damage and repair in mouse skin
- Determined that bifunctional alkylating agents induce mast cell degranulation in a vapor cup exposure model
- Identified mechanisms by which chemicals and bacterial toxins activate macrophages to release inflammatory mediators that contribute to toxicity
- Characterized the effects of disrupting circadian rhythm caused by jet lag
- Discovered a link between mammary tumorigenesis and circadian rhythm
- Characterized epigenetic regulation of circadian rhythm by carcinogens and chemopreventive agents
- Investigated the tumor suppressive function of the furry gene in the development of breast cancer
- Characterized the transgenerational effects of in utero exposure of zearanol

- Characterized changes in circadian genes *per2* and estrogen receptor beta expression levels after night shift work in hospital nurses
- Determined that the urinary pesticide metabolite levels of flight attendant flying routes that require disinfection of aircraft exceed baseline population levels by more than order of magnitude and approach occupational levels
- Identified the levels of irritant carbonyls in commercial aircraft cabins resulting from reaction with ozone which penetrates the cabin at typical cruising altitudes
- Published a review of benzene exposure and monitoring methods for the general population and workers
- Developed a method to quantify both soluble and insoluble hexavalent chromium in ambient particles
- Characterized time-location pattern for the population, many are socioeconomically disadvantaged groups, living in a hotspot for air pollution
- Characterized land use type on spatial/temporal variations of EC, OC, and Trace Elements in PM10 in an urban area
- Characterized road dust and tracers of traffic-generated air pollution
- Published a major review manuscript in *Environmental Health Perspectives* that discussed the major accomplishments in the field of exposure science and defined major milestones for the future, especially those needed to provide closer links between biological markers of exposure and health outcomes
- Completed a project with collaborators from Rutgers University and published two manuscripts that provided the first sets of data showing the potential exposure of segments of the general population to nanoparticles used in household spray disinfectants and cosmetic products
- Completed a project that identified over 500 chemical components of currently used artificial turf infill and the synthetic grass fibers; assessing the risk from all routes of exposure
- Initiated the development of the Exposure Index (EI) for the children enrolling in the National Children's Study which takes advantage of the many data bases we have acquired across the country to estimate individual and population exposures in the 105 NCS counties
- Commenced development of a "smart phone" app that connects to the incident command function of the State of NJ Hippocrates online system (a project of the Command, Control, and Interoperability Center for Advanced Data Analysis - CCICADA)
- Commenced development of an "Exposure Ranking Index" for characterizing potential exposures of workers related to post 9/11 World Trade Center activities
- Conducted an evaluation study of a novel computational system, PRoTEGE (Prioritization/Ranking of Toxic Exposures with GIS Extension), by applying it to screening-level ranking of the exposure potential of a test set of 55 industrial chemicals

- Continued to study the causes, dynamics and effects of photochemical air pollution in the fifth 5-year phase of the Ozone Research Center
- Guided development of a regional atmospheric dynamic model of pollen production, distribution and dispersion, coupled with a model for estimating population exposures and doses to aeroallergens co-occurring with photochemical and toxic air pollutants
- Continued development of an Exposure Index (EI) for the National Children's Study to support the analysis of associations between pregnancy outcomes (pre-term births and low birth weights) and environmental and demographic factors
- Continued development of the DORIAN (DOse Response Information ANalysis) system for multiscale mechanistic analysis of environment-biosystem interactions with focus on toxicokinetic and toxicodynamic processes relevant to xenobiotic metabolism, oxidative stress, and hepatotoxicity
- Continued development and testing of a prototype generalized risk analysis framework for engineered nanomaterials (ENMs), focusing on carbon nanotubes and silver nanoparticles
- Achieved transfection of cytotoxic T lymphocytes with gene-carrying lipoplexes as vectors
- Achieved generation of Heme Oxygenase-1 deficient rats
- Employing high throughput chemical screening, proof-of-principle was provided for an approach to clear HIV-1 infections.
- Small molecule scaffolds were identified that can serve as the basis for drug development to eliminate HIV-1 infections.
- Developed a novel regulated expression with potentially important clinical applications when tight control of gene expression is required.
- Discovered Efficient co-expression of bicistronic proteins in mesenchymal stem cells by development and optimization of a multifunctional plasmid
- Developed dosage-dependent effects of MSC-synthesized Mu-IFN $\alpha$ A within B16 tumors in mice
- Developed transfection efficiency of various pc3.5-based vectors harboring promoters and/or introns controlling the gene of interest.
- Discovered the Interferon-alpha family of proteins shows variable antiviral potencies against Human Immunodeficiency Virus
- Developed the relationship between antiproliferative activities and class I MHC surface expression of mouse interferon proteins on B16-F10 melanoma cells
- Refined the model for how the bacterial toxin RelE arrests protein synthesis
- Determined the properties of a representative of the VapC virulence associated bacterial toxin family

- Identified a bacterial toxin that causes necroptosis when expressed in mammalian cells
- Developed a novel assay for the identification of factors required for selenocysteine incorporation into selenoproteins
- Developed a model system to test the role of an auxiliary protein that may regulate selenoprotein synthesis
- Initiated a project to exploit the selenium requirement for male fertility in the development of novel contraceptives
- Demonstrated that the malaria parasite *Plasmodium falciparum* can invade and persist in Human Umbilical Vein Endothelial Cells in culture, indicating a possible new site for latent infections in humans. Determined mutations in translation elongation factor 3 alter ribosome binding as a potential anti-fungal target activity.
- Characterized 2 compounds that are anti- cancer or male contraceptive agents that target actin bundling by translation elongation factor 1A.
- Determined that ADP ribosylation of translation elongation factor 2 by diphtheria toxin alters protein mobility and stability.
- Determined altered actin bundling by translation elongation factor 1A results in modification of a protein synthesis factor required to initiate translation.
- Progressed toward making a mutant form of mouse interferon alpha that will serve as a antagonist ("blocker") of natural mouse interferons. When complete, these molecules will permit studies of lupus-like diseases in mice, in parallel to our work with human antagonists.
- Discovered that phosphorylation of chaperone Hsp27 promotes degradation of RNA-binding protein AUF1 to control mRNA degradation
- Found that RNA-binding protein AUF1 controls NF-kB signaling in monocytes in response to endotoxin exposure
- Demonstrated that hnRNP A1 is essential for the synthesis of genomic and subgenomic RNA of Sindbis virus
- Developed gene therapy-based treatment for experimental autoimmune encephalomyelitis, a model for human multiple sclerosis that represents a treatment model for other T cell-mediated autoimmune disease.
- Worked on a new strategy for down-regulating the immune response to hematopoietic allografts in order to control graft versus host disease.
- Studied aspects of hematopoiesis, mostly of the myeloid lineage and lymphoid lineages.
- Discovered that IFN-beta inhibits Toll-like receptor 9 processing in patients with multiple sclerosis

- Completed studies on gene expression in plasmacytoid dendritic cells in patients with multiple sclerosis
- Showed that mucosal immunity is involved in the development of encephalitogenic T cells.
- Discovered that CD11b macrophages can suppress the differentiation of Th1 pathogenic T cells.
- Discovered that alpha-synuclein activates microglia by inducing the expression of matrix metalloproteinases and the subsequent activation of protease-activated receptor-1
- Discovered that a component of coffee other than caffeine protects the brain from the pathology of alpha-synuclein in a mouse model of Parkinson's disease.
- Demonstrated that the Parkinson's disease linked protein alpha-synuclein is modified by SUMO leading to altered aggregation properties and curtailed toxicity of this pathogenic protein.
- Discovered that caffeine treatment can rescue nigral dopaminergic neurons in a rat chronic model of Parkinson's disease even after the process of neurodegeneration is initiated
- Caffeine treatment reduces microglia activation in a chronic rat model of Parkinson's disease
- Applied kernel density estimation methods to the display of neurophysiology data from mobile microelectrodes for functional brain mapping during deep brain stimulation surgery.
- Showed superiority of human-derived quantitative features, extracted from deep brain stimulation microelectrode neurophysiological waveforms for automated event detection, to traditional signal processing features that are not optimized for human neural signals.
- Discovered that the neuropeptide VGF requires activation of glutamate receptors followed by phosphorylation of CaMKII to promote neurogenesis of adult hippocampal neural progenitor cells
- Established a new behavioral depression paradigm, chronic social defeat stress, and tested the effects of the neuropeptide VGF infused intraventricularly in this model
- Used computer modeling to explore the regulation of microRNAs related to BDNF and its signaling pathways following traumatic brain injury
- Demonstrated the upregulation of the p75 co-receptor sortilin following traumatic brain injury
- Showed the upregulation of the oligodendrocyte precursor marker NG2 after lateral fluid percussion injury
- Initiated a study of the differences in neuronal degeneration and cell death after brain injury using Fluorojade C and activated caspase 3 expression respectively, in wildtype and p75 <sup>-/-</sup> mice

- Explored the differences in wildtype and p75 +/- mice following lateral fluid percussion injury for cognitive function using the Morris Water Maze and motor skills using the rotarod test
- Following traumatic injury to one of the cerebral hemispheres or to the spinal cord, we have observed reorganization of the dendritic structures of the pyramidal neurons of the contralateral cortex as well as a decrease in parvalbumin expression of cortical interneurons suggesting dramatic alternations in the microcircuitry distant from focal injury
- Continued studies that are determining that BDNF may reverse pathologies associated with Alzheimer's Disease
- Identified cellular targets of metabotropic agonists in the demyelinated corpus callosum that may be responsible for producing BDNF that supports the demyelinated region
- In preliminary results, identified roles for astrocyte-derived and oligodendrocyte-derived BDNF in brain development
- Identified evolutionarily-conserved residues in tropomyosin, the actin filament universal regulatory protein, that constitute actin binding sites
- Discovered that two Tcf/Lef proteins, Tcf3 and Tcf4, are required for normal progenitor patterning in the ventral neural tube
- Characterized the mechanisms that Tcf proteins employ to regulate Sonic Hedgehog (Shh) target gene expression during CNS development
- Discovered that Shh signaling from an intrinsic tissue source in the spinal cord, the floor plate, is specifically required to induce oligodendrocyte cell fates during mouse embryogenesis
- Discovered that adult spinal cord ependymal zone cells, which have stem cell properties, are derived from distinct embryonic lineages
- Discovered that MOR-1 KO mice have altered proliferation of dentate gyrus neuronal precursors independent of genotype
- Determined that different opioid receptors KO mouse strains have altered vocalizations
- Determined that MOR-1 and triple knock-out mice retain analgesia to IBNTX, a novel analgesic
- Discovered that morphine-6-glucuronide analgesia is strain-specifically associated with a specific mouse chromosomal locus
- Discovered that the cyclin-dependent kinase inhibitor, p57Kip2, promotes cell cycle exit in the developing nervous system and instructs neural stem cells to differentiate into neurons rather than glia
- Demonstrated that during early brain development, cyclin-dependent kinase inhibitor, p57Kip2, regulates neural stem cell proliferation, and controls production of neurons that contribute to lower layers of the cerebral cortex

- Discovered that in the hippocampus, a region critical for learning and memory, the PACAP ligand and receptor system plays a role in promoting survival of brain neurons after birth and into adulthood
- Demonstrated that the autism associated gene, Engrailed 2, is required for normal development of many behaviors including juvenile and adult social interactions, fear conditioning, visual-spatial learning and prepulse inhibition
- Discovered that the neurotoxin methylmercury, that is ubiquitous in the human diet, induces hippocampal cell death in vivo by activating the mitochondrial-dependent apoptotic pathway
- Discovered that the LRR domain of tropomodulin is crucial for neurite formation
- Demonstrated that mutations in tropomyosin-binding sites of tropomodulin change affinity to long muscle tropomyosins
- Demonstrated increased levels of ENGRAILED 2 is correlated with increased autism risk
- Demonstrated vacuolated lens mouse mutant is a multi-genic model of human neural tube defects
- Discovered acute adaptive reorganization events of central sensorimotor neurons after spinal cord injury involving changes of EIF4E's mRNA cargo
- Discovered specific roles of distinct ELAVL4 isoforms during neocortico-genesis
- Discovered that Par-1/MARK1, a polarity protein overexpressed in autism, regulates dendritic spine morphogenesis in neurons and its activity is regulated by synaptic activation
- Discovered that ARHGAP10, a Rho family exchange factor implicated in schizophrenia, regulates dendritic spine morphogenesis in neurons
- Discovered and published an age-related gene-specific changes in A-to-I mRNA editing in the human brain
- Published a method to use real time epifluorescence stereology and reported on the morphology of neurons in the mouse substantia nigra and ventral tegmental area
- Demonstrated that the WAVE/SCAR proteins are required for the maturation and maintenance of epithelial junctions in *C. elegans*
- Demonstrated that the WAVE/SCAR actin nucleation complex is required for membrane association of apical proteins
- Developed biochemical fractionation methods for the subcellular analysis of *C. elegans* proteins
- Demonstrated that the receptor protein Roundabout regulates microvilli length in the *Drosophila* large intestine

- Showed that Netrin signaling is required for heart tube assembly in *Drosophila*
- Presented cytoskeletal alterations in the bladder from male mice with cystinuria
- Presented effects of ovariectomy on stone formation in cystinuria mice
- Presented characterization of small molecule aggregate components in cystine stones as a screen for candidate stone inhibitors
- Discovered ovariectomy induces a significant decrease in contractile responses in the bladder from cystinuria mice
- Discovered ovariectomy does not promote cystine stone formation in cystinuria mice
- Discovered cystine stones are associated with proliferation and differentiation of epithelial cells in bladders from male mice with cystinuria
- Discovered cystine dimethylester is an inhibitor of cystine stone formation
- Showed that acetylcholine potentiates UNC-6 (netrin) and SLT-1 (slit) guidance cue signaling in *Caenorhabditis elegans*
- Submitted project for robust and accurate target positioning in external beam radiation therapy
- Examined Effect of Oophorectomy on Cystiene Stone Formation in Knock Out Mouse Model
- Demonstrated that Cystiene Knock Out Mouse Model Could be Used as a Model for Bladder Outlet obstruction
- Determined that Bladder Dysfunction in Cystinuria Male Mice is Associated with Apical Membrand, Cystoskeletal and Epithelial to Mesenchymal Alterations
- Evaluated the Role of Transforming Growth Factor-Beta (TGF- $\beta$ ) Neutralizing Antibody (1D11) in Preclinical Experiments for Prostate Cancer
- Evaluated the Relationship Between BMP-6 and Obesity in Transgenic Mice
- Developed a Model for BMP-6 Manipulation in Zebrafish
- Determining if Procalcitonin and Interleukin-6 Differentiate Identify Significant UTI in Patients in Long Term Care Facilities
- Completed Multicenter Infection Surveillance Study Following Cardiac Surgical Procedures
- Demonstrated A Post-Approval Study (PSA) to Monitor the Clinical Performance of the AbioCor in Severe End-Stage Heart Disease Patients
- Demonstrated Interagency Registry for Mechanically Assisted Circulatory Support (INTERMACS)

- Demonstrated that the estrogen receptor can bind to the GATA3 3'UTR
- Demonstrated that the estrogen receptor can act like a RNA binding protein
- Identified the region within the estrogen receptor protein that binds to the GATA3 mRNA
- Identified the region within the GATA3 mRNA that binds the estrogen receptor protein
- Received approval from CTEP to initiate a Phase II clinical trial to determine the effects of SJG-136 in ovarian cancers
- Uncovered the promoter consensus sequence of CD44-ICD
- Determined that CD44-ICD increases metabolism related genes in the presence of normoxia
- Determined the cycle control, bleeding pattern, blood pressure, lipid and carbohydrate metabolism of the transdermal ,contraceptive patch with a novel hormonal combination to an oral comparator with ethinylestradiol and levonorgestrel
- Contributed to the development of a protocol to test a spinal stimulation device for gynecologic issues
- Investigating the safety and efficacy of DHEA in the treatment of menopausal women with symptomatic vaginal atrophy
- Investigating the safety and efficacy of DHEA in the treatment of menopausal women with female sexual dysfunction
- Contributed to the science of assessing the safety and efficacy of a novel SERM for the treatment of vasomotor symptoms associated with menopause.
- Reported on the relationship of location and size of uterine myomas to degree of anemia, and symptoms like pelvic pressure and pain
- Reported on the SERM (Ospemifene) in the treatment of Vulvovaginal Atrophy in Postmenopausal Women in a Pivotal Phase 3 Study
- Evaluated the data on the effects of Zoledronic acid compared to raloxifene on bone turnover markers in postmenopausal women with low bone mineral density
- Working with Rutgers School of Public Health on accessing ease of use to material on birth control. Performing Web Evaluation of the Association of reproductive health professional's choosing a birth control method program
- Working with Rutgers School of Public Health on accessing the literature on alternative interventions used by the American Public to gain support for this list being included in electronic health records
- Assessing medical students in determining vitamin D levels in healthy adults

- Found that children show greater expressions of approach emotions (i.e., anger, enjoyment) with greater retaliatory behavior in a peer competition task
- Found that children exposed to prenatal cocaine show greater aggression than unexposed children on the no-provocation trials of a peer competition task, suggesting that the cocaine exposed children may remain aroused or angry for a longer period of time
- Found that prenatal cocaine exposure and male gender were associated with greater baseline aggression in a peer competition task
- Found that children show greater externalizing problems due to prenatal cocaine exposure, male gender, and environmental risk during middle childhood
- Found that prenatal cocaine exposure and male gender were associated with greater risk of use of drugs and cigarettes among at-risk, urban adolescents
- Found that males who were exposed prenatally to cocaine and who live in chaotic homes were 21 times more likely than females who were not exposed and who lived in non-chaotic homes to have injury behaviors in childhood
- Found that brain volumes of gray matter were associated with self representation abilities in children with autism spectrum disorders (ASD)
- Found that children with ASD had deficits in self representation abilities compared to a community sample of typically developing children
- Found that infants who subsequently received ASD diagnoses prior to the age of 3 failed to learn a simple contingency at 5 months in 2 sessions, when approximately 80% of normally developing infants do so
- Found that infant's emotional responses to goal blockage at 5 months can be reduced to three clusters of behavior which are reliable: Those who show high levels of reactivity and low anger and little or no sadness, those who show high levels of anger and moderate levels of sadness, those who show moderate levels of anger, activity and little or no sadness
- Found that children with low vs high vagal tone show parallel patterns of cardiac regulation over time during learning and goal blockage procedures at 5 months, while maintaining their physiological profiles
- Found that overall there is a developmental shift between 3 to 4 years and older ages in the ability to take the perspective of another
- Found a relation between mental age and the ability to take the perspective of another such that gifted 3 to 4-year-olds perform as well on these tasks as average 5 to 6-year-olds, who are their same mental age
- Found that self-conscious emotions (shame, pride, and embarrassment) increase from 4-6 years of age, but then decrease from 6 to 9 years of age in response to completing an evaluative task

- Found both neglected and comparison children to exhibit elevated rates of obesity, but with the chronicity of neglect actually predicting lower body mass index scores at ages 8 and 9 years
- Found children neglected in early childhood experience greater shame and depressive symptoms at age 7 years
- Found that for adolescent juvenile offenders, the conversion of shame into blaming others appears to contribute to violent delinquent behavior
- Confirmed model proposing that abusive parenting impacts juvenile violence directly and indirectly through the effects of converted shame
- Found that different classes of disgust stimuli, such as bugs, mutilation and body products elicit distinct sets of multiple emotions in adolescents
- Found that the sensitivity to the emotion of disgust is associated with adolescent psychopathology, specifically phobias
- Found strong links between sensitivity to disgust in adolescents with Blood-Injection-Injury Phobia
- Found that attachment security as measured by the Attachment Q-Sort can also be validly and reliably measured in free-ranging and captive rhesus macaques with the AQS-RM allowing for increased interaction between comparative and developmental psychologists
- Found a significant, sizable, and sustained developmental shift in rhesus macaque infant attachment security after 12 weeks: attachment security declined after 12 weeks consistent with a decreased reliance on mother as a secure base from which to explore
- Found attachment security in infant rhesus macaques was significantly correlated with fewer distress vocalizations, less aggression from mothers, greater reliance on maternal protection in high risk situations, among other correlations
- Found that individual attachment security scores for infant rhesus macaques were stable for weeks 1-12, unstable for weeks 13-24, and stable in weeks 25-42
- Found that environment becomes better over time for children from disadvantaged settings; increases in positive environmental indicators for the time between ages 3 to 10 is greater than those for the time between age 4 months to age 3 and the time between ages 10 to 13
- Found that Chaos significantly predicted Total Problems and Externalizing and Internalizing Problems for ages 5, 9, 10, & 12
- Found that there is a cocaine effect at ages 11 and 13 for Total and Externalizing Problems, as well as a gender effect for Total and Externalizing Problems for ages 9, 10, 11, & 13
- Found that (1) there are significant gender and cocaine effects on risky sexual behavior; (2) Chaos and SES significantly predicted risky substance use and sexual behaviors

- Found that Chaos significantly predicted Injury behavior. High chaos score was significantly associated with high injury behavior. And found that high Chaos, boys, and being exposed are 7, 4, and 3 times at odds ratio that are likely to engage in high injury behaviors
- Found that maternal depression is significantly associated with Chaos and SES factors, as well as with child internalizing problem. Moreover, Chaos and SES factors are significantly associated with children's internalizing problem
- Identified an essential role for the TRPM7 ion channel and magnesium in early embryonic development
- Determined that magnesium plays an essential role in the ability of cells to execute polarized cell movements
- Demonstrated that loss of 53BP1 can allow ES cells to tolerate acute loss of Brca1
- Demonstrated that loss of 53BP1 partially restores the DNA repair defect in BRCA1 <sup>-/-</sup> cells
- Found that a subset of human basal-like breast cancers have abnormally low BRCA1 expression
- Developed a novel bioinformatic method: Gene centrality, to identify potential driver genes in large gene expression data sets.
- Identified YES1 as a potential therapeutic target in human Basal-like breast cancer
- Demonstrated that BMI1 is rapidly recruited to sites of DNA damage where it is required for local histone H2A mono-ubiquitination
- Demonstrated that BMI1 is required for efficient HR-mediated repair of DNA double strand breaks
- Demonstrated that UHRF1, a key protein required for maintenance of cytosine methylation, is recruited to sites of DNA breaks
- Developed a lexA-tethering assay to measure whether individual proteins can nucleate sister chromatid cohesion
- Identified the Sir2 histone deacetylase as a sister chromatid cohesion targeting factor
- Discovered the role of chromatin remodeler in overcoming the polar nucleosomal barrier to transcription by Pol II
- Discovered the mechanism of histone survival during transcription by RNA polymerase II
- Discovered how histone sin mutations promote nucleosome traversal and histone displacement by RNA polymerase II
- Discovered how RNA polymerase II complexes cooperate to relieve the nucleosomal barrier and evict histones

- Determined that PHD domains of fission yeast Msc1 are necessary for interaction with the Swr1 chromatin remodeling complex
- Discovered that histone H2A.Z localization to the outer repeats of fission yeast centromeres requires Swr1, but not Msc1 function
- Demonstrated that increased expression of the Pap1 transcription factor confers drug resistance on cells deficient for the protein kinase Chk1
- Determined that localization of Pap1 to the nucleus is independent of Chk1 function
- Demonstrated important role of lactate pyruvate shuttle in tumor growth
- Demonstrated oncogenic Ras induces interferon-beta secretion and signaling
- Discovered two new classes of antibiotic agents that target the bacterial cell division protein FtsZ
- Found that FtsZ targeting agents can act by either simulating or blocking the self-polymerization of the protein
- Discovered that the promoter regions of the *bmi1* and *aurA* oncogenes contain sequences that can adopt G-quadruplex structures
- Demonstrated that macrocyclic oxazole compounds that stabilize the *bmi1* and *aurA* quadruplexes reduce expression of the oncogenes in cancer cells
- Determined the mode and stoichiometry by which the macrocyclic oxazole compounds bind quadruplex DNA
- Discovered T115, a novel triazole-based tubulin binding compound, that has demonstrated potent activity and low toxicity in rodent models of colorectal cancer
- Developed a computational suite of statistical and pattern recognition tools to discriminate USP-grade heparin samples from samples containing impurities and toxic adulterants for product safety and quality assessment.
- Discovered a novel series of oral therapeutics for toxoplasmosis, one of the major causes of birth defects in newborn deaths
- Discovered a novel class of small-molecule inhibitors of *Plasmodium (P.) falciparum*, the cause of the most virulent form of malaria
- Discovered a novel family of delta opioid receptor agonists as oral therapeutics for the treatment of pain
- Demonstrated that the channel kinase TRPM7 controls whole body magnesium homeostasis and proliferation of stem cells
- Discovered that autophagy is important for development of white adipose tissue

- Demonstrated that inactivation of autophagy in white adipose tissue dramatically improves lipid metabolism
- Established white adipocytes as a model system for study programmed mitophagy
- Validated a novel mouse model for non-invasive imaging of spontaneous tumors
- Found that genistein-induced DNA damage and chromosome rearrangements were topoisomerase II beta-mediated
- Demonstrated that the genistein-induced DNA damage signal, gamma-H2AX, required proteasome-mediated degradation of topoisomerase II beta
- Showed that the genistein-induced DNA damage signal, gamma-H2AX, was not through the induction of reactive oxygen species
- Identified NEDD8 modification sites on androgen receptor
- Discovered how NEDD8 modification alters androgen receptor activity
- Found that NEDD8 modification occurs on steroid receptors other than the androgen receptor
- Discovered the mechanism of mTOR localization to mitochondria
- Elucidated the function of mitochondrial localization in mTOR signaling
- Developed a hierarchy of breast cancer cell subsets that has never been reported
- Identified breast cancer stem cells
- Identified a role for microRNAs in breast cancer cell dormancy in bone marrow
- Discovered a new cause of resistance to ethambutol, a major tuberculosis drug
- Identified different roles for mesenchymal stem cells in immune responses to subsets of breast cancer cells
- Developed a model of spinal cord repair in zebrafish
- Demonstrated a mechanism of cAMP-induced apoptosis in neuron and myocytes
- Discovered a gene responsible for drug induced mutational drug resistance in tuberculosis
- Characterized a new class RNA polymerase-directed antibiotics against the following organisms: *Mycobacterium tuberculosis*, *Bacillus anthracis*, *Burkholderia mallei*, *Burkholderia pseudomallei*, *Yersinia pestis*, *Francisella tularensis*, *Coxiella burnetii*, *Rickettsia Rickettsiae* and *Brucella melitensis*
- Demonstrated that histamine regulates activities of neurons in the ventrolateral preoptic nucleus

- Demonstrated that voluntary alcohol intake induces the FosB/ $\Delta$ FosB of in rat brain
- Discovered that ethanol blocks long-term potentiation of GABAergic synapses in the ventral tegmental area involving mu-opioid receptors
- Identified an unexpected pro-injury effect of propofol on vascular smooth muscle cells with increased oxidative stress
- Discovered an essential role of PDCD4 in vascular smooth muscle cell apoptosis and proliferation: implications for vascular disease
- Demonstrated that ischaemic preconditioning-regulated miR-21 protects heart against ischaemia/reperfusion injury via anti-apoptosis through its target PDCD4
- Demonstrated that serum miR-21 is a novel for myocardial infarction
- Demonstrated that Propofol may be an addictive drug by regulating the expression of addictive genes, D-1 Receptor and FosB/ $\Delta$ FosB
- Demonstrated that the KSHV-encoded vIRF3 modulates IRF5 activities thus contributing to KSHV-induced immune evasion and lytic induction
- Elucidated the molecular mechanism by which IRF5 mediates proinflammatory cytokine induction via interaction with histone acetylases and deacetylases
- Discovered that IRF5 regulates lupus-associated autoantibodies in part through its regulation of CD21 expression on B cells
- Demonstrated that IRF5 expression is lost in human breast cancer tissues and identified a mechanistic role for IRF5 in tumor metastasis through its regulation of the CXCR4 chemokine
- Discovered that a portion of IRF5 is already localized to the nucleus in monocytes of SLE patients suggesting constitutive activation, as compared to healthy donors. We also identified the trigger of IRF5 nuclear localization in primary monocytes as autoantigens related to SLE pathogenesis
- Submitted a patent application for the use of imaging flow cytometry to detect lupus pathogenic autoantibodies
- Identified two novel chemotypes from twenty-three small molecule NS5B inhibitor leads through in-silico screening and in vitro investigations of ChemBridge database
- Discovered and characterized twenty-five derivatives from lead compound 3 bearing rhodanine scaffold, with  $IC_{50}$  values ranging from 7.7 to 68.0  $\mu$ M employing chemical derivatization and systematic Structure-Activity optimization approach
- In collaboration with Dr. Taylor, demonstrated the utility of the first persistent culture of genotype 1b virus for a convenient cytopathic effect (CPE)-based assay for HCV therapeutics development

- Identified new tyrosine phosphorylation sites on the Crk oncogene, and showed they were elevated in leukemia and breast cancer cells
- Identified molecular mechanisms underlying negative regulation of type I by type III interferons
- Developed reporter cell lines to study interaction of phagocytic receptors with their ligands
- Generated mice lacking receptors for type III interferons
- Established that addition of 2-deoxyglucose enhances growth inhibition and reverses acidification in colon cancer cells treated with metformin or phenformin
- Developed an in organelle assay to measure mitochondrial responses to genotoxic stress at the transcription level
- Discovered that *Mycoplasma tuberculosis* secretes a factor that alters mitochondrial function, reflected as transcriptional activation
- Discovered a mechanism that regulate Trx1-mediated reduction, transnitrosylation and denitrosylation of specific target proteins, solidifying the role of Trx1 as a master regulator of redox signal transduction
- In collaboration with Marco Zarbin, identified that increased retinal pigment epithelial survival can be achieved on aged submacular human Bruch's membrane by resurfacing the latter with a cell-deposited extracellular matrix
- In collaboration with Ed Azzam, identified late effects on molecular signaling in mitochondria in vivo space radiation-induced non-targeted responses
- In collaboration with David Perlin, identified the *Aspergillus fumigatus* proteomic biomarkers in response to caspofungin
- Developed a new method for quantification of alternatively polyadenylated mRNAs
- Determined and validated cis-acting sequence elements that influence polyadenylation in vivo
- Discovered that the NF45 protein functions as an IRES trans-acting factor required for translation of cIAP1 during the unfolded protein response
- Demonstrated that progranulin (granulin/epithelin precursor) and its constituent granulin repeats repress transcription from cellular promoters
- Elucidated the evolution and expression of the snaR family of non-coding RNAs
- Found that the expression of Type II human chorionic gonadotropin genes supports a role in the male reproductive system
- Discovered that DNA polymerase E from *Geobacillus kaustophilus* may serve as a model for similar DNA polymerase from *M. tuberculosis*. Efforts to characterize the thermostable enzyme are underway

- Developed novel tissue engineering scaffolds to promote tissue regeneration in cranial defects
- Elucidated the temporal and spatial expression of key arachidonic acid metabolizing enzymes during bone regeneration.
- Developed an affinity capture method to capture HCV genome in situ and identify associated host cell and viral factors
- Identified all the cellular factors that were associated with replicating HCV genome in the cells
- Established that specific microRNAs that are down-regulated in lung cancer cells influence BMP2 synthesis in malignant lung cells
- Discovered that BMP-2 targeting microRNAs down-regulated in lung cancer cells suppress cell growth and may be used for chemotherapeutic “microRNA replacement therapy”
- Demonstrated that the onco-protein, HuR, competes with a specific microRNA to control BMP2 expression
- Demonstrated that the synthetic triterpenoid CDDO and its derivatives, which are in Phase I Clinical trials for the treatment of leukemia and solid tumors, inhibit the ATPase as well as the peptidase activity of the mitochondrial ATP-dependent Lon protease
- Demonstrated that a biotinylated conjugate of CDDO forms adducts with the mitochondrial Lon protease
- Demonstrated that the synthetic triterpenoid CDDO and its derivatives inhibit both the ATPase and the peptidase activities of the mitochondrial ATP-dependent ClpXP protease
- Demonstrated that the synthetic triterpenoid CDDO and its derivatives do not inhibit the protease activity of the 20S proteasome, or the ATPase activity of the 26S proteasome
- Developed a deep sequencing method to map polyadenylation sites
- Discovered the importance of polyadenylation factor in controlling expression of LINE-1 elements
- Discovered the interplay between transcription and alternative polyadenylation
- Discovered that Epac mediates melanoma progression via modification of heparan sulfate
- Demonstrated that a selective inhibitor for adenylyl cyclase type V is a potential new drug for heart failure
- Developed a new method of treating diabetes in animal models and also of treating open ductus arteriosus in premature infants
- Demonstrated a mechanism of cAMP-induced apoptosis in neurons and myocytes

- Revealed that adenylate cyclase type 5 overexpression exerts an adverse effect on arrhythmogenesis, by inducing SR Ca<sup>2+</sup> overload, which in turn increases the propensity for afterdepolarizations
- Demonstrated that mitochondrial Ca<sup>2+</sup> release and uptake exquisitely control the local Ca<sup>2+</sup> level in the intracellular micro-domain and regulate intracellular Ca<sup>2+</sup> waves and arrhythmogenesis
- Revealed the ionic mechanisms for early afterdepolarizations may vary in different models
- Demonstrated that MSL cis-spreading from roX gene up-regulates the neighboring genes
- Showed that a lower developmental temperature in *Drosophila melanogaster* enhances stress resistance with down regulation of the *lmd* pathway
- Discovered that RGS (Regulator of G-protein Signaling) proteins regulate stress resistance and longevity in several species
- Discovered that insulin-like growth factor 3 has pro-angiogenic and anti-fibrotic activities, and may play a role in the correction of adult dilated cardiomyopathy
- Determined that embryonic stem cells injected early during development prevent adult cardiomyopathy triggered by overexpression of the pro-apoptotic gene *Mst1*
- Determined that induced pluripotent stem cells injected early during development cannot correct a severe model of muscular dystrophy, but can correct the adipose tissue mass
- Found that loss of sarcolipin in a gene knockout mouse model is associated with abnormal Ca<sup>2+</sup> handling and atrial remodeling
- Discovered that sarcolipin knockout mice are susceptible to atrial fibrillation upon aging
- Identified threonine 5 at the amino-terminus of sarcolipin as a key modulator of sarcolipin function
- Discovered that phosphorylation defective mutant sarcolipin chronically inhibits SR Ca<sup>2+</sup>-ATPase and causes atrial fibrillation
- Found that sarcolipin, a key regulator of the atrial SERCA pump, is specifically downregulated in human atrial fibrillation and heart failure
- Discovered that SR Ca<sup>2+</sup> uptake is significantly increased in human atria from atrial fibrillation patients
- Discovered that the expression of SR Ca<sup>2+</sup> handling proteins is decreased in atria, but not in the ventricles of aortic banded mice
- Identified a novel somatic mutation in the sarcolipin gene in a fetal bradyarrhythmia
- Demonstrated that blocking Endothelial-Monocyte-Activating-Polypeptide-II improves remodeling after chronic myocardial infarction by promoting angiogenesis

- Demonstrated that caspase inhibition protects cardiac function with chronic pressure overload by reducing nonmyocyte apoptosis and fibrosis, not by reducing myocyte apoptosis
- Demonstrated that cardiac overexpression of adenylyl cyclase type 5 induces left ventricular hypertrophy potentially by activating calcineurin-NFAT signaling
- Demonstrated that the accumulation of mitochondrial DNA in the nucleus during the aging process in baker's yeast is dependent on the DNA Ligase IV
- Defined a novel, alternatively activated population of macrophages, which we have termed "M2d", that plays an important role in tissue repair
- Discovered a role for the adenosine A2A and A2B receptors in the induction of M2d macrophages
- Discovered a role for the induction of alternative macrophage activation in diabetic wound healing
- Discovered a role for phospholipase-C $\beta$ 2 (PLC $\beta$ ) in the induction of M2d macrophages
- Discovered a role for miRNAs in the regulation of PLC $\beta$ 2 mRNA stability in macrophages
- Discovered a role for the 3'UTR of PLC $\beta$ 2 mRNA in the regulation of PLC $\beta$ 2 mRNA stability
- Demonstrated that human fibroblast cells may be converted into astrocyte-like cells without the use of transcription factors
- Discovery of the evolutionary depth of cancer-related protein conservation: the single cell organism *Trypanosoma* relies on its equivalent of the human protein called G3BP for human cancer protein G3BP normal cell growth
- Discovery of a possible alternative way that RNA polymerase II may use highly reiterated amino acid sequences to regulate co-transcriptional processes
- Described a small molecule inhibitor of *Plasmodium* sporozoite infection of mammalian hepatocytes
- Described conditional mutagenesis in *Plasmodium berghei* parasites
- Developed novel tools for conditional mutagenesis in different rodent species of *Plasmodium* parasites
- Demonstrated that paraoxonase 1, carried on HDL in the circulation, protects against protein N-homocysteinylation in humans (FASEB J 2010)
- Discovered a novel metabolite, the isopeptide homocysteinyll-lysine, and its biosynthetic pathway in humans and mice (Amino Acids 2010)
- Developed a new technique for monitoring site-specific N-homocysteinylation directly in human serum (Anal Biochem 2010, J Proteomics 2011)

- Discovered that bleomycin hydrolase and paraoxonase protect against homocysteine neurotoxicity in mice (submitted for publication)
- Continued to investigate nuclear architecture and chromosome movement during meiotic prophase in yeast
- Discovered that Human herpesvirus-8 reactivation can support growth of cells co-infected by Epstein-Barr Virus
- Discovered that short-term growth of cell co-infected by human herpesvirus-8 and Epstein-Barr Virus can be supported by paracrine mechanisms stimulated by the viral infections
- Characterized a FRET system (tRNAs labeled with Cy3 and Cy5 fluorescent dyes and EF-Tu labeled with a quencher) for acquiring sequence information from the ribosome by employing the Biacore method and a gel retardation assay to evaluate the binding. Presented the results at the NIH Sequencing Technologies Conference in April 2011 (an oral presentation and a poster)
- Showed that the fluorescence enhancement on silver colloid nanoparticles is in the 5-fold range, in a joint project with a collaborating group. The work has been recently published (Bharill et al., ACS Nano 2011 5:399-407). Also, provided a demonstration for the acquisition of nucleic sequence data from the translating ribosome by extending time traces to the consecutive nine codons
- Established collaboration with Dr. Scott Blanchard of Cornell Medical School and obtained funding from NIH. Formulated a plan for a continued collaborative program with Dr. Blanchard, and submitted a major multi-year RO1 grant application to NIH
- Determined the X-ray crystal structure of a bacterial Rap phosphatase bound to its target substrate, revealing the mechanistic basis of Rap protein phosphatase activity
- Rationally engineered a non-phosphatase protein to dephosphorylate a selected target
- Discovered that the mutant defective in production of a dual-function surface protein of Lyme spirochetes causes a thousand-fold reduction in infectivity as indicated by an increase in ID50 of the mutant
- Defined and differentiated the contribution of decorin binding protein A adhesin alleles of different Lyme spirochetes in a collaborative study
- Established that the codon-optimized firefly luciferase expressed in Lyme spirochetes can detect bacterial dissemination to different tissues in the mouse model of infection using in vivo imaging system (IVIS)
- Discovered that ATM kinase in budding yeast is strongly activated at protein-bound DNA; Published this finding in *Molecular and Cellular Biology* in May, 2011
- Determined that red blood cell (RBC) hemolysis in the Rb;E2f8 double knockout mice was most likely due to defective RBC membrane integrity

- Determined that ineffective erythropoiesis observed in the Rb;E2f8 double knockout mice was due to an enrichment of orthochromaphilic normablasts, a late stage erythroids that are normally programmed to permanently exit the cell cycle and to undergo terminal differentiation
- Determined that E2f3a, one of the two E2f3 isoforms, was significantly up-regulated in prostate glands with Myc oncogene over-expression long before prostate carcinoma has developed, suggesting that E2f3a may play a critical role in Myc-triggered prostate carcinogenesis
- Demonstrated that in models of diabetes, vascular cell injury occurs with both early programmed cell death membrane signaling and later genomic DNA degradation
- Demonstrated that gene knockdown for the forkhead transcription factor FoxO3a can avert vascular cell injury during models of diabetes
- Demonstrated that endothelial cell injury during models of diabetes is determined by subcellular trafficking of FoxO3a to the cell nucleus to control mitochondrial and caspase apoptotic signaling
- Demonstrated that the longevity factor sirtuin SIRT1 is necessary for protection against early apoptotic programs by activating protein kinase B cell survival pathways in models of oxidative stress and diabetes
- Demonstrated that the sirtuin SIRT1 targets the mitochondrial associated protein BAD through post-translational phosphorylation to maintain mitochondrial membrane and cell integrity in the nervous system
- Demonstrated that the wntless pathway of Wnt1 reverses amyloid injury in brain cell neurons during models of Alzheimer's disease
- Demonstrated that Wnt1 controls inflammatory cell activation in models of Alzheimer's disease to prevent the removal of functioning brain cells following amyloid exposure
- Demonstrated that Wnt1 relies upon beta-catenin and its intracellular trafficking to maintain survival of brain cell neurons
- Demonstrated in animal models of stroke that Wnt1 gene products are up-regulated and when over-expressed can significantly reduce stroke infarct size in the brain
- Demonstrated that reduction of stroke size in the brain by Wnt1 directly translates into improved neurological function and reduction in motor central nervous system disability
- Discovered the ventral medial prefrontal cortex is a necessary structure for the acquisition and/or performance of active avoidance behavior, a significant symptom of anxiety disorders
- Discovered that localized lesions to one of the two sub-regions of the ventral medial prefrontal cortex (prelimbic and infralimbic cortex) that project to the amygdala are not sufficient to cause a disruption in the acquisition and performance of active avoidance behavior, suggesting animals can acquire avoidance with either a prelimbic-amygdala/threat detection circuit or an infralimbic-amygdala/safety detection circuit

- Discovered that GalNAcT<sup>+/-</sup> hemizogous mice expressing reduced levels of GM1 ganglioside develop parkinsonian symptoms characteristic of Parkinson's disease (PD), without the additional complications characteristic of the GalNAcT<sup>+/-</sup> knockout. This renders it a physiologically relevant and highly useful model for PD
- Demonstrated that brain tissue sections from Parkinson's disease patients show marked deficiency of GM1 ganglioside, suggesting that GM1 administration constitutes a form of replacement therapy
- Found that NOD mice, an established model for type 1 diabetes, show variation in the amount of GM1 in effector T cells (Teffs) depending on source; this variation in GM1 correlates with pace of diabetes onset, further linking GM1 deficit in Teffs with disease susceptibility
- Demonstrated, together with investigators at Amylin Corporation, that chronic treatment with amylin enhanced leptin sensitivity, receptor binding and downstream signaling in the ventromedial hypothalamus
- Together with graduate student Christa Patterson, demonstrated that raising genetically obesity-prone rats in large litters to reduce their intake during lactation corrects their inborn leptin resistance and protects them from developing diet-induced obesity as adults
- Demonstrated, together with investigators at Yale Medical School, that there are neurons in the medial amygdalar nucleus that respond to changes in ambient glucose levels by altering their activity
- Demonstrated, together with postdoctoral fellow Christelle Le Foll that hypothalamic ventromedial nucleus neurons alter their activity in respose to changes in ambient long chain fatty acids utilizing either intracellular fatty acid metabolism or via the CD36 fatty acid transporter/receptor. Furthermore, rats genetically prone to become obese on high fat diets have a decreased sensitivity to fatty acid-induced changes in activity
- Demonstrated, together with investigators at the University of Pennsylvania, that neurons in genetically obesity-prone rats have abnormal development of ventromedial hypothalamic nucleus dendrites
- Demonstrated, together with investigators at Yale Medical School and University of Cincinnati that medial hypothalamic neurons in genetically obesity-prone rats have abnormalities of inhibitory and excitatory synapses on their cell bodies
- Demonstrated that there is abnormal white matter development after neonatal hypoxia-ischemia
- Established that aberrant production of cytokines after neonatal hypoxia-ischemia results in the preferential production of astrocytes instead of developmentally appropriate oligodendrocytes
- Demonstrated that blocking TGFβ1 signaling decreases astrogliosis after neonatal hypoxia-ischemia
- Established that neocortical neurons are generated during recovery from perinatal brain injury
- Found that the developing brain has greater capacity to produce new neurons than the

juvenile or adult brain

- Demonstrated that IL-27 downregulates Th17 cells via a mechanism that involves STAT1 and SOCS1 activation
- Investigated the signaling and regulatory mechanisms by which Vitamin D inhibits Th17 cells
- Identified the nature and time-course of changes in tonic GABAergic inhibition in hippocampal dentate projection neurons following concussive brain injury
- Determined cell-type specific differences in inhibition between granule cells and recently identified semilunar granule cells (SGCs) in the dentate molecular layer
- Uncovered decreases in tonic inhibition and enhanced excitability of SGCs after traumatic brain injury, the first demonstration of involvement of SGCs in a neurological disease paradigm
- Demonstrated the presence of the receptors and currents underlying extrasynaptic inhibition in dentate fast-spiking basket cells
- Discovered that tonic GABA currents in fast-spiking basket cells are enhanced in the latent period following pilocarpine induced status epilepticus
- Determined through computational simulations that increases in basket cell tonic GABA currents promoted hyperexcitability and seizure-like activity in the dentate gyrus
- Identified a significant depolarization in the reversal potential for GABA mediated currents in dentate basket cells following pilocarpine induced status epilepticus
- Defined the time course of Bax/Bid mediated apoptosis of oligodendrocyte progenitor cells resulting from glutamate excitotoxicity
- Defined the mammalian target of rapamycin (mTOR) – regulated proteome during oligodendrocyte differentiation
- Demonstrated that oligodendrocyte progenitor cell progression through G2/M phases of mitosis requires insulin-like growth factor-1 and stimulation of the mTOR pathway
- Discovered a role for insulin-like growth factor receptor signaling in regulating mammary/breast epithelial stem and progenitor populations
- Identified a specific requirement for the retinoblastoma protein (pRB) in creating the chromatin marks that signal recruitment of chromatin-remodeling complexes able to activate the gene expression patterns that define osteoblast differentiation
- Differentiated specific roles segregating with pRB versus the closely related family protein p107 in the above processes
- Identified the “DREAM” complex as an important repressor of tissue-specific genes in proliferating precursor cells prior to differentiation.

- Identified a specific subset of the SWI/SNF chromatin-remodeling complex as specifically required for the activation of osteogenic genes
- Evaluated the role of the FOXO1 protein in osteoblast differentiation
- Studied transcriptional activation by pRB, and its coordination with SWI/SNF recruitment
- Identified tissue-specific gene targeting by the mammalian DREAM complex
- Demonstrated local insulin significantly increases bone graft incorporation, with almost two fold increase of new bone formation
- Demonstrated that the use of a bisphosphonate drug partially prevents bone loss during the long-term immobilization associated with bed rest after disability
- Showed that the use of the bisphosphonate allows for better trabecular recovery during remobilization
- Characterized the mechanical fatigue life of bisphosphonate-treated cortical bone tissue demonstrating that biomechanical safety may be compromised and lead to fracture
- Identified complications associated with negative pressure reaming for harvesting autologous bone graft
- Described bone and wound healing in the diabetic patient
- Described clamp-assisted reduction of high subtrochanteric fractures of the femur: surgical technique
- Reported on cephalomedullary screws as the standard proximal locking screws for nailing femoral shaft fractures
- Characterized the radial nerve during the posterior approach to the humerus
- Described use of an “antibiotic plate” for infected periprosthetic fracture in total hip Arthroplasty
- Described the forward progression of the helical blade into the pelvis following repair with the trochanter fixation nail
- Described the stage total hip arthroplasty and fracture fixation for a column acetabular fracture in a patient with type I osteogenesis imperfecta
- Determined an in vivo assessment of incorporation of bone graft substitute plugs in osteoarticular autograft
- Determined skin sterility after ethyl-chloride spray
- Correlated the intrinsic level of PDGF to bone healing by showing patients who went to non unions had 1/3 the level of PDGF, and 1/2 the level of VEGF at the intrinsic bone bed site of attempted fusion compared to those who achieved union

- Described the use of prophylactic bilateral femoral nails in subtrochanteric insufficiency fractures
- Described the pathogenesis of failure of the REPIPHYSIS expandable prosthesis
- Described the functional outcomes after utilization of the REPIPHYSIS expandable prosthesis
- Described the use of tibio-talar arthrodesis by distraction osteogenesis with a circular external fixator
- Compared the use of phenol and argon beam coagulation in the treatment of stage II and III benign aggressive bone tumors
- Described a differentiated liposarcoma of the thigh with a chondrosarcomatous dedifferentiated component
- Reviewed the natural history of multiple schwannomatosis
- Showed that InertT particles can induce Th2-type responses through TLR4-independent pathways
- Described the use of the reverse sural flap for lower leg defects after oncology resections
- Described the role of brachytherapy and external beam radiation therapy in the treatment of extra-abdominal desmoid tumors
- Described the role of constrained acetabular liners in oncologic reconstructions
- Described levels of evidence in musculoskeletal oncology literature
- Identified posterolateral instability of the elbow in an adolescent with a lateral epicondyle fracture
- Demonstrated the treatment of a segmental defect in open radial and ulnar shaft fractures using rhBMP-2 and iliac crest bone graft
- Discovered evidence that melatonin activates PLC to generate IP(3) and open ER-localized IP(3)-sensitive Ca(2+) channels in *P. falciparum* and predict that this receptor signaling pathway is likely to be involved in the regulation and synchronization of parasite cell cycle progression.
- Determined that Aspartate 102 in the Heme Domain of Soluble Guanylyl Cyclase has a Key Role in NO Activation
- Provided the first evidence that the fundamental set of regulatory factors HuB/C/D, nPTB, REST4, and miR-124 previously considered to have a unique role in governing neurogenesis are also utilized in the lens and raises questions about the origins of these developmental factors and mechanisms in lens and neuronal cells that also have a basic role in determining the neuronal phenotype

- Studied increased expression and local accumulation of the prion protein, Alzheimer A $\beta$  peptides, superoxide dismutase 1, and nitric oxide synthases 1 & 2 in muscle in a rabbit model of diabetes
- Investigated the evidence demonstrating the role of eNOS in the elevation of microvascular permeability and examined the relative importance of eNOS phosphorylation and localization in its function to promote elevated microvascular permeability as well as emerging topics with regard to eNOS and microvascular permeability regulation
- Reviewed the current literature regarding the molecular mechanisms by which VMH GSNs sense glucose, the putative roles of GSNs in the detection and initiation of the CRR and explored hypothetical mechanisms by which VMH NO production may both facilitate and subsequently impair the CRR
- Demonstrated that the process of Fe-S cluster biogenesis in wild-type mitochondria is greatly stimulated and kinetically favored by the addition of NAD(+) or NADH in a dose-dependent manner, probably via transport into mitochondria and subsequent conversion into NADPH
- Demonstrated that marked changes in endogenous antioxidant expression precede vitamin A-, C-, and E-protectable, radiation-induced reductions in small intestinal nutrient transport
- Reported that effects of hydroxamate metalloendoprotease inhibitors on botulinum neurotoxin A poisoned mouse neuromuscular junctions
- Demonstrated conclusively that TRPM8 is gated by cold and its chemical agonists directly, and that dependence of its gating on PI(4,5)P(2) is a result of direct specific interactions with the lipid
- Discovered that DISC1, a protein implicated in schizophrenia, could also be part of the molecular pathogenesis of Alzheimer's disease
- Discovered a negative feedback mechanism on L-arginine transport by which Nitric Oxide modulates its own biosynthesis in cardiac ventricular myocytes
- Developed a new technique using the D-enantiomer of arginine to gain knowledge on the molecular mechanisms of transport by cationic L-amino acid carriers
- Developed novel theoretical biophysical approach to describe molecular mechanisms of the coupling between the microscopic voltage sensing and voltage-independent transitions in voltage-gated ion channels
- Used modern high-performance computing approaches and analytical methods to identify peptides modifying voltage-gated calcium channels
- Discovered novel membrane-delimited regulatory pathway that controls voltage-gated calcium channels
- Proved that development of tolerance in D3 dopamine receptor signaling is accompanied by distinct changes in receptor conformation

- Discovered that the human chitinase family protein YKL-40 (upregulated in multiple cancers and implicated in tissue remodeling and angiogenesis) physically interacts with VEGF, the first known interaction of this protein with a signaling molecule
- Defined impedance signatures for various cancer cell lines and discovered that cytokine activation is associated with changes these signatures
- Discovered adherence-linked electrical changes in cell membranes caused by restored expression of miR-16 in human prostate cancer cells
- Demonstrated that dynamic mass rearrangement profiles of tumor cells correlate with malignant potential
- Demonstrated that the spatial orientation of replication origins varies during the cell cycle in unique ways in a human leukemic cell line
- Demonstrated that nonerythroid  $\alpha$  spectrin plays a critical role in maintaining chromosome stability in normal human cells
- Developed a model to explain the role of Fanconi anemia proteins in maintaining the stability of nonerythroid  $\alpha$  spectrin in cells
- Established a link between Fanconi anemia proteins and nonerythroid  $\alpha$  spectrin in the repair of DNA interstrand cross-links
- Documented that inhibition of Cot1/Tip2 oncogene in AML cells reduces ERK5 activation and up-regulates p27Kip1 concomitant with enhancement of differentiation and cell cycle arrest induced by silibinin and 1,25-dihydroxyvitamin D3
- Showed that oncoprotein Cot1 represses kinase suppressors of Ras1/2 and 1,25-dihydroxyvitamin D3-induced differentiation of human acute myeloid leukemia cells.
- Demonstrated that tumor suppressor p53 status does not determine the differentiation-associated G1 cell cycle arrest induced in leukemia cells by 1,25-dihydroxyvitamin D<sub>3</sub> and antioxidants.
- Discovered that the Nrf2 transcription factor is a positive regulator of myeloid differentiation of acute myeloid leukemia cells.
- Showed that expression of MAP3 kinase COT1 is up-regulated by 1,25-dihydroxyvitamin D3 in parallel with activated c-jun during differentiation of human myeloid leukemia cells
- Isolated a new antimicrobial compound from *Serratia marcescens* which could be used against pathogenic bacteria
- Developed a new method for isolating novel biofilm-derived compounds for controlling pathogenic bacteria and biofilms
- Developed a new method for measuring biofilm movement in flow cell systems
- Examined the potential use of predatory bacteria to manage and reduce bacteria associated with human infection including oral disease

- Examined the potential use of predatory bacteria to control infection caused by single and multi-specie biofilms
- Determined the host specificity of predatory bacteria from the genera Bdellovibrio and Micavibrio
- Examined environmental and biological factors which influence the predation aptitude of Bdellovibrio and Micavibrio
- Determined the genome sequence of Micavibrio
- Isolated new genes involved in predator-prey interactions in Bdellovibrio bacteriovorus and Micavibrio
- Discovered that a unique set of genes are deregulated in endogenous retrovirus mediated germinal center-derived B cell lymphoma development
- Showed transgenic mice over-expressing a dominant-negative isoform of Ikaros can be produced to study its role in the development of germinal center-derived B cell lymphoma
- Discovered that a novel set of immune system regulated gene expression programs mediate the development of periodontal disease in a rat model
- Discovered that a group of human germinal center derived B cell lymphomas express proteins coded for by human endogenous retroviral genes, which may be relevant to other cancers
- Discovered that Leukotoxin has therapeutic efficacy in a human xenograft transplantation model for psoriasis
- Discovered that Leukotoxin can synergize with other standard chemotherapeutic agents used to treat leukemia
- Identified toxic effect of *K. kingae* outer membrane vesicles on human cells
- Demonstrated genetic relationship between *K. kingae* and other members of Neisseriaceae family
- Identified major protein composition of *K. kingae* outer membrane vesicles
- Demonstrated that vitamin D induces an antibacterial innate immune response in gingival epithelial cells, including the stimulation of TREM-1 expression on the surface of those cells
- Demonstrated the antifungal effect of antimicrobial peptide mimetics against biofilms of *Candida albicans*
- Demonstrated the dual antibiotic/anti-inflammatory effect of an antimicrobial peptide mimetic against periodontal pathogens
- Discovered a novel method of treatment for treating brain disorders associated with oxidative stress
- Demonstrated Developmental Regulation of enzymes associated with myelination by glutamatergic activity in vivo

- Developed a novel experimental/pharmacological treatment for metachromatic leukodystrophy
- Identified a role for mammalian exonuclease Xrn2 in maturation of ribosomal RNA
- Demonstrated that degradation of many aberrant intermediates in rRNA synthesis, previously attributed mainly to 3' exonucleases, occurs in the 5' to 3' direction in mammalian cells
- Identified the mammalian DEAD box helicase family member Ddx51 as a novel ribosome synthesis factor
- Discovered that Lipoxin A4 can reduce mortality in sepsis by decreasing both systemic inflammation and bacterial load.
- Demonstrated that the mechanism for the decreased bacterial load is due to increased macrophage recruitment to the site of infection.
- Demonstrated that the homologous miR-290-295 microRNAs have different seed regions and, thus, potentially distinct function
- Reached important milestones in the development of a High Throughput Sequencing - Cross-Linked Immunoprecipitation protocol for the experimental identification of miRNA targets in mouse embryonic stem cells and early mouse embryos
- Completed the total synthesis of Maresin, a lipid mediator of docosahexaenoic acid
- Completed the total synthesis of Neuroprotectin D1
- Completed the total synthesis of the human urinary metabolite of Lipoxin-A4
- Completed the total synthesis of Resolvin E1, Resolvin E2 and Resolvin D1
- Investigated the role of the two structural elements of RNA Polymerase secondary channel, the  $\beta$ -subunit sequence insertion element SI1 and the  $\beta'$ -subunit "Trigger loop", in the function of *E. coli* transcript cleavage factors GreA, GreB, DksA and TraR
- Discovered the molecular mechanism by which *E. coli* transcriptional regulators DksA and TraR recognizes and selectively bind to specific initiation complexes of RNA polymerase
- Demonstrated that "closed" conformation of RNA polymerase "Trigger Loop" is necessary and sufficient for substrate NTP binding, catalysis and translocation
- Demonstrated that the "Open" conformation of RNA polymerase "Trigger Loop" is required for the high rate of NTP diffusion to the active center of RNAP, for binding and functioning of transcript cleavage factors, and for the maximal rate of processive elongation
- Characterized two important means of transcription termination that are critical to the fidelity of gene expression
- Discovered that developmental biases shape the evolution of sperm in nematodes

- Designed and filed seven provisional patents for the development of diagnostic blood tests that detect the presence of various neurodegenerative diseases using protein microarrays as targets for disease-specific autoantibodies in human sera
- Continued studies demonstrating that neurons in the adult human and mouse brain express peptidyl arginine deiminase 4 (PAD4) as a damage-response mechanism that appears to conserve energy expenditure and redirect cellular resources to a repair mode
- Showed that neurons in the Alzheimer's disease brain expressing peptidyl arginine deiminase generate citrullinated proteins in damaged cells under repair that may contribute to the generation of autoantibodies in humans
- Completed studies showing that diabetes and hypercholesterolemia cause blood-brain barrier breakdown and the leak of plasma components into the brain tissue in a porcine model
- Demonstrated that blood-borne autoantibodies bind selectively to pyramidal neurons in the brain, the same neurons that are vulnerable to Alzheimer's disease pathology
- Completed and published a study demonstrating that blood-borne autoantibodies enter the brain under conditions of blood-brain barrier breakdown and drive the chronic deposition of soluble amyloid peptide into neurons vulnerable to Alzheimer's disease pathology
- Completed studies showing that darapladib (a test compound developed by GlaxoSmithKline and under patent by UMDNJ) blocks blood-brain barrier breakdown, plasma and immunoglobulin leak into the brain tissue and intraneuronal deposition of amyloid peptide in vulnerable neurons
- Continued studies showing that the conditions of diabetes mellitus and hypercholesterolemia in a porcine animal model result in chronically increased gene and protein expression of the key tight junction proteins, claudin-5 and occludin
- Demonstrated that cytochrome P450 2A13 (CYP2A13)-mediated activation of a tobacco-specific carcinogen NNK leads malignant transformation of human mammary epithelial cells. This result provides a mechanistic insight to support the etiological role of cigarette smoking in human breast cancer
- Identified several genetic variants of human cytochrome P450 reductase (POR) that have significant activity alterations in metabolizing cancer therapeutic drugs. This result may have potential clinical application, once validated, to predict therapeutic response to the involved drugs
- Developed and optimized a method to measure Cr(VI) in ambient air
- Demonstrated air quality patterns for O<sub>3</sub> in a changing climate
- Contributed to our current understanding of the ambient airborne Pb exposure for setting National Ambient Air Quality Standard
- Completed laboratory phase of research in the biochemical parameters of stress in pre-diabetes in the ICAM Research Laboratory, within the SHRP Interprofessional Health Research Labs, housed within the department of Clinical Laboratory Sciences

- Continuing to utilize Functional Magnetic Resonance Imaging and Cortical Stimulation to expand our understanding of cortical and subcortical neuronal mechanisms involved in learning and control of human motor skill

## TRANSLATIONAL RESEARCH

- Translated the data from targeting the BH3 domain of Bcl-2 family members with mimetic small molecules synergized with chemotherapy into a multi-center clinical trial with a BH3 domain mimetic (ABT263) combined with androgen ablation approved in men with prostate cancer
- Translated the discovery of a single nucleotide polymorphism, SNP309, in the MDM2 promoter that regulates p53 to find the importance of this SNP in prediction of age of onset of breast cancer
- Demonstrated translational development of the basic science discovery of the metabotropic glutamate receptor 1 (Grm1) in melanoma
- Translated, in an ongoing clinical trial, the demonstrated effect of tocopherol that had been found in a prostate cancer mouse model
- Translated, in an ongoing clinical trial, the demonstrated synergistic effect of lipitor and celebrex that had been found in a prostate cancer animal model
- Translated the results from the discovery that the metastasis gene metadherin activation by 8q22 genomic gain promotes chemo-resistance and found these resulted in a showing of poor clinical outcome in breast cancer
- Using a novel in-vitro cell culture model we developed earlier, identified several molecular targets affected by mesalamine. The model will provide an opportunity for further chemoprevention studies related to colon cancer.
- Developed a novel in-vitro model of transformation of benign Barrett's epithelium with long-term exposure to acid and bile. Currently we are investigating the molecular mechanism of this transformation.
- Submitted an invention disclosure to the Office of Licensing and Patents on work related to using Protein X in diagnosing Alzheimer's disease
- Demonstrated Edwards EndoClamp Testing in Calf Model
- Completed Abioco Training in Swine
- Discovered I10-061-7 Tumor Cells and Mycoplasma Induced Transformation of Lung Cells Influenced by BMP-2 Lung Cancer
- Demonstrated Diagnosis of Secondhand Tobacco Smoke Exposure in Youths Admitted to Acute Care Hospitals in New Jersey – Analysis of Secondary Data
- Discovered The Role of BMP Regulating Tumor Cells in NSCLC

- Determined that in vivo endotoxin triggers transient changes in ATP levels and autophagy in human leukocytes, mice leukocytes and liver
- Determined that in vivo endotoxin alters the expression of three key metabolic regulators, Sirt1, AMPK and HIF-1a, in liver of mice challenged with endotoxin in vivo
- Demonstrated that resveratrol can prevent the changes in cellular metabolism post endotoxin infusion, and that the effects of resveratrol relative to the cellular bioenergetics are Sirt1-dependent
- Initiated biochemical studies in a cecal-ligation and puncture mouse model of sepsis
- Initiated studies of endotoxin-induced dose-dependent changes in human leukocytes bioenergetics, and showed that these changes can unfold in the absence of overt systemic inflammatory responses
- Initiated studies to determine the mechanism by which the cellular bioenergetics are modified in human leukocytes challenged with endotoxin in vitro
- Identified common Toll like receptor 4 and injury induced transcriptional themes in human leukocytes
- Initiated development of rodent models of Deep Brain Stimulation (DBS)-related to epilepsy and assessed the impact of DBS targets upon Kindling and synaptic efficacy and short term forms of neuroplasticity, a collaborative effort with individuals at Rockefeller University
- Invented a surgical platform (the Subtilitas Injector) for delivery of cells into the rodent retina; provisional patent application (RWJ 11-59) filed, and manuscript submitted (Vokes et al)
- Optimized the process of DNA mediated gene transfer for delivery of plasmid vectors using multiple expression cassettes
- Established embryonic stem cell lines with drug-inducible transgenes for the analysis of transgene-mediated migration of transplanted cells
- Discovered a novel function of the PI3K intracellular signaling pathway in promoting somatic cell reprogramming. Discovered a chromatin modifying protein (Pway1) that enables the reprogramming of human somatic cells into functional neural cells
- Initiated studies into the role of glial scar matrix in axonal regeneration, in collaboration with W.M. Keck Center for Collaborative Neuroscience, Rutgers University
- Submitted a manuscript demonstrating that a mutually dependent relationship exists between fibronectin matrix assembly and internalization of alpha-5 integrin, in collaboration with Division of Surgical Science, Department of Surgery, UMDNJ-Robert Wood Johnson Medical School
- Initiated studies showing that fibronectin plays a key role in heterogeneous cell-cell interactions and cohesion, in collaboration with Division of Surgical Science, Department of Surgery, UMDNJ-Robert Wood Johnson Medical School

- Discovered that the microenvironment can reversibly modulate the fibrogenic potential of human mesenchymal stem cells, in collaboration with Department of Molecular Biology, Princeton University
- Developed orthotopic (mammary fat pad) model for murine breast cancer using Her2+ transgenic tumor derived at CINJ
- Demonstrated tumor regression and cures using tumor microenvironment modulation with novel recombinant virus encoding tumor marker and GM-CSF in orthotopic murine tumor model
- Studied the effects of modulating TGF $\beta$  on immunity to mouse breast tumor and tumor growth
- Demonstrated antitumor effects of tumor microenvironment administration of toll like receptor stimulants plus novel engineered virus neutralizing the pro-tumor IL10 molecule
- Developed novel polymer based delivery system for therapy of tumors in collaboration with Department of Bioengineering at Rutgers
- Demonstrated antitumor therapeutic activity of localized polymer (containing immune stimulating DNA ) delivered at the tumor microenvironment
- Demonstrated direct immune stimulation using polymer delivery system with CpG DNA and tumor antigen in immune cells from mice
- Continued studies of differential immune cell gene expression in volunteer subjects challenged with endotoxin and in critically-ill patients using microarray and advanced bioinformatics technologies
- Continued to investigate the relationship between polymorphisms in toll-like receptor 4, MDM2, and MIF and ApoE on the response to in vivo endotoxin challenge in normal human volunteers
- Continued studies of time-related changes in heart rate variability in human volunteers challenged with intravenous endotoxin
- Continued studies to assess influence of time-of-day/diurnal responses to endotoxin in humans
- Continued to define the influence of sterile and endotoxin stressors on human circadian gene expression and immune cell function
- Completed studies of gene expression by microarray analyses in blood leukocytes and purified subsets of blood leukocytes (monocytes, T-lymphocytes, neutrophils) after varying doses of intravenous endotoxin administration to human volunteers
- Continued studies of the differential regulation of monocyte and neutrophil cell-surface receptors associated with the inflammatory response in human volunteers after pretreatment with glucocorticoid hormone by intravenous infusion for 24 hours followed by intravenous endotoxin administration

- Continued studies of gene expression by microarray analyses in blood leukocytes and purified subsets of blood leukocytes (monocytes, T-lymphocytes, neutrophils) in human volunteers after pretreatment with glucocorticoid hormone by intravenous infusion for 24 hours followed by intravenous endotoxin administration
- Finalized use of the FACSCanto II flow cytometer for assessment of plasma/serum cytokines using cytometric bead array (CBA) technology
- With collaborators in the Department of Biomedical Engineering at Rutgers University, continued further to develop differential equation-based mathematical models of the human inflammatory response (with Ioannis Androulakis, PhD)
- Determined that constitutive recycling of FN integrin is dependent on FN matrix assembly. In the absence of FN or in the presence of a FN fragment containing the cell-binding domain, internalized integrin is targeted for degradation
- Identified that the ubiquitin-proteasome is pathway required for alpha5 integrin degradation in the absence of FN
- Determined that alpha 5 integrin is ubiquitinated- most likely by c-Cbl which co-immunoprecipitates with the integrin in the absence of FN
- Using mutational analysis, identified key lysine residues in the alpha 5 integrin cytoplasmic tail that, when mutated to alanine, confer protection from degradation
- Measured surface tension of aggregates of 3 well-characterized cell lines from the Dunning rat prostate cancer model and showed that their surface tensions differed significantly.
- Performed in vitro transfilter invasion assays and demonstrated an inverse relationship between surface tension and invasion.
- Demonstrated that the cell lines differed in their capacity for fibronectin matrix assembly (FNMA).
- Showed that capacity for FNMA correlated directly with surface tension and inversely with invasiveness.
- Showed that MLL cells transfected with wild-type alpha-5 integrin were able to assemble a fibronectin matrix and that this gave rise to increased cohesion and decreased invasiveness
- Showed that the 70 KDa fragment of fibronectin can abrogate the effects of integrin transfection
- Demonstrated that MLL cells transfected with a chimeric integrin that does support FNMA was unable to influence matrix assembly, cohesion, or invasion.
- Generated all the cohesion data for the human cell lines C4-2B4 and ARCaP.
- Used a new MEK inhibitor (AZD6244) to explore effects on FNMA.

- Generated many/most of the cell lines required to address the role of FNMA in modulating cohesion and tumor-stromal cell interaction.
- Performed immunoblot, flow cytometry, and immunofluorescent techniques to characterize the cell surface adhesion protein integrin- $\alpha 5\beta 1$  of cell lines; RWPE-1, PC-3, PC-3M-LN4, LNCaP and DU-145. Normal prostate epithelium (RWPE-1) expresses much higher levels of integrin- $\alpha 5\beta 1$  when compared to PCa lines.
- Analyzed fibronectin matrix assembly by fluorescent staining in the PCa cell lines PC-3, PC-3M-LN4, DU145, and LNCaP. All cell lines were unable to form a significant matrix in 2D.
- Performed biochemical matrix assembly experiments on PC-3, DU-145, and LNCaP cells and showed that these cell lines lack capacity for FNMA.
- Tested PC-3, DU145, and LNCap cell lines for their response to pharmacological inducers of fibronectin matrix assembly (Meki, Dexamethasone, Geldenamycin). These lines did not respond to pharmacological treatment.
- PCa cell lines PC-3, DU-145, and LNCaP were stably transfected with a construct encoding human integrin- $\alpha 5$  and a neomycin resistance marker.
- Generated stable transfectants of PC-3, DU-145, and LNCap by selection in neomycin. PC-3 and DU-145 cells sorted via FACS several times to yield a highly expressing population of cells.
- Transfected cell lines were characterized for their expression of integrin- $\alpha 5\beta 1$  via immunoblot and flow cytometry. All transfected lines expressed high levels of integrin- $\alpha 5\beta 1$ , relative to untransfected parental lines.
- The cell line PC-3 was stably transfected with a construct encoding a human integrin- $\alpha 5$ -GFP fusion protein and a neomycin resistance marker.
- PC3/ $\alpha 5$ -GFP cells were selected in neomycin and repeatedly sorted by FACS.
- Characterized PC-3/ $\alpha 5$ -GFP cells for expression of the  $\alpha 5$ -GFP fusion protein via immunoblot and flow cytometry. PC-3/ $\alpha 5$ -GFP expressed higher levels of  $\alpha 5$  when compared to the untransfected parental PC-3 cell line.
- Performed compaction assays on transfected lines and their parental counterparts.
- Immunohistochemical staining was performed on histopathologically graded prostate biopsies. Tissues were analyzed for the presence of fibronectin matrix, as well as integrin  $\alpha 5$ .
- Immunoblots were performed in order to detect levels of CD105 in PCa cell lines.
- Showed that highly aggressive brain tumor cell lines cannot assemble fibronectin into a matrix. Demonstrated that treatment with dexamethasone, MEKi, or GA restores this ability.
- Developed an assay to quantify brain tumor dispersal onto ECM components.

- Showed that drug treatment markedly reduced dispersal velocity.
- Explored the role of the ECM in mediating brain tumor dispersal velocity.
- Performed tumor dispersal assays to measure spreading velocity on specific substrates.
- Tested the efficacy of a 70KDa fragment of fibronectin to block matrix assembly.
- Determined the effect of 70KDa treatment on dispersal velocity.
- Showed that treating brain tumor cells with Dex and 70KDa fragment of fibronectin restored dispersal velocity.
- Showed that treatment of brain tumor cells with Dex, MEKi, or GA did not alter migration behavior but acted through a fibronectin matrix mediated adhesion to reduce dispersal velocity.
- Generated and characterized brain tumor cell lines expressing matched levels of E-, N-, or P-cadherin.
- Performed dispersal velocity assays and showed that cadherins all possess the capacity to discourage dispersal of tumor cells from a tumor mass.
- Demonstrated that an antibody raised against the soluble form of the EGF receptor promotes 3D tissue cohesion and compaction, in vitro, suggesting a functional link between sEGFR and  $\alpha 5$  integrin.
- Isolated and cultured bacterial strains from the luminal contents of the small intestine and colon
- Determined the proportions of specific phyla, classes, genus, and species of bacteria in aerobic and anaerobic cultures using QPCR for 16S rRNA
- Determined that the majority of TNF- $\alpha$  and IL-1 $\beta$  produced in response to anaerobic gut bacterial metabolites is produced by myeloid dendritic cells and not by macrophages or lymphoid dendritic cells
- Determined that only the Bacteroidetes metabolites (but not Enterococcus metabolites as described in the literature) were able to induce significant TNF- $\alpha$  and IL-1 $\beta$  production from myeloid dendritic cells
- Initiated experiments to define the effects of Bacteroidetes on the development and progression of gut mucosal injury and sepsis
- Demonstrated that 2B4 (CD244), previously identified as a natural killer cell receptor, is a major biomarker of gut hematopoietic cells: 2B4 is expressed by the vast majority (>80%) of hematopoietic cells in the intestines, and is expressed at very low levels (<5%) outside the gut (other distant tissues such as the spleen)
- Illustrated that expression of 2B4 on gut hematopoietic cells occurs exclusively in the gut by using GFP bone marrow chimeric mice

- IRB approved and initiated analysis of 2B4 expression in human gut samples
- Acquired a material transfer agreement for 2B4 KO mice from Dallas-Southwestern University to initiate functional studies on the role of 2B4 using mouse models of tolerance and oral infection
- Generated CD70 knock-out mice (under C57 mouse background) and confirmed germline transmission
- Starting Crossing of CD70 knock-out mice with multiple TCR transgenic lines
- Starting backcrossing of CD70 KO mice against a pure BALB/c background
- Initiated experiments to define the role of CD70 costimulation on immune cell development and functions
- Demonstrated that cells from the mother's breast milk survive the neonatal gastrointestinal tract; determined that these milk cells establish themselves inside the surface of Peyer's patches of pups by the time of weaning
- Confirmed that these milk cells are found exclusively in the Peyer's patches of the pup (and in no other organ preparation tested at the time of weaning)
- Illustrated that these cells are not rejected by the pup's immune system and remain at 8 weeks of age (5 weeks post-weaning) and travel outside the Peyer's patches
- Initiated experiments to define the role of these mammary milk cells in the development and function of the immune system in neonates and infant mice.
- Continued differentiation analysis of carotid plaque under the circumstances of standard angioplasty versus cryoplasty in an ex-vivo model
- Monitored outcome on cellular substrates, diseased plaque smooth muscle cells and tissue culture viability in diseased carotid plaque
- Established the viability of endothelial cell growth in an explanted carotid plaque
- Demonstrated a viable and realistic teaching model for carotid angioplasty and stenting with use of an anti-embolic protection filter
- Discovered that talin1 controls integrin recycling and thereby promotes epiblast elongation and lineage differentiation (accepted by Molecular and Cellular Biology)
- Discovered that talin1 directly interacts with the small GTPase Rab11 and mapped the binding site in talin1
- Demonstrated that inactivation of Cdc42 in endothelial cells but not the surrounding cells blocks vascular assembly during vasculogenesis and that PKC $\zeta$  and GSK-3 $\beta$  act downstream of Cdc42 to control directional migration of endothelial cells (accepted by Arteriosclerosis, Thrombosis, and Vascular Biology)

- Discovered that glycosylation-independent binding of soluble CREG to mannose-6-phosphate/insulin-like growth factor-2 receptor modulates the phenotype of human vascular smooth muscle cells (published in Journal of Molecular and Cellular Cardiology)
- Demonstrated that HIF-2 mediates the upregulation of the pro-apoptotic protein Bnip3 which is required for apoptosis-dependent cavitation during embryonic epithelial morphogenesis
- Demonstrated that the tumor suppressor PTEN is required for hypoxia-induced upregulation of Bnip3 and apoptosis during embryonic epithelial cavitation in a phosphatase-independent fashion
- Developed a new method of treating diabetes in animal models
- Developed a new method of treating open ductus arteriosus in premature infants
- Explored the therapeutic potential of adenylyl cyclase type V inhibition for the treatment of heart failure, obesity and diabetes
- Determined impact of chronic viral hepatitis on patient discontinuation rates due to hepatotoxicity for patients receiving treatment for latent tuberculosis infection
- Identified a biomarker for treatment response and prognosis for breast cancer.
- Developed rapid methods to identify bacteria from blood cultures and patient blood
- Developed rapid methods to identify tuberculosis in different body fluids using novel diagnostic technologies
- Described immune correlates of protection against infection and disease
- Demonstrated the short and long-term effects of nesiritide (Natrecor) in acute decompensated heart failure (ADHF) patients
- Described the safety of Darbepoetin alfa Treatment in Heart Failure (HF) Subjects
- Demonstrated the efficacy and safety of Relaxin in Subjects with Acute Heart Failure
- Demonstrated the utility of a novel wireless system to eliminate gender bias in the treatment of acute ST elevation in myocardial infarction
- Demonstrated distinct LV remodeling patterns in African American patients with hypertension
- Developed new stress testing index in end stage liver disease patients
- Demonstrated the effect of Lixivaptan in treating hyponatremia in NYHA Class III/IV Cardiac Patient Evaluation
- Demonstrated utility of gene therapy (Mydicar;Ad-Serca-2a) in low ejection fraction heart failure

- Described the utility of adenosine antagonist in treating acute decompensated heart failure
- Demonstrated the efficacy of a novel thrombin receptor antagonist in acute coronary syndrome
- Demonstrated effectiveness of a novel P2Y<sub>12</sub> inhibitor in the treatment of acute coronary syndrome
- Invented new stent (MGuard) to reduce distal embolization
- Co-invented minimal invasive antral membrane balloon elevation (or MIAMBE) device
- Described the utility of adenosine antagonist in treating acute decompensated heart failure
- Developed new stress testing index in end stage liver disease patients
- Demonstrated that dynamic mass rearrangement profiles of tumor cells correlate with malignant potential
- Demonstrated that correcting the breakdown of the structural protein, nonerythroid  $\alpha$  spectrin in cells from patients with Fanconi anemia, corrected cellular phenotypic defects characteristic of this disorder
- In collaboration with scientists at Princeton University, developed photo-activated masked-cisplatin drugs that selectively deliver active cisplatin upon photolysis. Full patent application has been submitted by UMDNJ
- Discovered that immune activation parameters persist in plasmacytoid dendritic cells (pDC) from HIV-infected individuals despite successful virus suppression
- Discovered that the gut commensal organism, *Lactobacillus acidophilus*, exerts immunosuppressive activity over human pDC, providing a mechanism of not causing acute gut inflammation
- In collaboration with the group of Dr. George Yap, discovered that the parasite *T. gondii*, invades human dendritic cells and functionally inactivates them
- Established and defined molecular signatures that are specifically associated with a very aggressive subset of basal cell carcinomas
- Showed that Silibinin can induce differentiation as well as enhance vitamin D<sub>3</sub>-induced differentiation of human AML cells *ex vivo* and regulates the levels of differentiation-related transcription factors
- Demonstrated that 1,25-dihydroxyvitamin D<sub>3</sub> enhances the apoptotic activity of MDM2 antagonist nutlin-3a in acute myeloid leukemia cells expressing wild-type p53
- Discovered that isoforms of p38MAPK gamma and delta contribute to differentiation of human AML cells induced by 1,25-dihydroxyvitamin D

- We have shown that toll-like receptor 9 and its ligands could be important in spinal cord injury (SCI) and the modulation of functional outcomes after SCI (These findings will be reported in Society for Neuroscience Meeting 2011)
- Filed two national non-provisional patents describing methods to detect and diagnose Alzheimer's disease and other neurodegenerative diseases based on analysis of disease-specific autoantibody profiles in the blood
- Continued studies on a potential therapeutic strategy for treatment of neurodegenerative diseases that involves targeted B cell suppression and lowering blood levels of brain-reactive autoantibodies
- Completed the development of a diagnostic test for Alzheimer's disease that uses a single drop of blood and protein microarrays and has a current accuracy of 93.7%
- Completed the development of a diagnostic test for Parkinson's disease that uses a single drop of blood and protein microarrays and has a current accuracy of 98.5%
- Completed the development of a diagnostic test for the early detection of breast cancer that uses a single drop of blood and human protein microarrays and has a current accuracy of 99%
- Launched a new biotechnology company, Beren Technologies, that will focus on developing and refining a diagnostic test aimed at the early detection of various cancers
- Completed in vitro and in vivo exposure studies to assess Diesel exhaust particle effects on human antimycobacterial immunity
- Discovered that Diesel exhaust particles impair human immunity against Mycobacterium tuberculosis in in vitro studies
- Discovered that Diesel exhaust particles decrease Mycobacterium tuberculosis and antigen-induced Th1 cytokine production in a dose-dependent fashion and preserve/increase Th2 cytokine production
- Showed that the adverse Diesel exhaust particle effects are mediated by impairment of the myD-88-dependent and myD-88-independent intracellular signaling pathways
- Demonstrated that Diesel exhaust particle effects on human monocytes/macrophages may be conferred by a M1 to M2 phenotype switch and subsequent hyporesponsiveness of these cells to additional stimuli
- Developed and validated a qRT-PCR classifier for lung cancer prognosis and discovered a set of 91 genes representative of more than 20 biological pathways relevant to lung cancer prognosis, especially patient survival with early stage lung cancer.
- Collected data on joint project on standard patients and cultural competence.
- Collected balance data to utilize in a predictive study, looking at relationship between balance and ankle injuries
- Collected data on relationship of spinal manipulation to scapular kinematics and shoulder musculature

- Investigated motion analysis equipment for future research

## CLINICAL SCIENCES

- Showed in a retrospective study that the No-cost TSE “Mask” Improved Oxygenation and
  - Reduced Severe Oxygen Desaturation in Propofol-sedated Obese Patients during Upper GI Endoscopy
  - Prevented Severe Desaturation and Reduced Risk of Fire Hazard in Propofol-sedated Obese Patients
  - Prevented Severe Desaturation in Propofol-sedated Patients During Short Colonoscopy
  - Reduced Risk of Fire Hazard in Propofol-sedated Patients During Short Surgical Procedures
- Showed in a retrospective study that the No-cost TSE “Mask” Prevented Severe Desaturation in Obese Patients During Retrobulbar Block and in Propofol-sedated Obese Patients During Colonoscopy
- Showed in a retrospective study that Pre-Oxygenation With the No-cost TSE “Mask” Prevented Severe Desaturation and
  - Improved Oxygenation in Obese Patients Under Deep Propofol Sedation During Lengthy Upper GI Endoscopy
  - Reduced Risk of Fire Hazard in Obese Patients Under Moderate-Deep Propofol Sedation During Various Lengthy Surgical Procedures
- Completed characterization of primary breast cancer specimens that reveal unusual proteasome activity in a sub-population of patients
- Defined the importance of using single agent gemcitabine over the combination of gemcitabine and oxaliplatin in patients with pancreatic cancer
- Found that BCCIP expression plays a role in radiation therapy resistance in cells with wt p53 and in patients with wt p53
- Detected a SNP in the MDM-4 gene that is associated with earlier onset of estrogen receptor negative breast tumors
- Discovered the importance of a genetic variant in PP2A and TSC1 and TSC2 in breast cancer outcomes
- Developed a haplotype entropy method that utilizes differences in haplotype frequency between populations that is powerful for detecting population-specific linkage disequilibrium embedded in short regions. This method has the advantages of incorporating multilocus association, conciliation with low allele frequencies, and independence from allele polarity, which are ideal for short haplotype analysis

- Led a phase I and II effort to study chemotherapy in early stages of prostate cancer, characterized by high risk local disease and PSA progression after local therapy that formed the basis for National phase III studies in early disease
- Defined the schedule of a new vaccine paradigm in patients with early stage prostate cancer on a national trial of a viral based PSA vaccine, which led to an additional CINJ led National cooperative group trial in this population
- Found that patients with triple negative breast cancer had no increased risk of local relapse after conservative surgery and radiation, despite overall poor prognosis
- Completed preclinical studies demonstrating the synergistic combination of radiation therapy and Grm1 targeting using Riluzole supporting an ongoing investigator initiated clinical trial of Riluzole with brain radiation therapy
- Showed the effectiveness of medical interpreters in the emergency department for Spanish-speaking patients with limited English proficiency
- Demonstrated electrocardiographic manifestations of cardiac infectious-inflammatory disorders
- Demonstrated the pre-hospital rapid sequence intubation in a system with two advanced life support providers
- Demonstrated the use of warning lights and sirens did not significantly delay hospital time-critical interventions
- Showed hydrogen sulfide toxicity remains a culturally linked method of committing suicide that is dangerous and poses a threat to emergency medical responders
- Demonstrated the critical nature of Jimson Weed intoxication
- Evaluated the safety and feasibility of complex pancreatic surgery in the community setting
- Showed early experience and review of the literature of robotic-assisted laparoscopic donor nephrectomies
- Demonstrated right ventricular pneumocardia secondary to hepatic abscesses
- Reviewed pre-hospital rapid sequence intubation in a system with two advanced life support providers
- Showed IVC assessment for vascular volume status
- Demonstrated increased airway oxidative stress and obstruction in asthmatics after inhalation of diesel exhaust
- Completed analysis of the impact of air pollution in Beijing, China on markers of inflammation and coagulation in healthy human subjects

- Demonstrated changes in exhaled breath condensate oxidative stress following a 1.5 hour drive on the New Jersey Turnpike
- Showed gene x environment interaction between a GSTP1 polymorphism and decreased proteasome activity following diesel exhaust inhalation in healthy subjects
- Demonstrated increased nitrite in exhaled breath condensate after exposure in a passenger vehicle on the New Jersey Turnpike
- Demonstrated effectiveness of use of a powered air purifying respirator to control passenger exposures to traffic-related particulate matter air pollution in experimental studies
- Showed that heart rate variability among healthy young adults was not significantly affected by car rides on the New Jersey Turnpike during morning rush hour traffic
- Validated real-time black carbon measurements as a marker of diesel exhaust exposure in a community in Newark
- Discovered a negative dose response relationship between lifetime solvent exposure and functional imaging activation patterns during performance of a working memory task
- Demonstrated neurobehavioral performance deficits among workers chronically exposed to solvents
- Validated a lifetime solvent exposure index with neurobehavioral performance among workers chronically exposed to solvent mixtures
- Documented performance standards for neurobehavioral testing of Thai children
- Demonstrated that DNA bar-coding allows species-specific determination of mercury and other contaminant levels in tuna, with highest levels in tuna favored for sushi
- Expanded concept of environmental justice to include the intersection of social and physical risk factors: residence location, low income, low education, hazardous occupations, as well as minority status
- Demonstrated that biomedical research continues to slight sex and gender as variables, leading to continued health care disparities
- Demonstrated that the postulated 1:1 selenium/mercury protective molar ratio in ocean fish does not necessarily protect against methylmercury toxicity
- Identified multiple pathways for methylmercury toxicity that do and do not operate via selenium binding and selenoenzyme inhibition
- Demonstrated that after remediation of chromium-contaminated sites, current indoor levels of hexavalent chromium are low, not related to outdoors, and in some cases coming from wood treatments of specific furniture items
- Reported that an excess of selenium over mercury in marine fish should not be the basis for risk assessment or consumption advisories regarding methylmercury exposure

- Reported that contrary to popular definitions, minority groups are now and always have been at greater risk of exposure to workplace hazards and toxics and that occupational exposure is an integral part of environmental justice
- Reported that risk management approaches often ignore the outliers, those rare individuals with exceedingly high exposures who are most at risk of toxic effects
- Demonstrated ethnic and gender differences in environmental resource use by Native Americans and Caucasians in the Northwest, with the native women having the highest toxic and radiation exposures
- Quantified public suspicion and contrasted Native American versus governmental views of screening assessment plus modeling versus comprehensive site characterization in hazardous waste management planning
- Quantified the impact of proposed cuts in funding for the National Institute of Occupational Safety and Health on the training of occupational physicians
- Completed historical review of permissible exposure limit by the Occupational Safety and Health Administration, demonstrating the limitations of this enforcement approach
- Determined that an altered ACTH response to stress among subjects with higher blood and bone lead further supports the idea that HPA axis dysfunction observed in lead exposed animals translates to human subjects
- Determined that increased ACTH response to stress in the absence of commensurate CORT response suggests either a lower adrenal response to ACTH or a deficient feedback loop
- Summarized the challenges for primary care practice transformation from a 15 year developmental program of research
- Developed evidence for how to tailor medical interventions for the individual patient with chronic illness
- Demonstrated that practices can use learning teams as a team-based change management strategy in primary care
- Demonstrated that a 10-session group stress and anger management intervention led to a significant reduction in systolic blood pressure in hypertensive employees in a multi-ethnic urban healthcare setting
- Demonstrated that adherence to the use of a guided breathing biofeedback device in a randomized trial for hypertensives is high (>600 minutes of use over 8 weeks) and that a tendency to ruminative thinking may interfere with successful use of the device
- Demonstrated that social isolation was significantly related to a higher rate of left ventricular hypertrophy in low-income urban Hispanics
- Described factors influencing men's decisions regarding prostate cancer screening
- Described facilitators and barriers to integrating a patient navigator as care coordinator in community primary care settings

- Determined that patients at increased risk for colorectal cancer (smokers, those with diabetes or obesity) have lower screening rates than patients at average risk
- Described strategies for successful in-person recruitment of patients in community primary care setting to participate in research studies
- Described strategies used and challenges faced by a breast cancer navigator in an urban underserved community
- Determined that an intervention to decrease weight bias among health professionals was effective in improving medical students' attitudes toward obese persons
- Described barriers to breast and cervical cancer screening among obese women
- Described effective ways for external facilitators to help primary care practices sustain quality improvement changes after the facilitator leaves the organization
- Described effective in-person strategies to recruit patients into clinical trials
- Described barriers to the integration of primary mental health care services in primary care settings and offered a series of solutions to inform future research directions able to effect change in delivery of care
- Described the impact of spousal influences in a person's decision making process when they are deciding whether or not to receive recommended cancer screening
- Demonstrated that number of physical symptoms present among persons with severe/persistent mental disorders at intake for a community-based mental health facility is a true predictor of service use and reported possible implications this has for the integration of mental and physical health service delivery
- Described lessons from community-based primary care practices on the incorporation of EHR (electronic health record) systems into clinical and clerical work
- Contributed to the study design, data analysis, and data interpretation of several international multicenter randomized controlled trials of Canakinumab, an IL-1 monoclonal Ab, used in acute and chronic gouty arthritis that showed its efficacy in the treatment of acute flares in difficult-to-treat gouty arthritis as well as in reducing the risk of acute gouty arthritis flares chronically.
- Showed that the risk of breast cancer was two-fold higher in women with benign multinodular thyroid goiter. This report was featured in an article in Clinical Endocrine News.
- Identified 315,246 patients who presented to hospitals in New Jersey for acute MI between 1986 and 2007. Almost half (40.9%) of patients identified were female. The researchers examined the effect the campaign has had on acute MI incidence, management and outcomes. The overall incidence of acute MI (per 100,000) decreased between 1986 and 2007, with the most notable decline observed in men (women: 321 to 197;  $P < .0001$  and men: 598 to 311;  $P < .0001$ ). According to the researchers, after 2002, the trend increased.

- Reported on the incidence of ventricular septal rupture complicating acute myocardial infarction. Using the New Jersey Myocardial Infarction Data Acquisition System database, these researchers found that despite improvement in the medical and interventional therapies of acute MI, the incidence of ventricular septal rupture has not changed over the last 2 decades and mortality associated with this complication is also unchanged.
- Showed that there is no ultrasonographic evidence to mention in trochanteric bursitis thus suggesting that the most appropriate term to be used for what was previously known as trochanteric bursitis is Trochanteric Pain Syndrome.
- Assessed a new diagnostic panel for identifying and performing susceptibility testing on streptococci.
- Evaluated new blood culture media for the detection of bloodstream infections.
- Evaluated a new molecular amplification assay (PCR) for the rapid diagnosis of sepsis.
- Examined the evolution of antibiotic resistance in *Staphylococcus aureus* bloodstream isolates.
- Contributed to a national multicenter evaluation of antimicrobial resistance patterns for 2010 and 2011.
- Participated in a study entitled "High-throughput screening to identify antagonists of HIV-1 latency".
- Evaluated a Probiotic Enteric Regimen for Easing Complications of Transplant: A Pilot Study (PERFECT Trial)".
- Examined the clinical impact of multidrug-resistant *Acinetobacter* bacteremia.
- Reported on the Vertical Transmission of Babesiosis from a Pregnant Splenectomized Mother to Her Neonate.
- Reported an unusual case entitled "Marbles for Bones: A Case of Osteopetrosis Presenting with Acute-on-Chronic Infection due to Sialolithiasis".
- Evaluated testing methods for *C. difficile* diarrhea.
- Examined a new laboratory assay for the rapid identification of methicillin-resistant vs. methicillin-susceptible *S. aureus* from positive blood cultures.
- Examined the potential impact of lowering carbapenem susceptibility breakpoints against Enterobacteriaceae..
- Discovered genetic and immune biomarkers that characterize responders and non-responders to multiple sclerosis therapies.
- Identified a new mechanism by which Glatiramer Acetate alters the clinical course of multiple sclerosis.

- Discovered that genes involved in protein folding, vesicular transport, myelin structure and tau expression are risk factors for the development of progressive supranuclear palsy
- Conducted the first GWAS study of maternally acting gene alleles. Discovered six new candidate genes for autism, one of them of genome-wide significance
- Showed that maternal and possibly maternal-grandmaternal folate status and folate-related genes may contribute to Down syndrome
- Showed that maternally acting folate-related gene alleles along with maternal and possibly grandmaternal folate status may contribute to epigenetic abnormalities in autism and Down syndrome
- Discovered two major mechanisms of genes that act in mothers during pregnancy to contribute to the clinical picture of neurodevelopmental disorders in their offspring
- Discovered a genetic variant of glutathione peroxidase 1 that contributes to autism
- Demonstrated that Hospital Pre-notification of Stroke Patients by Emergency Medical Services Improves Stroke Time Targets.
- Demonstrated Safety of Thrombolytic Therapy for Acute Ischemic Stroke After Recent Transient Ischemic Attack
- Described a novel intracranial vasculopathy in the Journal of Stroke and Cerebrovascular Diseases
- Showed superiority of self-learning, adaptive methods to non-adaptive methods for seizure prediction from intracranial electroencephalograms.
- Demonstrated a novel statistical method to calculate best-case inter-rater reliability in a retrospective fashion without requiring different human experts to interpret the same clinical diagnostic studies, with application for quality control in EEG reporting.
- Evaluated the performance of a novel bacteriophage based diagnostic test designed to rapidly diagnose staphylococcal bloodstream infection
- Expanded sequential rapid HIV verification at counseling and testing locations throughout New Jersey
- Demonstrated that task persistence is lower in smokers with schizophrenia as compared to non-psychiatric smokers.
- Showed that task persistence is related to history of ability to quit smoking for at least one-week and for at least one-year among smokers with and without schizophrenia.
- Showed that cognitive-behavioral therapy may be a feasible and efficacious approach for the treatment of depression in Parkinson's disease in a randomized controlled trial.
- Demonstrated the feasibility of telephone-based cognitive-behavioral therapy for depression in Parkinson's disease.

- Completed and published a study demonstrating that high levels of somatic symptoms at intake predict service use and service costs in behavioral health care
- Completed and published an application of text mining methods demonstrating the value of these methods in predicting errors in the diagnosis of schizophrenia
- Demonstrated a relationship between elevated levels of TNF- $\alpha$  and depression and cognition in Parkinson's disease
- Completed and published a genome-scale model of human cell metabolism
- Created a conditional BCCIP knockdown mouse model to investigate its role in brain tumor and breast cancer.
- Performed molecular characterization of a radiation sensitive human fibroblast cell line.
- Established a functional role of filaminA in cell sensitivity to chemotherapy drugs.
- Continued to identify the potential functions of a previously uncharacterized protein SETD4 in DNA damage response
- Completed a study demonstrating increased rates of failure in breast cancer patients overexpressing DDX-1
- Completed a study detailing fatigue levels in patients receiving 3 different types of breast irradiation
- Demonstrated the combined lethality of ionizing radiation and riluzole in melanoma cells with ectopic Grm1 expression
- Identified Parkin as a novel p53 regulated gene, which is involved in the regulation of glucose metabolism and antioxidant defense in cells (Cen Zhang)
- Identified microRNAs that directly regulate MDM2 in cells, which in turn regulate p53 functions in tumor suppression.
- Investigated the roles of p63 and p73 isoforms in nucleotide excision repair of UV damage in cells
  
- Initiated the following studies
  - Determination of optimal fiducial marker across image guided radiation therapy modalities.
  - Comparing the doses and toxicities in patients treated with radiation therapy for rectal cancer using 3-dimensional conformal radiotherapy (3DCRT) verses intensity-modulated radiation therapy (IMRT).
  - Use of multiple beam angles to minimize the impact of high density fiducial markers in the prostate proton radiotherapy

- Patterns of intra-fractional motion and uncertainties of treatment setup reference systems in accelerated partial breast irradiation of right- and left-sided breast cancer
- Fast beam allocation algorithm for gamma knife based SRS planning
- OnedosePlus MOSFET dosimeter performance in tangential field in vivo dosimetry
- Completed the following studies:
  - Development of a 3D deformable registration algorithm between CBCT and simulation CT
  - Segmentation algorithm for IGRT of prostate cancer.
  - Development of an adaptive tracking algorithm for radiation treatments of lung cancers
  - Investigation of intra-fractional target motions in partial breast radiation treatments.
  - Comparison of 3DCRT and IMRT of pancreatic cancers
  - Development of an algorithm for dynamic online tracking of lung tumors during radiotherapy.
  - ATM kinase signaling induced by low energy beta particles
  - The workforce in radiation oncology
  - Polymorphisms in BCL-2 and incidence of breast cancer
  - Partial breast irradiation in low risk DCIS
  - Whole breast irradiation in low risk DCIS
  - National utilization of partial breast irradiation
  - Fatigue during radiation using different treatment approaches
- Elucidated the mechanism of PALB2-KEAP1 interplay in the regulation of NRF2-mediated antioxidant gene expression
- Investigated the role of Beclin 1 (autophagy) in breast cancer using a palb2 conditional knockout model
- Investigated the function of BRCA1, BRCA2 and PALB2 in DNA damage-induced intra-S phase and G2/M cell cycle checkpoint control
- Set up a functional assay system to evaluate the effects of BRCA1 missense variants on DNA damage response function and PARP inhibitor sensitivity

- Participated in collaborative study on Mycophenolate vs. Oral Cyclophosphamide in Scleroderma Interstitial Lung Disease
- Submitted project to study comparison of ventilation/perfusion scan data in acute pulmonary embolism at RWJUH to the PIOPED Study
- Collaborated on submission of a project to study MRI-guided laser-induced thermal therapy for cytoreduction of inoperable grade III/IV gliomas prior to administration of adjuvant chemotherapy and radiation
- Collaborated on submission of a project to study economic impact of central venous access selection in the pediatric oncology population
- Demonstrated Cardiac Valve Replacement Surgery Thromboembolic-Related Complications- Randomized Trial of Previous and Current Generation Mechanical Prosthesis (TRC-MP)
- Completed The Effect of Acadesine on Clinically Significant Adverse Cardiovascular and Cerebrovascular Events in High-Risk Subjects Undergoing Coronary Artery Bypass Graft
- Continued studies to improve Deep Brain Stimulation (DBS) microelectrode recording (MER) targeting of the subthalamic nucleus (STN) via spatial maps by addition of cortical local field potential (LFP) signals. Collaborative effort with individuals in Neurology
- Development of continuous online monitoring of intracranial pressure (ICP) and blood pressure slope ratio for the determination of cerebral pressure disautoregulation thresholds. Collaborative effort with individuals in Rutgers Engineering
- Initiated assessment of impedance measuring reliability and accuracy of Deep Brain Stimulation (DBS) neuro-modulation devices
- Initiated assessment of Magnetic Resonance Imaging (MRI) impact upon Deep Brain Stimulation (DBS) Activa-PC system, effect upon on/off state, effect parameter settings, and effect upon brain impedance
- Initiated assessment of output reliability and accuracy of Deep Brain Stimulation (DBS) neuro-modulation devices
- Initiated development of new protocol for efficient and accurate placement of stereotactic frame upon patients slated for Deep Brain Stimulation (DBS)
- Initiated following the brain impedance post- Deep Brain Stimulation (DBS) implantation during the initial months of DBS parameter adjustment
- Initiated measurement of brain impedance intra-operatively during Deep Brain Stimulation (DBS) targeting of the subthalamic nucleus (STN)
- Initiated the determination of the appropriate guide cannulae length to avoid trans-ventricular deflection of Deep Brain Stimulation (DBS) leads
- Initiated studies into the identification of risk factors for wound healing complications and hernia recurrence after abdominal wall reconstruction, in collaboration with Division of General Surgery, Department of Surgery, UMDNJ-Robert Wood Johnson Medical School

- On-going health care disparities research in collaboration with the School of Public Health.
- Showed that estrogenic mycotoxins were detectable in urine samples of 78.5% of girls participating in the Jersey Girl Study and that levels were predominantly associated with beef and popcorn intake.
- Showed that girls with detectable urinary mycoestrogens tended to be shorter and less likely to have reached the onset of breast development.
- Showed that phytoestrogen consumption from foods and supplements did not increase ovarian cancer risk.
- Continued investigation of environmental risk factors affecting onset of puberty in young girls in New Jersey.
- Continued investigation of risk factors affecting aggressive early stage breast cancer in African American women to further understanding of racial disparities in breast cancer risk.
- Showed that closer adherence to the USDA Dietary Guidelines for Americans did not have an impact on reducing endometrial cancer risk.
- Showed that women who had better dietary quality as measured by the Healthy Eating Index did not experience lower risk of developing ovarian cancer.
- Continued investigation of the impact of body mass index on ovarian cancer survival in a retrospective study.
- Started recruitment process for investigating risk factors for ovarian cancer in African American women, an area with very limited available evidence in a study involving nine geographical areas in the United States.
- Completed accrual of a first-in-man NCI/CTEP sponsored trial of engineered poxvirus encoding GMCSF and immune stimulating proteins in patients with advanced bladder tumor prior to bladder removal
- Demonstrated immune modulation by administering engineered poxvirus into patient bladder
- Continued accrual of first-in-man NCI/CTEP sponsored trial of intra-pancreatic poxvirus vaccine in patients with locally advanced adenocarcinoma of the bladder
- Continued to investigate the relationship between status of autonomic and vagal nerve activity during the course of critical illness in surgical patients
- Proceeded to define “decomplexification” of circadian signals in patients with severe injury and infection
- Continued ongoing studies to define the influence of route of feeding upon heart rate variability parameters in critically-ill patients

- Continued development of real-time monitoring technology for parameters of HRV including mult-scale entropy (with John Semmlow, PhD)
- With collaborators in the Department of Biomedical Engineering at Rutgers University, continued further to develop differential equation-based mathematical models of the human inflammatory response (with Ioannis Androulakis, PhD)
- Evaluated the Use of Fibrin Glue During Nephroureteromy in Reducing Tumor Spillage
- Evaluated the Efficacy of Single Port Varicocele Repair in Adolescents
- Demonstrated an Association Between Delayed Toilet Training and the Development of Dysfunctional Voiding in Children
- Evaluating the Relationship Between Child Temperament and Dysfunctional Voiding
- Developed Bladder/Urothelial Cancer Tissue Bank and Prospective Clinical Database at CINJ
- Evaluated Peri-Operative Bleeding Complications in Patients Taking Vitamin E Prior to Robotic Assisted Radical Prostatectomy
- Developed a Database from Data Acquired During the Annual CINJ Prostate Screening Event
- Determined Sprafkin and Potency Following Robotic Prostatectomy
- Determined the Impact of Penile Rehabilitation on Post-Robotic Prostatectomy Potency
- Evaluated the Impact of Robotic Prostatectomy on Penile Length
- Evaluating Screening Patterns and Outcomes of Prostate Cancer Screening in the State of NJ
- Examined the Role of Sacral Neuromodulation in Refractory Overactive Bladder
- Evaluated the Role for Urodynamic Evaluation in Patients with Chronic Abacterial Prostatitis
- Determining the Role of Botulinum Toxin Type A in Neurogenic and Idiopathic Overactive Bladder
- Examining the Role of Antimuscarinics in Overactive Bladder
- Determining the Optimal Frequency of Self-Calibration of the Urethra to Prevent Recurrence of Urethral Strictures
- Examining the Role of Botulinum Toxin type A Neurogenic Detrusor Overactivity due to Parkinsonism, Cerebrovascular Accidents & Multiple System Atrophy
- Evaluating the Utility of Sacral Neuromodulation in Neurogenic Overactive Bladder secondary to Parkinsonism

- Evaluated the Risk of Radiation Exposure During Surveillance of Early stage Non Seminoma Germ Cell Testis Cancer
- Examined the Early Learning Curve in Robotic Cystectomy
- Discovered A Novel Method for Renal Hilar Control During Open and Robotic Partial Nephrectomy
- Analyzed the Function of Affect of Treatment Decision of Rising PSA Patients
- Defined the clinical effectiveness of a joint community cardiology and university vascular surgery program in the cardiology catheterization laboratory
- Discovered the shift in the diagnosis of abdominal aortic aneurysm based upon CT scanning performed for solid tumor and back pain
- Monitored the financial and quality of life issues surrounding endovascular aortic aneurysm repair during follow-up care.
- CHOICE Trial - established post-FDA approval registry for carotid stenting utilizing FDA approved stent and filter-wire systems for both vascular surgeons and peripheral interventional cardiologists
- OVATION Trial - Studied the safety and efficacy of a new endovascular aortic aneurysm repair stent-graft.
- Demonstrated using the national data that overall risk of postoperative stroke after carotid artery stenting is significantly greater than after carotid endarterectomy
- Discovered that carotid artery stenting was more often utilized in octogenarians but they do not have a higher risk of stroke after this procedure when compared to younger patients
- Found that high volume hospitals and practitioners were significantly associated with lower rates of stroke after carotid artery stenting and decreased hospital resource utilization
- Showed that rates of stroke after carotid artery stenting did not vary significantly among practitioner specialties (vascular surgeons, interventional cardiologists, and interventional radiologists) but vascular surgeons had the lowest utilization of hospital resources
- Demonstrated that major teaching hospitals were significantly more likely to utilize endovascular procedures for elective repair of abdominal aortic aneurysms, offered a significant improvement in survival, and had decreased hospital length of stay and cost
- Found that older patients, men, and nonwhites were more likely to develop sepsis as a complication after elective surgery
- Discovered that among major elective surgical procedures esophageal, pancreatic and gastric procedures represented the greatest risk for the development of sepsis, but mortality for patients developing sepsis was found to be the greatest following thoracic, adrenal, and hepatic procedures

- Showed that among elective vascular surgical procedures, open aortic surgery and carotid endarterectomy have, respectively, the greatest and the lowest risk for postoperative infectious complications
- Found that hospitals performing higher numbers of elective abdominal aortic aneurysm repairs significantly reduced postoperative infectious complications and hospital resource utilization in Medicare beneficiaries for both open and endovascular procedures
- Demonstrated that in-hospital delay of elective surgery from the day of admission was associated with a significant increase in the rates of postoperative infectious complications and mortality, and extensively increased hospital cost
- Found that tibioperoneal percutaneous angioplasty in the US Medicare population was associated with frequent in-hospital complications and high rates of readmissions following amputations
- Discovered that despite a significant increase in less invasive endovascular repair of popliteal artery aneurysms in the US Medicare population, this procedure was associated with greater re-interventions over time and did not offer mortality or cost benefits
- Demonstrated that although deemed “safer and less invasive”, endovascular procedures on the lower extremities had a greater number of potentially preventable adverse events, primarily due to bleeding complications that were associated with an almost three times greater likelihood of death
- Showed that potentially preventable adverse events after endovascular procedures on the lower extremities were associated with advanced age, black race and comorbidities, and occurred more frequently in teaching and large hospitals
- APTUS - Documented feasibility of a new intra-arterial securing mechanism for endovascular aortic aneurysm repair and the inefficacy of an unsupported lower limb design due to a high thrombosis rate
- ANACONDA - Established the safety and efficacy of a new design of endovascular aortic aneurysm stent graft which allows for repositioning at the time of implantation and a unique proximal neck securing design to preserve renal blood flow.
- Achieved transfection of cytotoxic T lymphocytes with gene-carrying lipoplexes as vectors
- Achieved generation of Heme Oxygenase-1 deficient rats
- Revealed the relationship between magnesium sulfate tocolysis and intraventricular hemorrhage in very preterm infants.
- Demonstrated the risk of radiation exposure to children and their mothers.
- Demonstrated the relationship between very preterm gestation and breast milk cytokine content during the first month of lactation.
- Showed biologically active breast milk proteins in association with very preterm delivery and state of lactation.

- Reviewed adherence to antiretroviral therapy in pediatric patients with Human Immunodeficiency Virus (HIV-1) and progression of the disease.
- Reviewed the influence of very preterm labor on the non-specific immunity of breast milk in the first month of lactation.
- Revealed the vascular endothelial growth factor in tracheal aspirates from preterm infants
- Revealed coronary complications in children with Kawasaki Disease in association with time of IVIG treatment.
- Described novel mechanisms of oxidant generation by catalase
- Established a cytometric bead array core facility
- Discovered that native and nitrated fatty acids regulate oxidant generation in neonatal neutrophils
- Discovered that phthalate plasticizers increase inflammatory activity in neonates
- Found that vitamin D modulates inflammatory disease in newborns
- Investigated the relationship between maternal exposure to bisphenol A and phthalates, prematurity, and genital abnormalities
- Investigated the effects of bilirubin on immune function in newborns
- Found that late-preterm birth is associated with subtle deficits in cognitive functioning as early as age 2 years
- Found that overweight teenage girls are more likely than their non-overweight peers to engage in risky sexual behavior
- Found that rates of overweight among Mexican American children are higher than expected given their birth weight distribution
- Found that poor child health increases the likelihood that their families experience housing problems
- Found that US health disadvantages compared to England arise at early ages and that differences in the body weight distributions of the two countries do not play a clear role
- Found 99% of SIDS cases contain risk factors, the majority modifiable, and that 78% contain multiple concurrent risks and published in *Pediatrics*, 2010
- Found Latino cases of SIDS have disproportionately more upper respiratory infections, compared to other racial and ethnic groups and presented findings at annual meeting of Society for Pediatric Research, May, 2011
- Investigated bed sharing status in SIDS cases of twins
- Investigated sleep position of infants relative to gestational age

- Investigated relative risk patterns in SIDS cases over two eras
- Completed B-Cell function in Children with Nephrotic Syndrome Study
- Studied Podocyte as an Innate Immune Cell: Implications for Disease
- Participated in a longitudinal study of long term outcomes in children with Chronic Kidney Disease
- Participated in a Phase 1 study to evaluate the Single-Dose Pharmacokinetics and Safety of Ceftobiprole, a new antibiotic in pediatric patients.
- Studied the effects of Inhaled nitric oxide for the treatment of bronchopulmonary dysplasia (BPD) in preterm Infants requiring mechanical ventilation or positive pressure support on days 5 to 14 after birth as part of a multicenter national study.
- Participated in a multicenter study to evaluate the Transition Readiness and Quality of Life in patients with Lupus by the use of a novel intervention-“LUPUS Passport” funded by Lupus Foundation of America:
- Studied B-Cell function in Children with Nephrotic Syndrome
- Participated in a national registry of patients with pediatric rheumatic diseases. (CARRA net registry)
- Participated in a national study to evaluate the overall burden of RSV disease and its risk factors among preterm infants (32-35wk GA) who do not receive RSV prophylaxis, during their first RSV season.
- Participated in a nationwide study to evaluate the Safety, Efficacy and Pharmacokinetics of Daptomycin in Pediatric patients with Complicated Skin and Skin Structure Infections
- Participated in a Phase I, Study to Evaluate the Pharmacokinetics of Repeated Once-Daily Intravenous Doses of Esomeprazole in Paediatric Patients
- Participated in The Type 1 Diabetes TrialNet Registry. The goals of the TrialNet Natural History Study of the Development of Type 1 Diabetes [TN-01] are to gain information about the natural history and pathogenesis of type 1 diabetes and to facilitate the recruitment and assessment of individuals who might qualify for type 1 diabetes prevention trials.
- Found that mobile sampling using Piper as an estimate of exposure to inhalable PM is more strongly associated to the presence of wheeze and asthma than general area stationary sampling. This information may be useful in identifying the source of asthmagens in a child’s play environment allowing for more effective remediation.
- Showed the Preliminary Comparison of Health Related Quality of Life in Children with Lupus across Different Continents.
- Showed the Improving Transition Readiness and Quality of Life with a Pediatric Lupus Health Passport

- Showed organ system-involvement in lupus and relationship with demographic factors disease duration and health-related quality of life in childhood SLE
- Showed Worldwide incidence and prevalence of pediatric onset systemic lupus erythematosus
- Showed pain as predictors of functioning in adolescents with juvenile idiopathic arthritis
- Showed Enhanced Drug Safety Surveillance Project in Juvenile Rheumatoid Arthritis and Idiopathic Arthritis
- Defined the proper use of hormonal therapy in men with localized prostate cancer undergoing active surveillance instead of an aggressive local approach
- Completed a randomized trial of smokers that defined and optimized an approach to pharmacotherapy
- Defined the natural course of prostate cancer progression in elderly men, which provides a guide to both specialized and general physicians to make more effective decisions with men recently diagnosed with prostate cancer
- Demonstrated the effect of tocopherol in prostate cancer in a mouse model
- Demonstrated the synergistic effect of lipitor and celebrex in a prostate cancer animal model
- Refined criteria by which to conduct skin screening for melanoma in male elderly and less educated patients
- Defined the treatment for populations of patients with low risk of prostate cancer progression, which was as a focus on comparative effectiveness and optimization of patient outcomes with treatment
- Demonstrated the importance of nicotine metabolism in individuals using antiepileptic drugs to tobacco cessation
- Developed mechanisms to enhance colorectal screening in primary care practices based on support systems
- Developed cancer prevention strategies that can be disseminated and implemented in community primary care practices
- Demonstrated that there is a minimally invasive means of measuring both Cardiac Index and Mean Arterial Pressure, without Central Venous Pressure
- Demonstrated that intraoperative infusion with dexmedetomidine combined with inhalation anesthetics provided satisfactory intraoperative conditions for tonsillectomy and adenoidectomy without adverse hemodynamic effects
- Demonstrated that mental retardation does not affect BIS values during general anesthesia

- Found that older women exposed to physical and verbal abuse are more likely to have poorer mental health outcomes
- Discovered that patients with HTN at our student-run free clinic received pharmacotherapy as recommended by JNC 7 guidelines and the high blood pressure goal set by Healthy People 2010
- Successfully completed an in-vitro biomechanics project comparing two types of cements used to treat vertebral compression fractures and their effects on index and adjacent levels; failure characteristics of treated segment was also assessed
- Demonstrated stress-strain characteristics of different materials used in making spinal implants
- Discovered that singleton pregnancies resulting from ovulation stimulation with gonadotropins, such as that used in IVF [in vitro fertilization], have a twofold increased incidence of preterm birth.
- Discovered a new cellular signalling pathway regulating uterine endometrial development required for implantation
- Demonstrated (as collaborator with Dr. Steven E. Schutzer) that proteins in cerebrospinal fluid can be used to distinguish chronic fatigue syndrome from post-treatment Lyme disease
- Completed a study showing higher body mass index (BMI) is associated with endometrial hyperplasia compared to women with lower BMIs and abnormal bleeding and defined molecular signatures
- Completed a study on the association of neutrophils in fetal lungs and stomach with acute chorioamnionitis
- Completed a study showing that atypical glandular cells on a pap is a high risk diagnosis for women cared for at an inner city hospital
- Examined the effect of frequent acidulated phosphate fluoride foam treatments on prevention of demineralization in patients with fixed orthodontic appliances
- Examined the influence of varying maxillary lateral incisor dimensions on the perceived dental esthetics of dental professionals and laypersons in symmetric and asymmetric situations
- Examined the effect of rewards on orthodontic compliance
- Examined therapeutic agents used to treat orthodontic white spots in-vitro study
- Investigated patient compliance and the effects of short message service
- Identified lethal dose 50% for *K. kingae* in rat offsprings
- Showed the bactericidal effect of *K. kingae* outer membrane vesicles antiserum for *K. kingae*

- Discovered that in the obese population there is a distinct subgroup of individuals who are metabolically healthy obese
- Discovered that it is important for clinicians to recognize the differences between unhealthy and healthy obese, the tendency to treat all obese individuals the same may be counterproductive when treating the metabolically healthy obese individual
- Discovered that the metabolically healthy obese includes a younger population and a smaller percentage of the male sex
- Discovered that the metabolically healthy obese subgroup on average has lower BMIs and lower body fat mass
- Discovered that the metabolically healthy obese population's data in our study showed higher HDL levels and lower triglycerides, SBP, DBP, fasting glucose, AST and ALT levels
- Revealed that anticholinergic medications were prescribed in 82.7% of cases of overactive bladder
- Revealed that almost half of all physicians in the study were aware of glaucoma as a risk factor in the administration of anticholinergic medications for the treatment of overactive bladder
- Revealed that 60% of respondents did not consider it acceptable to treat overactive bladder with anticholinergics in patients who had undergone successful iridotomy in the past
- Revealed that glaucoma screening and ophthalmology referrals were recorded in 1.3 and 2.7% of all cases respectively
- Revealed that 85% of doctors agreed that patients should be screened prior to initiation of anticholinergics
- Demonstrated a significant difference in physician's understanding and practice of the use of anticholinergic medications for overactive bladder conditions when suspected or identified problems with glaucoma existed
- Demonstrated that Electronic Medical Records correlate with improved billing accuracy when compared with paper charts
- Revealed that improvements in billing accuracy were largely due to improved documentation of the history and exam portions of the patient visit on electronic medical records
- Revealed that only 45% of patients knew their current LDL and only 48% know their current HDL levels and 70% of patients reported a doctor discussed specific goals for LDL and HDL cholesterol
- Revealed that a majority of patients do not know treatment goals for hyperlipidemia; 70% of patients reported a doctor provided discussion and education about treatment goals; and despite this, only 18% of patients know their current LDL goal and 30% knew their current HDL goal

- Revealed that there is a large difference between actual patient knowledge and physician perception of patient knowledge regarding understanding of treatment goals for hyperlipidemia
- Discovered that there were no statistical differences in the outcomes of patients treated with two different drug eluting stents as compared to those treated with the stents eluting the same drug
- Discovered that there was a difference in restenosis and TVR at 12 months compared to 6 months in those who used mixed drug eluting stents
- Discovered that echocardiography was not able to reliably produce the hemodynamic data available from right heart catheterization in coronary artery bypass patients
- Discovered that the overall frequency of septal perfusion defects in patients with resting left bundle branch block in the outpatient setting was low and similar to the low frequency of septal perfusion defects seen with exercise Thallium-201 in a previous study
- Began to analyze data on the correlation between the use of Proton-Pump Inhibitors and Clostridium difficile-associated diarrhea in nursing home patients
- Continued to collect data on end-of-life care preferences among Muslims in America
- Continued to collect data on urinary catheterization without medical indication in the elderly hospitalized patient
- Initiated a study on identifying delirium in elderly patients in the emergency department and their transition to inpatient care
- Examined the influence of maternal anemia on the mother's health, pregnancy outcome and infant's iron endowment at birth
- Examined puberty and adolescent pregnancy as part of women's health
- Investigated if circulating vitamin D is decreased in gestational hyperglycemia and with cesarean section
- Investigated maternal hypoadiponectinemia and risk of gestational diabetes and mild hyperglycemia
- Examined gestational hyperglycemia, excessive pregnancy weight gain and risk of fetal overgrowth
- Developed an infant acuity scoring system for neonatal nursing
- Demonstrated that hospitals meeting standards for nursing excellence through Magnet accreditation have better patient outcomes for high risk infants
- Found that three quarters of the disparities in late life health between African American and Whites in the United States can be accounted for by differences in childhood socioeconomic status and neighborhood and family factors in young adulthood

- Explored relationships between various ethnicities and diabetic control and have found that Latinos have significantly poorer control over their diabetes than whites, blacks, or Asians
- Analyzed data collected for study of robotically assisted virtual reality to augment UE function in individuals post CVA
- Began data analysis of cortisol and DHEA-S levels in serum and saliva samples as part of funded study of markers of stress and inflammation in adults with pre-Type 2 diabetes
- Began industry funded study of pressure treatment for pain in sciatica
- Completed research investigating ergonomic practices associated with microscope use among Cytotechnologists
- Completed pilot study of the effect of inspiratory muscle training on inspiratory muscle strength and functional capacity in adults with cystic fibrosis
- Completed study on the use of biofeedback to augment the acquisition of skills in performing joint mobilization techniques among physical therapy students
- Completed subject recruitment, assessment, and preliminary data analysis for a \$1,400,000 R01 grant from NIH's National Center for Complementary and Alternative Medicine to perform a dose-finding trial for massage therapy as a treatment for osteoarthritis of the knee
- Continued data collection and analysis regarding the neural reorganization that occurs in stroke survivors after training in virtual reality environments
- Continued to advance plans for pilot project for study of yoga intervention specifically tailored for people with multiple sclerosis, with partners and additional funding sources
- Continued subject recruitment, treatment and assessment in UMDNJ pilot clinical trial comparing guided imagery and relaxation techniques to music listening as adjuncts to preparing and recovering from orthognathic (jaw) surgery, in collaboration with UMDNJ Dental School
- Demonstrated that the use of mental practice improves walking for people post stroke.
- Designed and Implemented a Novel Algorithm for Combating Cyber-Terrorism in Healthcare Systems
- Developed a New Multiple Sequence Alignment Approach that reveals Protein Structural Determinants
- Developed a Novel Technique for Isolation of Low Abundance Bovine Brain Membrane Proteins
- Developed an Ontology Driven Framework for the Analysis and Reporting of Oncology Combination Therapy Prescription Data

- Examined the components of Subjective Global Assessment (SGA) and their ability to predict overall SGA score in Stage Five Chronic Kidney Disease Patients on maintenance hemodialysis
- Examined the weight screening practices, attitudes and knowledge and educational needs among pediatric and orthodontic dentists in U.S. accredited post-doctoral training programs
- Explored Perceived Needs, Interests, and Practices in Weight Management and History of Chronic Diseases of UMDNJ Faculty and Staff
- Explored the Distribution Patterns of 911 Calls to the Emergency Medical Services for determining the Optimal Network Architecture for Quick and Efficient Response
- Explored the predictability of the Mediterranean Diet Score on cardiovascular disease risk among individuals treated in a primary care practice
- Investigated the Association of Selected Candidate Gene Polymorphisms with Periodontal Disease
- Initiated study Boot camp for post stroke survivors
- Investigated the impact of a peer-led, social cognitive theory (SCT)-based diet and physical activity program on anthropometrics and SCT construct scores of first-year college students
- Investigated the use of Different Data Mining Techniques for the Detection of Impurities in Heparin Samples
- Measured the effect of Medical Nutrition Therapy (MNT) on the clinical outcomes of dyslipidemia among US veterans in comparison to traditional nutrition education approaches
- Measured the prevalence of overweight/obesity among children seen in a U.S. urban pediatric dental school clinic
- Studied the level of agreement regarding the Subjective Global Assessment, Malnutrition Inflammation Score, and a Comprehensive Nutrition Assessment in the identification of nutritional status among individuals diagnosed with Stage Five Chronic Kidney Disease on Maintenance Hemodialysis
- Utilized a virtual reality augmented cycling kit in a study

## EDUCATIONAL RESEARCH

- Developed project to study predicting outcome of Selective Internal Radiation Therapy treatment based on pre- and post-procedure Bremsstrahlung and PET scans
- Developed project to study Pampiniform Plexus Venography

- Developed project to study the effect of radiation education and risk awareness in Emergency Room CT utilization
- Developed project to study nuclear medicine vs. catheter angiography in GI bleeding
- Developed project on ACR Appropriateness Criteria: Radiology Resident Questionnaire
- Developed project looking at ways in which residents review cases with faculty on PACS
- Developed project to study short-term MR imaging characteristics and response to MR image-guided laser ablation therapy
- Demonstrated A Retrospective Chart Review of Subjects Requiring Cardiac Support with the Impella Pump at Robert Wood Johnson University Hospital
- Demonstrated Impella and BiVAD Training in Swine (Abiomed, Inc)
- Demonstrated Steroid Therapy for Acute Respiratory Distress Syndrome Following Lobectomy
- Completed Core Faculty on the T-32 Training Program on Tissue Engineering and Biomaterials Science
- Evaluating Correlation Between Resident Temperament and Performance on Professionalism Evaluations
- Determining Utility of Robotic Surgical Simulator for Resident Education
- Examining how Resident Temperament Affects Performance on Robotic Simulation Trainer
- Validated use of RoSS Robotic Simulator as a Teaching Tool for Residents
- Collaborating with Urology on robotics and laparoscopic simulation trials
- Commenced multisite UMDNJ (New Brunswick and Stratford) vulvodynia clinical and research group
- Teaching and evaluating group competency in systems-based practice in anesthesiology
- Through the Information Mastery (IM) Training Program:
  - Improved physician's initial perceived barriers regarding using computers at the point-of-care
  - Decreased physicians' initial perceived barriers to using Evidence Based Practice at the point-of-care
  - Increased physician's self-reported use of the computer during or after the clinical encounter

- Increased physicians' use of more appropriate types of online medical informatics resources used in evidence based practice
- Improved Medical Students' knowledge about Information Mastery (medical informatics and evidence based practice)
- Improved Medical Students' beliefs about using a computer during a clinical encounter to seek evidence
- Increased Medical Students' self-reported use of the Information Mastery Approach to evidence based practice
- Improved the types of online medical informatics resources Medical Students' used in evidence based practice (moving from Google to Essential Evidence Plus, ACP Journal Club, Clinical Evidence, Bandolier and National Guideline Clearinghouse)
- Demonstrated that Social Networking sites have a presence and influence on how students learn information and make decisions on selecting a post-graduate program
- Initiated an evaluation of a formal geriatric curriculum for first year internal medicine residents
- Identified additional geriatric competencies for medical students that are specifically related to osteopathic manipulative medicine/osteopathic principles and practice
- Developed and tested an educational intervention aimed at increasing awareness and knowledge of the benefits of living kidney donation.
- Examined the knowledge, attitudes, beliefs, and practices among ethnically diverse Black women regarding cervical cancer screening and HPV.
- Analyzed the data collected on the ethical decision making skills of entry -level practitioners pre licensure
- Conducted a Delphi study to identify the components of advanced level practice in clinical nutrition practice
- Conducting Study comparing change in score on the Health Science Reasoning Test, a standardized test of clinical reasoning skill for health science students between entry level and graduation between two cohorts of students
- Continued Investigation in Doctoral level students in Physical Therapy to characterize types of feedback conditions during learning that will optimize their skills learning joint mobilization skills
- Continued investigation of change in the DIT scores of entry-level students during the PT program
- Designed and Implemented an ICD-10 Initiative Training Program
- Explored Comparability of Response Rates of Paper and Electronic Survey on Weight Status, Personal Weight Management Practices, and Chronic Diseases History among UMDNJ Faculty and Staff

- Explored the Impact of an Educational Intervention for Continuing Education on Applying the Nutrition Care Process and International Dietetics and Nutrition Terminology for Registered Dietitians Practicing in the Area of Long-Term Care
- Exploring undergraduate and graduate Clinical Laboratory Science students' perception of course quality related to the seven principles of good practice in undergraduate education in multiple course delivery methods

## OTHER RESEARCH

- Completed a three-phase study of the experiences and needs of families of children who have a health condition and who did not pass their newborn hearing screening, and the experiences of the audiologists who provide services to these children.
- Reported the importance of plasma membrane calcium ATPase 2 and collapsing response mediator protein 1 in spinal cord neuronal survival and experimental autoimmune encephalomyelitis
- We have established that plasma membrane calcium ATPase2 heterozygous mice are more susceptible to experimental autoimmune encephalomyelitis than wild type controls
- We have shown that cytokines differentially modulate plasma membrane calcium ATPase 2 levels and calcium signaling in spinal cord neurons via direct actions
- We have demonstrated that calcium signaling and plasma membrane calcium ATPase 2-(PMCA2) containing synaptic complexes are altered in Purkinje cells of PMCA2-heterozygous mice leading to cell death. We have defined the underlying mechanisms
- Conducted open-ended interviews to better understand the factors behind missed appointments by uninsured patients at our student-run free clinic
- Analyzed data from patient interviews and chart audits to identify ways of increasing the uninsured patient's willingness to return to our student-run free clinic
- Explored opportunities for diabetes and hypertension screening at outpatient clinics in Sierra Leone
- Developed a multidimensional conceptual model of neighborhood characteristics likely to influence health, including social vulnerability, wealth, violence, density, stability, and the presence of physicians, bars, supermarkets, and fast food establishments
- Identified the importance of using multiple indicators of neighborhood with good psychometric qualities for advancing knowledge about the mechanisms by which neighborhoods influence health
- Defined the way in which characteristics of neighborhoods, including social vulnerability, wealth, violence, density, stability, and the presence of physicians, bars, supermarkets, and fast food establishments influence health and depressive symptoms experienced by older people

- Found that after controlling for gender, age, marital status, race, education and income indicators of violence, density, and social vulnerability influence self-rated health, while effects on depressive symptoms are limited to neighborhood density and violence
- Defined a conceptual model of successful aging that includes objective and subjective components
- Discovered that age and gender were associated with objective successful aging but not with subjective successful aging
- Defined people who age successfully according to both objective and subjective criteria, neither criteria, and one, but not the other criteria
- Discovered that although characteristics observable early in life predict people aging successfully, their influence is modified by current health behaviors and social relationships
- Used phenomenology method to describe the lived experiences of the behavioral change in oral hygiene practices of nursing students
- Delineated the validation procedures of the Chinese version of the Decisional Balance Scale (CDBS) from four previous studies
- Presented study results regarding a pilot test of an individualized supportive intervention with African-American women to reduce postpartum smoking relapse
- Discovered that women's concerns about routine prenatal HIV testing could be grouped into the categories of fear, protecting the baby, protecting the woman, confidentiality and stigma
  - Suggested strategies for addressing these concerns were related to themes of education and information, normalizing HIV testing, patient-provider relationships, systems and private communication
- Demonstrated effectiveness of in person and online web 2.0 group meetings for community mobilization of self-care of health with women infected or affected by HIV in Jersey City and Paterson
- Discovered that individual motivational differences were associated with women's productivity in community mobilization, with autonomous motivation associated with greater productivity
- Demonstrated that the Access to Reproductive Care and HIV Services (ARCH) program of co-located nursing services in New Jersey's syringe exchange programs (SAPs) effectively increases access to a range of health services and HIV prevention by men and women who are active substance users
- Demonstrated that the ARCH program addresses missed opportunities for perinatal HIV prevention among active substance users and/or their partners by supporting effective

- access to reproductive health counseling, pregnancy testing and effective referrals and linkages to HIV testing, prenatal care and substance abuse treatment
- Examined missed opportunities for prevention of perinatal HIV transmission through in-depth retrospective case reviews of HIV-infected and exposed infants born at two Newark medical centers and chart reviews and interviews of their mothers
  - Completed analyses based on novel community-based field sample collection and chemical lab analysis protocols regarding older adult respiratory health and exposure to phthalates and fungi in home floor dust
  - Analyzed a medication reconciliation tool applying laboratory and naturalistic approaches to system evaluation
  - Identified factors associated with physical activity and risk of obesity among a representative sample of racial/ ethnic minority children living across five cities in the state of New Jersey
  - Investigated adult and child barriers for engaging in physical activity in select neighborhoods of Newark, NJ. The study involved a door-to-door survey of randomly selected households
  - Completed the 2010 New Jersey Youth Tobacco Survey, administered to 3,123 high school students (grades 9-12) in 38 schools throughout the state. Despite improvements over the past decade in reducing ever and current tobacco use among New Jersey youth, decreasing prevalence trends have stalled and in some cases reversed, in 2010
  - Investigated the relationship between menthol smoking and cessation in a commissioned report to the Tobacco Products Scientific Advisory Committee (TSPAC) of the FDA's Center for Tobacco Products. Results informed discussions about the development of regulatory policy regarding the use of menthol in cigarettes
  - Assessed the effectiveness of a supported education intervention for adults with mental illness who are enrolled in post-secondary education
  - Evaluated the differences in service needs for younger individuals participating in supported education. This study will inform community-based and college level academic support services of the unique challenges facing younger students with psychiatric conditions.
  - Evaluated a theoretical model relating self-efficacy and employment outcomes among adults with serious mental illnesses in order to inform the appropriateness of related supportive interventions.
  - Studying whether the job seeking self-efficacy and outcome expectations of individuals in supported employment programs predicts their job seeking activity.
  - Examined the effect of peer-provided employment support groups on participants' readiness for employment, employment related activities and employment acquisition.
  - Evaluated the effectiveness of Residential Intensive Support Teams on the community and clinical outcomes of individuals with serious mental illnesses recently discharged from state psychiatric institutions.

- Assisted with the Fidelity Assessment Common Ingredients Tool (FACIT) study. This study examined twenty New Jersey self-help centers for people who have psychiatric disabilities and measures how well self-help centers are following the Consumer Operated Self-help Model as designed by the Substance Abuse Mental Health Services Administration. Data from the FACIT Project is being combined with data from a UMDNJ Foundation grant to assess the empowerment and satisfaction levels of individuals attending the self-help centers.
- Evaluated the impact of a Wellness Coaching curriculum on the personal and professional outcomes of peer providers.
- Collected and analyzed training attitude surveys utilized in multi-disciplinary trainings held at a psychiatric hospital.
- Participated in the Pakistan Project. This project, sponsored by Caravan of Life, involves consultation and training with a psychiatric in-patient/outpatient facility in Karachi, Pakistan. To date this has resulted in one paper in press, one international presentation and one national presentation.
- Evaluated the impact of a jail diversion intervention for people with serious mental illnesses on subsequent criminal behavior over a five year follow-up period.
- Collaborated on the creation of a multi-disciplinary pilot program to address metabolic syndrome for persons with mental illness

## RESEARCH PROJECTS: 2010-2011

### FEDERAL FUNDING

Transfusion Trigger Trial in Coronary Heart Disease: A Pilot Study; J. Carson, RWJMS; *National Heart, Lung and Blood Institute*

Trial of Controlled Breathing Effects on Ambulatory Blood Pressure; L. Clemow, RWJMS; *National Heart, Lung and Blood Institute*

Modulating Drug Resistance in Prostate Cancer: The Dean and Betty Gallo Prostate Cancer Center; R. DiPaola, RWJMS; *United States Department of Defense*

Growth and Development of the Nervous System: Molecular Mechanisms; C. Dreyfus, RWJMS; *National Institute of Child Health and Human Development*

Somatic Mutations During Lymphoma Formation. Image Mining for Comparative Analysis of Protein Expression in Tissue Microarrays; L. Yang, RWJMS; *National Institutes of Health*

Heart Rate Variability Biofeedback: Its Role in Asthma Therapeutics; P. Lehrer, RWJMS; *National Institutes of Health*

Psychological Intervention for Ovarian Cancer Patients; S. Manne, RWJMS; *National Institutes of Health*

Regulation of Metal Ion Homeostasis by Channel Kinases; A. Ryazanov, RWJMS; *National Institutes of Health*

Potassium Channels are Targets of ROS; F. Sesti, RWJMS; *National Science Foundation*

Immunosuppression by Adult Stem Cells; Y. Shi, RWJMS; *National Institutes of Health*

Genetic Analysis of Transcription Initiation in Yeast; M. Hampsey, RWJMS; *National Institutes of Health*

The Coupling of mRNA Transcription and 3'-End Formation; M. Hampsey, RWJMS; *National Institutes of Health*

Functional Analysis of Rad23 Protein; K. Madura, RWJMS; *National Institutes of Health*

Studies to Examine Centrin's Role in DNA Repair; K. Madura, RWJMS; *National Institutes of Health*

Mechanism and Regulation of Transcription Initiation; S. Patel, RWJMS; *National Institutes of Health*

Mechanistic Studies of Hexameric Helicases; S. Patel, RWJMS; *National Institutes of Health*

Targeting Entry of Retroviral/Lentiviral Vectors; M. Roth, RWJMS; *National Institutes of Health*

Retroviral Integration & HDAC Inhibitors; M. Roth, RWJMS; *National Institutes of Health*

Bioengineering Human Embryonic Stem Cells; M. Roth, RWJMS; *National Institutes of Health*

Integration of Murine Retroviral Vectors; M. Roth, RWJMS; *National Institutes of Health*

Functional Analysis of Bfl-1/A1 in Apoptosis and Oncogenesis; C. Gelinas, RWJMS; *National Institutes of Health*

Deciphering of the Toxin-Antitoxin Systems in E. Coli; M. Inouye, RWJMS; *National Institutes of Health*

The Method for Determination of Membrane Protein Structures without Purification; M. Inouye, RWJMS; *National Institutes of Health*

Lysosomal Enzymes and Associated Human Genetic Diseases; P. Lobel, RWJMS; *National Institutes of Health*

Novel Lysosomal Enzyme Deficient in Batten Disease; P. Lobel, RWJMS; *National Institutes of Health*

Identification and Functional Assessment of Autism Susceptibility Genes; J. Millonig, RWJMS; *National Institutes of Health*

A Mouse Knock-in Model for ENGRAILED 2 Autism Susceptibility; J. Millonig, RWJMS; *National Institutes of Health*

Tumor Suppressor Role of CAPER Alpha in ER Alpha-Negative and Rel/NF-KappaB-Positive Breast Cancer; P. Molli, RWJMS; *Department of Defense*

A Computational Approach to Developing Heterochiral Peptide Therapeutics; V. Nanda, RWJMS; *National Institutes of Health*

Computational Design of a Synthetic Extracellular Matrix; V. Nanda, RWJMS; *National Institutes of Health*

Structure-Based Engineering of Allergens to Enhance Digestibility; V. Nanda, RWJMS; *National Institutes of Health*

Design of Programmable, Self-Assembling Collagen Biomaterials; V. Nanda, RWJMS; *National Science Foundation*

Transcription Antitermination by OB-fold Family Proteins; S. Phadtare, RWJMS; *National Institutes of Health*

Structure and Function of Response Regulator Proteins; A. Stock, RWJMS; *National Institutes of Health*

Dll4 Gene Regulation and Function During Retinogenesis; M. Xiang, RWJMS; *National Institutes of Health*

Transcriptional Regulation of Retinal Development; M. Xiang, RWJMS; *National Institutes of Health*

Exposure to Pesticides: A Fetal Environmental Risk Factor for Parkinson's Disease; B. Barlow, RWJMS; *National Institute of Environmental Health Sciences*

Evaluation of Two Sampling and Analytical Methods for the Measurement of Hexavalent Chromium in Ambient Air; Z. Fan, RWJMS; *United States Environmental Protection Agency*

Neurobehavioral Effects of Pesticide Exposure Among Children in Rural Thailand; N. Fiedler, RWJMS; *National Institute of Environmental Health Sciences*

Development of Drugs to Mitigate Parathion Intoxication; J. Laskin, RWJMS; *National Institute of Neurological Disorders and Stroke*

Mechanisms of Pesticide-Induced Neuro-behavioral Deficits: Relevance to ADHD; J. Richardson, RWJMS; *National Institutes of Health*

Developmental Pesticide Exposure: The Parkinson's Disease Phenotype; M. Thiruchelvam, RWJMS; *National Institute of Environmental Health Sciences*

Linkage Study of Air Quality PM 2.5 and Cardiovascular Effect Data from the Tracking Network; D. Wartenberg, RWJMS; *Centers for Disease Control and Prevention*

Taking Action by Learning and Knowledge Management to Enhance Diabetes; L. Clemow, RWJMS; *National Institutes of Health*

Cardiovascular Disease Care and EMR Use in Community Based Primary Care Practices; D. Cohen, RWJMS; *National Institutes of Health*

Enhancing Colorectal CA Screening Through Learning Teams; B. Crabtree, RWJMS; *National Cancer Institute*

Integrating Practice & Community Cancer Control; B. Crabtree, RWJMS; *National Cancer Institute*

Translating Research Into Action for Diabetes (TRIAD) Legacy Study; J. Crosson, RWJMS; *Centers for Disease Control and Prevention*

Modeling Androgen Independent Prostate Cancer in Mutant Mice; C. Abate-Shen, RWJMS; *National Cancer Institute*

Zinc Homeostasis in Cardiac Stem Cells; I. Korichneva, RWJMS; *National Institutes of Health*

Continuation of Thrombosis and Hemostasis Centers Research and Prevention Network; previous title: Integrating Prevention Services for Persons with Bleeding and Clotting Disorders; C. Philipp, RWJMS; *Centers for Disease Control and Prevention*

Mycophenolate vs. Oral Cyclophosphamide in Scleroderma Interstitial Lung Disease; D. Riley, RWJMS; *National Institutes of Health*

Expanding the genetic code in yeast; P. Copeland, RWJMS; *National Institute of General Medical Sciences*

Functional analysis of SBP2 and selenocysteine incorporation; P. Copeland, RWJMS; *National Institute of General Medical Sciences*

Gene Regulation Using Novel Drugs Modulating Premature Translational Termination; J. Dougherty, RWJMS; *National Institute of Allergy and Infectious Diseases*

Regulators of Translation Elongation Factor eEF1A; T. Kinzy, RWJMS; *National Institute of General Medical Sciences*

Conservation of Meiotic Recombination Sites in the Human Genome; H. Li, RWJMS; *National Institute of General Medical Sciences*

Virus-Host Interactions in Eukaryotic Cells; S. Pestka, RWJMS; *National Institute of Allergy and Infectious Diseases*

Functional Dissection of Toxin-Antitoxin Systems in Mycobacterium Tuberculosis; N. Woychik, RWJMS; *National Institute of Allergy and Infectious Diseases*

Membrane Protein Production Using the Yeast SPP System; N. Woychik, RWJMS; *National Institute of General Medical Sciences*

Multiple Sclerosis: Molecular Profile of Plasmacytoid Dendritic Cells; K. Balashov, RWJMS; *National Institute of Neurological Disorders and Stroke*

BDNF-Engineered Stem Cell Mediated Neuroprotection in EAE; S. Dhib-Jalbut, RWJMS; *National Institute of Neurological Disorders and Stroke*

Alpha-Synuclein Regulation by microRNAs; E. Junn, RWJMS; *National Institutes of Health*

Neuroprotective Activity of DJ-1 in Parkinson's Disease; M. Mouradian, RWJMS; *National Institute of Neurological Disorders and Stroke*

A Parkinson's Disease Neuro Protection Trial; J. Sage, RWJMS; *National Institute of Neurological Disorders and Stroke*

Neuropeptide VGF in Antidepressant-Induced Neurogenesis and Mood Disorders; J. Alder, RWJMS; *National Institute of Mental Health*

The Role of Neurotrophins in Oligodendrocyte Function; C. Dreyfus, RWJMS; *National Institute of Neurological Disorders and Stroke*

Deciphering How Tropomyosin Regulates the Actin Filament; S.E. Hitchcock-DeGregori, RWJMS; *National Institutes of Health*

Factors Influencing Regulation of the Dynamics of the Actin Filament Pointed End; A. Kostyukova, RWJMS; *National Institutes of Health*

Molecular control of Shh-Gli signaling by Gli factors; M. Matise, RWJMS; *National Institutes of Health*

Molecular regulation of Hedgehog signaling in the vertebrate CNS; M. Matise, RWJMS; *National Science Foundation*

A Mouse Knock-in Model for EN2 Autism Susceptibility; J. Millonig, RWJMS; *National Institute of Mental Health*

Elucidating the Role of miRNA Dysregulation in Schizophrenia and Bipolar Disorder; J. Millonig, RWJMS; *National Institutes of Mental Health*

Molecular Control of Corticospinal System Formation by Intermediate Targets; M.R. Rasin, RWJMS; *National Institute of Neurological Disorders and Stroke*

Role of First Neocortical RNA-operon in Specification of Neocortical Projection Neurons; M.R. Rasin, RWJMS; *National Institute of Neurological Disorders and Stroke*

Regulation of Dendritic Differentiation by BDNF-Induced Neuropeptide Nociceptin; S. Thakker-Varia, RWJMS; *National Science Foundation*

The Par-6/aPKC Complex in Synaptic Assembly and Function; H. Zhang, RWJMS; *National Institute of Neurological Disorders and Stroke*

Multifunctional Nanotherapeutics for Cancer Treatment and Imaging; L Rodriguez, RWJMS; *National Cancer Institute*

Targeted Proapoptotic Anticancer Drug Delivery System; L. Rodriguez, RWJMS; *National Cancer Institute*

Regulation of MDR1 Expression and Drug Resistance by CD44; L. Rodriguez, RWJMS; *National Cancer Institute*

Gonadotropin Action; W. Moyle, RWJMS; *National Institute of Child Health and Human Development*

Myotube Guidance in Drosophila; S. Kramer, RWJMS; *National Institute of Arthritis and Musculoskeletal and Skin Diseases*

Heart Tube Formation in Drosophila; S. Kramer, RWJMS; *National Science Foundation*

Description of Dermal and Tendon Allograft Characterization Program; F. Silver, RWJMS; *Musculoskeletal Transplant Foundation*

Regulation of the Cytoskeleton During Neuronal Morphogenesis; M. Soto, RWJMS; *National Science Foundation*

Molecular Mechanisms Initiating Cell Migrations in Caenorhabditis elegans; M. Soto, RWJMS; *National Institutes of Health*

Developmental Effects of Prenatal Cocaine Exposure; M. Lewis, RWJMS; *National Institute on Drug Abuse*

Pathophysiology of Basement Membrane Zone Collagens; F. Ramirez, RWJMS; *National Institute of Arthritis and Musculoskeletal and Skin*

Behavioral Effects on Welfare Reform; N. Reichman, RWJMS; *National Institutes of Health*

Effects of Prenatal Care on Pediatric Health Care; N. Reichman, RWJMS; *National Institute of Child Health and Human Development*

Progenitor Cells of the Mouse Prostate Epithelium; M. Shen, RWJMS; *National Institutes of Health*

Emotions and Risk to Psychopathology in Infants and Children; M. Sullivan, RWJMS; *National Institutes of Health*

Mechanisms of Inflammatory Lung Disease in Neonates; B. Weinberger, RWJMS; *National Institutes of Health*

Chronic Kidney Disease in Children (CKIDS); L. Weiss, RWJMS; *National Institutes of Health*

Children with Hearing Loss and Existing Comorbid Conditions in New Jersey; D. Spitalnik, RWJMS; *CDC's National Center on Birth Defects and Developmental Disabilities*

Obstructing Androgen Receptor Activation in Prostate Cancer Cells through Post-Translational Modification by NEDD8; J. Chen, RWJMS; *United States Department of Defense*

Chromosome Architecture: Cohesion of Transcriptionally Silenced Domains; M. Gartenberg, RWJMS; *National Institutes of Health*

The Role of Autophagy in the Age Related Mitochondrial Deterioration; S. Jin, RWJMS; *National Institute on Aging*

The Role of Autophagy in Tumorigenesis; S. Jin, RWJMS; *National Institutes of Health*

Mechanism of Action of Antitumor Drugs; L. Liu, RWJMS; *National Cancer Institute*

Mechanism of Action of TOP2 Directed Anticancer Drugs; L. Liu, RWJMS; *National Institutes of Health*

Functional Analysis of the Bifunctional ION Channel and Kinase TRPM7; L. Runnels, RWJMS; *National Institutes of Health*

Translational Control of Radiation Induced Apoptosis; A. Ryazanov, RWJMS; *National Institutes of Health*

Caffeine Regulates Splicing of Cancer-Related Genes: Dissecting the Mechanism; K. Scotto, RWJMS; *National Institutes of Health*

Mechanism of Communication in Chromatin; V. Studitsky, RWJMS; *National Science Foundation*

Mechanism Transcript Elongation in Chromatin; V. Studitsky, RWJMS; *National Institutes of Health*

Cell Cycle Checkpoint Control in Response to DNA Damage; N. Walworth, RWJMS; *National Institute of General Medical Sciences*

Peptide Deformylase Inhibitor LBM415 for Sexually Transmitted Infections; H. Fan, RWJMS; *National Institute of Allergy and Infectious Diseases*

Role of MED1 in Regulating Androgen Receptor Activity During Prostate Cancer Progression; J. Fondell, RWJMS; *US Department of Defense*

Regulation of Cell Survival by the Rapamycin Insensitive mTOR Complex; E. Jacinto, RWJMS; *National Institutes of Health*

Bi-Directional Calcium Signaling in Striated Muscles; J. Ma, RWJMS; *National Heart, Lung and Blood Institute*

Ca Sparks in Muscle Aging and Dystrophy; J. Ma, RWJMS; *National Institutes of Health*

TRIC-A Novel Modulator of Intracellular Ca Homeostasis; J. Ma, RWJMS; *National Institutes of Health*

A K<sup>+</sup> Channel Learning Susceptibility Gene; F. Sesti, RWJMS; *National Science Foundation*

Molecular Mechanisms of Ataxin-1 Action; C. Tsai, RWJMS; *National Institutes of Health*

Calcium Regulation in the Progression of Muscular Dystrophy; N. Weisleder, RWJMS; *National Institutes of Health*

Testing CBT Models and Change Mechanisms for Alcohol Dependent Women; J. Williams, RWJMS; *Rutgers University through the National Institutes of Health*

Trial of Nicotine Spray as an aid for Smoking Cessation in Schizophrenia; J. Williams, RWJMS; *National Institutes of Health*

Developing Treatment, Treatment Validation and Treatment Scope in the Setting of an Autism Clinical Trial; S. Novotny, RWJMS; *Department of Defense*

Omega 3 Fatty Acids in the Treatment of Children with Autism Spectrum Disorders; S. Novotny, RWJMS; *National Institutes of Health*

Non -Drug Treatment for Latinos with Panic Disorder & Asthma; P. Lehrer, M. Katsamanis, RWJMS; *Yeshiva University through the National Institutes of Health*

MISSION II - Maintaining Independence and Sobriety Through Systems Integration, Outreach & Networking; A. Kline, RWJMS; *Substance Abuse and Mental Health Services Administration*

Antidepressant Adherence Among Hispanics; A. Interian, RWJMS; *National Institutes of Health*

MUPS (Medically Unexplained Physical Symptoms) in Primary Care Research Center; J. Escobar, RWJMS; *National Institutes of Health*

Treating Depression in Parkinson's Disease: A New Method; R. Dobkin, RWJMS; *National Institutes of Health*

Developing a Smoking Cessation Intervention for Methadone Maintained Smokers; N. Cooperman, RWJMS; *National Institutes of Health*

Alternative Mechanisms to Inactivate p53 During Oncogenesis; Z. Shen, RWJMS; *National Cancer Institute*

Genetic Defects in a Novel Radiation Sensitive Syndrome; Z. Shen, RWJMS; *National Institute of Environmental Health Sciences, NIH*

Functional Classification of BRCA1 Missense Mutations for PARP Inhibitor Therapy; R. Anantha, RWJMS; *Department Of Defense*

Enhance Catastrophic Planning and Citizen Prep Capability; V.H. Gracias, RWJMS; *the Office of Homeland Security and Preparedness*

Multimodal Capture of Teamwork in Collocated Collaboration; M. Tinti, RWJMS; *National Science Foundation*

Assessing Technology Requirements for Preventing Teamwork Errors in Time-Critical Settings; M. Tinti, RWJMS ; *National Science Foundation*

Multicenter Study of Duration of Antibiotics for Intra-Abdominal Infection; M. Tinti, RWJMS; *National Institutes of Health*

Regulation of Embryonic Epithelial Morphogenesis; S. Li, RWJMS; *National Institutes of Health*

Intimacy-Enhancing Couples' Intervention for Localized Prostate Cancer; I. Kim, S. Manne, RWJMS; *National Cancer Institute*

Neuroendocrine Differentiation in Prostate Cancer: Role of Bone Morphogenetic Protein-6 and Macrophages; I. Kim, RWJMS; *Department of Defense*

Role of BMP-6/Macrophages/IL-6 Loop in Castration-Resistant Prostate Cancer Cells; I. Kim, RWJMS; *National Cancer Institute*

Intravesical rF-GM-CSF and rF Tricom in the Treatment of Advanced Bladder Cancer; R. Weiss, RWJMS; *National Cancer Institute*

Obesity in Ovarian Cancer Prognosis; E. Bandera, RWJMS, *National Cancer Institute*

Epidemiology of Ovarian Cancer in African American Women; E. Bandera, RWJMS, *National Cancer Institute*

Race & Risk Factors for Early/Aggressive Breast Cancer ("The Women's Circle of Health Study"); E. Bandera, RWJMS, *Roswell Park Cancer Institute through National Cancer Institute*

Trial of Inhaled Nitric Oxide to Augment Tissue Perfusion in Sepsis (S); T. Trzeciak, RWJMS; *National Institutes of Health*

Changes in Physical Activity and Diet in Colorectal Cancer Survivors; E. Coups, RWJMS; *National Cancer Institute*

Role of Autophagy in Keratin Homeostasis in Breast Cancer; S. Kongara, RWJMS; *US Department of Defense*

53BP1 Abnormalities in Breast Cancer; A. Aly, RWJMS; *US Department of Defense*

Early Clinical Trials of New Anti-Cancer Agents with Phase I Emphasis; R. DiPaola, RWJMS; *National Institutes of Health*

New Technologies for Remote Data Capture & Protocol Authoring; R. DiPaola, RWJMS; *National Cancer Institute*

Validating Grm1 as a Therapeutic Target in Melanoma; J. Goydos, RWJMS; *National Institutes of Health*

A Patient Oriented Program for Surgical Oncologists; J. Goydos, RWJMS; *National Cancer Institute*

Trial of Riluzole in Patients with Advanced Melanoma; J. Goydos, RWJMS; *National Institutes of Health*

Combination Therapy that Targets Glutamate Signaling in Melanoma; J. Goydos, RWJMS; *National Cancer Institute*

The Impact of a Common MDM2 SNP on the Sensitivity of Breast Cancer to Treatment; K. Hirshfield, RWJMS; *US Department of Defense*

Psychosocial Stress Promotes Irradiation-Induced Tumorigenesis Through the Attenuation of p53 Function; W. Hu, RWJMS; *US Department of Defense*

Life After Cancer: Examining Survivor Transitions from Specialist to Primary Care; S. Hudson, RWJMS; *National Cancer Institute*

Predictors of Follow-Up Care Seeking Among Breast and Prostate Cancer Survivors; S. Hudson, RWJMS; *National Institutes of Health*

Role of Autophagy in Breast Cancer; V. Karantza-Wadsworth, RWJMS; *National Cancer Institute*

In-Situ Activation of Antitumor Effectors; E. Lattime, RWJMS; *National Cancer Institute*

Evaluation of Long-Term Prognosis of Localized Prostate Cancer Following Initial Radiation Therapy; G. Lu-Yao, RWJMS; *National Institutes of Health*

Evaluation of Palliative Prostate Cancer Among Elderly Men; G. Lu-Yao, RWJMS; *National Institutes of Health*

Trial of Hydroxychloroquine, an Inhibitor of Autophagy, in Patients with Stage III or IV Resectable Melanoma; J. Mehnert, RWJMS; *National Institutes of Health*

Asymmetric Cell Division and Notch Signaling in Lung Cancer Stem Cells; S. Pine, RWJMS; *National Institutes of Health*

Targeting Transforming Growth Factor Beta in Metastatic Breast Cancer; M. Reiss, RWJMS; *National Cancer Institute*

TGFβ Receptor Mutations in Cancer and other Diseases; M. Reiss, RWJMS; *National Cancer Institute*

Regulation of MDR1 Expression and Drug Resistance by CD44; L. Rodriguez-Rust, RWJMS; *National Cancer Institute*

The Role of MicroRNAs in Human Hematopoietic Cell Differentiation; D. Schaar, RWJMS; *National Institutes of Health*

Effectiveness Trial of Attention Shaping for Schizophrenia; S. Silverstein, RWJMS; *National Institute of Mental Health*

Acid Fast Bacilli (AFB) Smears for Drug Resistance Detection and Surveillance in Mycobacterium Tuberculosis (MTB); D. Alland, NJMS; *National Institute of Allergy and Infectious Diseases*

Rapid Diagnosis of XDR Tuberculosis; D. Alland, NJMS; *National Institute of Allergy and Infectious Diseases*

Defensins in STI Mediated Enhanced HIV Infectivity; L. Chang, NJMS; *National Institute of Allergy and Infectious Diseases*

Shock, Trauma, and Gut Origin of Sepsis; E. Deitch, NJMS; *National Institute of General Medical Sciences*

Mesenteric Lymph Linking Gut and Distant Organ Injury; E. Deitch, NJMS; *National Institute of General Medical Sciences*

Mapping and Modeling Host Pathogen Interactions in TB Latency and Reactivation; M. Gennaro, NJMS; *National Heart, Lung and Blood Institute*

Host-Pathogen Interactions and M.tb Drug Resistance; G. Kaplan, NJMS; *National Institute of Allergy and Infectious Diseases*

Emerging XDR-TB: Host and Pathogen Contributions; G. Kaplin, NJMS; *National Institute of Allergy and Infectious Diseases*

The Molecular Basis of the Epidemic blaKPC Gene Klebsiella; B. Kreiswirth, NJMS; *National Institute of Allergy and Infectious Diseases*

The Role of Scavenger Receptor gp340 in Mucosal HIV 1 Transmission and Inhibition; M. Lu, NJMS; *National Institute of Allergy and Infectious Diseases*

NJMS Clinical Trials Unit: Targeting Pediatric, Adolescent, and Maternal HIV Infection; J. Oleske, NJMS; *National Institute of Allergy and Infectious Diseases*

Mechanisms and Regulation of Mycobacterium Tuberculosis Iron Acquisition; I. Smith, NJMS; *National Institute of Allergy and Infectious Diseases*

Cardiovascular Control in Normal and Disease States; S. Vatner, NJMS; *National Heart, Lung and Blood Institute*

Anaerobic Shock as a Novel Treatment for Tuberculosis; X. Zhao, NJMS; *National Institutes of Health*

A RasGAP-microRNA Connection in Cardiac Hypertrophy; M. Abdellati, NJMS; *National Heart, Lung and Blood Institute*

The Role of MicroRNA in Cardiac Cell Death; M. Abdellatif, NJMS; *National Heart, Lung and Blood Institute*

Integrated Dual-Use Systems for Bio-Defense and Sepsis Diagnosis; D. Alland, NJMS; *National Institute of Allergy and Infectious Diseases*

Development of a Second Generation MDR-XDR TB Assay; D. Alland, NJMS; *National Institute of Allergy and Infectious Diseases*

Development of Molecular Blood Culture; D. Alland, NJMS; *National Institute of Allergy and Infectious Diseases*

IGF-1, Oxidative Stress and Telomere Dynamics in Cultured Human Somatic Cells; A. Aviv, NJMS; *Ruth L. Kirschstein National Research Service Award*

Leukocyte Telomere Dynamics, Gender, Menopause, Insulin Resistance, and Survival; A. Aviv, NJMS; *National Institute on Aging*

The Role of Gap-Junction Communication and Oxidative Metabolism in the Biological Effects of Space Radiation; E. Azzam, NJMS; *National Aeronautics and Space Administration*

Proteasome Activity and Reversal of Post Ischemic Ventricular Remodeling; G. Babu, NJMS; *National Heart, Lung and Blood Institute*

Analysis of Trypanosome mRNA Synthesis by Gene Transfer; V. Bellofatto, NJMS; *National Institute of Allergy and Infectious Diseases*

Mechanism for Reduced Adrenomedullary Epinephrine Release in Type 1 Diabetes; J. Berlin, NJMS; *Ruth L. Kirschstein National Research Service Award*

S-Nitrosylation of Soluble Guanylyl Cyclase: Potential Role in Nitrate Tolerance; A. Beuve, NJMS; *National Heart, Lung and Blood Institute*

Regulation of Soluble Guanylyl Cyclase, the NO-Receptor; A. Beuve, NJMS; *National Institute of General Medical Sciences*

Cerebral Blood Flow and BOLD Changes in TBI Using fMRI; B. Biswal, NJMS; *National Institute of Neurological Disorders and Stroke*

Physiological, Neural, and Cognitive Basis of Age-Related Working Memory; B. Biswal, NJMS; *National Institute on Aging*

Functional MRI of Aging: Biophysical Characterization; B. Biswal, NJMS; *National Institute on Aging*

Carotid Revascularization Endarterectomy vs. Stenting Trial; T. Brott, NJMS; *National Institute of Neurological Disorders and Stroke*

HLA-Releasing Metalloproteinase in Allograft Rejection; Y. Bushkin, NJMS, *National Institute of Allergy and Infectious Diseases*

HIV-Human Peritoneal Macrophage Interactions; L. Chang, NJMS; *National Institute of Allergy and Infectious Diseases*

Early Childhood Development in Relation to Intimate Partner Violence During Pregnancy; P. Chen, NJMS; *National Institute of Child Health and Human Development*

Role of TRPV6 in Gender and Age Dependent Alterations in Calcium Homeostasis; S. Christakos, NJMS; *Ruth L. Kirschstein National Research Service Award*

Vitamin D Hormone Function and Mechanism of Action; S. Christakos, NJMS; *National Institute of Diabetes and Digestive and Kidney Disease*

Vitamin D and the Immune System; S. Christakos, NJMS; *National Institute of Allergy and Infectious Diseases*

Organizational Self-Assessment to Improve Diabetes Care in Primary Care Practices; J. Crosson, NJMS; *National Institute of Diabetes and Digestive and Kidney Disease*

National Study of Determinants of Early Diagnosis, Prevention and Treatment of TB in African-American Community; A. Davidow, NJMS; *Centers for Disease Control and Prevention*

TB Epidemiologic Studies Consortium - TBES - Enhanced Surveillance to Identify Missed Opportunities for TB Prevention in Foreign Born; A. Davidow, NJMS; *Centers for Disease Control and Prevention*

Proteasome Activity and Reversal of Post Ischemic Ventricular Remodeling; C. DePre, NJMS; *National Heart, Lung and Blood Institute*

Pediatric HIV/AIDS Cohort Study-NJMS: Adolescent Master Protocol; A. Dieudonne, NJMS; *National Institute of Child Health and Human Development*

Lethal Action of Fluoroquinolones with Non-Growing Mycobacterium Tuberculosis; K. Drlica, NJMS; *National Institute of Allergy and Infectious Diseases*

Genetic Competence Apparatus of Bacillus Suptilia; D. Dubnau, NJMS; *National Institute of General Medical Sciences*

The Role of Pseudopilins During Transformation in Bacillus Subtilis; D. Dubnau, NJMS; *Ruth L. Kirschstein National Research Service Award*

Inactivation of Hyperpermeability after Ischemia-Reperfusion Induced Inflammation; W. Duran, NJMS; *National Heart, Lung and Blood Institute*

Control of Microcirculatory Exchange Function; W. Duran, NJMS; *National Heart, Lung and Blood Institute*

Regulation of Intestinal Phosphate Uptake by Dietary Carbohydrate; R. Ferraris, NJMS; *National Institute of Diabetes and Digestive and Kidney Disease*

Developmental Regulation of Intestinal Sugar Transport; R. Ferraris, NJMS; *National Science Foundation*

Plasmacytoid Dendritic Cells in HIV Pathogenesis; P. Fitzgerald-Bocarsly, NJMS; *National Institute of Allergy and Infectious Diseases*

Alzheimer Disease Mechanisms in Lens Aging and Disease; P. Frederikse, NJMS; *National Eye Institute*

Pharmaceutical Counter Measure Effects on Tissue Level Quality of Immobilized Bone; C. Fritton, NJMS; *National Space Biomedical Research Institute*

The Role of Hormone-Evoked Mitochondrial Calcium Increases in the Pathogenesis of Alcoholic Liver Disease; L. Gaspers, NJMS; *National Institute on Alcohol Abuse and Alcoholism*

Gr-1 + Cells and the Response to Nematode Parasites; W. Gause; *National Institute of Allergy and Infectious Diseases*

Cytokine Gene Expression During in Vivo Immune Response; W. Gause, NJMS; *National Institute of Allergy and Infectious Diseases*

Structure-Function of Connexin Pores; A. Harris, NJMS; *National Institute of Neurological Disorders and Stroke*

Treatment of Shock with Adenosine Receptor Ligands; G. Hasko, NJMS; *US Department of Defense*

Adenosine in Trauma and Sepsis; G. Hasko, NJMS; *National Institute of General Medical Sciences*

Tumor Suppression by Telomere Dysfunction Induced Senescence; U. Herbig, NJMS; *National Cancer Institute*

Effects of Nonuniform Distribution of Radioactivity; R. Howell, NJMS; *National Cancer Institute*

Mechanisms of Mistranslation-Mediated Mutator Response; M. Humayun, NJMS; *National Institute of General Medical Sciences*

Myocardial Passive Stiffness: Effect of Aging; W. Hunter; *National Institute on Aging*

Generation of Monoclonal and Polyclonal Antibodies to Neolacto-Series Gangliosides; A. Ilyas, NJMS; *National Institute of Neurological Disorders and Stroke*

Trial to Evaluate the Safety of a New Strategy to Treat Drug Resistant Tuberculosis in an Under-Resourced Country; E. Jones, NJMS; *National Institute of Allergy and Infectious Diseases*

Molecular Organization of Yeast Chromosome 1; D. Kaback, NJMS; *National Science Foundation*

Analysis of XDR-TB and MDR-TB Strains: Safety, Diagnosis and Pathogenesis; G. Kaplan, NJMS; *John E. Fogarty International Center*

Role of Autotoxin in HCV Associated Hepatocellular Carcinoma; N. Kaushik-Basu, NJMS; *National Cancer Institute*

Assessment of Meridian Theory in the Vascular System; D. Kim, NJMS; *National Center for Complementary and Alternative Medicine*

Evasion of Antiviral Protection by Poxvirus-Encoded IFN Antagonists; S. Kolenko, NJMS; *National Institute of Allergy and Infectious Diseases*

Prevention of Cardiac Cell Death by Mst1 Inhibitor; R. Kudgej, NJMS; *National Heart, Lung and Blood Institute*

Regulation of D1 Dopamine Receptor Expression by ncRNA in Cocaine Addiction; E. Kuzhikandathil, NJMS; *National Institute on Drug Abuse*

Functional Characterization of D3 Dopamine Receptor in the Drd3-EGFP Transgenic Mice; E. Kuzhikandathil, NJMS; *National Institute of Mental Health*

Live Cell Imaging Confocal Microscope with Spectral Detector and Resonant Scanner; D. Lagunoff, NJMS; *National Center for Research Resources*

Role of Nuclear Gangliosides in Neuronal Function; R. Ledeen, NJMS; *National Institute of Neurological Disorders and Stroke*

Adenosine, Toll-Like Receptors and Angiogenesis; S. Leibovich, NJMS; *National Institute of General Medical Sciences*

IGF2 and Neural Stem Cell Homeostasis; S. Levison, NJMS; *Ruth L. Kirschstein National Research Service Award*

Glial Dysgenesis in the Injured Developing Brain; S. Levison, NJMS; *National Institute of Child Health and Human Development*

Pedestrian Safety for Urban Children: Hot Spot Mapping and Targeted Education; D. Livingston, NJMS; *United States Department of Transportation*

Structure and Function of the HIV-1 Envelope Protein; M. Lu, NJMS; *National Institute of Allergy and Infectious Diseases*

Small Molecule Inhibitors of GP41-Mediated Fusion as HIV-1 Topical Microbicides; M. Lu, NJMS; *National Institute of Allergy and Infectious Diseases*

Engineered Envelope Glycoprotein Trimers for HIV 1 Vaccine Immunogens; M. Lu; *National Institute of Allergy and Infectious Diseases*

Development of an HIV-1 Entry Inhibitor Pre-Drug as a Microbicide; M. Lu, NJMS; *National Institute of Allergy and Infectious Diseases*

Re-Specification of the Notch Response by the HHV-8 Lytic Switch Protein; D. Lukac, NJMS; *National Institute of Allergy and Infectious Diseases*

Ribosome-Based Single Molecule Method to Acquire Sequence Data from Genomes; W. Mandeck, NJMS; *National Human Genome Research Institute*

Neuroendocrine Regulation of Erythropoiesis Following Trauma; A. Mohr, NJMS; *National Institute of General Medical Sciences*

SWI/SNF-Related Complex Components in Osteoblast Differentiation; E. Moran, NJMS; *National Institute of General Medical Sciences*

The p270 SWI/SNF Subunit as Potential Wilm's Tumor Susceptibility Gene; E. Moran, NJMS; *National Cancer Institute*

Molecular Motors in Transport and Signaling by APP; V. Muresan, NJMS; *National Institute of General Medical Sciences*

Reporter Mice for APP Processing and Transport; Z. Muresan, NJMS; *National Institute on Aging*

Structure and Function of RNA Polymerase in E.coli; A. Mustaev, NJMS; *National Institute of General Medical Sciences*

Addressing Disparities in Cancer Care for Latino Medicare Beneficiaries; A. Natale-Pereira, NJMS; *Centers for Medicare and Medicaid Services*

Structural Biology of Multifunctional Bacterial Phosphatases; M. Neiditch, NJMS; *National Institute of Allergy and Infectious Diseases*

Local Modulation of Inflammation to Heal Cranial-Facial Bone Defects; P. O'Connor, NJMS; *National Institute of Dental and Craniofacial Research*

Novel Cell Targets for Enhancing Osteogenesis; P. O'Connor, NJMS; *United States Department of Defense*

Mitochondrial Aconitase: Fe-S Cluster Biogenesis and Interaction with mtDNA; D. Pain, NJMS; *National Institute on Aging*

Mitochondrial Cysteine Desulfurase; D. Pain, NJMS; *National Institute of General Medical Sciences*

Structure-Based Development of Nonnucleoside Anti-HIV-1 RT Drugs; V. Pandey, NJMS; *National Institute of Allergy and Infectious Diseases*

Proteomics of HCV Replication Complex; V. Pandey, NJMS; *National Institute of Allergy and Infectious Diseases*

Fuse Binding Protein as a Cellular Effector of HCV Replication; V. Pandey; *National Institute of Diabetes and Digestive and Kidney Disease*

Roles of Non-Coding RNA, roX, in Global Chromatin Organization; Y. Park, NJMS; *National Science Foundation*

A Unique Approach to Identify Markers for Congenital Syphilis and Neurosyphilis; N. Parveen, NJMS; *National Institute of Allergy and Infectious Diseases*

Mechanism of Arginine Transport in Cardiac Myocytes; R. Peluffo, NJMS; *National Heart, Lung and Blood Institute*

A Rapid and Expandable Nucleic Acid Platform to Detect Bloodstream Infections; D. Perlin, NJMS; *National Institute of Allergy and Infectious Diseases*

Mechanism of Clinical Resistance to Echinocandin: Antifungal Drugs; D. Perlin, NJMS; *National Institute of Allergy and Infectious Diseases*

Antigenic Properties of the V1/V2 Domain of HIV-1 gp120; A. Pinter, NJMS; *National Institute of Allergy and Infectious Diseases*

Novel Epitopes that Mediate Broad Neutralization of Clade B and C HIV-1 Isolates; A. Pinter, NJMS; *National Institute of Allergy and Infectious Diseases*

HTS Assays for Reagents Capable of Unmasking Conserved Neutralization Sites in HIV; A. Pinter, NJMS; *National Institute of Neurological Disorders and Stroke*

Strategies for Eliciting BnAbs Against Conserved HIV-1 Quaternary Epitopes; A. Pinter, NJMS; *National Institute of Allergy and Infectious Diseases*

Enhanced OCT 4 Expression Imparts a Primitive Phenotype in Breast Cancer Cells and Explains Cancer Dormancy in Bone Marrow; P. Rameshwar, NJMS; *United States Department of Defense*

Delivery of MiRNA to Breast Cancer Cells Through Exosomes Released from Bone Marrow Stroma and Mesenchymal Stem Cells; P. Rameshwar, NJMS; *United States Department of Defense*

Studies of the Role of MicroRNA MiR-16-1 in the NZB Model of CLL; E. Raveche, NJMS; *National Cancer Institute*

Aspergillus-Specific CD4 T Cells in Invasive Aspergillosis; A. Rivera-Medina, NJMS; *National Cancer Institute*

Lipid Regulation of Transient Receptor Potential Channels; T. Rohacs, NJMS; *National Institute of Neurological Disorders and Stroke*

Regulation of the Intestinal Ca<sup>2+</sup> Channels TRPV6; T. Rohacs, NJMS; *National Institute of General Medical Sciences*

Hypoglycemia-Induced NO in Glucose Sensing Neurons and Counterregulation; V. Routh, NJMS; *National Institute of Diabetes and Digestive and Kidney Disease*

Hormonal Regulation of Glucose Sensing Neurons in Health and Diabetes; V. Routh, NJMS; *National Institute of Diabetes and Digestive and Kidney Disease*

Role of Neuropeptide Y-Glucose inhibited (NPY-GI) Neurons in Cytokine-Induced Anorexia-Cachexia; V. Routh, NJMS; *National Cancer Institute*

Novel Hypothalamic Molecular Mechanisms for Disorders of Glucose Homeostasis; V. Routh, NJMS; *National Institute of Diabetes and Digestive and Kidney Disease*

Inflammatory Biomarkers and Progression of Diabetic Retinopathy; M. Roy, NJMS; *National Eye Institute*

Inhibition of Lung Defense by Air Pollutant Particulates; L. Ryan, NJMS; *National Institute of Environmental Health Sciences*

Human B-Defensin-I in HSV-I Innate Immunity; L. Ryan, NJMS; *National Institute of Allergy and Infectious Diseases*

Cardioprotective Effects of Thioredoxin 1; J. Sadoshima, NJMS; *National Heart, Lung and Blood Institute*

Redox Regulation in Aging and Failing Heart; J. Sadoshima, NJMS; *National Institute on Aging*

Regulation of Myocardial Growth and Death by GSK-3; J. Sadoshima, NJMS; *National Heart, Lung and Blood Institute*

Rassf1 Signaling in Cardiac Hypertrophy Fibrosis and Failure; J. Sadoshima, NJMS; *Ruth L. Kirschstein National Research Service Award*

Regulation of Myocardial Growth and Death by Autophagy; J. Sadoshima, NJMS; *National Heart, Lung and Blood Institute*

Helminth Modulation of Mtb; P. Salgame, NJMS; *National Institute of Allergy and Infectious Diseases*

TLR2 and the Tubercle Granuloma; P. Salgame, NJMS; *National Institute of Allergy and Infectious Diseases*

Immunosuppressive Role of TLR2 in Host Immunity to Mycobacterium Tuberculosis; P. Salgame, NJMS; *Ruth L. Kirschstein National Research Service Award*

Imaging the Transport of Individual mRNA Molecules to the Active Synapses; T. Sanjay, NJMS; *National Institute of Mental Health*

Molecular Mechanism of hTERT Function in Mitochondria; J. Santos, NJMS; *United States Department of Defense*

Central Cardiovascular Regulation and Proangiotensin-12; H. Sapru, NJMS; *National Heart, Lung and Blood Institute*

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Dissection of Mycobacterium Tuberculosis Metabolic and Regulatory Pathways to Persistence; L. Shi, NJMS; *National Institute of Allergy and Infectious Diseases*

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High Throughput Screening Assays to Identify Small Molecules that Target the ClpXP Protease; C. Suzuki, NJMS; *National Institute of Neurological Disorders and Stroke*

The Role of cAMP Signaling Changes in Alcoholic Liver Disease; A. Thomas, NJMS; *Ruth L. Kirschstein National Research Service Award*

Effects of Ethanol on Excitation Contraction Coupling in Cardiac Muscle Cells; A. Thomas, NJMS; *National Institute on Alcohol Abuse and Alcoholism*

A Novel Ryanodine Receptor in the Hormonal Regulation of Hepatic Metabolism; A. Thomas, NJMS; *National Institute of Diabetes and Digestive and Kidney Disease*

Ethanol on Excitation-Contraction in Cardiac Cells; A. Thomas, NJMS; *National Institute on Alcohol Abuse and Alcoholism*

Analysis of mRNA Polyadenylation Events Across Species and Tissues; B. Tian, NJMS; *National Institute of General Medical Sciences*

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Localized Aggressive Periodontitis: Microbial Host Markers Susceptibility; D. Fine, NJDS; *National Institute of Dental & Craniofacial Research*

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Characterization of Kingella kingae leukotoxin; N. Balashova, NJDS; *National Institute of Allergies and Infection Diseases*

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Trauma-Focused CBT: Potential Mechanisms that Inhibit and Facilitate Change; E. Deblinger, SOM; *National Institutes of Health/DHHS*

Evolution of Developmental Regulatory Pathways; R. Ellis, SOM; *National Institutes of Health/DHHS*

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Role of the Oxidative Stress Pathway in Drug Resistance; R. Strich, SOM; *National Institutes of Health/DHHS*

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Examining the Relationship Between Smoking and Cessation; C. Delnevo, SPH; *US Food and Drug Administration (Subcontract from RTI)*

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Understanding Smokeless Tobacco Marketing; J. Lewis, SPH; *National Institutes of Health (Subcontract from University of San Francisco)*

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Impact of Air Pollution Reductions During the Beijing Olympic on Pre-Term Birth; P. Ohman-Strickland, SPH; *National Institutes of Health (Subcontract from University of Rochester)*

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Respiratory Effects of Silver and Carbon Nanomaterials; S. Schwander, SPH; *National Institute of Environmental Health Sciences (Subcontract from University of Southern California)*

Effects of Caffeine on UVB Skin Cancer; W. Shih, SPH; *National Institutes of Health (Subcontract from Rutgers, The State University of New Jersey)*

Multisite Randomized Control Trial Investigating the Efficacy of Massage for Osteoarthritis; A. Perlman, SHRP; *National Center for Complementary and Alternative Medicine, National Institutes of Health*

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Integrated Motor Imagery for People Post-Stroke; J. Deutsch, SHRP; *National Center for Medical Rehabilitation Research-RO3*

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Prevalence of Complementary and Alternative Medicine (CAM) Use and Disclosure to Healthcare Providers in a Complementary Cancer Center; A. Perlman, SHRP; *National Cancer Institute, National Institutes of Health*

Study of Vagus Nerve Stimulation Using the Neurocybernetic Prosthesis System in Patients with Refractory Fibromyalgia with and without Concurrent Major Depression; A. Perlman, SHRP; *The National Institute of Arthritis and Musculoskeletal and Skin Diseases, National Institutes of Health*

Virtual Reality Augmented Cycling for Post-Stroke Mobility Rehabilitation; M. Kafri, SHRP; *National Institutes of Health-STTR*

Visual Augmentation Through Virtual Reality to Rehabilitate the Hand After Stroke; E. Tunik, SHRP; *National Institutes of Health*

Cognitive Behavioral Therapy for Post Traumatic Stress Disorder in Severe Mental Illnesses: A Randomized Clinical Trial; W. Lu, SHRP; *National Institute of Mental Health, National Institutes of Health*

A Study of Age-Associated Need, Services, and Outcomes of Participants enrolled in Supported Education; K. Gill, SHRP; *National Institute of Disability and Rehabilitation Research (NIDRR)*

Effectiveness of Educational Supports on Retention of Postsecondary Students with Psychiatric Disabilities; K. Gill, SHRP; *National Institute of Disability and Rehabilitation Research (NIDRR)*

**OTHER GOVERNMENTAL FUNDING**

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Genetic and Epigenetic ENGRAILED 2 ASD Risk Factors; J. Millonig, RWJMS; *New Jersey Governor's Council for Medical Research and Treatment of Autism*

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Signaling Pathways Regulating Axon Remyelination; M. Matisse, RWJMS, *New Jersey Commission on Spinal Cord Research*

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Role of BDNF Signaling in Traumatic Brain Injury; S. Thakker-Varia, RWJMS; *New Jersey Commission on Brain Injury Research*

Self Representation and Brain Development in Autism; M. Lewis, RWJMS; *New Jersey Governor's Council for Medical Research and Treatment of Autism*

Madison School District Functional Behavior Assessment; S. Lohrmann, RWJMS; *Madison School District (Madison High School)*

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The Spatial Arrangement and Activity mTOR; J. Thomas, RWJMS; *New Jersey Commission on Cancer Research*

Using Peer Counselors to Address Tobacco Among Mental Health Consumers; J. Williams, RWJMS; *State of New Jersey - Division of Mental Health Services*

Genetic Variants Implicated in Breast Cancer; A. Vazquez, RWJMS; *New Jersey Commission of Cancer Research*

Identification of Synergistic Drug Interactions Using Phase II Clinical Data; W. Kang and A. Vazquez, RWJMS

Identification of Candidate Compounds Inhibiting Tumors with p53 Mutations; A. Vazquez and D. Carpizo, RWJMS

Development of Genome-Scale Model of Human Cell Metabolism; A. Vazquez, RWJMS and Z. N. Oltvai, Pittsburgh University

Lower Extremity Angioplasty: Impact of Obesity, Gender and Ethnicity on Utilization and Outcomes; T. Vogel, RWJMS; *American Heart Association*

Bioengineering of Human Embryonic Stem Cells; R. D. McKinnon; *NJCSCR*

Reprogramming Fibroblasts to OPCs for SCI Repair; R. D. McKinnon, RWJMS; *NJCSCR*

MSCs in African American Breast Cancer Patients; D. Banerjee, RWJMS; *New Jersey Commission on Cancer Research*

Evaluating Interventions Promoting Translational Cancer Research Career Choice by Minority Youth; S. Chaudhary, RWJMS; *New Jersey Commission on Cancer Research*

The Effect of Poly (ADP-Ribose) Polymerase (PARP) Inhibitors on Cancer Stem Cells; S. Ganesan, RWJMS; *New Jersey Commission on Cancer Research*

Allogeneic Cellular Therapy for Hematologic Cancers; M. Gharibo, RWJMS; *New Jersey Commission on Cancer Research*

The Role of the Bone Marrow Cells in Repair of the Blood Brain Barrier After Injury; J. Glod, RWJMS; *New Jersey Commission on Brain Injury Research*

The Impact of Prostate Cancer Stem Cell Therapy; H. Sabaawy, RWJMS; *New Jersey Commission on Cancer Research*

A Pilot Study of Nuclear Factor-Kappa B Inhibition During Induction Chemotherapy for Patients with AML; R. Strair, RWJMS; *New Jersey Commission on Cancer Research*

New Routes to Apoptosis that are P53-Independent; B. Barnes, NJMS; *New Jersey Commission on Cancer Research*

Altered Brain Connectivity in Spinal Cord Injured Patients Using fMRI; B. Biswal, NJMS; *New Jersey Commission on Spinal Cord Research*

Altered Brain Connectivity in Autism Spectrum Disorders Patients; B. Biswal; *New Jersey Governor's Council on Autism*

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Stimulating CNS Regeneration after Traumatic Brain Injury; S. Levison, NJMS; *New Jersey Commission on Brain Injury Research*

Safety Education for Child Pedestrians to Prevent Traumatic Injuries and Resulting Developmental Disabilities; D. Livingston, NJMS; *New Jersey Department of Human Services*

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Tonic Gabaergic Inhibition after Traumatic Brain Injury: Role in Epileptogenicity; V. Santhakumar, NJMS; *New Jersey Commission on Brain Injury Research*

Molecular Mechanisms of Insulin-Like Growth Factor-I (IGF-I) Mediated Survival of Oligodendrocyte Progenitors in Spinal Cord Injury; T. Wood, NJMS; *New Jersey Commission on Spinal Cord Research*

IGF Signaling in Normal and Malignant Breast Stem Cells; T. Wood, NJMS; *New Jersey Commission on Cancer Research*

The Role of the E2F3 Locus in Myc-Triggered Prostate Cancer; L. Wu, NJMS; *New Jersey Commission on Cancer Research*

Rb/E2F Pathway in Hematopoiesis and Leukemia; L. Wu, NJMS; *New Jersey Commission on Cancer Research*

Identification of Human Cytomegalovirus Pathogenic Genes; H. Zhu, NJMS; *New Jersey Commission on Cancer Research*

A novel biological therapy for treatment of leukemia; S. C. Kachlany, NJDS; *NJ Commission on Cancer Research*

Genomic Stability, Chromatin Remodeling and Differentiation Potential of Mesenchymal Stem Cells During ex vivo Expansion; R. Nagele, SOM; *NJ Commission on Science and Technology*

Assessment of Learning Needs and Clinical Practice Support for Nurses in Substance Use Harm Reduction Settings in New Jersey; C. Burr, FXB-SN; *New Jersey Department of Health and Senior Services, Division of HIV/AIDS Services*

Overall Evaluation of NJ Comprehensive Tobacco Control; C. Delnevo, SPH; *New Jersey Department of Health and Senior Services*

Peer Wellness Coaching; K. Gill, SHRP; *NJ Division of Mental Health Services*

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The Mechanism of HMGA2 in Pulmonary Lymphangiomyomatosis; K. Chada, RWJMS; *Centre for Rare Lung Disorders, Columbia University*

Bf1-1 as a Therapeutic Target and Prognostic Indicator in B-CLL and AML; C. Gelinias, RWJMS; *Leukemia and Lymphoma Society*

Molecular Characterization of Niemann-Pick C2 Disease; P. Lobel, RWJMS; *Ara Parseghian Medical Research Foundation*

Evaluation of Peripheral Enzyme Replacement Therapy for LINCL and Development of Inducible Transgenic TPPI Model; Y. Meng, RWJMS; *Batten Disease Support and Research Association*

Elucidating the Role of miRNA Dysregulation in Schizophrenia and Bipolar Disorder; J. Millonig, RWJMS; *Rutgers, The State University of New Jersey*

Molecular Mechanisms of Signal Transduction; A. Stock, RWJMS; *Howard Hughes Medical Institute*

Intrathecal Enzyme Replacement Therapy for LINCL; S. Xu, RWJMS; *Batten Disease Support and Research Association*

Increased Cancer Susceptibility in Aging Tissue – an Embryonic Stem Cell Approach; C. Lu, RWJMS; *Ellison Medical Foundation*

Modeling Human Development and Disease with Embryonic Stem Cells; C. Lu, RWJMS; *Living Free for Research*

Gingiva Derived MSCs: Role in Immunomodulation and Tissue Regeneration; Y. Shi, RWJMS; *University of Southern California*

Interplays Between the Jaw Mesenchymal Stem Cells and T Lymphocytes; Y. Shi, RWJMS; *University of Southern California*

Studies of Impacts of Climate Change on Allergic Airway Disease; P. Georgopoulos, RWJMS; *Rutgers, The State University of New Jersey*

National Institute of Child Health & Human Development National Children's Study (NCS) Centers; P. Lioy, RWJMS; *Mount Sinai School of Medicine*

Relating DNA Adducts and Toxicogenomics (Subcontracts from Northeastern University); H. Zarbl, RWJMS; *Northeastern University*

Volatile Components in Infant Breathing Zone; S. Shalat, RWJMS; *Johnson and Johnson*

Cardiovascular Disease Care and EMR Use in Community Based Primary Care Practice; E. Clark, RWJMS; *Oregon Health and Science University*

Using Learning Teams for Reflective Adaptation/Diabetes; E. Shaw, RWJMS; *University of Colorado*

Molecular Signatures of Progression of Barrett's Epithelium to Neoplasia; M. Bajpai, RWJMS; *Ruth Estrin Goldberg Memorial for Cancer Research*

Role of (HSP)-32 in Glomerular Microvasculature; P. Duann, RWJMS; *American Heart Association*

Systolic Blood Pressure Intervention Trial (SPRINT); J. Kostis, RWJMS; *University of Alabama at Birmingham*

Using the Default Effect to Promote Healthy Behavior; E. Leventhal, RWJMS; *Rutgers, The State University of New Jersey*

Multicenter Imaging Study for Evaluation of Chest Pain (PROMISE trial); S. Palmeri, RWJMS; *Duke University*

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Videos Supplement Traditional Assessment (VISTA) Protocol for Systemic Lupus Erythematosus Phase III Trial Observational Study; N. Schlesinger, RWJMS; *University of Michigan*

Visual Clinical Problem Threading for Case Summarization; F. Sonnenberg, RWJMS; *Rutgers, The State University of New Jersey*

Platelet Oriented Inhibition in New TIA and Minor Ischemic Stroke; J. McKinney, RWJMS; *University of Pennsylvania*

The Combined Approach to Lysis Utilizing Eptifibatide and rt-PA in Acute Ischemic Stroke Enhance Regime; J. McKinney, RWJMS; *University of Cincinnati*

Contribution of TG2 to  $\alpha$ -Synucleinopathies in Primary Neuronal Culture; M. Mouradian, RWJMS; *Rutgers, The State University of New Jersey*

The Role of Glial Cell-Derived Factors in a Cuprizone Model of MS; C. Dreyfus, RWJMS; *National Multiple Sclerosis Society*

The Role of the Par-6/aPKC Complex in Glutamatergic Neurotransmission; H. Zhang, RWJMS; *The Brain and Behavior Research Foundation*

Targeted Proapoptotic Anticancer Drug Delivery System; L. Rodriguez, RWJMS; *Rutgers, The State University of New Jersey*

Redesign of Aminoglycosides to Treat Human Genetic Diseases Caused by Nonsense Mutations; D. Pilch, RWJMS; *United States-Israel Binational Science Foundation (BSF)*

Mechanism of Thyroid Hormone Dependent Gene Silencing in Heart Muscle; J. Fondell, RWJMS; *American Heart Association*

Mammalian TOR and SIN in Tumor Growth and Metastasis; E. Jacinto, RWJMS; *American Cancer Society*

mTOR Targets in T Lymphocyte Development; E. Jacinto, RWJMS; *Cancer Research Institute*

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Autism and Control of Cerebral Metabolism; H. Weiss, RWJMS; *Autism Speaks*

Rescuing Ca<sup>2+</sup> Deregulation and Contractile Function in Muscle Aging; X. Zhao, RWJMS; *American Heart Association*

An Exploration of the Association of Inflammatory Cytokines and the Non-Motor

Symptoms of Parkinson's Disease in Patients in DATATOP; M. Menza, RWJMS; *University of Rochester*

BCL-2 and Radiation Sensitivity in Breast Cancer; B. Haffty, RWJMS; *Breast Cancer Research Foundation*

Contouring in Radiation Oncology Education (CORE) – A Self-Assessment Module (SAM) for Radiation Oncologists; S. Goyal, RWJMS; *Radiologic Society of North America*

The PALB2-BRCA2 Pathway in Oxidative Stress Response and Tumor Suppression; B. Xia, RWJMS; *American Cancer Society*

Role of CREG in Vascular Smooth Muscle Cell Phenotypic Modulation; S. Li, RWJMS; *American Heart Association*

Comparative Effectiveness of Treatments of Localized Prostate Cancer; K. Henry, RWJMS; *Vanderbilt University*

Epidemiology of Ovarian Cancer in African American Women; E. Bandera, RWJMS; *Duke University*

The Influence of Selenium on Biomarkers of Prostate Cancer Risk; R. DiPaola, RWJMS; *Pennsylvania State University*

LOH at BRCA1/BRCA2 Loci in Mutation Carriers as a Precursor to Breast Tumorigenesis; K. Hirshfield, RWJMS; *Rutgers, The State University of New Jersey*

Single Nucleotide Polymorphisms in the p53 Pathway; K. Hirshfield, RWJMS; *The Breast Cancer Research Foundation*

Single Nucleotide Polymorphisms in the p53: 63 and 73 Pathways; K. Hirshfield, RWJMS; *The Breast Cancer Research Foundation*

Autophagy as a Therapeutic Target in Breast Cancer Treatment Gafa not attached; V. Karantza-Wadsworth, RWJMS; *Damon Runyon Cancer Research Foundation*

Functional Status of Autophagy in Tumors as a Determinant in the Treatment of Breast Cancer; V. Karantza-Wadsworth, RWJMS; *Susan G. Komen Breast Cancer Foundation*

Roles and Regulations of p53; A. Levine, RWJMS; *Columbia University*

The Relationship between Breast Cancer Stem Cells and p53 Mutations; A. Levine, RWJMS; *The Breast Cancer Research Foundation*

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Trial of Hydroxychloroquine, an Inhibitor of Autophagy in Patients with Stage III or IV Resectable Melanoma; J. Mehnert, RWJMS; *Harry J Lloyd Charitable Trust*

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Transforming Growth Factor Beta Signaling and Melanoma Development; K. Cohen-Solal, RWJMS; *American Cancer Society of New Jersey*

Autophagy and HER2 Interactions in Breast Cancer Progression & Treatment; V. Karantza-Wadsworth, RWJMS; *American Association for Cancer Research*

Trial of Carboplatin and RAD001 in Metastatic Castrate Resistant Prostate Cancer Pretreated with Docetaxel Chemotherapy; M. Stein, RWJMS; *Barbara Ann Karmanos Cancer Center*

Mycobacterium TB Biomarkers for Diagnosis and Care; D. Alland, NJMS; *The Catalysis Foundation for Health*

Developing Stool Protocols for the X-Pert System; D. Alland, NJMS; *Howard Hughes Medical Institute*

Biological Function of IRF-5 SNPs in Lupus; B. Barnes, NJMS; *Arthritis Foundation*

In Vivo Evaluation of Insulin as an Adjuvant to Improve Healing in Segmental Bone Defects in a Bilateral Canine Ulna Model; K. Beebe, NJMS; *Orthopaedic Research and Education Foundation*

Synaptic Interactions: Formation and Plasticity; A. Beuve, E. Kuzhikandathil; J. McArdle, P. Rameshwar, E. Townes-Anderson; NJMS; *F. M. Kirby Foundation*

Study of a Potential Drug-Target in the Malaria Parasite, Plasmodium Casein Kinase I; P. Bhanot, NJMS; *American Heart Association*

Comparing Docetaxel in Combination with Doxorubicin and Cyclophosphamide (TAC) vs Doxorubicin and Cyclophosphamide Followed by Docetaxel (AC--T); M. Bryan, NJMS; *Breast Cancer International Research Group*

Role of Two Component Signal Transduction in Candida Interaction with Endothelial Cells; N. Chauhan, NJMS; *American Heart Association*

Effect of a New Curriculum on the Humanism and Professionalism of Medical Students Analysis and Conceptual Model Development; C. Brazeau, NJMS; *The Arnold P. Gold Foundation*

A Clinical Approach to Understand Obstacles to the Diagnosis of Chronic Viral Hepatitis; A. DelaTorre, NJMS; *Healthcare Foundation of New Jersey*

Multiple Sclerosis Development of a New Diagnosis Approach; S. Feldman, NJMS; *Foundation of the Consortium of Multiple Sclerosis Centers*

Study of Weight-Reduction Diet plus Acetazolamide vs. Diet Plus Placebo in Subjects with Idiopathic Intracranial Hypertension with Mild Visual Loss; L. Frohman, NJMS; *St. Luke's Roosevelt Institute for Health Science*

Patient Education: Are we getting the message across?; M. Granick, NJMS; *The Aesthetic Surgery Education & Research Foundation*

Role of Toll Like Receptor 9 in Spinal Cord Neuronal Functioning; R. Heary, NJMS; *Neurosurgery Research and Education Foundation*

Telomere Dysfunction Induced Senescence in Aging Primates; U. Herbig, NJMS; *Ellison Medical Foundation*

Strategic Timing of Antiretroviral Therapy ("START" or INSIGHT 101); S. Hodder, NJMS; *Institute for Clinical Research*

Impact of Innate Immunity on Regressive Autism; H. Jyonouchi, NJMS; *Jonty Foundation*

The Cellular mechanism by which tobacco subverts macrophage cytokine responses to mycobacterial infection; G. Kaplan, NJMS; *Civilian Research and Development Foundation*

Improved Health Outcomes and Process Through Provider training Diabetes Mellitus Continuous Quality Improvement; M. Kolipoulos, NJMS; *American Association of Diabetes Educators*

Inhibition of Type I and Type III IFNs by Poxvirus-Encoded Soluble Proteins; S. Kottenko, NJMS; *The Alliance for Lupus Research*

A Molecular Epidemiologic Study of the Rates and Transmission of Tuberculosis in the Pediatric Population of Masiphumelele; B. Kreiswirth, NJMS; *Civilian Research and Development Foundation*

Trans-Atlantic Network on Newborn Stroke Inflammatory Modulation on Neurovascular Injury; S. Levison, NJMS; *Leducq Foundation*

The Role of MAP Kinases in Regulating Oxidative Stress and Longevity; A. Ivessa, NJMS; *American Heart Association*

Cardiac Protection with Adenylyl Cyclase; K. Iwatsubo, NJMS; *American Heart Association, Founder Affiliate*

The Role of Homocysteine Thiolactone in Atherosclerosis; H. Jakubowski, NJMS; *American Heart Association*

Immunological Research at NJMS; H. Jyonouchi, NJMS; *United Way of Essex County*

Mitochondrial Calcium Signaling and its Influence on Neural Activation-Induced Cerebral Response; S. Kannurpatti, NJMS; *American Heart Association*

Identifying Molecular Mechanisms that Regulate Expression of the D1 Dopamine Receptor Gene in the Kidney; E. Kuzhikandathil, NJMS; *American Heart Association, Heritage Affiliate*

IGF Signaling and Stem Cell Phenotype in Wnt-1 Initiated Mammary Tumorigenesis; D. Lazzarino, NJMS; *Ruth Estrin Goldberg Memorial for Cancer Research*

Role of GMI Ganglioside and its Cross-Linking Ligands in Autoimmune Suppression; R. Ledeen, NJMS; *National Multiple Sclerosis Society*

Notch Signal Specificity in Endothelial Differentiation, Cardiovascular Disease, and Infection by Human Herpesvirus-8; D. Lukac, NJMS; *American Heart Association*

Erythropoietin and Wingless Genes Novel Strategies for Neuronal Longevity During Diabetes; K. Maiese, NJMS; *American Diabetes Association*

Studies on the Mechanisms of Immune Subversion in Leprosy - The Heiser Program Award; C. Manca, NJMS; *New York Community Trust*

Surveillance of the RADARS 7 by Poison Control Center: A Pilot Study; S. Marcus, NJMS; *Denver Health and Hospital Authority*

Antibiotic Prophylaxis in Oral Lacerations; T. Murano, NJMS; *University Physician Associates of New Jersey*

Role of GTP in Iron-Sulfur Cluster Formation in Mammalian Mitochondria; D. Pain, NJMS; *American Heart Association, Founder Affiliate*

Influence of the Maternal Immune Response on Development of Autism; N. Ponzio, NJMS; *Autism Speaks*

Role of Cell Cycle Related Kinase in Cardiac Cell Growth and Survival; H. Qiu, NJMS; *American Heart Association*

Natural Repressors of BMP2 Synthesis; M. Rogers, NJMS; *American Heart Association*

MicroRNA Expression Profiles in Multiple Sclerosis; C. Rohowsky-Kochan, NJMS; *National Multiple Sclerosis Society*

Genetic Factors Associated with Type 1 Diabetes and Diabetic Retinopathy in African Americans; M. Roy, NJMS; *Wellcome Trust*

Redox and Nitrosative Regulation of Cardiac Remodeling Novel Therapeutic Approaches for Heart Failure; J. Sadoshima, NJMS; *Leducq Foundation*

Continuation of Borrelia Sequencing; S. Schutzer, NJMS; *Lyme Disease Association*

Cardiac Dystrophy: Cellular Mechanisms; N. Shirokova, NJMS; *American Heart Association, Founder Affiliate*

Sodium and Calcium Fluxes in Dystrophic Cardiomyopathy; N. Shirokova, NJMS; *American Heart Association, Founder Affiliate*

Post-Transcriptional Regulation of the D1 Dopamine Receptor in Cocaine Addiction; A. Thomas, NJMS; *Pharma Foundation*

The Effects of Local Insulin Application to Lumbar Spinal Fusions in a Rat Model; M. Vines, NJMS; *Orthopaedic Research and Education Foundation*

The mTOR Pathway: A Master Regulator of Oligodendrocyte Differentiation; T. Wood, NJMS; *National Multiple Sclerosis Society*

IL-2 Induced Behavioral Changes: Role of Sex Differences and Development; S. Zalcman, NJMS; *Society for Women's Health Research*

Toxicity Assessment of Bovine Corneal Endothelial Cell Conditioned Media Following Subretinal Injections in Pigs; M. Zarbin, NJMS; *Prevent Blindness America*

The Role of the GSK-3 Alpha in Cardiac Growth, the Development of Cardiac Hypertrophy and the Progression to Heart Failure; P. Zhai, NJMS; *American Heart Association*

MicroRNA-145 in the next Generation of Drug Eluting Stents; C. Zhang, NJMS; *American Heart Association*

Extracellular Matrix Development for Cell-Based Therapy of AMD; M. Zarbin, NJMS; *Lincy Foundation*

Characterization of Kingella kingae leukotoxin. N. Balashova, NJMS; *American Heart Association*

Geriatric Infusion: Preparing Physicians of the 21st Century to Care of Our Elderly; A. Chopra, SOM; *Reynolds Foundation*

Effect of OMT on the Use of Opioid and Analgesic Medication for Chronic Low Back Pain; R. Jermyn, SOM; *American Osteopathic Association*

Stem Cell Therapy for Canavan Disease; P. Leone, SOM; *Jacob's Cure Foundation*

Embryonic Stem Cell-Based Therapy for Canavan Disease; P. Leone, SOM; *Jacob's Cure Foundation*

Neural Stem Cell as Regenerative Therapy for Canavan Disease; P. Leone, SOM; *Jacob's Cure Foundation*

Role of Ubiquitin in Regulating Ribosome Stability; N. Shcherbik, SOM; *American Heart Association (Founders Affiliate)*

Polypharmacy Use among Long-term Care Residents Living at The Francis E. Parker Memorial Home facilities; G. Heider, SN; *The Francis E. Parker Memorial Home*

Health Literacy Initiative with Monolingual Latinos (Instrucción en Salud Latina); F. Munet-Vilaro, SN; *Robert wood Johnson Foundation New Jersey Health Initiative*

Enhancing Living Donor Kidney Transplant Education (ELITE) Study; D. Brown, SPH; *St. Barnabas Medical Center*

Factors of Racially Disparate Breast Cancer Treatment; K. Demissie, SPH; *American Cancer Society*

Human CYP2A13: A New Link between Smoking and Breast Cancer; J. Hong, SPH; *Flight Attendant Medical Research Institute*

Lead States in Public Health Quality Improvement: MLC-3; M. Rosen, SPH; *New Jersey Health Officers Association*

Culturally Competent Smoking Cessation Outreach; M. Steinberg, SPH; *Rutgers Community Health Foundation*

PRIVATE INDUSTRY

Takara Bio Initiative for Innovative Biotechnology; M. Inouye, RWJMS; *Takara Bio*

Trial to Assess the Tolerability of Two Doses of MK 0663/Etoricoxib in Patients with Rheumatoid Arthritis; V. Hsu, RWJMS; *Merck and Company*

Study to Evaluate CDP6038 Administered Subcutaneously for 12 Weeks to Subjects w/Active Rheumatoid Arthritis; V. Hsu, RWJMS; *UCB Biosciences*

Assessment of Content Validity and Other Quantitative Measurement Properties of the Cochin Hand Functional Scale (CHFS) for use in a Scleroderma Patient Population with Digital Ulcers (DUs); V. Hsu, RWJMS; *United BioSource Corporation*

Study to Assess CDP6038 Administered Subcutaneously to Subjects with Active Rheumatoid Arthritis who Complete RA0056; V. Hsu, RWJMS; *UCB Biosciences*

Study to Assess Efficacy of a Once Daily Administration of Phosphodiesterase 5; V. Hsu, RWJMS; *Pfizer*

Study of Retin-A Micro 0.04% in the Treatment of Pediatric Acne Vulgaris in Children, Ages 9 to 11 Years of Age; A. Pappert, RWJMS; *Johnson & Johnson Consumer and Personal Products Worldwide*

Efficacy and Safety of Alitretinoin in the Treatment of Severe Chronic Hand Eczema Refractory to Topical Therapy; B. Rao, RWJMS; *Basilea Pharmaceutica Ltd*

Registry of patients with Psoriasis Who are Candidates for Systemic Therapy Including Biologics; B. Rao, RWJMS; *Centacor*

Assess the Effectiveness of Ozone VOC Purifier to Remove Odors; C. Weisel, RWJMS; *Boeing*

Evaluation of Chemicals that may Adversely Affect the air Quality within an aircraft and Cause Symptoms in Passengers and Crew; C. Weisel, RWJMS; *Boeing*

Efficacy and Safety of Acetadote EDTA Free; A. Geib, RWJMS; *Cumberland Pharmaceutical*

STAT: Mercury Studying the Treatment of Acute Hypertension: A Multi-center Emergency Department Clevidipine Utilization Registry A Registry of Early-Adopting Hospital Experience with Clevidipine Butyrate; R. Eisenstein, RWJMS; *The Medicines Company*

Effect of Acid Suppression on Reversibility of Progression of Barrett's Epithelium to Neoplasia; M. Bajpai, RWJMS; *Takeda Pharmaceuticals North America*

Study of Apremilast (CC10004) in Subjects with Moderate to Severe Plaque Psoriasis; M. Magliocco, RWJMS; *Celgene Corporation*

Study to Evaluate Kidney Damage Measured by Neutrophil Gelatinase Associated Lipoclain (INGAL) as a New Bio-Marker in Patients w/Normal eGFR Undergoing Percutaneous Coronary Intervention; A. Moreyra, RWJMS; *Bracco Diagnostics*

Trial to Evaluate the Pharmacokinetics and Safety Profile of BAY94-9027 Following Single and Multiple Dose Administration in two Cohorts of Previously Treated Male Subjects with Severe Hemophilia; C. Philipp, RWJMS; *Bayer Healthcare Pharmaceuticals*

Study to Evaluate Pharmacokinetics and Immediate Tolerability of Recombinant Activated FVII (rFVIIa BI) in Patients with Hemophilia A or B and Inhibitors; C. Philipp, RWJMS; *Baxter Healthcare Corporation*

Study to Evaluate the Safety Tolerability and Efficacy of FG-3019 in Subjects with Idiopathic Pulmonary Fibrosis; D. Riley, RWJMS; *FibroGen*

Evaluation of Bact/Alert Resin Culture Media vs. Bact/Alert Charcoal Culture Media for the Detection of Micro-Organisms from Blood and Sterile Body Fluids in Adults; M. Weinstein, RWJMS; *Biomerieux Vitek*

Evaluation of the MicroScan Automated Identification & Antimicrobial Susceptibility Testing System for Susceptibility Testing of Daptomycin, Linezolid, Minocycline, Moxifloxacin, & Pristinamycin; M. Weinstein, RWJMS; *Siemens Healthcare Diagnostics*

PDACs in Initiation and Progression of EAE; Y. Ron, RWJMS; *Celgene Cellular Therapeutics*

Sideromics - Gallium Maltolate Project; Y. Ron, RWJMS; *Sideromics, LLC*

Study to Evaluate the Safety and Efficacy of Davunetide for the Treatment of Progressive Supranuclear Palsy; L. Golbe, RWJMS; *Allon Therapeutics*

Study of XP21279B12 and Sinemet in Parkinson's Disease Subjects with Motor Fluctuations; M. Mark, RWJMS; *Xenopt Inc.*

Study of the safety and Clinical Utility of IPX066 in Subjects with Parkinson's Disease; M. Mark, RWJMS; *IMPAX Laboratories*

Characterization of PPA2 as a Novel Therapeutic Target and a Biomarker of PD; M. Mouradian, RWJMS; *Signum Biosciences*

Eslicarbazepine Acetate as Adjunctive Therapy for Refractory Partial Seizures; B. Wu, RWJMS; *Sunovion Pharmaceuticals*

DHEA Against Vaginal Atrophy-Safety Study of 12 Months ERC 230; G. Bachmann, RWJMS; *EndoCeutics*

Evaluation of Clinical Performance of the Determine HIV Ag/Ab Combo; E. Martin, RWJMS; *Alere Scarborough*

Role of  $\alpha$ -Synuclein in Parkinson's Disease using Post Mortem Human Tissue; E. Richfield, RWJMS; *Elan Pharmaceuticals*

Study to Assess the Overall Burden of RSV Disease and its Risk Factors Among Preterm Infants who do not Receive RSV Prophylaxis; D. Chefitz, RWJMS; *Medimmune*

The Genetics of Short Stature International Study of Somatropin (GeNeSIS); I. Marshall, RWJMS; *Eli Lilly and Company*

Inhaled Nitric Oxide for the Prevention of Bronchopulmonary Dysplasia (BPD) in Preterm Infants Requiring Mechanical Ventilation or Positive Pressure Support on Days 5-14 After Birth; S. Puvabanditsin, RWJMS; *INO Therapeutics*

Developmental Studies for MG53 and MG29 in Human Diseases; J. Ma, RWJMS; *TRIM-edicine*

Varenicline - Aided Cigarette Reduction in Smokers Not Ready to Quit; M. Steinberg, RWJMS; *Pfizer*

Study of Agomelatine Sublingual Tablets in Patients with Major Depressive Disorder; M. Menza, RWJMS; *Novartis Pharmaceutical Corporation*

Study to Evaluate 50mg of Desvenlafaxine Succinate Sustained-release Formulation in the Treatment of Peri- and Postmenopausal Women with Major Depressive Disorder; M. Menza, RWJMS; *Wyeth Pharmaceuticals*

Potential Accuracy Improvement in Patient Positioning for the Moving Target Volumes Based on Dynamic Image Registration Between 4DCT and Fluoroscopy; N. J. Yue, RWJMS; *Varian Medical Systems*

Measurement of Pro-Angiogenic Markers in Patients with Hepatic Metastases Undergoing Selective Internal Radiation Therapy (SIRT); J. Noshier, RWJMS; *Sirtex Medical*

Study to Investigate Safety of Progesterone in Patients with Severe Traumatic Brain Injury; M. Tinti, RWJMS; *BHR Pharma, LLC*

Flail Chest: Early Operative Fixation Versus Non-Operative Management - A Prospective Randomized Study; A. Shiroff, RWJMS; *Synthes USA Products, LLC*

Seprafilm in Open Abdomens: A Prospective Evaluation of Wound and Adhesion Characteristics In Trauma Damage Control; A. Shiroff, RWJMS; *Genzyme*

Timing of Patient Care Events During "Rapid" Warfarin Reversal with Fresh Frozen Plasma to Reduce the INR; S. Rhodes, RWJMS; *Compara Biomedical*

Optimization of Cosman Roberts Wells (CRW) Stereotactic Frame Mounting and Subthalamic Nucleus (STN) Targeting; S. Danish, RWJMS; *Integra Life Sciences*

Study of Abiraterone Acetate in Subjects w/Metastatic Castration-Resistant Prostate Cancer Who Have Progressed After Taxane-Based Chemotherapy; T. Mayer, RWJMS; *Cougar Biotechnology*

Trial of Ridaforolimus in Combination w/Dalotuzumab Compared to Exemestane or to Ridaforolimus or Dalotuzumab Monotherapy in Estrogen Receptor Positive Breast Cancer; A. Tan, RWJMS; *Merck and Company*

Liposomal Drug Treatment in Lymphoma Xenograft in Mice; J. Bertino, RWJMS; *Celator Pharmaceuticals*

Trial of Ofatumumab Maintenance Treatment versus no Further Treatment in Subject w/Released Chronic Lymphocytic Leukemia (CLL); K. David, RWJMS; *GlaxoSmithKline*

Study of KW 2478 in combination with Bortezomib in Subjects with Relapsed and/or Refractory Multiple Myeloma; M. Gharibo, RWJMS; *Kyowa Hakko Kirin Pharma; Inc.*

Study of Canfusfanude HCL for Injection (Telcyta) in Refractory or Relapsed Mantle Cell Lymphoma Diffuse Large B Cell Lymphoma and Multiple Myeloma; M. Gharibo, RWJMS; *Telik*

Evaluation of the Phosphorylated Histone H3 (pHH3) Biomarker in the Ascites of Ovarian Cancer Patients; D. Gibbon, RWJMS; *Merck and Company*

Study of R4733 Administered Orally in Patients with Refractory Metastatic or Locally Advanced Solid Tumors; D. Gibbon, RWJMS; *Hoffman La Roche*

Study of GDC 0941 in Combination w/Erlotinib in Patients w/ Advanced Solid Tumors; R. Moss, RWJMS; *Genentech*

Study Comparing CO-1.01 with Gemcitabine as First-Line Therapy in Patients with Metastatic Pancreatic Adenocarcinoma; E. Poplin, RWJMS; *Clovis Oncology*.

Study of Phosphoinositide 3 Kinase Inhibitor GSK 2126458 in Subjects with Solid Tumors or Lymphoma P3K112826; A. Tan, RWJMS; *GlaxoSmithKline*

Study to Evaluate the Effects of Ketoconazole and the Effects of Esomeprazole on the Pharmacokinetics of Orally Administered Repeat Doses of Pazopanib in Subjects with Solid Tumor Malignancies; A. Tan, RWJMS; *GlaxoSmithKline*

Understanding Iniparib and its Role in the Treatment of Triple Negative Breast Cancer; A. Tan, RWJMS; *Sanofi-Aventis*

Registry of Patients with Newly Diagnosed Peripheral T-Cell Lymphoma; K. David, RWJMS; *Allos Therapeutics; Inc.*

Trial of ABT-888 in Subjects with Recurrent High Grade Serious Ovarian Cancer; D. Gibbon, RWJMS; *Abbott Laboratories*

Trial of Letrozole (Femara) and Sorafenib (Nexavar) in Postmenopausal Women with Hormone-Receptor Positive Locally Advanced or Metastatic Breast Cancer; A. Tan, RWJMS; *Bayer Corporation Pharmaceutical Division*

Trial of Letrozole (Femara) and Sorafenib (Nexavar) in Postmenopausal Women with Hormone-Receptor Positive Locally Advanced or Metastatic Breast Cancer; A. Tan, RWJMS; *Bayer Corporation Pharmaceutical Division*

An Epidemiologic Study of Xolair (Omalizumab); D. Axelrod, NJMS; *Genentech*

Intercellular Communication and the Radiation Induced Bystander Effect; E. Azzam, NJMS; *Columbia University*

Design of Novel Cardiac Glycosides; J. Berlin, NJMS; *Drexel University*

High Resolution Human Connectome; B. Biswal, NJMS; *Medical College of Wisconsin*

Validating Resting State Derived Brain Connectivity; B. Biswal, NJMS; *Board of Regents of the University of Wisconsin System*

Therapeutics for Drug-Resistant Bacteria: Myzopyronins; N. Connell, NJMS; *Rutgers, The State University of New Jersey*

Integrated Platform to Accelerate the Rational Design of Therapeutics for Bio-Warfare Threats; N. Connell, NJMS; *Snowdon Pharmaceuticals*

MTR Study of New Lesions in the Become Study; S. Cook, NJMS; *Bayer Healthcare Pharmaceuticals*

Study of Twice Daily Promiseb Topical Cream in Pediatric Subjects with Cradle Cap; E. David, NJMS; *Promius Pharma*

Study of Ramucirumab IMC 1121B Drug Product and Best Supportive Care vs Placebo and BSC as 2nd Line Treatment in Patients with Hepatocellular Carcinoma; A. DelaTorre, NJMS; *Imclone Systems*

Study of PEG-rIL-29 Administered in Combination with Ribavirin to Treatment-Naive Subjects with Chronic Hepatitis C Virus Infection; A. DelaTorre, NJMS; *Zymogenetics*

Study to assess the use of VT-122 in weight losing patients with advanced hepatocellular carcinoma; A. DelaTorre, NJMS; *VICUS Therapeutics*

Role of Chronic Fructose Feeding During Gestation and Lactation on the Incident of Maternal Osteoporosis Consequences in the Offsprings; V. Douard, NJMS; *Benjamin Delessert Institute*

Antibacterial Agents that Restrict the Emergence of Resistance; K. Drlica, NJMS; *The University of Iowa*

Role of Type III IFN in Innate Immunity to Respiratory Virus Infection; P. Fitzgerald-Bocarsly, NJMS; *New York University School of Medicine*

Trial to Assess Outcome of Patients Revascularized by the Penumbra System; C. Gandhi, NJMS; *Penumbra*

Hemodynamic Effects of Inotropic Drugs on Failing Rat Hearts: Comparison with Dobutamine; S. Gao, NJMS; *CV Dynamics*

ER Mitochondrial Signaling and Alcoholic Tissue Injury; L. Gaspers, NJMS; *Thomas Jefferson University*

Feedback Regulation and Transcriptional Coupling in Bacterial Stress Response; M. Gennaro, NJMS; *William Marsh Rice University*

Warfarin vs. Aspirin in Reduced Cardiac Ejection Fraction (WARCEF); C. Gerula, NJMS; *Columbia University*

Study of [F-18] HX4 Positron Emission Tomography (PET) to Detect Hypoxia in Tumors; N. Ghesani, NJMS; *SIEMENS*

Trial Comparing Cervical Arthroplasty to Anterior Cervical Diskectomy and Fusion for the Treatment of Cervical Degenerative Disc Disease; R. Heary, NJMS; *DePuy*

An Assessment of P-15 Bone Putty in Anterior Cervical Fusion with Instrumentation; R. Heary, NJMS; *Cerapedics*

Biomechanical Assessment of Perimeter Mesh Location on Cement Distribution and Potential Cement Extravasation through the Vertebral Endplates; R. Heary, NJMS; *DePuy*

In Vitro Assessment of the Expedium Pedicle Screw System with various Rods; R. Heary, NJMS; *DePuy*

Study of Ultrasound Therapy as Adjunctive Therapy for Increasing Posterolateral Fusion Success Following Lumbar Surgery; R. Heary, NJMS; *Smith and Nephew*

Trial to Compare the Efficacy, Safety, and Tolerability of PREZISTA by Gender and Race; S. Hodder, NJMS; *Tibotec Pharmaceuticals*

Trial of TMC278 25 mg q.d. Versus Efavirenz 600mg q.d. in Antiretroviral-Naive HIV-1 Infected Subjects; S. Hodder, NJMS; *Tibotec Therapeutics*

Improving Testing for TB and LTBI for Persons with HIV at HRSA Title III Funded Clinics - TBESC Task Order 29; S. Hodder, NJMS; *Columbia University*

Study of GSK1349572 50 mg Once Daily Versus Raltegravir 400 mg Twice Daily; S. Hodder, NJMS; *GlaxoSmithKline*

Study to Evaluate Cardiovascular Outcomes Following Treatment with Alogliptin in Addition to Standard of Care in Subjects with Type 2 Diabetes; E. Kaluski, NJMS; *Takeda Global Research & Development Center*

Prospective observational long-term safety registry of Multiple Sclerosis patients who have participated in cladribine clinical trials; S. Kamin, NJMS; *Serono Laboratories*

JCV Antibody Program in Patients with Relapsing Multiple Sclerosis Receiving or Considering Treatment with Tysabri; S. Kamin, NJMS; *Biogen Idec*

Study of HEPLISAV to Licensed Vaccine {Engerix B} Among Adults {18 to 70 Years of Age} with Chronic Kidney Disease; G. Kaplan, NJMS; *Dynavax Technologies*

Mycobacterium Tuberculosis Infection of Human Lung; G. Kaplan, NJMS; *Cornell University*

Incidence of TB in cohort of children enrolled in a TB prevention trial; S. Kim, NJMS; *Harvard University*

Study of Aliskiren Therapy on top of Standard Therapy on Morbidity and Mortality in Patients With Acute Decompensated Heart Failure; M. Klapholz, NJMS; *Novartis Pharmaceuticals*

Study Evaluating the Hemodynamic Effects, Safety and Tolerability of CXL-1020 in Patients with Systolic Heart Failure; M. Klapholz, NJMS; *Cardioxyl Pharmaceuticals*

Extension to the Study to Evaluate the Long-Term Efficacy and Safety of Concentration-Controlled Everolimus in Liver Transplant Recipients; B. Koneru, NJMS; *Novartis Pharmaceuticals*

Role of Type III Interferon in Innate Immunity to Respiratory Virus Infection; S. Kotenko, NJMS; *New York University School of Medicine*

Molecular Epidemiology of HIV-Associated Extensively Drug Resistant Tuberculosis in Rural South Africa; B. Kreiswirth, NJMS; *Albert Einstein College of Medicine*

Extensively Drug-Resistant Tuberculosis Among Gold Miners in South Africa; B. Kreiswirth, NJMS; *Johns Hopkins University Hospital*

Designing and Validating a Diagnostic Test for Virulent Isolates to Prevent HAP; B. Kreiswirth, NJMS; *Pfizer*

Study to Describe the Genetic Profile of Carbapenem Resistant Klebsiella Pneumoniae Strains Causing Nosocomial Infections in the Metropolitan New York and New Jersey Population; B. Kreiswirth, NJMS; *Merck Research Laboratories*

Women's Health Initiative Memory Study (ECHO) Epidemiology of Cognitive Health Outcomes; N. Lasser, NJMS; *Wake Forest University Health Sciences*

Clinical Trial Evaluating Adherus TM Dural Sealant When Used as a Dural Sealant in Cranial Procedures; J. Liu, NJMS; *HyperBranch Medical Technology*

Study to Evaluate the Effects of Oral Administration of Lixivaptan in Patients with Congestive Heart Failure; J. Maher, NJMS; *Cardiokine Biopharma*

Study to evaluate the efficacy and safety of oral BAY 63-2521 (1mg, 1.5 mg, 2 mg, or 2.5 mg TID) in patients with Chronic Thromboembolic Pulmonary Hypertension; J. Maher, NJMS; *Bayer Healthcare Pharmaceuticals*

Left Atrial Pressure Monitoring to Optimize Heart Failure Therapy (LAPTOP-HF IDE Study); J. Maher, NJMS; *St. Jude Medical Company*

Study of GSK716155 and its effect on myocardial metabolims, myocardial function, and exercise capacity in patients with NYHA Class II/III congestive heart failure; J. Maher, NJMS; *GlaxoSmithKline*

The Effect of Recombinant Luteinizing Hormone on Follicular Response, Oocyte Quality, and Pregnancy in In-Vitro Fertilization Cycles in Women; P. McGovern, NJMS; *Serono Laboratories*

Surface Modified Scaffolds to Promote Bone Formation; P. Opperman, NJMS; *3D Biotek*

Study of Eslicarbazepine Acetate Monotherapy in subjects with Partial Epilepsy Not Well Controlled by Current Antiepileptic Drugs; J. Pak, NJMS; *Sepracor*

Steinmann Pin Augmentation Versus Locking Plate Constructs in Cemented Proximal Tibial Defects; F. Patterson, NJMS; *Synthes*

Cellular Basis for the Antifungal Activity of Amiodarone; D. Perlin, NJMS; *Johns Hopkins University*

Assessment of Bacteriostatic or Bacteriacidal Properties of Perfluoroalkylated Photosensitizers on Solid Surfaces with Developing Biofilms and with Planktonic Cells; D. Perlin, NJMS; *New Jersey Institute of Technology*

Improving Efficacy of TB Drugs by Immune Modulation with a PDE4 Inhibitor (SelCID); D. Perlin, NJMS; *Celgene Corporation*

Evaluation of PDE4 Inhibitors in Influenza Models; D. Perlin, NJMS; *Celgene Corporation*

Mechanistic Assessment of Reduced Antifungal Susceptibility to Caspofungin and other Echinocandin Drugs in Clinical Isolates; D. Perlin, NJMS; *Merck and Company*

Evaluation of ASP9726 on inhibition glucan synthase from susceptible and echinocandin resistant fungi; D. Perlin, NJMS; *Astellas Pharma US*

Study of YONDELIS (trabectedin) for Subjects with Advanced or Metastatic Sarcoma; L. Pliner, NJMS; *Johnson and Johnson*

Comparison of Dexmedetomidine Sedation vs Propofol in Vitreoretinal Surgery Under Sub-Tenon's Block; M. Potian; NJMS; *Hospira*

Evaluate whether bone marrow cells delivered systemically after ischemiareperfusion myocardial infarction can home to be infarct region in mice; H. Qiu, NJMS; *CV Dynamics*

Identifying Efficient Surfaces for the Expansion of Human Mesenchymal Stem Cell; P. Rameshwar, NJMS; *BASF Corporation*

Allogenic Response to Bone Chip; P. Rameshwar, NJMS; *Biomet*

Functional Analysis of Pirt and Pirt2 Novel Regulators of TRP Channels; T. Rohacs, NJMS; *Johns Hopkins University*

Glucose Sensing Study Group: An Examination of the Potential for SGLT Based Therapy in the Reversal of Defective Counterregulation in T1DM; V. Routh, NJMS; *Yale University*

Study of Mapatumumab in Combination with Sorafenib as a First-line Therapy in Subjects With Advanced Hepatocellular Carcinoma; A. Samanta, NJMS; *Human Genome Sciences*

Trial of ANA 598 Administered with Pegylated Interferon and Ribavirin in Genotype 1 Patients with Chronic hepatitis C; A. Samanta, NJMS; *Anadys Pharmaceuticals Inc.*

Registry of the Efficacy, Safety and Adherence to Therapy of Infergen (Interferon alfacon-1) in Patients Chronically Infected with Hepatitis C; A. Samanta, NJMS; *Duke Clinical Research Institute*

The Use of Intravenous Ibuprofen for Post Electroconvulsive Therapy Myalgia; T. Schultz, NJMS; *Cumberland Pharmaceuticals*

The Use of FSH Receptor Polymorphisms to Improve Pregnancy Rates in In-Vitro Fertilization; A. Seungdamrong, NJMS; *Ferring Pharmaceuticals*

A New Marker for Chronic Demyelination in Diabetic Neuropathy Study; N. Souayah, NJMS; *Talecris Biotherapeutics*

Role of HVPS34/mTOR Complex in Amino Acid-Induced Obesity and Insulin Resistance; A. Thomas, NJMS; *University of Cincinnati*

Identification and Prediction of Polyadenylation Sites Using Sequencing Reads; B. Tian, NJMS; *New Jersey Institute of Technology*

Mechanisms for Increased Breast Cancer Risk in Type 2 Diabetes; T. Wood, NJMS; *Mount Sinai School of Medicine*

Study of the Epi Rad90 Ophthalmic System for the Treatment of Subfoveal Choroidal Neovascularization; M. Zarbin, NJMS; *Neo Vista*

Generation and Evaluation of a Varicella Zoster Virus with an ORF7 Deletion (v7D); H. Zhu, NJMS; *Beijing Wantai Biological Pharmacy*

Efficacy Study of Anti HCMV Drug Candidate INAX; H. Zhu, NJMS; *INAGEN ApS*

A Severe combined immuno-deficient (SCID) hu chimeric mouse model for studying HCMV viral replication; H. Zhu, NJMS; *Merck Sharp and Dohme Research Laboratories*

Purification of bacterial proteins that target the blood brain barrier; S. C. Kachlany, NJDS; *InnoPharma*

Study of Regularly Scheduled Neutralizing Antibody Testing on Treatment Patterns versus Usual Care in High-Dose Interferon Treated Subjects; D. Barone, SOM; *Allergan*

Trial of Oral Cladribine in Subjects with a First Clinical Event at High Risk of Converting to MS; D. Barone, SOM; *EMD Serono*

JCV Antibody Program in Patients with Relapsing Multiple Sclerosis Receiving or Considering Treatment with Tysabri: STRATIFY-2; D. Barone, SOM; *Biogen Idec*

Trial to Evaluate Electric Autoinjector (RebiSmart™) or Self-Injection in Subjects with Relapsing Multiple Sclerosis (RMS) Treated with Rebif 44 mcg Subcutaneously (sc) Three Times a Week; D. Barone, SOM; *EMD Serono*

Trial of Bapineuzumab (AAB-001, ELN115727) in Patients With Mild to Moderate Alzheimer's Disease Who Are Apolipoprotein E 4 Non-Carriers; A. Chopra, SOM; *Elan Pharmaceuticals*

Study to Assess the Efficacy (Reduction of Cardiovascular Disease Events) and Safety of 100 mg Enteric-Coated Acetylsalicylic Acid in Patients at Moderate Risk of Cardiovascular Disease; J. Coren, SOM; *Bayer Healthcare*

Study of MAP0004 in Adult Migraineurs for a Single Migraine Followed by Open-Label Extension to 26/52 Weeks; J. Coren, SOM; *MAP Pharmaceuticals*

Study of Albiglutide Administered in Combination with Metformin and Glimepiride Compared with Metformin Plus Glimepiride and Placebo and with Metformin Plus Glimepiride, and Pioglitazone in Subjects with Type 2 Diabetes Mellitus; K. Garnier, SOM; *GlaxoSmithKline*

Study of Albiglutide When Used in Combination with Metformin Compared with Metformin Plus Sitagliptin, Metformin Plus Glimepiride, and Metformin Plus Placebo in Subjects with Type 2 Diabetes Mellitus; K. Garnier, SOM; *GlaxoSmithKline*

Study of Albiglutide When Used in Combination with Pioglitazone with or without Metformin in Subjects with Type 2 Diabetes Mellitus; K. Garnier, SOM; *GlaxoSmithKline*

Trial to Evaluate Depagliflozin in Subjects with Type 2 Diabetes Mellitus and Moderate Renal Impairment Who Have Inadequate Glycemic Control; E. Helfer, SOM; *Bristol-Myers Squibb*

Study to Assess the Efficacy (Reduction of Cardiovascular Disease Events) and Safety of 100 mg Enteric-Coated Acetylsalicylic Acid in Patients at Moderate Risk of Cardiovascular Disease; R. Hudrick, SOM; *Bayer Healthcare*

Study of the Durability of Effect of Milnacipran for the Treatment of Fibromyalgia in Patients Receiving Long Term Milnacipram Treatment; R. Hudrick, SOM; *Forest Research*

Study of Cutaneous Field Stimulation (CFS) as Treatment for Chronic Back Pain; R. Jermyn, SOM; *Meagan Medical*

Efficacy and Safety of Cyclobenzaprine Hydrochloride Extended-Release for the Treatment of Chronic Migraine; L. Mueller, SOM; *Cephalon*

The Evolution and Management of Migraine Recurrence beyond 24 Hours: A Prospective Study of Tertiary Care Center Patients; L. Mueller, SOM; *Endo*

Beneficial Effects of SB in Preventing Structural and Functional Breakdown of the Blood-Brain Barrier Mediated by Diabetes and Hyperlipidemia in the Porcine Brain; R. Nagele, SOM; *GlaxoSmithKline*

DNA Methylation-A Mechanism for Aggressive Breast Cancers in African American Women; K. Demissie, SPH; *Roswell Park Cancer Institute*

Risk Factors and Barriers to Long-Term Medication Adherence Among Adult Renal Transplant Patients: a Mixed Method Approach; K. Demissie, SPH; *Novartis Pharmaceuticals*

Childhood Obesity Prevention & Disease Risk Reduction: A Needs Assessment & Education Intervention for Pediatric & Orthodontic Dental Residents; J. Ziegler, SHRP; *American Dietetic Association*

The Effects of Almond Consumption on Pre-diabetes; S. Gould Fogerite, SHRP; *Almond Board of California*

The Effects of Pressure on Lower Back Pain in Sciatica; A. I. Perlman, SHRP; *Johnson and Johnson Consumer and Personal Products Worldwide*

## **FOUNDATION OF UMDNJ**

Immune Functions of a Novel Gut-Specific Innate Cell Type; A. Laouar, RWJMS

Metabolically Stable Oligoamines for siRNA Nanoparticle Preparation; T. Thomas, RWJMS

Adenosine and Neurodegeneration; P. Sonsalla, RWJMS

Human Neural Cell Platforms and Human Cell Based Bioassays to Discover Inhibitors of Regulatory Elements Critical for Neurological Disorders; S. Dhib-Jalbut, RWJMS

Toxicity of Phthalas and Bisphenol A in Neonates; B. Weinberger, RWJMS

Modulating Glutamergic Signaling to Enhance Radiation Therapy in Gliomas; A. Khan, RWJMS

The Regulation of p53 and its Pathway by MicroRNAs in Colorectal Cancer; Z. Feng, *Collaborative "High Impact" Grant*

Refinement of a High Fidelity Recording System and Quantitative Visual Activity Map for Real Time Functional Localization of Targets During DBS Surgery; E. L. Hargreaves, RWJMS

Prostate Cancer Research Outcomes; T. Jang, RWJMS

Comparative Effectiveness of Different Treatments for Locally Advanced CaP; T. Jang, RWJMS

Intensity Modulated Radiation Therapy for Prostate Cancer and the Effect of Certificate of Need; T. Mayer, RWJMS

Zebrafish Model of TEL-AML1 Leukemia; H. Sabaawy, RWJMS

Leukemia Inhibitory Factor Negative Regulation p53 in Colorectal Cancer; W. Hu, RWJMS

Determining the Target of a Compound that Blocks Plasmodium Sporozoite; P. Bhanot, NJMS

Non Canonical Metastatic Pathway for CrK Oncogene in Breast Cancer; R. Birge, NJMS

Reverse Engineering Type 1 Diabetes (T1D); D. Bleich, NJMS

Regulation of the Connexin Channel that Produces Deafness and Skin Disorders; J. Contreras, NJMS

Tuberculosis Testing in a Multi Ethnic Inner City Population of High Risk Pregnant Women; A. Davidow, NJMS

Induced Pluripotent Stem Cell Correction of Muscular Dystrophy Associated Cardiomyopathy; D. Fraidenaich, NJMS

Dissecting the Role of the IGF 1 Mechanical Loading Axis to Combat Osteoporosis; C. Fritton, NJMS

Positron Emission Tomography with F-18 Flourodeoxyglucose to Identify Early Events in Latent Infection with Mycobacterium Tuberculosis; N. Ghesani, NJMS

IGF Signaling Promotes Bypass of Cellular Senescence During Early Stage of Breast Cancer (MPI); U. Herbig, NJMS

Nursing the Brain to Health: A Multidisciplinary Approach to Modern-Day Stroke Treatment; A. Hidalgo, NJMS

Modeling HIV Transmission and Prevention in Newark, NJ; S. Hodder, NJMS

Perspectives of Culturally Competent Smoking Cessation Counseling Practices - A View From College/University; N. Hymowitz, NJMS

Waiting Room Parents - Strengthening the Lives of Vulnerable Youth; R. Johnson, NJMS

Role of Autotaxin in HCV-Associated Hepatocellular Carcinoma; N. Kaushik-Basu, NJMS

Using Bacterial Genomics to Unravel the NYC MRSA Epidemic; B. Kreiswirth, NJMS

DNA Repair Defect in Fanconi Anemia Group A; M. Lambert, NJMS

The Role of SWI SNF Related Complex Components in Osteoblast Differentiation; E. Moran, NJMS

Purification and Crystallization of Meca-ClpC Complexes; M. Neiditch, NJMS

Genome Targeted Inhibitor of Retrovirus Bridging Funds; V. Pandey, NJMS

A Novel Approach to Examine the Function of Two Treponema Pallidum Proteins and to Evaluate their Potential as Vaccine Candidates Against Syphilis; N. Parveen, NJMS

Memory Immunity in TB; P. Salgame, NJMS

Development of High Throughput Screening Assays for Modulators of Mitochondrial ATP-Dependent Proteolysis; C. Suzuki, NJMS

The Mitochondrial ATP Dependent Lon Protease in Cardiac Ischemia and Hypertrophy; C. Suzuki, NJMS

Roles of the Mitochondrial Chaperones Mortalin and Tid1 in Protein Disaggregation and Degradation; C. Suzuki, NJMS

Deep Sequencing RNA Ligands for Double Stranded RNA Binding Domain Proteins; B. Tian, NJMS

Role of retroviral superantigen-specific genes in B cell lymphoma development, V.K. Tsiagbe, NJDS

A Method for Isolating Bioactive Compounds from Biofilms. D. Kadouri, NJDS  
Kingella kingae outer membrane vesicles for vaccine development. N. Balashova, NJDS

Anthrax DNA Helicase and Primase Inhibitors for Biodefense; S. Biswas, SOM

Structure-Function of Prokaryotic Transcription Elongation Factors Gre and Gfh; S. Borukhov, SOM

Regulation of Meiotic Divisions by Hct1p Dependent Proteolysis; K. Cooper, SOM

Using Lectins to Target Podoplanin for Chemotherapy; G. Goldberg, SOM

The Yeast Saccharomyces Cerevisiae as a Model Organism for Autism; M. Henry, SOM

Use of a Genetically Amenable Model Organism to Identify Potential Autism Predisposition Genes; M. Henry, SOM

Non-Equivalence of the ES Cell Specific microRNAs miR-290-295/miR-371-373; H. Houbaviy, SOM

Tissue-Specific Analysis of Lin28 Mutant Mice; E. Moss, SOM

Identification of Ubiquitinated Proteins Associated with Yeast Ribosomes; D. Pestov, SOM

Pain Reactivity in Couples with Osteoarthritis: A Feasibility Study; R. Pruchno, SOM

Myogenic Differentiation of Cord Blood Mesenchymal Stem Cells; B. Saitta, SOM

Identification of Genes Controlling Ribosome Degradation; N. Shcherbik, SOM

Structure and Function of Human Mitochondrial RNA Polymerase; D. Temiakov, SOM

Effects of Lipoxin A4 and Lipoxin Analogs in Sepsis; K. Yin, SOM

Can Parks Promote Physical Activity Among Children Living in Low Income Families?; S. Echeverria, SPH

Development of Gene Selection Method for Discovery of Cancer Subtypes; K. Sinae, SPH

Cortical Stimulation of Autism Spectrum Disorder; E. Tunik, SHRP

Guided Imagery and Relaxation Techniques as an Adjunct to Preparing and Recovering from Orthognathic Surgery; S. Gould Fogerite, SHRP

Markers of Stress and Inflammation in pre-Type 2 Diabetes; S. Gould Fogerite, SHRP

The use of Biofeedback to Augment the Acquisition of Skills in Performing Joint Mobilization Techniques Among Physical Therapy Students; E. Tunik, SHRP

Yoga intervention specifically tailored for people with Multiple Sclerosis ; S. Gould Fogerite, SHRP

Helping Enhancing Low Perceived Social Support (HELPS): A Pilot Study on Social Support Intervention; W. Lu, SHRP

The Impact of Self-Help Center Characteristics on the Satisfaction and Empowerment of People with Serious Mental Illness; N. Gao, SHRP

Peer Employment Support Study; M. Roberts, SHRP

Effect of Self-efficacy and Outcome Expectations on Work Seeking Behavior Among People with Psychiatric Disabilities. A. Spagnolo, SHRP

### **INTERNAL UMDNJ FUNDING**

Prevention and Control (RWJ Foundation Grant); R. DiPaola, RWJMS; *The Cancer Institute of New Jersey Foundation*

The Effect of Radiation Education and Risk Awareness in Emergency Department CT Utilization; R. Eisenstein, RWJMS; *Department of Emergency Medicine*

Comparison of Ventilation Perfusion Scan Data in Acute Pulmonary Embolism; M. Chin, RWJMS; *Department of Emergency Medicine*

Oxygen Therapy for the Treatment of Undifferentiated Headache in the Emergency Department; B. Veysman; RWJMS *Department of Emergency Medicine*

Impact of a change in ICU Admission Policy on Length of Stay and Morbidity; J. McCoy, RWJMS; *Department of Emergency Medicine*

The Effects of Simulation on Caregiver Confidence During Cardiovascular Resuscitation; J. McCoy, RWJMS; *Department of Emergency Medicine*

Patterns of Emergency Department Use for Primary Care; R. Arya, RWJMS; *Emergency Medicine & Family Medicine*

Understanding Primary Care Workforce Innovations and Barriers to Spread; B. Crabtree, RWJMS; *Robert Wood Johnson Foundation*

Evaluation of Cardiac Uncoupling and Heart Rate Variability in Patients Undergoing Surgical Resection of Upper Gastrointestinal Malignancies; C. Gannon, S. Lowry, D. August, D. Carpizo, RWJMS; *CINJ*

Molecular Modulators of HCV Replication; N. Kaushik-Basu, NJMS; *Dean's Biomedical Research Support*

Treatment of Sepsis; K. Yin, SOM; *UMDNJ Patents and Licensing*

Registered Nurses Study; B. Caldwell, SN; *UMDNJ – School of Nursing Grant*

HIV and AIDS Prevention Transmission Knowledge and Attitudes of Participants in Community Health Fairs; F. Munet-Vílaro, SN; *Francois Xavier Bagnoud Center*

Factors of Racially Disparate Breast Cancer Treatment; K. Demissie, SPH; *The Cancer Institute of New Jersey*

Correlation Between Balance and Ankle Injuries in Soccer; C. Vasan, SHRP; *Ross Memorial Scholarship*

LiveWell! A Lifestyle Management Program; D.R. Radler, SHRP

Virtual Laboratory for Biomedical Data Management; S. Srinivasan, SHRP; *Academic Information Technology Advisory Committee (ACITAC)*

Multi-disciplinary Pilot Program to Address Metabolic Syndrome for Persons with Mental Illness; K. Gill, SHRP; *UMDNJ-School of Health Related Professions-Department of Psychiatric Rehabilitation and Counseling Professions Program and Foundaton of UMDNJ*

FACIT (Fidelity Assessment Common Ingredients Tool) study. P. Basto, SHRP; *UMDNJ-School of Health Related Professions*

Faculty and Student Attitudes Towards Students  
with Psychiatric Disabilities on Campus; M.  
Mullen, SHRP; *Academic Information  
Technology Advisory Committee (ACITAC)*



## APPENDICES

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## **CAPITAL PLAN**

### **NEWARK CAMPUS – Existing Facility Upgrades**

#### **Energy Conservation Measures**

This project engages approximately \$11 million in funding from PSE&G for major infrastructure upgrades at the campus power plant. Work will renovate existing systems and provide new infrastructure as required to significantly reduce energy consumption on the campus.

#### **Central Research Animal Facility Renovation**

Using approximately \$15 million in American Recovery and Reinvestment Act of 2009 funding, this project will provide for a reconstruction of the existing animal research facility in the Medical Science Building. The project will allow the New Jersey Medical School to enhance its research mission.

#### **UH Cardiology/Radiology Equipment Replacement**

This \$2.4 million project funded by University Hospital (UH) will renovate three Cardiology Labs on I level and two Radiology Suites on C level of UH to receive new state-of-the-art cardiac and interventional equipment. The new GE equipment on I level and Siemens equipment on C level will significantly increase up-time and revenue in both units of UH.

#### **NJDS D North Clinic Renovation**

This \$1.6 million project funded by New Jersey Dental School will renovate a dental clinic on D-Level of the Bergen Street Pavilion. Forty-four original, beyond useful life operatories will be replaced with forty-four modern operatories that conform to today's preferred dental practices.

### **PISCATAWAY CAMPUS – Existing Facility Upgrades**

#### **UBHC Seclusion Room Improvements**

This \$550,000.00 project funded by University Behavioral HealthCare (UBHC) will renovate and update two seclusion rooms and surrounding areas in the inpatient areas of UBHC's Piscataway campus. The project will enhance the behavioral program, update the configuration and aging infrastructure serving these rooms, and bring the space up to current hospital and health care facility construction guidelines.

#### **151 Centennial Envelope Repair and Restoration**

This \$780,000.00 project will allow for repairs to the exterior stone façade of the building. Repairs and restoration will alleviate deteriorated conditions around the exterior.

**BOARD OF TRUSTEES MEMBER PROFILES**

**KEVIN M. BARRY, MD, MBA**  
- CHAIRPERSON -

Kevin M. Barry, MD, MBA is an attending anesthesiologist at Morristown Memorial Hospital. He has served as president of Anesthesia Associates of Morristown since 1994.

Dr. Barry was a Henry Rutgers Scholar and graduated Phi Beta Kappa with a BA in Biochemistry from Rutgers College in 1983. He received his medical degree in 1987 from UMDNJ-New Jersey Medical School. He interned at Memorial Sloan Kettering Cancer Center and then completed an anesthesia residency at The New York Hospital and Hospital for Special Surgery, Cornell Medical Center, where he served as the chief resident from 1990 to 1991. In 1995 he received an MBA from New York University's Stern School of Business.

Dr. Barry is a Diplomat of The American Board of Anesthesiology, The American Board of Pain Medicine, and The American Board of Medical Acupuncture and is a Certified Physician Executive of The Certifying Commission in Medical Management.

He is a member of the American Medical Association, New Jersey Medical Society, Morris County Medical Society, American Society of Anesthesiologists, New Jersey State Society of Anesthesiologists, American Academy of Pain Medicine, American Academy of Medical Acupuncture, and American College of Physician Executives. He has served as a consultant in anesthesia to the State Board of Medical Examiners, on the planning committee of the Helms Medical Institute, and the Health Care Transition Team for Governor Christie.

He also teaches medical acupuncture to physicians in programs accredited by UCLA and Stanford Schools of Medicine. He serves on the Anesthesia Steering Committee for Health Volunteers Overseas, and has provided medical care and physician training in many countries over the past 20 years. His first trip abroad was as a fourth-year medical student at New Jersey Medical School.

Dr. Barry was appointed to the UMDNJ Board of Trustees in February 2007.



**MARY ANN CHRISTOPHER, RN, MSN, FAAN**  
- VICE-CHAIRPERSON -

Mary Ann Christopher, RN, MSN, FAAN is President and Chief Executive Officer of Visiting Nurse Association of Central Jersey (VNACJ), a community-based organization that provides comprehensive care to individuals and families throughout Monmouth, Middlesex, Ocean, Mercer, Somerset, Union, Burlington and Gloucester counties. VNACJ is the largest Visiting Nurse Association in the State of New Jersey and among the largest in the nation, with 1,500 serving over 100,000 individuals each year. Mrs. Christopher has been a nurse for thirty years and has worked at the VNACJ since 1983.

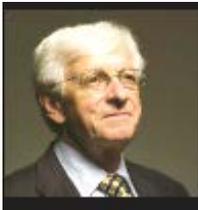
During her tenure as President and CEO, Mrs. Christopher has spearheaded the agency's growth into its region's leading provider of in-home and hospice care. Under her stewardship, the VNACJ provides a broad array of programs, including clinics for the poor, school-based health services, a mobile nursing program to the deinstitutionalized mentally ill and community outreach and prevention programs. The agency serves as an essential safety-net for thousands of individuals and families without access to primary and preventative services.

Mrs. Christopher is a leading national voice on a wide range of health care issues. She regularly interacts with decision-makers on Capitol Hill and in her State Capitol to develop legislative and regulatory policies to enhance the delivery of home care, hospice, and community-based health care services. Her public policy work has included advancement of public/private partnerships to address the growing nursing shortage, expansion of telehealth services, ensuring adequate reimbursement for Medicare home health, improving Medicaid managed care programs strengthening her state's human services system for the most vulnerable.

Her work has included serving with distinction on numerous Boards of Directors, and appointments to several health-care related positions across the country. She currently serves on the Board of Trustees for both the National Association for Home Care and Hospice ("NAHC") and the Visiting Nurse Associations of America ("VNAA"), and is the Chair of the Robert Wood Johnson Foundation New Jersey Nursing Initiative, aimed at addressing the shortage of nurses across the state. She is also a Fellow of the American Academy of Nursing, the Nurse Executive Program at the Wharton School of Business, and the Public Health Leadership Institute of the Centers for Disease Control.

Mrs. Christopher earned a Bachelor of Science Degree in Nursing from Fairfield University and a Master of Science Degree in Nursing from Seton Hall University. She and her husband George Christopher reside in Avon By The Sea, and have four children.

Mrs. Christopher was appointed to the UMDNJ Board of Trustees by Governor John S. Corzine in June 2006, and reappointed to a full five-year term in 2007.

**BRADFORD W. HILDEBRANDT**

- SECRETARY -

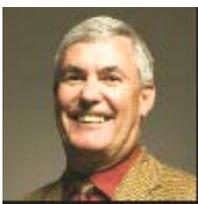
Bradford W. Hildebrandt is the founder of Hildebrandt, Inc., an international management and consulting firm that services government agencies, law firms, and other professional service firms. He is recognized as an international authority on the subjects of strategy planning, leadership and organizational development, governance and management, compensation, economics, and mergers. He is acknowledged with creating an industry standard of specialized tools needed for successful professional management consulting in the legal profession worldwide.

He is a member of the Pace University School of Law Board of Visitors, a faculty advisor and lecturer at the George Washington University School of Professional Services, and a faculty advisor to several universities.

Mr. Hildebrandt, a Merchant Marine officer, is a board member of the Rutgers Institute of Marine and Coastal Sciences.

He earned a B.S. from Rutgers, the State University of New Jersey, and continued with graduate studies at Pace University in New York.

Mr. Hildebrandt joined the Board in June 2007.

**JAMES BROACH, PH.D.**

- TRUSTEE -

James R. Broach, PhD, is currently serving as Associate Chair and Professor at Princeton University, Department of Molecular Biology.

Dr. Broach completed his undergraduate studies at Yale University and was awarded a Bachelor of Science degree in chemistry in 1969. In 1973, he was awarded a Ph.D. in Biochemistry from the University of California, Berkeley where he also completed his predoctoral fellowship in Biochemistry, and postdoctoral fellowship in medical Physics. In addition, he completed a postdoctoral fellowship at Cold Springs Harbor Laboratory, upon which he was employed in the capacity of a Staff Scientist. Subsequently, he joined the State University of New York at Stony Brook as an Assistant/Associate

professor, a position he held just prior to serving in his current position at Princeton University.

In the past, Dr. Broach has served as a Postdoctoral Fellow with the American Cancer Society, an Investigator for the American Heart Association, a Fellow with the American Academy of Microbiology, and a member of the National Institutes of Health's Genetics Section. He has also served as an Associate Editor for the journals *Cell* and *Molecular and Cellular Biology* and Associate Editor for the *Journal Cell*. He also served as Co-Chairman of the 1991 Gordon Conference on Extrachromosomal Elements and Chairman of the 1993 Gordon Conference on Plasmid and Chromosome Dynamics.

He was appointed to the Board of Trustees in April 2007.



**HONORABLE JAMES H. COLEMAN, JR.**  
- TRUSTEE -

James H. Coleman, Jr. is Of Counsel to the Morristown-based law firm of Porzio, Bromberg & Newman P.C. He focuses his practice on advising attorneys and clients on appellate strategy and on acting as a mediator or arbitrator of complex, private and public disputes.

Justice Coleman joined Porzio following a long judicial career, which culminated in his elevation to the Appellate Division in 1981, and his appointment in 1994 to the Supreme Court of New Jersey, where he served as an associate justice until his retirement in 2003.

Until recently, Justice Coleman served as chairman of the Board of Trustees for Legal Services of New Jersey and as co-chair of the Governor's Judicial Advisory Panel. He has previously served as chairman of New Jersey Supreme Court Committees on both Sentence Disparity and Minorities Concerns in the Judiciary, and as a member of New Jersey Supreme Court Committees on Criminal Practice, Legal Ethics, Medical Malpractice and Probation. Justice Coleman was also a member of the New Jersey Supreme Court Appellate Division Management Committee and the New Jersey Death Penalty Study Commission.

Justice Coleman earned a B.A. from Virginia State University in 1956 and a J.D. from Howard University School of Law in 1959. He was admitted to the New Jersey Bar in 1960.

Justice Coleman was appointed to the UMDNJ Board of Trustees in 2010.



**KEVIN M. COVERT, ESQ.**  
- TRUSTEE -

Kevin M. Covert, Esq., is the Vice President and Deputy General Counsel for Human Resources at Honeywell International Inc., headquartered in Morristown. At Honeywell, Mr. Covert is responsible for all legal matters including litigation, compliance and corporate transactions relating to labor, employment, employee benefits and compensation. He oversees labor negotiations and the language of collective bargaining agreements.

Prior to joining Honeywell in 1998, Mr. Covert was a shareholder in Kulzer & DiPadova, P.A., in Haddonfield. His practice areas included employee benefits, retirement plans, and compensation planning.

He is a member of the bar in New Jersey and Pennsylvania. He is also a member of the American Benefits Counsel and has served as chairman of that organization's Government Relations Committee.

Mr. Covert received a B.S. in Finance from Rider University, an LL.M. in Taxation from New York University, and a J.D. from Rutgers University School of Law and is currently working towards his MBA from Wharton Business School.

Mr. Covert was appointed to the Board of Trustees in March 2007.



**DAVID CRITCHLEY**  
- TRUSTEE -

David Critchley is Secretary-Treasurer of the New Jersey State Building and Construction Trades Council, AFL-CIO, which coordinates activity and provides resources to 15 affiliated trades unions in the construction industry. It also represents 13 local building trades councils, more than 100 local unions and over 150,000 rank and file members.

Mr. Critchley also serves as president of the Morris County Building and Construction Trades Council.

Mr. Critchley has worked exclusively in the construction industry. Since 1985, he has held a series of union leadership positions, beginning as business agent of United Union of Roofers, Waterproofers and Allied Workers Local #4. In 1993, he was appointed vice president of United Union of Roofers, Union of Roofers, Waterproofers and Allied Workers Local #4 and was appointed president in 1998.

In addition, Mr. Critchley was elected president of New Jersey District Council of Roofers in 2004 and business manager of United Union of Roofers, Waterproofers and Allied Workers Local #4 in 2007.

He was appointed to the Board of Trustees in January 2011.



**MICHAEL CRITCHLEY, JR., ESQ.**  
- TRUSTEES -

Michael Critchley, Jr., Esq., is a partner in Critchley & Kinum, a West Orange law firm where he represents individuals and corporations at all stages of federal and state litigation and during regulatory proceedings. Mr. Critchley has also counseled boards of directors and senior management on internal investigations as well as advised corporations on the implementation of comprehensive compliance systems.

Mr. Critchley received his BA from Rutgers University and his JD from Seton Hall University Law School. He also received an MBA in finance from New York University's Stern School of Business.

Following law school, Mr. Critchley clerked in the United States District Court for the District of New Jersey. His extensive business experience includes several years working at the investment banking firm of Credit Suisse First Boston.

Mr. Critchley was appointed to the UMDNJ Board of Trustees in June 2007. His term will expire in 2011.



**ROBERT J. DEL TUFO, ESQ.**  
- TRUSTEE -

Robert J. Del Tufo, of counsel to Skadden, Arps, Slate, Meagher & Flom LLP, is chairperson of the UMDNJ Board of Trustees. He practices primarily in the areas of commercial litigation, environmental law, product liability, white collar defense, and governmental relations.

Mr. Del Tufo was New Jersey's Attorney General from 1990 to 1993. As Attorney General, he headed the Department of Law and Public Safety, which has 11 divisions and approximately 10,000 employees. Among other things, he supervised approximately 500 attorneys providing legal advice to state agencies and representing those agencies in civil litigation. He was also responsible for overseeing New Jersey's criminal justice system.

Mr. Del Tufo served as United States Attorney for the District of New Jersey from 1977 to 1980, where he was responsible for the representation of the federal government in civil litigation and in criminal investigations and prosecutions. He also served as Commissioner of the New Jersey State Commission of Investigation, First Assistant State Attorney General, and Director of New Jersey's Division of Criminal Justice.

He is a member of and/or supports many charitable organizations, including Legal Services of New Jersey, Integrity, Inc., the Daytop Village Foundation and John Cabot University.

He received his undergraduate degree from Princeton University *cum laude* and his law degree from Yale University Law School, where he was an editor of the *Yale Law Journal*.

Mr. Del Tufo was appointed to the UMDNJ Board of Trustees in March 2006.



## CHRISTINE GRANT, JD, MBA

- TRUSTEE -

Christine Grant, JD, MBA, is founder and chief executive officer of InfecDetect, LLC, of Princeton, which specializes in rapid diagnostic tests and protective gear for the detection of and protection from infectious disease.

Ms. Grant is a nationally recognized expert in health care finance, reimbursement and public health programs and law. She has provided public service to six New Jersey governors, including service as a former New Jersey Commissioner of Health and Senior Services and Cabinet Officer.

Previously, Ms. Grant held senior management positions in government and policy at Merck & Co. and Sanofi Pasteur. She was a senior program officer at The Robert Wood Johnson Foundation.

She is active in the American Bar Association and chaired the ABA's Science and Technology Law Section. She is Vice Chair of the National Partnership for Prevention and a member of the NIH National Science Advisory Board for Biosecurity.

Ms. Grant earned a BA degree from Swarthmore College, an MBA from The Wharton School of the University of Pennsylvania and a JD from Rutgers Law School, Newark.

She was appointed to the Board of Trustees in October 2010.



## MARY SUE HENIFIN, J.D., MPH

- TRUSTEE -

Mary Sue Henifin, JD, MPH, is an attorney with expertise in litigation, and investigation matters involving a wide array of legal issues including environmental, technology, health care and white collar defense. She is a shareholder in Buchanan Ingersoll &

Rooney PC, a law firm with offices throughout the country, including Newark and Princeton. She has served as adjunct faculty member of the UMDNJ-Robert Wood Johnson Medical School's Department of Environmental and Community Medicine. She developed the Public Health Law course for the school, for which she received the Adjunct Faculty of the Year Award.

Henifin has taught Business Law and Ethics as the Executive in Residence for Rider University's Executive MBA Program. She is also a member and former chair of the Lawyers Advisory Committee to the Federal District Court of the District of New Jersey. She previously served as a deputy attorney general for the State of New Jersey.

She has written extensively on legal issues and public health and is co-author of the New Jersey Brownfield's Law and chapters on medical testimony and toxicology for the Reference Manual on Scientific Evidence, a standard work on how to present scientific evidence in court.

A graduate, with honors, from Rutgers University School of Law, Henifin graduated from Harvard College, cum laude, with a bachelor's degree in biology, and she holds a master's degree in public health from Columbia University.

Ms. Henifin was appointed to the Board in November 2007.



**MARILYN M. ("PENNY") JOSEPH**  
- TRUSTEE -

Marilyn M. Joseph is Director of Corporate Outreach Programs at Panasonic Corporation of North America. She is responsible for the management, coordination and implementation of Panasonic's annual corporate giving efforts throughout North America. Ms. Joseph joined Panasonic in 1989.

Earlier, concurrent with leading the company's philanthropic efforts, Ms. Joseph served as Director, Panasonic Corporate Recruiting, from 2001-2005, with specific emphasis on the recruitment and retention of minorities and women to enhance the diversity of Panasonic's workforce. Prior to that, she was Assistant General Manager in Panasonic's Government and Public Affairs Department.

Before joining Panasonic, she was Manager, Public Affairs, for Mutual Benefit Life Insurance Company, and also worked for the City of Newark in various positions, including Senior Personnel Technician and Administrative Analyst in the Planning Office, with responsibility for the administration of several federal grant programs budgets.

Ms. Joseph's memberships, current and past, include the Board of Directors of the Foundation of Bronx Community College of the City University of New York; Essex County Commission on the Status of Women; Corporate Associates Board of Gallaudet University; Board of Directors of Girls Inc.; Board of Directors of Meadowlands Hospital Medical Center; Board of Directors of NJ Seeds; Board of Trustees of the New Jersey World Trade Center Scholarship Fund; Corporate Associates Advisory Board of the Puerto Rican Family Institute, and the Board of Directors of Youth for Understanding.

She is a graduate of Spelman College in Atlanta, Georgia.

Ms. Joseph was appointed to the Board in February 2011.



**IRA P. MONKA, DO**  
- TRUSTEE -

Ira P. Monka, DO, is chief executive officer and medical director of the Medical Institute of New Jersey, P.C., a comprehensive medical facility in Cedar Knolls and Mendham, NJ with ten board-certified physicians.

He received his D.O. degree from the UMDNJ - School of Osteopathic Medicine (SOM). He completed an internship in family practice in South Broward, Florida, and a residency in family practice at Memorial General Hospital, Union, New Jersey. Dr. Monka completed his Health Policy Fellowship from Ohio University School of Osteopathic Medicine in 2003-2004. He received his master's degree in Health Administration from Andrew Taylor Still University, Kirksville, MO., in 2006. He volunteers as an assistant professor in the family practice department at SOM.

Dr. Monka is president of the New Jersey Osteopathic Educational Foundation and past president of the Board of Directors of the New Jersey Association of Osteopathic Physicians and Surgeons. He is a member of the Bureau of State Government Affairs of the American Osteopathic Association and the Committee on Federal Legislation of the American College of Osteopathic Family Physicians. He is also 2011 co-chair and 2012 chair of the National Convention of the American Osteopathic Association.

Dr. Monka joined the Board of Trustees in October 2010.



**JONATHAN H. ORENSTEIN, D.M.D.**  
- TRUSTEE -

Dr. Jonathan H. Orenstein received his dental degree from Temple University, School of Dental Medicine in 1985 and his Certificate in Prosthodontics in 1987. He has a staff appointment to Cooper University Medical Center, a consulting staff appointment to the Regional Cleft Palate Program and Cooper Trauma Center, and a staff appointment to UMDNJ. Dr. Orenstein was granted a U.S. patent in 1989 on implant-related hardware. He co-authored several articles on various prosthetic topics in refereed journals and presented at various local, national, and international meetings on innovative implant restorative dentistry.

Dr. Orenstein is a Fellow of the Academy of Osseointegration, member of the Board of Trustees and current President of the Delaware Valley Academy of Osseointegration, and is a member of the American College of Prosthodontics, the American Dental Association, and the Southern Dental Society of New Jersey. He is in private practice in Marlton, New Jersey.

Dr. Orenstein was appointed to the UMDNJ Board of Trustees in January 2004.



**MARY E. O'DOWD, MPH**  
EX-OFFICIO

Mary O'Dowd was serving as Deputy Commissioner of the Department of Health and Senior Services when she was nominated by Governor Chris Christie on March 25, 2011, to serve as the State's health commissioner. Ms. O'Dowd has wide ranging experience in the health care field with a focus on management and finances. As Deputy Commissioner since March 2010, she oversaw the areas of healthcare financing, facilities evaluation and licensing, and senior benefits.

She previously served as chief of staff for the department from January 2008 to March 2010. In that capacity, she managed a workforce of more than 1,800 and a budget of nearly \$3 billion and shaped the department's policy in the areas of health care delivery, senior services, public health, and emergency preparedness.

Earlier, Ms. O'Dowd managed revenue cycle operations for the Emergency Department at NYU Medical Center, served as a legislative aide for the New Jersey General Assembly on education and healthcare issues, and was assistant vice president of legislation and policy for the New Jersey Hospital Association.

Acting Commissioner O'Dowd is a graduate of Douglass College at Rutgers University and holds a Master's in Public Health from Columbia University Mailman School of Public Health. She also completed a fellowship in hospital finance at NYU Medical Center.

**UMDNJ GOVERNING BOARD CHARACTERISTICS 2011**

**Race/Ethnicity and Gender of Governing Board**

<b>Race/Ethnicity</b>	<b>Male</b>	<b>Female</b>	<b>Total</b>
<i>White</i>	8	5	13
<i>Black</i>	1	1	2
<i>Hispanic</i>	0	0	0
<i>Asian</i>	0	0	0
<i>Native American</i>	0	0	0
<i>Non-Resident Alien</i>	0	0	0
<b>Total</b>	<b>9</b>	<b>6</b>	<b>15</b>

Source: UMDNJ Office of Workplace Diversity, July 23, 2010