

H. MAJOR RESEARCH AND PUBLIC SERVICE ACTIVITIES

1. Research & Development Expenditures, 2009-2010

Item	Amount (\$)
Federally Financed Academic R&D Expenditures	1,322,988
Institutionally Financed Academic R&D Expenditures	937,968
Total Academic R&D Expenditures	2,260,956

Source: Office of Research and Sponsored Programs, Kean University 2010

Note: Dollar amount as reported to the National Science Foundation (NSF) on Form #411 (Survey of Research and Development Expenditures at Colleges and Universities).

2. Externally Sponsored Research

The Office of Research and Sponsored Programs (ORSP) seeks external funding to support and enhance faculty and student research, curricular development and innovation, and community outreach programming. The Office administers the University's grants and contracts (internal and external) from the pre-award stage through final reporting, and provides oversight to Kean's centers and institutes. ORSP serves as the University's liaison with public foundations, and is responsible for compliance regarding federal and state regulations. The following table lists the externally sponsored research programs by award amount:

Project Director	Project Title	Agency	Amount (\$)
De Garcia, William	The Exceptional Educational Opportunities	New Jersey Commission on Higher Education	1,185,614
Martin, Arlene	Professional Impact New Jersey	New Jersey Department of Human Services	990,838
Kelly, Audrey	Local Fire Fighters Training	New Jersey Department of State	801,933
Joiner, David	MRI-R2 Consortium: Acquisition of hardware for data visualization and exploratory analysis	National Science Foundation	593,820
Polirstok, Susan	Garden State Partnership for Teacher Quality	United States Department of Education	416,958
Caceres, Jose	Project Adelante	New Jersey Commission on Higher Education	398,704
Knezek, Claudia	Traffic Safety Program	New Jersey Division of Highway Traffic Safety	304,000
Hilliard-Nelson, Gail	Transition to Teaching - Kean/Newark Collaboration	United States Department of Education	296,410
James, Carol	Creating 21 st Century New Jersey Schools	New Jersey Department of Education	295,160
Boehm, Eric	MRI: Acquisition of Instrumentation for a Molecular Ecology and Biosystematics Laboratory	National Science Foundation	291,060
Jackson, Veronica	Project U - Upward Bound	United States Department of Education	276,600
Polirstok, Susan	New Vistas Teachers Project	United States Department of Education	258,536

Project Director	Project Title	Agency	Amount (\$)
Mascari, Barry	Systemic Reform in Guidance and Counseling Programs	New Jersey Department of Education	225,000
Diaz, Wendy	McNair Scholars	United States Department of Education	220,000
Kostak, Mira	The New Jersey Small Business Development Center - Operational Support	United States Small Business Association	185,756
Shebitz, Daniela	Prevention/Reduction of Greenhouse Gas Emissions of Colleges and Universities	Environmental Protection Agency	179,655
Cerda, Victoria	Hispanic Foster Care - Hudson	New Jersey Division of Youth and Family Services	169,641
Shulman, Martin	Speech Upgrade	New Jersey Department of Education	165,000
Campbell, Minnie	New Jersey Nursing Education Collaborative	Robert Wood Johnson Foundation	152,449
Toney, Jeffrey	Garden State LSAMP (Louis Stokes Alliance for Minority Participation)	National Science Foundation	100,608
Porta, Angela	AREA Grant: Claudin-2, Claudin-12 and Cadherin-17: Novel Targets of Vitamin D Action	National Institutes of Health	78,679
Halper, Michael	Auditing Methodologies for Medical Terminologies	National Library for Medicine	70,631
Searson, Michael	Startalk Hindi 2010 Program	National Security Agency	53,265
Wolanin, Andrew	Stories of Struggles and Successes: A consumer based needs assessment for the NJCDD	New Jersey Council on Developmental Disabilities	50,416
Kostak, Mira	SBDC Satellite Office-Plainfield	State of New Jersey Urban Enterprise Authority	50,000
Best, Linda	National Writing Project	National Writing Project	46,000
Tomich, Melissa	Irvington Enrichment Program	Irvington Public Schools	41,887
Polirstok, Susan	Professional Development in Sheltered English Instruction	New Jersey Department of Education	40,000
Foreman, Lindy	Mature Women Students	Newcombe Foundation	30,000
Foreman, Lindy	Rummel Scholars	Rummel Foundation	30,000
Lorentzen, Laura	Tech-Prep Grant Program Union County Vocational Schools (Academy for Allied Health Sciences)	New Jersey Department of Education	25,000
Rhee, Shangguen	Tech-Prep Grant Program South Brunswick Township Public Schools	New Jersey Department of Education	24,315
Lorentzen, Laura	NJCSTME Scholarships	Wachovia Foundation	20,000
Toney, Jeffrey	Merck Institute for Science Education/AAAS	Merck Scientific Research Institute	20,000

Project Director	Project Title	Agency	Amount (\$)
Jackson, Veronica	Upward Bound	Novartis Pharmaceuticals	19,000
Wooten, John	Premiere Stages	New Jersey State Council on the Arts	16,949
Garino, Susan	Liberty Hall Butler's Pantry Upgrade	The Hyde and Watson Foundation	15,000
Santo Pietro, Mary Jo	Institute for Adults Living with Communication Disorders	Elizabethtown Healthcare Foundation	15,000
Xu, Charlie	College Access Challenge Grant	New Jersey Commission on Higher Education	10,000
Halper, Michael	Partitioning to Support Auditing and Extending the UMLS-Summer Supplement	National Library of Medicine	8,445
Young, Ethel	Even Start-Hillside	United States Department of Education	8,000
Zamora, Mia	The Big Read	National Endowment for the Arts	7,500
Kostak, Mira	Elizabeth CDBG	City of Elizabeth	7,000
Polirstok, Susan	College of Education Workshops	Piscataway Township Board of Education	6,000
Wooten, John	Premiere Stages	The Gleason Family Foundation	4,000
Chen-Hafteck, Lily	(AIRS) Advancing Interdisciplinary Research in Singing	University of Prince Edward Island	4,000
Wooten, John	Premiere Stages	The Westfield Foundation	3,600
Mercantini, Jonathan	Oh Freedom	New Jersey Council for the Humanities	2,792
Santo Pietro, Mary Jo	Institute of Adults Living with Communication Disorders	Elenore & Maurice Rosenthal Foundation	2,500
Wooten, John	Premiere Stages	The Provident Bank Foundation	1,000
Total			\$ 8,218,721

Source: Office of Research and Sponsored Programs, Kean University 2010

3. Internally Sponsored Research

Kean University established the Reassigned Time for Research (RTR) Awards program to support the faculty's active interest in research and other scholarly pursuits in 1973. Through this program, the University conducts an annual review and selects faculty, professional personnel, and librarians to receive research awards of released time and limited direct costs. Projects funded by Reassigned Time for Research serve to advance the state of the art or knowledge in a particular field of study or professional activity, or to develop a particular area of research or creative work to the point where it can be shared beyond the Kean University community.

Seven RTR projects were funded for the 2009-10 academic year. Successful applicants receive a maximum of six credits of reassigned time during the academic year and a \$400 stipend for equipment, supplies and other needs associated with their research.

Six non-tenured faculty research projects (UFRI) were funded for the 2009-10 academic year. As with the RTR awards, successful applicants receive six credits of reassigned time during the academic year and a \$400 stipend for equipment, supplies and other needs associated with their research.

The Students Partnering with Faculty (SpF) Summer Research Program is a competitive program that has been developed to support and advance student and faculty research and scholarship at Kean University. Through the SpF program, full-time faculty will have the opportunity to submit proposals in collaboration with undergraduate full-time students enrolled in the current semester for the purpose of attaining funding toward a specific student-faculty research project. Students and faculty each receive \$3,500 stipends and up to \$2,000 for research supplies and expenses. Eleven projects were funded during summer 2009.

The Foundation Faculty Research Award (FFRA) is sponsored by the Kean University Foundation and was initiated this academic year. The fundamental goal of FFRA is to help faculty better position themselves to apply for and receive external funding for their research and scholarly activities. Faculty can apply annually for three consecutive years of funding for up to \$5000 annually. Five faculty members received this award for the 2009-2010 academic year.

The New Research Initiatives Award (URC) is designed to support research in the following areas: Liberty Hall in all fields, interdisciplinary research involving at least two departments, and creative projects that enhance the University's ties to New Jersey high schools. Thirteen faculty received awards of up to \$15,000 for the 2009-2010 academic year.

The Presidential Scholars Challenge (PSC) and Presidents Research Initiative (PRI) funds faculty research initiatives in areas important to the strategic vision and core initiatives of the University. The grant provides bridge support to faculty researchers who then pursue external funding to continue their research program. Fifteen faculty received award amounts ranging from \$10,000 to \$65,000

Reassigned Time for Research Awards (RTR)

Fulgencio Batista: From President to Dictator, Volume II (Short-term and Long-Term Writing Projects)
Frank Argote-Freyre, History

The Deliberate Writer, A Series of Three Textbooks for First-Year College Writers (prospectus developed as the invitation of an acquisitions editor for Pearson/Longman and Prentice Hall Publishers)
Linda Best, English

DNA Sequencing of the ITS to Resolve Evolutionary Relationships within the Mytilinidiales
Eric Boehm, Biology

Examining Children's Growth in Reading Achievement from Kindergarten to Third Grade: Multilevel Analyses of Child, Family, and Teach Variables
Jennifer Chen, Early Childhood & Family Studies

Investigations of Distyly and Self-incompatibility in *Linum* and the Influence of Fatty-acid Metabolites on Cytokine Dynamics upon Challenge with the Cholera Toxin
Farshad Tamari, Biology

Controlling Inflammation with Docosahexaenoic Acid (DHA)
Evros Vassiliou, Biology

Literacy Development and the Acquisition of Social Practices in the Lives of Four Working-Class Women Academics
Gail Verdi, Elementary, Middle & Secondary Education

Untenured Faculty/Librarian Research Initiative Awards (UFRI)

Current Roles and Responsibilities of School Nurses in the United States: An Application of Multi-Method Research
Cheryl Krause-Parello, Nursing

Modeling and Visualizing Uncertainty in Geographic Knowledge Discovery
Feng Qi, Geology/Meteorology

Probing Host-Guest Interactions Using Hydrogen-Deuterium Exchange Mass Spectrometry
Dil Ramanathan, Science and Technology

Young Children's Use of Technology 2.0 Tools
Dina Rosen, Early Childhood & Family Studies

The Effect of Positive Activity on Academic Success
Joanne Walsh, Psychology

New Models on Joint Production/Inventory Planning and Revenue Management for Supply Chain Systems with Seasonal Products
Bin Zhou, Management

Students Partnering with Faculty Summer Research Program Awards (SpF)

The Use of DNA Sequencing to Resolve Global Evolutionary Relationships in the Genus *Glyphium* (tentatively placed in the Pleosporomycetidae, Dothideomycetes, Ascomycota)
Eric Boehm (Faculty), Ziphora Sam (Student), Karina Ochoa (Student), Olivera Krstanoska (Student)

Interactive Visualization System for Large Scientific Data Sets
George Chang (Faculty), Ibtisam Ali (Student), Swetha Medicherla (Student), Albert Banks (Student)

The Relationship between the Quality of the Early Childhood Classroom Environment and the Language Development of Young Children
Jennifer Chen (Faculty), Angelo Castillo (Student), Patricia Pettesch (Student), Silvia Pino (Student)

Morphologic Investigation of Thunderstorm Initiates and GIS Attributes with Testing for Improved Operational Nowcasting of Severity in New Jersey
Paul Croft (Faculty), Amy Wuestenberg (Student), Justin Schulte (Student), Danielle Fadeski (Student)

Color Vision in the Great Whales and Implications for Fishing Gear Avoidance
Jeffrey Fasick (Faculty), Gisele Andrade (Student), Stephanie Brennan (Student)

Knowledge Discovery from Sensor Data for Environmental Information
Patricia Morreale (Faculty), Frank Kendall (Student), Ryan Suleski, (Student), Brian Sinnicke (Student)

Environmental Variables Leading to Garlic Mustard Establishment and Invasion in Union County Parks
Daniela Shebitz (Faculty), Victoria Pirolli (Student), Jesse Damiano (Student), Paula Phillips (Student)

Investigations of Distly and Self-Incompatibility in *Linum*
Farshad Tamari (Faculty), Danie Saget (Student), Oluwatosin Akindunbi (Student)

The Silence of Her Heart - Journey of a Victim of Domestic Violence
Larry Tung (Faculty), Maria Vargas-Pion (Student), Aura Jimenez (Student)

Handling the Conflicting Roles of Manager and Leader in Global Teams
Suling Zhang (Faculty), Chengyan Liu (Student), Cui Na (Student)

Revenue Management and Dynamic Pricing in Production/Inventory Systems: Theories and Practice
Bin Zhou (Faculty), Brian Wershonski (Student), Michael Sanosian (Student)

Foundation Faculty Research Awards (FFRA)

The Effects of Parenting Styles and Practices on the Behavioral Adjustment and Language Development of Chinese Children from Immigrant, Low-Income Families
Jennifer Chen, Department of Early Childhood & Family Studies

Weather Hazard Education & Research for Ecosystems of Urban Relevance in NJ - Working in a Community of Outreach Research Experiences (Kean University: WHERE – UR – IN New Jersey! The Working CORE)
Paul Croft, Department of Geology and Meteorology

Investigation of Asymmetric Bimetallic Complexes with Respect to Bioactivity and Charge Separation
Matthew Mongelli, Department of Chemistry & Physics

Molecular Genetics Investigations of Distyly and Self-Incompatibility in Linum: Investigations of Polygalacturonase, Alpha-Dioxygenase, and Beta Expansion as Steps toward an Increase in Flax Crop Field
Farshad Tamari, Department of Biological Sciences

The Composition, Seasonal Occurrence, and Reproductivity of Marine Seaweeds in Barnegat Bay, New Jersey
Brian Teasdale, Department of Biological Sciences

New Research Initiatives Awards (URC)

Evolution and Education: A forum for Teachers
Brian Baldwin, Science and Technology
Brian Regal, History

Student Writing at the High School and College Levels: Collaborative Research Initiatives for Instructional Alignment and Faculty Exchange
Linda Best, English

Fog Occurrence using GIS: Predicting Areal & Point Estimation by Regression
Paul Croft, Geology/Meteorology
Feng Qi, Geology/Meteorology

Virtual Liberty Hall – Phase I
MJ Divino, Design

Pancreatic and Colorectal Tumor Cell Destruction by Metal-DNA Complexes
Jeffrey Fasick, Biology
Matthew Mongelli, Chemistry & Physics

CS @ Kean: Supercomputers, Students and Computer Science
David Joiner, Science & Technology

Pets & Human Health: The Biobehavioral and Psychobiologic Interface
Cheryl Krause-Parello, Nursing

Extra, Extra: The Rise and Transformation of American Newspapers
Patricia Winters Lauro, Communications

UrbanNet: Urban Environment Monitoring and Modeling with a Wireless Sensor Network
Patricia Morreale, Computer Science
Paul Croft, Geology/Meteorology
Feng Qi, Geology/Meteorology

Liberty Hall Architectural Scale Model as an Educational Tool
Linda O'Shea, Interior Design

Host-Guest Chemistry to Improve LC-MS Detection Limits for Pharmaceuticals Present as Contaminants in Water
Dil Ramathan, Science & Technology

Developing a Carbon Accounting Method for Mitigation Projects
Daniela Shebitz, Biology
Patricia Morreale, Computer Science
Brian Teasdale, Biology

The Use of Flax in the Prevention of Cholera Infection
Farshad Tamari, Biology

Presidential Scholars Challenge (PSC) and Presidents Research Initiative (PRI) Awards

Interactive and Augmented Reality
George Chang, Computer Science

Investigating the Quality of Teachers' Interactions and Conversations with Preschool Children from Low-Income Families
Jennifer Chen, Early Childhood & Family Studies

Community Environmental Networks for Risk Identification and Management
Paul Croft, Geology/Meteorology
Patricia Morreale, Computer Science
Feng Qi, Geology/Meteorology

Integrating Carbon Accounting and Environmental Integrity Assessment into Sustainable Wetland Conservation and Management
William Eaton, Biology
Sylvio Codella, Biology
Daniela Shebitz, Biology
Brian Teasdale, Biology

Repurposing FDA Approved Drugs as Novel Cancer Treatments and as Therapeutics against Chemoresistant Tumors
Jeffrey Fasick, Biology

Center for Nursing Research at Kean University
Cheryl Krause-Parello, Nursing

Liberty Hall Museum Manuscript Project
Jonathan Mercantini, History

Knowledge Mining from Sensor Data
Patricia Morreale, Computer Science
David Joiner, Science & Technology

Using Zebrafish to Assess Environmental Pollutants
Dil Ramanathan, Science & Technology

Darwin and the Monsters: Cryptozoology in the Role of Evolutionary Thought: Pliny to the Present
Brian Regal, History

Food Waste Composting Science and Compost Utilization
Nicholas Smith-Sebasto, School of Environmental and Life Sciences
William Eaton, Biology
Daniela Shebitz, Biology
Brian Teasdale, Biology

An Investigation into Direct Solar Fuels for Island Communities
Brian Teasdale, Biology
Matthew Mongelli, Chemistry/Physics

Teacher Read-Alouds with and without Student Companion Texts in a Low SES, Predominantly Hispanic Community
Diane Tracey, Communication

The Future of Chinatown: Urban Renewal vs. Gentrification
Larry Tung, Communication
Xurong Kong, History

Therapeutic Role of DHA Acid in Inflammation and Inflammatory Bowel Disease
Evros Vassiliou, Biology

Source: Office of Research and Sponsored Programs, Kean University 2010