

**New Jersey State Commission on Cancer Research
LAY ABSTRACT OF RESEARCH PROJECT**

NAME OF PRINCIPAL INVESTIGATOR/PROGRAM DIRECTOR: **Katsunori Sugimoto**

Project Title: **Mechanism for recruiting checkpoint proteins to DNA lesions**

Description: **A deeper understanding of DNA damage checkpoint should allow us to modulate the process in tumors in ways that could improve cancer therapy.**

DNA is continually subjected to damaging agents produced inside cells and penetrated from the environment. DNA damage checkpoint control is devoted to the surveillance of damaged DNA. It is important to study DNA damage checkpoint for two reasons. First, it is the front line defense against DNA damage. Unprocessed DNA damage can lead to mutations that can accumulate to cause cancer. Second, some of the compounds used in cancer chemotherapy and radiotherapy work by damaging DNA. The success of therapy with such agents is affected by DNA damage checkpoint control in normal and tumor tissues. A deeper understanding of DNA damage checkpoint should allow us to modulate the process in tumors in ways that could improve cancer therapy.