

CORNELL CHRONICLE

Researchers win \$3 million NIH grant to fight cancer

By Susan S. Lang | September 21, 2011

Three Cornell researchers have been awarded a five-year Transformative Research Projects Award (T-R01) of approximately \$3.04 million from the National Institutes of Health to fight cancer by targeting the regulation of metabolic enzymes.

MEDIA CONTACT

Joe Schwartz

bjs54@cornell.edu (<mailto:bjs54@cornell.edu>)

607-882-3774 (tel:607-882-3774)

Richard A. Cerione, professor of pharmacology in the Department of Molecular Medicine, College of Veterinary Medicine, and of chemistry and chemical biology in the College of Arts and Sciences; Hening Lin, assistant professor of chemistry and chemical biology; and Robert S. Weiss, associate professor of molecular genetics in the Vet College, are working on the project, "Succinylation and Malonylation as Novel Protein Modifications in Cancer."

The research will focus on a new set of regulatory modifications that occur on proteins and which appear to be important to cancer progression, explain the researchers.

"More specifically, we believe that these modifications help to activate proteins that are responsible for meeting the hefty energy requirements of cancer cells. Thus, if we can block these modifications and the activation of the metabolic proteins, the cancer cells will not be able to meet their energy needs and hopefully die," said Cerione.

He continued, "The grant is funding a really nice collaborative undertaking between Hening's lab (who first identified the modifications and will design small molecule inhibitors), my lab (which will examine their effects on the growth and invasiveness of cancer cells in culture), and Bob's lab (which will develop and study mouse models for cancer that should ultimately be very valuable for assessing the inhibitors)."

Projects chosen for the T-R01 award program are intended "to challenge the status quo with innovative ideas that have the potential to propel fields forward and speed the translation of research into improved health for the American public." In other words, the award allows researchers to sidestep conventional stumbling blocks they often encounter when applying for funding for high-risk research, such as the need for preliminary data or a restriction on the amount of funds that can be requested. The funded projects tend to be inherently risky, but if successful, can profoundly impact a broad area of biomedical research.

STORY CONTACTS

Susan S. Lang

ssl4@cornell.edu (<mailto:ssl4@cornell.edu>)

607-255-3613 (tel:607-255-3613)