

HIGHLIGHTS FROM THE BIOTECH CENTER

October 2008

Faculty Activities and Accomplishments

A Memorandum of Understanding between Rutgers University and USDA APHIS-PPQ concerning the development of a new Plant Biosecurity Certificate Program was signed by Dean Goodman and Victor Harabin (Eastern Regional Director of USDA APHIS-PPQ) on Sept. 24. Present at the signing were Drs. Rong Di (Biotech Center) Jim White (Plant Biology and Pathology), George Hamilton (Entomology) and Gordon Gordh (USDA APHIS National Science Advisor). Rong Di, Assistant Research Professor in the lab of Dr. Nilgun Tumer, is developing a new course titled "Plant Biosecurity Issues and Technologies" to be offered in Spring 2009. This course will be part of the new Rutgers Plant Biosecurity Certificate Program.

An article titled "Bioexploration in Central Asia" appears in the latest issue of Wildlife Conservation (Nov/Dec 2008) profiling the work of Rutgers scientists and their Central Asian colleagues in collecting and screening plants, fungi, and bacteria with potential pharmaceutical value. The photos were taken by Ilya Raskin, who leads the NIH-funded project that is part of the International Cooperative Biodiversity Groups program.

Student Activities and Accomplishments

Brian Leibowitz will be starting a postdoctoral position with Dr. Jian Yu at the University of Pittsburgh Cancer Institute in early November, where he'll be working on the role of the apoptotic protein PUMA in carcinogenesis. Brian completed his PhD this past May in the lab of Dr. Wendie Cohick (Animal Sciences). The title of his thesis was "Molecular Regulation of IGFBP-3 Expression and its Role in Apoptosis in Mammary Epithelial Cells." Good luck, Brian!

Seven undergraduate students working with Biotech Center faculty mentors were recent recipients of Aresty awards supporting undergraduate research. They are: Matthew Bruno, a senior Environmental Sciences major, doing a George H Cook Honors Thesis (Young lab); Alyssa Cocchiara, a Douglass student majoring in Nutrition (Cohick lab); Shravan Dave, a junior Biotech major and honors student (Young lab); Maria Montano (Tumer lab); Puja Patel, a biochemistry major (Bini lab); Marya Skvortsova (Lam lab); and Michael Strug, a senior double majoring in Animal Sciences and Biotechnology and a GH Cook Scholar (Bagnell lab). The students will present posters of their work at the Aresty undergraduate research symposium next April. Congratulations all!

Grants and Fundraising Efforts

Dr. Ilya Raskin received a new award from the Medicines for Malaria Venture, a Swiss group supported by the Gates Foundation, the Rockefeller Foundation, and other major donors. MMV is a joint public-private partnership with the mission of discovering, developing, and delivering drugs to treat poor populations infected with malaria in endemic countries. Dr. Raskin's project, which involves collaborators at North Carolina State University and the University of Capetown, South Africa, will follow up on a major anti-malarial screening project originally carried out by Merck and the New York Botanical Garden during World War II. The US-South African team will use *in vitro* and *in vivo* assays to isolate and characterize novel anti-malarial compounds

from Merck's program. The goal of the 4-year project is to discover and pre-clinically characterize 3-5 novel compounds with potential to become future anti-malarial drugs. The Rutgers team will receive \$164,500 in Year 1, which gets underway in early November.

Dr. Raskin received a second award for research on "Novel botanicals from Chile with anti-diabetic and wound healing properties." This project involves collaboration with the University of Illinois, and will focus on pre-clinical and early clinical development of compounds from maqui berries (*Aristotelia chilensis*) and lucuma fruit (*Pouteria lucuma*). This initiative is funded by Phytomedics-Chile, Inc., which in turn received support from an economic development agency of the Chilean government. The award totals \$92,800 for the first year.

Conferences, Seminars, and Other Events

A workshop focusing on sugarcane as a feedstock for bioethanol took place on October 8th at the Douglass Campus Student Center. The objective of this workshop was to identify specific areas of sugarcane cultivation and processing that can be addressed by synergistic collaborations between the participants from U.S. as well as Brazilian institutions. Investigators from Rutgers University, the University of São Paulo of Brazil, and sugarcane researchers from Texas, Louisiana and Florida presented their research at the one-day meeting, which was open to the public and attended by 40 participants. The workshop was designed to help drive the development of sugarcane and related grass species and feedstocks to improve biomass production and facilitate their processing into sustainable and renewable fuel for the 21st century. The workshop was made possible through financial support by the School of Environmental and Biological Sciences, the Biotechnology Center for Agriculture and the Environment, the Rutgers Energy Institute, the Waksman Institute of Microbiology, and the Turfgrass Center of Rutgers University. It was organized by Dr. Eric Lam as part of the International Cluster for Sugarcane Engineering that was established by Rutgers University in 2007.

Dr. Wendie Cohick (Animal Sciences) and Graduate student Tiffany Polanco attended the 15th Annual Institute on Teaching and Mentoring in Tampa Florida from Oct. 24 to 26th. The meeting was presented as part of the Compact for Faculty Diversity, a partnership of regional, federal and foundation programs that focus on minority graduate education and faculty diversity. The purpose of the Institute is to provide minority scholars with the skills necessary to succeed in graduate study and to prepare them for success as faculty members at colleges and universities.