

PRESS RELEASE

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Researchers Receive \$250,000 in University 'GAP' Awards

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By Barry Ray

TALLAHASSEE, Fla. -- For the past four years, the Florida State University Research Foundation has funded a highly competitive grant program designed to support Florida State researchers as they seek to transfer their technology out of the laboratory and into the commercial marketplace.

The winners of these Grant Assistance Program (GAP) awards are those researchers who can most clearly identify the commercial viability of a product, process or license that they believe will come from their efforts with a corporate partner.

"We started this program to encourage faculty to become engaged with the private sector to solve real problems. This is happening," said Kirby Kemper, Florida State's vice president for Research. "We have been fortunate to have a review committee of Tallahassee technology business people led by Kay Stephenson of Datamaxx.

"I also want to thank the committee members who, as local volunteers, generously donate their time," Kemper said. "They not only make award decisions but also meet with faculty every three months to talk about the next commercialization steps."

In two rounds of awards, the Research Foundation has granted \$250,000 in GAP awards for fiscal year 2009 to a total of seven research projects currently under way at Florida State. The four projects to receive GAP funding during this spring's competition, and the award amounts, are as follows:

Treating Cancer-Drug Side Effects: "Drug Delivery for Treatment of Spinal Muscular Atrophy and Peripheral Neuropathy" -- \$40,000 award to Kate Calvin, postdoctoral associate, Department of Biomedical Sciences (in the laboratory of Professor Charles Ouimet), and researcher, Department of Chemistry and Biochemistry. This is a drug delivery method for treatment of spinal muscular atrophy and peripheral neuropathy -- essentially a treatment for areas of the body that have been adversely affected by cancer treatment drugs such as Taxol. The treatment uses a protein, SMN, to target nerve terminals, and employs a neurotoxic protein, botulinum, as the carrier of SMN. Botulinum is used in this way because of the way its structure allows it to attach to nerve terminals.

The Potential to Delay Premature Labor: "Novel Application of Melatonin Antagonists in Obstetrical Practice" -- \$40,000 award to James Olcese, associate professor, Department of Biomedical Sciences. This is a method for the prevention of pre-term labor. Olcese proposes to introduce, intravenously, a melatonin antagonist to women who are predisposed to premature birth. Melatonin antagonists are drugs that do not provoke a biological response themselves, but bind to melatonin receptors and therefore prevent melatonin itself from binding to the receptor. Olcese suspects that this inhibition of the uptake of melatonin will prevent women from beginning labor.

'Buckypaper' as a Non-Toxic Fire Retardant: "Fire Retardant Polymer Composites" -- \$25,000 award to Chuck Zhang, professor, Department of Industrial and Manufacturing Engineering, and deputy director, High-Performance Materials Institute. This process is designed to use buckypaper, a thin sheet made from an aggregate of carbon nanotubes, as a fire- and smoke-shielding layer for sensitive devices. The buckypaper skin will be applied to polymer surfaces either during the production process or applied after production as a film.

A Better Solar Energy Device: “Inflatable Solar Energy Collector” -- \$15,000 award to Ian Winger, associate, Department of Physics. The Inflatable Solar Energy Collector is a device designed to maximize the amount of sunlight that is focused on an energy collector. The energy collector is typically filled with water or oil, which in a full operating system would ultimately power a steam generator to make electricity.

Florida State researchers who received GAP funding for fiscal year 2009 in the award competition’s earlier round (fall 2008) are as follows:

Detecting Biomarkers of Disease on Cell Surfaces: “Quantification of Cellular Sphingolipids” -- \$40,000 award to Alan Marshall, the Robert O. Lawton Professor of Chemistry and Biochemistry at Florida State and director of the Ion Cyclotron Resonance Program at the National High Magnetic Field Laboratory; and scholar/scientist Mark Emmett and postdoctoral associate Huan He, both of the National High Magnetic Field Laboratory. This research group has invented a novel method for labeling and quantifying sphingolipids in cell cultures. GAP funding will be used to develop a test kit for possible commercial use as an adjunct to treatment of diseases such as cancer.

A New Way to Produce Drugs: “Automated Syntheses of Pharmaceutical Agents” -- \$40,000 award to Tyler McQuade, associate professor, Department of Chemistry and Biochemistry. The McQuade Lab has developed novel chemistry and process technologies for continuous, as opposed to batch, synthesis of several pharmaceuticals. The group will use GAP funding to further develop their techniques to manufacture one commercially important drug. The goal of the process is to drastically reduce the cost of drug manufacture while increasing the yield of the process.

A New Cancer Fighter: “Development of Enzyme Inhibitors” -- \$40,000 award to Amy Sang, professor, Department of Chemistry and Biochemistry. The Sang Lab has developed and synthesized matrix metalloprotease inhibitors, proteins that may allow for major breakthroughs in the prevention of stroke and in the ability to control growth in certain cancer cells.

Once researchers or a research group receive a GAP award, they are assigned a team of local business leaders who act as mentors. This group then meets on a quarterly basis to provide insight and assistance to the GAP winners in the area of product development. For more information on the Grant Assistance Program at The Florida State University, visit <http://www.research.fsu.edu/foundation/gap/>.