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Plant Sensory Systems Receives NSF Grant

Funding Will Help Company Test Plant Modifications

Plant Sensory Systems (www.plantsensorysystems.com), a resident of bwtech@UMBC's Incubator, has received a Small Business Innovation Research (SBIR) grant from the National Science Foundation. The $100,000 grant, which is a six-month grant (referred to as Phase I) that takes effect July 1, will help the company test new genetic modifications on its laboratory plants. The research is a crucial first step in creating plants that are more productive and environmentally-friendly.

Founded by the husband-and-wife team of Frank and Kathleen Turano last July, Plant Sensory Systems is focused on creating plants that are more nitrogen use-efficient as well as drought-resistant. More efficient use of nitrogen, the main ingredient in fertilizer, means less run-off into rivers and streams. Increased drought resistance could reduce crop losses significantly in drought years. Eventually, the Turanos hope to license their technologies to seed and biotechnology companies.

This is the first grant the company has received and will enable the Turanos to test their hypotheses regarding a genetic modification to plants that will increase the production of GABA, an amino acid that has been shown to affect plants' response to drought conditions as well as their nitrogen absorption. By increasing the amount of GABA, the plant could withstand drought better and require less nitrogen to grow. Currently, the Turanos' experiments are being done on the Arabidopsis plant; if successful, they would start testing crop plants such as canola.

If the Turanos experience success in their research and show their plant engineering concepts are valid, they will be eligible to apply for a Phase II, two-year grant from NSF once their Phase I grant period is completed.

“We are confident our research will help us create better plants that will benefit the agricultural industry, consumers and the environment,” said Kathleen Turano. Added Frank Turano: “We are very pleased with this grant and the opportunity to take our research to the next level.”

“Plant Sensory Systems is engaged in groundbreaking work in the field of agricultural technology,” said David Fink, director of entrepreneurial services at bwtech@UMBC. “We are pleased that NSF has recognized their potential with this award.”

About bwtech@UMBC:
bwtech@UMBC is a 71-acre research and technology community at the University of Maryland, Baltimore County (UMBC). It comprises the technology business Incubator and Accelerator, home to over 30 early-stage high-tech and life science companies, and the Research and Technology Park, with a total development capacity of 350,000 square feet of office and laboratory space. bwtech@UMBC offers collaboration with university faculty and students, and enjoys a strategic and convenient location, close to downtown Baltimore, BWI Thurgood Marshall Airport, and Washington, D.C. bwtech’s annual economic impact on the state is estimated to be over $300 million.

About UMBC:
UMBC is a medium-sized public research university of 12,000 undergraduate and graduate students who collaborate with faculty to address real-world challenges. Located just south of Baltimore near I-95 and the BWI airport, UMBC's residential campus houses state-of-the-art facilities in the sciences, engineering, arts, social sciences and humanities. UMBC combines the energy of a research university with the close community feel and attention to individual students found in liberal arts colleges.