

TRAINING TOMORROW'S

The University of Florida College of Medicine in collaboration with UF's Warrington College of Business Administration has started a two-year master's program in translational biotechnology that will prepare graduates for management roles in industry and academia by equipping them with knowledge and skills critical for developing new therapies for use in humans. The first of its kind in Florida, the program is supported by a three-year, \$700,000 grant from the National Science Foundation.

The program is especially timely because biotechnology is poised as an important economic engine that will power growth for the state of Florida.

In addition to curricular and practical training in biomedical and laboratory science, students will receive intensive training in business administration. Graduates will earn a Master of Science degree in medical sciences, with a minor in business administration.

"They are going to really understand the science fundamentals, how products are developed, how business functions, what the main drivers of project management are, how projects and resources are budgeted, the types of timelines involved and the different kinds of expertise needed to develop new therapeutic products," said molecular genetics and microbiology Associate Professor Richard Snyder, the program director and director of Biotherapeutic Programs in the UF Office of Research.

Students entering the program typically have a strong background in chemistry and biology and will learn how to conduct advanced applied research. By the time they graduate from the program, they will also have a strong grounding in business management. The program presents additional career



Teri Cram of Banyan Biomarkers, Inc and Mahajoub Bello-Roufai of Florida Biologix.

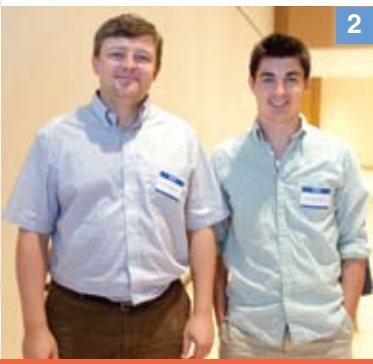
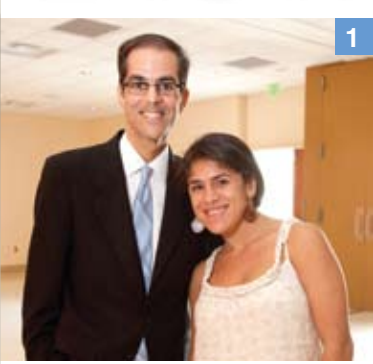
and re-training options in a high-skill, high-wage industry for many individuals, including traditional students and people who are underemployed or have been displaced.

The two-year, thesis-optional program is research-intensive and includes a formal internship at a Florida biotechnology company. Industry leaders serve on the program's advisory board.

Courses are geared toward skills needed in the development, testing and eventual commercialization of drugs, biologics and devices. They cover the translational research activities behind enzymes and other protein products, transgenic plants and animals, tissues and cellular products and biomedical implants. In addition, there will be instruction on product development, regulatory compliance, analytical product testing, ethics and responsible conduct of research, among other topics.

"Success in the biotechnology industry requires a combined skill set — not just knowing the life sciences, but you also

BIOTECH WORKFORCE



1. Dr. Christopher Cogle and Angelica Trujillo
2. Dr. Coy Heldermon and Joseph Gibney
3. The inaugural class of students from left: Jesse Bishop, Joseph Gibney, Veronica Saffran, Jose Herrera, Angelica Trujillo and Sami Thakur.

need to have business knowledge in order to be effective in turning a science and technology project into a successful business venture,” said Steve Lin, vice president of biologics research and development and chief technology officer of Gainesville-

based Exactech, Inc., a leader in orthopedic implant technology. Lin wrote to the NSF in support of the new program:

“If I’m going to add staff, if there are two applicants that are equally talented in biotechnology I would choose the one who has training in business, because it is very important when planning or executing a technology project to understand the business requirements, resource and regulatory issues and laws, because that can affect the success of technical projects.”

Traditionally, such skill combinations are found in industry settings, but more and more they are being nurtured in academic institutions, as clinical and translational science programs thrive and researchers investigate therapies for various diseases, including rare conditions that do not generally attract the interest of pharmaceutical companies.

“Graduates are expected to have a high impact on the growth of biotechnology companies in the state, but also on the expansion of the translational research enterprise at UF and other academic institutions,” Snyder said.

The program’s industry partners include BioFlorida, the International Society for Pharmaceutical Engineering, RTI Biologics, Inc., Banyan Biomarkers, Inc., Exactech, Inc., Pasteuria Bioscience, Inc., Scripps Florida, Nanotherapeutics, Inc., Workforce Florida and the Florida Research Consortium.

Czerne Reid

Related website:

<http://www.mgm.ufl.edu/MS/translational-biotech.htm>

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