

New M.S. in Biotechnology puts science to work

By Lisa Mikolajek Barton



How does a great idea in science become a product people can use?

The new Master of Science in Biotechnology program at Duquesne University teaches students how to translate their knowledge of science into business careers in research and development, product development and project management. The program also provides advanced knowledge and leadership skills that can equip laboratory staff to move into management positions.

After gaining state accreditation in 2007, the program opened the doors to its first class this fall. Designed to accommodate working professionals, the program can be completed part-time in approximately two years. Faculty include members from both the Bayer School of Natural and Environmental Sciences as well as the Donahue Graduate School of Business.

Dr. Alan Seadler, director of the program and the Edward V. Fritzky Chair of Biotechnology Leadership, said, "When a student graduates with a bachelor's degree in biology or chemistry, he or she has a strong foundation in science, but not necessarily a clear idea of how to put that to work. This program provides an answer to the question, 'What do I do now?'"

"Traditional graduate programs in biology and chemistry prepare students for academic teaching and research," he

continued. "This program is designed to broaden their view of the possibilities in science so that they don't overlook exciting and satisfying careers in the commercial environment."

After completing his Ph.D. in biology, Seadler soon found himself in a role for which he had not been prepared—product development manager at Ciba-Corning Diagnostics, now a division of Bayer Diagnostics. There was a promising idea for a new system for medical diagnosis, but the scientific possibilities had to be balanced with the needs of customers. "I had to bring chemists, engineers and marketing managers together to come up with a final product that offered value to our customers at a cost that was not out of their reach," Seadler recounted.

While the venture was successful, Seadler admits that the process was "painful." His current students in the M.S. in Biotechnology program will be

better prepared to face similar challenges, because they will enter into their careers with the understanding that publishing a new scientific discovery and developing a new product are two very different endeavors.

"Just about every new company in biotech or life sciences starts up with a leading scientist, who is an expert in his field, and a CEO, who knows the business," Seadler said. "Students coming out of this program will occupy that essential position between the two and help manage the dialogue where the science and business requirements intersect. They will have their science education and enough business training to be able to communicate with both and help translate cutting edge science into new medical and scientific products."

For more information on the M.S. in Biotechnology, visit www.science.duq.edu/biotech. ■

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