RIVIER AWARDED COMPETITIVE \$650,000 NATIONAL SCIENCE FOUNDATION STEM GRANT

(From Rivier Today, Fall 2016)



From left to right: Sister Paula Marie Buley, IHM, Rivier's President; Dr. Susan Barbaro, Associate Professor of Biology, Department Coordinator, and author of the NSF grant; and Dr. Douglas Howard, Vice President for Academic Affairs.

The National Science Foundation (NSF) has awarded Rivier's biology department a five-year, \$650,000 grant to support the education of young scientists. The grant will fund a pilot program titled ARGYLES (Attract, Retain and Graduate Young LifE Scientists) to engage biology majors as emergent scientists who will contribute to the vitality of the STEM workforce in the Northeast.

This innovative program will provide four-year scholarships, and signature learning and professional experiences, to academically talented students from lower-income families. Preference will be given to minority, female, and first-generation learners, who are currently underrepresented in the STEM disciplines, as a provision of the NSF grant. The program's key components include summer field study, peer and faculty mentoring, community building, independent research proposals and projects, travel to scientific conferences, and workforce preparation.

"In addition to supporting current STEM students, this national grant will also enable Rivier to expand a model for student engagement in other disciplines," says **Sister Paula Marie Buley**, IHM, Rivier's President. "The ARGYLES program offers four pillars of support: academic, financial, vocational, and communal. In addition, the focus on experiential learning will offer a hands-on educational experience and build diversity within the scientific community."

ARGYLES program objectives guide students from the campus to the community to their careers. These objectives include recruitment and enrollment of qualified students; building community within the cohort, and active participation in campus life and the Greater Nashua community; increased retention and graduation rates; and continuation to STEM graduate study or employment in their field within six months of graduation.

"We're excited for this opportunity to expand Rivier's biology and biotech programs," says **Dr. Susan Barbaro**, Associate Professor of Biology, Department Coordinator, and the grant's author. "We have already established a partnership with faculty and staff at the University of Waterloo in Ontario as we plan for a community-building teaching trip next summer."

In addition to potential expansion to other Rivier academic departments, the program's successes will be shared with peer institutions through conference presentations, news releases, and peer-reviewed journals to encourage program adoption at other colleges and universities.

Real-world experience. Community building. Global engagement.



Tew's Falls on the Niagara Escarpment in Ontario, Canada

ARGYLES participants will engage in a ten-day field experience with faculty, peer mentors, and other students from Rivier and the University of Waterloo to explore geological and environmental sites along the Niagara Escarpment in Canada. This region offers the opportunity for students to study geological and glacial features and fossils; observe the wide variety of habitats the Escarpment supports—more than 300 species of birds, 53 types of mammals, 36 species of amphibians and reptiles, 90 kinds of fish and more than 1,500 different plants; conduct water testing and examine issues related to fresh water; and to examine the Escarpment's economic importance to the province of Ontario and the issues of balancing protection, conservation, and development.