



Dr. Stuart Hamilton



NSF Project Team

Habay Earns First NIH Grant

Dr. Stephen Habay, Chemistry, earned the campus' first competitive grant from the National Institutes of Health (NIH). The \$290,538 Academic Research Enhancement Award (AREA) will expand research opportunities for undergraduates and enhance SU's laboratory spaces with new equipment.

Habay compares his work as a synthetic organic chemist to being a "molecular architect." He said, "We design and build complex molecules from simple building blocks that you can purchase or make in the lab." His project involves developing methods for the synthesis of fused bicyclic alkaloids, a special class of compounds that show promise in combatting illnesses ranging from cancer and migraines to hypertension and malaria.

"We have discovered a new way of making these molecules that is quick and efficient from building blocks called oxazolium salts," he said. "Despite the wide availability of these salts to chemists, they have never been used to make alkaloids in this way." Many alkaloids are derived from nature and available only in small quantities. Producing larger amounts synthetically in a lab allows for more research into their medicinal properties.

The best part of the project, Habay said, is being able to involve more students. The grant funds up to 15 paid positions over the next three summers, with other students involved during the semesters. In addition, the grant enables the Chemistry Department to purchase chemicals and supplies for the proposed research, as well as new major, state of the art instruments for use in teaching labs and research courses.

Hamilton Assists on NSF Project

Dr. Stuart Hamilton, Geography and Geosciences, is assisting with a nearly \$1.8 million National Science Foundation (NSF) project that is examining aquaculture in Africa's Lake Victoria. Hamilton is a co-principal investigator on the team and graduate student Matthew Caddenhead is the first of two SU research assistants working on the project. The team is investigating the potential for aquaculture in Lake Victoria and the implications for wild fisheries and fish commodity markets. They are exploring the bridge aquaculture creates, linking the ecology of the lake (a natural system) with the economy of its surrounding fisheries (a human system). Hamilton is responsible for designing environmental suitability models for various fish species at different stages in their life cycles. He believes the project will contribute to improve food and income security in East African nations that rely on the natural capital provided by Lake Victoria.

Richard A. Henson School of Science and Technology



Barse billfish research



Geography Field Study



Geography Field Study



Supporting STEM Jobs

SU was named a 2015-16 STEM JobsSM Approved College by Victory Media. The designation spotlights campuses that offer students STEM-focused programs to best prepare them for careers in the high-growth fields of science, technology, engineering and mathematics. The STEM JobsSM Approved Colleges list includes only 184 campuses nationwide, selected from some 1,800 surveyed. They are rated for aligning their STEM programs with in-demand jobs, having relationships that help students get jobs, attracting and supporting diverse students and faculty, and having resources dedicated to STEM student achievement and success.



Summer Research Experiences

SU students spent the summer conducting several research projects. May Palace, physics major, was at the University of California, Davis, for a physics-focused Research Experiences for Undergraduates site, fully funded by the National Science Foundation. She worked in a laboratory studying vortices in superfluid helium.

Omar Aboul-Enein, computer science and mathematics major, was at the National Institute of Standards and Technology (NIST) on a Summer Undergraduate Research Fellowship. He assisted the NIST with its performance testing of mobile manipulator robots.

In addition, 13 SU geography students explored the geography of the Colorado Plateau as part of an annual regional field studies course. Students were introduced to the limiting factor of water in the Desert Southwest and how the current drought, and its expected continuation, impacts the major reservoirs and therefore human availability for agricultural, commercial and residential uses.

Nursing at its Best

SU students have the highest 10-year average pass rate of all University System of Maryland institutions on the National Council Licensure Examination for Registered Nurses, at 91.6 percent. With pass rates increasing for the third consecutive year in 2014-15, SU topped state peers including Johns Hopkins and Towson universities. In addition to successfully graduating highly qualified registered nurses, SU also is preparing more nurse educators and leaders through its new Doctor of Nursing Practice, which earned accreditation from the Commission on Collegiate Nursing Education (CCNE). The department's post-graduate Advanced Practice Registered Nursing (APRN) certificate also received CCNE accreditation. In addition, SU was ranked No. 3 among the "Top 10 Up and Coming Nursing Schools in the East for 2016," according to BestMasterofScienceinNursing.com.