

# GRANT NEWS

## The Mark of a Great University

In each issue of *Hofstra Horizons*, through our "Grant News" column, we highlight some of the recent accomplishments of Hofstra University faculty and administrators in major national and international, peer-reviewed grant competitions, and important regional grant competitions.

It has been said that one mark of every great university is an active grants program. This is so because it is only through grant assistance that our nation's best colleges and universities can afford the special activities and offerings that distinguish them from other institutions.



**Thomas O. Murphy**

This has been an incredible year in grant competition for the University. Through this column, we have the opportunity to demonstrate what a great year it was by highlighting the accomplishments of select individuals who have recently received grants, but it may be that Hofstra's greatest grant-related accomplishment of the past year was its collective effort. The number of grant applications submitted in 2003 is up more than 70 percent from the previous year, a statistic that bodes very well for our institution's future.

Congratulations to all our 2003 grant applicants. Listed below is some information about what these grant applications have already produced.

### Center for Technological Literacy

This has been a capstone year for Hofstra University's Center for Technological Literacy, under the direction of Drs. M. David Burghardt and Michael Hacker. In September 2003 the Center was awarded a five-year grant from the National Science Foundation (NSF) valued at more than \$11.5 million. Funding is provided for the program, "The MSTP Project: Mathematics Across the Mathematics, Science and Technology Curriculum." The purpose of the MSTP Program is to improve teaching and learning in middle-level mathematics using a model of 10 school districts in New York. For this program, Drs. Burghardt and Hacker assembled a strong team of local talent, including Dr. Sharon Whitton, Dr. Michael Ayewoh, Dr. S. Maxwell Hines, and Dr. Nanette Wachter-Jurcsak, along with core partners Stony Brook University, New York State Education Department and 10 Long Island school districts. Supporting partners include the Long Island Regional School Support Center; Boards of Cooperative Educational Services; professional teacher associations in science, mathematics, and technology; Brookhaven National Laboratory, and the Eisenhower Regional Alliance for Mathematics and Science Education. Core and supporting partners are in the process of developing and implementing a model for increasing the diversity of the teaching workforce; enhancing university faculty's understanding of middle school reform, learning standards, and assessments; increasing middle school mathematics, science, and technology teach-

ers' understanding of mathematics content and pedagogy; and improving curriculum alignment among the mathematics, science, and technology disciplines. In effect, MSTP integrates three components: (1) collaborative professional development for school-based and higher education faculty; (2) curriculum revision and alignment; and (3) recruitment of underrepresented minority undergraduates in mathematics, science and engineering into teaching careers. The program's impact is expected to be great and immediate as the partnership expects to directly engage 300 teachers, 20 higher education faculty and 12,000 students per year.

News of the MSTP grant came just months after the Center for Technological Literacy received a \$976,725 award from the NSF for the "New York State Professional Development Collaborative" under the direction of Dr. Margaret Weeks, co-directed by Drs. Burghardt and Hacker. Through this project, the University in partnership with five New York state community colleges, the New York State Technology Education Association (NYSTEA), and 10 New York business/industry/government partners, will establish a statewide professional development collaborative. The project will initially provide workshops in the areas of materials/manufacturing and information technologies to 100 secondary school technology teachers through a program that brings together community college technical experts, professional association teacher/leaders and university pedagogical experts. The overarching goals are to provide contemporary professional development to tech-

nology educators using standards-based exemplary materials, to forge sustainable alliances between community colleges and the technology education community, and to create a professional development model that the leadership of New York's Technology Education Association will sustain. Congratulations to Drs. Weeks, Hacker and Burghardt, and all of their associates in these two new grant-supported projects.

### Grant Successes in Scientific Research

Building a successful grants program in the sciences takes time and deliberate planning, but the rewards from such an effort can be great for both faculty and the students of the science departments. Science grants to academe are most often awarded in support of four functions: research investigation, advanced level training or professional development, the acquisition of special purpose equipment and curriculum development. Hofstra's portfolio of grants in the sciences expanded considerably this year and included awards in each of these four categories — all awarded through rigorous peer review competition.

It had been several years since the University had submitted a grant application directly to the National Institutes of Health (NIH), the nation's largest provider of research grant support to academe. However, since May 2002 six grant applications have been submitted to NIH by Hofstra and of these, two have already been awarded with receipt of a third grant imminent.

Congratulations to Dr. Harold M. Hastings, principal investigator, on a new NIH research grant titled "Atrial Fibrillation: Anatomy Versus Cell Physiology." Chronic atrial fibrillation affects more than two million patients in the United States, causes 15 percent of all strokes, and currently presents one of the greatest treatment challenges in cardiac electrophysiology. Dr. Hastings is assisted in this research project by several undergraduate students and by fellow senior investigators Drs. Flavio Fenton and Elizabeth Cherry.

Dr. Cherry warrants special recognition as recipient of a second NIH grant, a National Research Service Award (NRSA) for her research on computer-guided designer ablation of atrial fibrillation. The highly competitive NRSA Fellowship enables Dr. Cherry to dedicate her full effort toward developing a research-based career. Her presence among Hofstra students — especially among women seeking careers in the sciences — should prove inspirational.

The Hastings' lab had another fine grant accomplishment to report in recent months — a quarter million dollar grant award for the acquisition of a Beowulf supercomputer for physical science research. Congratulations to the team of Drs. Harold Hastings, Flavio Fenton, Sabrina Sobel and Terry Brack, all co-principal investigators on this new NSF grant.

The NSF also issued an important new grant award to members of the Department of Biology: Drs. Beverly Clendening, Peter Daniel, Maureen Krause and Robert Seagull. This award has been provided through the agency's Course, Curriculum and Laboratory Improvement (CCLI) program and is valued at \$200,000. This project will support recently approved curricular changes that are designed to enhance student learning, knowledge retention and scientific reasoning skills and to decrease attrition by the introduction of active, inquiry-driven learning into both the lecture and laboratory components of the new biology core sequence.

With this variety of grant support, and the growing number of science faculty taking on the challenge of peer review competition, an undergraduate degree in the sciences from Hofstra will be increasingly recognized as an effective springboard to graduate education and professional careers in scientific research and medicine.

## Service Grants

We would like to offer some long-overdue recognition to several key people behind a number of service grants conducted by Hofstra University.

Many of us have heard of programs like STEP, CSTEP, Liberty Partnerships and NOAH, but how much do we really know about them? One thing we should all know and appreciate is that these service programs provide valuable ties between the University and its neighboring communities. What's more, these programs often produce outstanding college students and fine, productive citizens. In general, these programs serve economically disadvantaged and minority students, who build a brighter future for themselves.

STEP, the Science and Technology Entry Program, is an academic enrichment program under the direction of Dr. Michael Ayewoh, an Assistant Dean in the School of Education and Allied Human Services. Funded by the state of New York, STEP targets students in grades 7-12 who exhibit the potential for college-level study and emphasizes the development of skills that will make them successful in the science and technology fields. CSTEP, the Collegiate Science and Technology Entry Program, is also under the direction of Dr. Ayewoh. CSTEP is designed to increase the number of qualified minority and economically disadvantaged students at Hofstra who choose and complete courses in pre-professional and professional education programs leading to careers in New York state-licensed professions. CSTEP is also funded by the state of New York.

Hofstra University's Liberty Partnerships Program (LPP), under the direction of Ruth Redlener, does an outstanding job assisting at-risk students in grades 9-12 and was recently featured in a several page article in *Newsday*. LPP offers a broad range of services designed to increase not only a student's ability, but also his or her motivation. So, in addition to providing academic experiences, LPP offers students an opportunity to learn life skills, such as home ownership and the management of personal finances. The program serves more than 130 students on Long Island this year, with funding provided in part from the state of New York and local industry. Ms. Redlener was provided a donation of \$10,000 from Computer Associates to expand her LPP activities.

Hofstra University established NOAH, New Opportunities at Hofstra, in 1964. Five years later, the state of New York established HEOP, the Higher Education Opportunity Program, modeled after innovative programs like Hofstra's NOAH. Indeed, NOAH was one of the first programs of its kind in the United States, an admissions and developmental program designed to assist economically disadvantaged and educationally "not-yet-proven" students to take on the challenges of college. NOAH, under the direction of Cynthia Diaz-Wilson, offers advisement and instructional services to students who have demonstrated abilities or talents outside the classroom to help them achieve their full academic potential inside the classroom.

All of the aforementioned programs were recently notified by the state of New York that their grant support will be extended another year — a total of more than \$846,000 in grant support. But no one can place a price tag on the positive impact these programs have on so many youth — on the long-term good this investment offers. Nonetheless, each year these service programs become the target of possible budget cuts. Over the course of the academic year, we should make an effort to learn a bit more about one or two of these programs and the life-altering impact Dr. Michael Ayewoh, Ruth Redlener, Cynthia Diaz-Wilson, and their dedicated associates have had on these young lives.

Finally, we would like to congratulate Dr. Michael Ayewoh on being the recipient of another new grant. Dr. Ayewoh is the program director for a new Teacher/Leader Quality Partnerships (TLQP) program grant, valued at \$253,734 from New York State's Office of Higher Education. TLQP grants are provided to promote professional development for pre-service and in-service teachers, principals, and other professional school personnel. Dr. Ayewoh will seek assistance from Hofstra College of Liberal Arts and Sciences (HCLAS) to conduct this program. Best wishes to Dr. Ayewoh and his associates in the School of Education and Allied Human Services as well as HCLAS in implementing this new Hofstra program.

Clearly, the grants program at Hofstra University has grown. This is not a surprise as, it has been said, one mark of a great university is an active grants program.