LSU RESEARCH

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Fall 2003

The constant pursuit of discovery

LSU external funding increases 22 percent for FY 2002-2003

External funding for LSU in fiscal year 2002-2003 reached $122.4 million, an increase of 22 percent over fiscal year 2001-2002.

"We are very proud of the great accomplishments of our faculty and staff. This impressive growth in external funding is yet another example of LSU's rising stature as a research university, and is a wonderful catalyst to the Baton Rouge and Louisiana economies," said LSU Chancellor **Mark A. Emmert**.

The exact funding total for the fiscal year was $122,402,758.

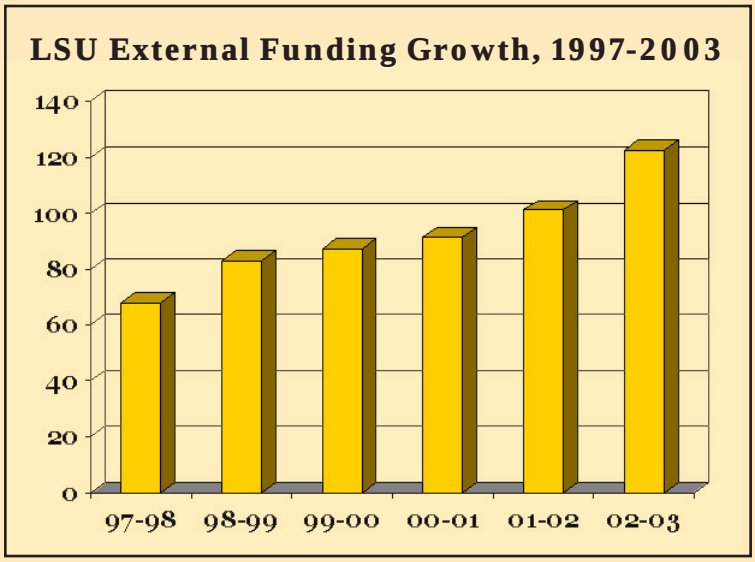
Thanks in large part to the National Center for Biomedical Research & Training and the Academy of Counter-Terrorist Education, the Division of Continuing Education helped set the pace, with $36.4 million in funding, a 95 percent increase over last fiscal year.

Two colleges also led the pack: the College of Basic Sciences brought in close to $25.7 million, an increase of 30 percent over last fiscal year, and the School of the Coast & Environment received $11.4 million, up 82 percent.

The School of Library & Information Science received the largest grant ever given by the Institute of Museum & Library Services, $498,653.

LSU's external funding has grown by a total of 81 percent since the 1997-1998 fiscal year. The average annual percent of funding growth over the last five fiscal years is 12.8 percent.

Research areas that saw significant funding growth in 2002-2003 included bioscience, with almost $15.5 million; environmental, with $8.5 million; coastal issues, with $12.9 million; and social sciences, with close to $6.3 million.



"The average growth of LSU's research endeavors at 12.8 percent over the past five years would be the envy of many U.S. businesses," said **Kevin Smith**, vice chancellor for research and graduate studies.

The federal government was the top source for funding, providing $77.8 million, or 64 percent, while the state provided $33 million, or 27 percent. Industry and other private sources provided $11.6 million, or 9 percent.

"As society increases its dependence on a workforce trained in the scientific and technological disciplines, while recognizing the impact of the arts, humanities, and social sciences on societal change, LSU researchers continue to pursue discovery that leads to excellence in teaching and service," said Smith.

For more information, call 225/578-5833.

This story was contributed by Rob Anderson, LSU Office of University Relations.

IN BRIEF

New initiatives to fund faculty research

As part of the University's National Flagship Agenda, LSU is instituting new policy measures to support faculty research and scholarship. These measures include increased funding for assisting faculty with research activities, the creation of a new seed research and travel fund, and improvements in the process of applying for grants.

LSU alumnus endows graduate program

An endowment was created in the College of Engineering thanks to Donald W. and Gloria Pichon Clayton of Houston, Texas, who donated $2,075,000 for faculty and student support of the engineering science program. Both are 1959 graduates of LSU. The new endowment will fund several distinguished professorships and merit awards for faculty and students.

LSU teacher preparation program redesign addressing shortage of qualified teachers

According to new federal standards for teacher preparation, there may be thousands of under-qualified teachers in Louisiana who do not have a degree in the subject matter they are teaching. LSU is helping to decrease that number with a redesigned teacher preparation program.

Thanks to two grants from the National Science Foundation, LSU students seeking to teach grades 7 to 12 in science and math will be better prepared to instruct Louisiana's students in middle and high schools.

Traditional programs typically require teacher candidates to major in education with a focus in their anticipated teaching subject. In LSU's redesigned teacher preparation program, which began this fall, students now pursue a degree in the field they plan to teach, with a concentration in education.

The grant is funding scholarships for both undergraduate and graduate students. One of the scholarships, the Robert Noyce scholarship, requires students to teach two years in a U.S. school where a significant proportion of students receive free or reduced-price lunch for each year they receive the award. Every public school system in Louisiana has at least one school that meets that requirement.

"One of the notable points of the redesign is the collaboration between the subject matter faculty and the College of Education faculty in the design and delivery of the program from LSU's classrooms to the secondary education classrooms."

FRANK CARTLEDGE
Associate Dean, College of Basic Sciences

The new program will put teacher candidates into school settings for field work much more often than in the past. It will connect education students with experienced high school teachers who will be acting as mentors throughout the program, outside of traditional student teaching roles.

The redesign was a collaborative effort between the LSU College of Education, the Governor's Blue Ribbon Commission on Teacher Quality, and the Louisiana Board of Regents.

New leader and members begin terms on Council on Research

Michael Cherry, professor of physics & astronomy, was elected the 2003-2004 chairman of the Council on Research. His research deals with high energy astrophysics, which includes radiation produced by energetic particles in space.

Pratul Ajmera, McDermott International professor of electrical & computer engineering, was selected to represent engineering and will serve through the end of December 2003. Some of his research interests include semiconductor materials and devices, and integrated circuit fabrication processes.

Marcia Newcomer, professor of biological sciences, was selected to represent the life sciences and will serve through the end of December 2005. Her research includes proteins and enzymes that transport and metabolize Vitamin A and other naturally occurring retinoids

Mary Sirridge, professor of philosophy, was selected to represent the humanities and will serve through the end of December 2003. Her principal area of research is philosophy of language in ancient and medieval thought.

Campus community gets down to business at 'boot camp'

Entrepreneur "wannabes" recently had the opportunity to build their business acumen at the Business Boot Camp for Start-Ups.

Sponsored by the Baton Rouge Technology Council, Capital Region Competitive Strategy, and the Office of Research & Graduate Studies, the boot camp offered lessons in business planning and creating venture presentations. The boot camp was a preliminary event to the 3rd Annual Louisiana Purchase Venture Capital Forum being held on Oct. 16 & 17. Visit **www.la-purchase.com** for more information.

Carol Carter of the Louisiana Institute for Entrepreneurial Education & Family Business Studies and Bryan Greenwood of the Louisiana Business & Technology Center were presenters at the Business Boot Camp for Start Ups.

LSU hires world-renowned astrophysicist to lead information technology center

Solving Einstein's equations is just another day at work for **Ed Seidel**, who was recently appointed director of LSU CAPITAL, the LSU Center for Applied Information Technology and Learning.

Seidel is world-renowned for his research on black holes and high-performance computing. He came to LSU from the Max Planck Institute for Gravitational Physics, also known as the Albert Einstein Institute, in Potsdam, Germany. His work as head of the institute's numerical relativity group has prepared him for the research that he plans to pursue using the resources and expertise available at LSU CAPITAL, such as the center's supercomputer, "SuperMike."

"We plan to develop LSU CAPITAL into a world-renowned center for computational sciences, while at the same time raising the level of science, engineering, and humanities on campus," said Seidel.

Seidel earned his Ph.D. in relativistic astrophysics from Yale University in 1988. Before working at the Max Planck Institute, he was employed by the National Center for Supercomputing Applications at the University of Illinois.

Ed Seidel at a recent presentation to members of the media and LSU.

While serving as director of LSU CAPITAL, Seidel will also serve as a faculty member in the Department of Physics & Astronomy and the Department of Computer Science.

Seidel's research in numerical relativity involves solving Einstein's equations with computers. He is also working on producing solutions to the problem of the collision of black holes in space. His research group studies the parallel use of different computers connected by networks to solve scientific problems, working in a new field called grid computing.

The educational projects spearheaded by Seidel's LSU CAPITAL group are an effort to facilitate the University's movement toward national flagship status.

This story was contributed by Jennifer Hughes, LSU CAPITAL.

Food is only the beginning, researcher finds even Acadian genetics are unique

Since the Acadians came to Louisiana from Canada nearly 250 years ago, they have been celebrated as a people with a unique culture and history. As it turns out, even on a genetic level, Acadians are just as unique as their cuisine and music.

For more than 10 years, biological sciences professor **Mark Batzer** and his team of collaborators, Bronya Keats, chair of the Department of Genetics at the LSU Health Sciences Center in New Orleans, and Prescott Deininger, Zimmerman Chair of Basic Cancer Research at the Tulane University Health Sciences Center in New Orleans, have studied an autosomal recessive genetic mutation unique to the Acadian people. They have found that Acadians have a unique genetic mutation that disrupts a PDZ domain-containing protein called harmonin. It is expressed in the inner ear sensory hair cells, giving rise to Usher Syndrome Type 1C, a disease that causes congenital profound sensorineural deafness, vestibular dysfunction, and blindness.

Batzer's Laboratory of Comparative Genomics is also tracking the movement of the Acadian population from Europe across the Atlantic to Canada and Louisiana through population genetics research. Settlement in the bayous of southwestern Louisiana and relative isolation because of linguistic, religious, and cultural cohesiveness are among the factors believed to have contributed to the unique genetic architecture of the Acadian people.

> *"By tracking the Acadians' movement and knowing where they came from, we can better understand their current genetic make up"*
>
> **Mark Batzer**
> ***Department of Biological Sciences***

These studies will provide the underpinnings for better health and genetic counseling in the Acadian population. The project is funded by a grant from the Louisiana Health Excellence Fund.

Visit **http://batzerlab.lsu.edu** to get additional information on Batzer and his team, and their research on human genetic variation, genome structure, and the identification of the genes responsible for several genetic disorders.

FACULTY AND STAFF HONORS

William Beyer, *LSU Technology Support Center*, *Office of Computing Services*, was recognized by the Association of Rehabilitation Programs in Computer Training as an Outstanding Business Advisory Council member.

Ray Castle, *Kinesiology*, was selected as a member of the USA medical staff for the 2003 Pan American Games.

John Day, *Coastal Ecology*, was recognized by the Estuarine Research Federation as the recipient of the 2003 William A. Niering Award for education.

Chacko John, *Geology & Geophysics*, was elected president of the Energy Minerals Division of the American Association of Petroleum Geologists.

Don Kraft, *Computer Science*, was elected a fellow of the American Association for the Advancement of Science.

LSU Professor Emeritus **Bob Muller**, *Geography & Anthropology*, was awarded a 2003 Lifetime Achievement Award from the Climate Specialty Group of the American Association of Geographers.

LSU Boyd Professor **Harry Roberts**, *Oceanography & Coastal Sciences*, was chosen by the Society for Sedimentary Geology as the recipient of its Shepard Medal for excellence in marine geology.

Dek Terrell, *Economics*, was named co-editor of the *Southern Economic Journal*, which is published four times a year by the Southern Economic Association.

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