



The Department of Biological Sciences

The University of Delaware

December 2005

Greetings from the Chair

On behalf of all the faculty, staff and students of the Department of Biological Sciences, I send our warmest regards. We have enjoyed another rewarding year marked by some terrific accomplishments and remarkable generosity of our alumni/ae. Again a number of our undergraduate and graduate students received national awards for their research efforts in the form of travel grants or predoctoral fellowships. The undergraduate research program has continued to grow and is providing "hands-on" research experiences to a large portion of our majors, activities which has inspired many of these students to pursue careers in biological research or medicine. Our graduate program also has grown to an impressive strength and many of our students have received competitive national training grant support to pursue their thesis work. A great many of our students present their work at national or international scientific meetings which not only highlights the talents and hard work of these students, but also demonstrates the strong research infrastructure that exists at the University of Delaware. This is well-complemented by the research accomplishments and impressive extramural funding of our faculty who continue to secure major grant support in an extremely competitive funding environment.

The generosity of many has enabled us to initiate several new programs during the past year. Mrs. Ruth Stetson donated funds to establish the Milton Stetson Undergraduate Research Fellowship to an outstanding undergraduate researcher. This year's recipient was Lauren Bennett. Dr. Stetson, a for-



Dr. Milt Stetson with undergraduate advisee Debra Roberts at a poster session in May 2000

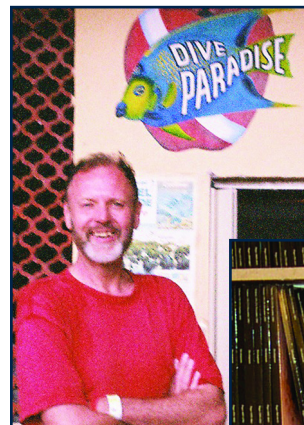
mer professor and department chair, was a highly regarded researcher and educator who passed away unexpectedly several years ago. His dedication to undergraduate research is well reflected in this fellowship. An anonymous donor has provided funds to establish the Graduate Student Publication Excellence Award, and this year's recipient was Keith Bayha, Ph.D. Dr. and Mrs. Howard E.

Hudson have donated funds to establish The Arnold M. Clark Lectureship in Molecular Genetics that will support a yearly lecture by a preeminent scientist in the field of molecular biology and genetics. This will increase the exposure of all of our students to breakthroughs in this arena, present an opportunity for them to meet world class researchers outside of the university as well as providing the lecturer the opportunity to see the accomplishments of our students and faculty first-hand. Arnold Clark was a highly respected professor who was noted for his research in genetics, his teaching and his wry sense of humor. He retired from the University in 1983.

We also enjoyed an outstanding year of faculty recruitment success. A national search resulted in the hiring of Dr. Deborah Allen as an Associate Professor who brings a nationally recognized program in the scholarship of science education with her. We also are pleased to have recruited another highly recognized researcher, Dr. Randy Duncan, an Associate Professor whose research focuses on the impact of mechanical stress on skeletal architecture. Soon to join us are Drs. Barbara Butler and

Fidelma Boyd. Dr. Butler is an Assistant Professor with an excellent background in science education that will help promote science education outreach activity in the area. Dr. Boyd is also an Assistant Professor with a highly successful research program in bacterial pathogenesis. Dr. Howard Cornell announced his retirement from the university this past year after many years of teaching and research excellence in ecology. Dr. Malcolm Taylor also has decided to retire after this year. Dr. Taylor has

anchored many aspects of our physiology programs and mentored many students in his studies of reproductive cycles in fish.



Drs. Howard Cornell (left) and Malcolm Taylor (right)



They will be greatly missed by students and faculty members alike.

Again we thank our many alumni/ae for their generosity in helping support our programs. In particular, we look forward to establishing several endowed Professorships in the near future. You can be a major and lasting part of these traditions by your contributions, large or small. Information on how to donate is included both later in this Newsletter as well as at our web site: <http://www.udel.edu/bio/>. Please browse the site for news and to see some familiar faces!

- Daniel Carson
Trustees Distinguished Professor and Chair
Department of Biological Sciences



Dr. and Mrs. Howard E. Hudson

Faculty Work to Improve Minority Involvement in Research

A wealth of data supports the conclusion that disparities in health care exist in this country. The disparities are due to cultural, economic, and biological factors. The recent approval of BiDil as a treatment for high blood pressure in African Americans has shown that personalizing medicine is important and that clinical studies must involve people from different cultural backgrounds. Unfortunately, recruiting participants from African American and Hispanic populations has proved difficult in part because minorities generally distrust researchers. The distrust between the research and cultural communities exists because there are very few African American or Hispanic Ph.D. or M.D. role models.

The Department of Biological Sciences has received local and national recognition for its strong effort to increase the number of minorities involved in research. Because Drs. Mary C. Farach-Carson, Carlton Cooper, and Robert Sikes are involved in prostate research and because prostate cancer disproportionately affects African American males, they teamed up with Dr. David Usher to apply successfully for a Department of Defense grant to support undergraduates from the historically African American universities of Lincoln and Delaware State to participate in prostate cancer research. It is hoped that minority participa-

tion in undergraduate research will convince these students to earn advanced degrees in the sciences.

Individually, Dr. David Usher was honored for his role in expanding the pool of minority researchers. At the sixth National Role Models Conference in Las Vegas, Usher received a National Faculty Mentor Role Model Award from Minority Access Inc. The conference's theme was "Diversity in Retrospect and Prospect: Expanding the Pool of Researchers to Reduce Health Disparities." According to Andrea Mickle, president and chief executive officer of Minority Access, Usher "symbolizes Minority Access' ideal faculty mentor role model—one who has con-

tributed to increasing the pool of minority researchers through mentoring and supporting minority students." Usher was recognized for his many contributions to providing educational opportunities and support to underrepresented and minority students. He helped establish and directs the Bridges to the Baccalaureate Programs between UD and Delaware Technical and Community College. He also helped expand UD's NUCLEUS program, a program funded by the Howard Hughes Medical Institute. Both programs prepare academically talented minority students for entry into medical and graduate programs.

The University of Delaware honored Dr. Deni Galileo for his efforts to mentor minority students. He received a Mentor of the Year Award, given by the University's McNair program, for his exemplary leadership, exceptional ability to serve as an advisor, and his efforts to guide, challenge, inspire, counsel and encourage students to achieve their academic and personal goals. The University of Delaware's McNair Program is the most successful in the nation, having placed 100% of its undergraduate members in graduate programs. It is through the efforts of Biological Sciences faculty like Dr. Galileo and Dr. Usher, who won the McNair Award in 2004, that this program is a success.



Dr. David Usher works with Marysol Lavander, a Delaware Technical and Community College student and participant in the Bridges to the Baccalaureate Program

Alumni News

Martin Freed (B.A. 1982) was named Chief Medical Officer of Vitae Pharmaceuticals after spending almost fourteen years with GlaxoSmithKline. He has also been a Clinical Assistant Professor at the University of Pennsylvania School of Medicine.

Jeff Heckman (B.A. 1987) earned an MBA from West Chester University and has recently joined Cephalon Inc. as a Director of Project Management.

Matthew Picklo (B.A. 1990) is an Assistant Professor and Graduate Director in the Department of Pharmacology, Physiology, and

Therapeutics at the University of North Dakota.

Michael Sharer (B.A. 1990) is now the Director of Technology Transfer, Licensing, and Commercialization at Western Michigan University.

Donald Godwin (B.A. 1991) was tenured and promoted to Associate Professor of Pharmaceutics in 2002 and recently named Assistant Dean of Student Affairs at the University of New Mexico College of Pharmacy.

Lisa Blazejewski (B.A. 1995) completed an M.S. at the University of Minnesota in

1999 and is now a Genetic Counselor at the University of Massachusetts Memorial Medical Center in Worcester, MA.

Michael Shindle (B.A. 1999) graduated with honors from Johns Hopkins University School of Medicine in 2004 and is currently an Orthopedic Surgery Resident at the Hospital for Special Surgery in New York City.

Thanks to everyone who sent us their news!

What's New with Dan Simmons



Dr. Dan Simmons

Dan Simmons started his scientific research career nearly forty years ago with a summer undergraduate research project studying the molecular control of virus function. After completing graduate and postdoctoral training in virology, he joined the UD Department of Biological Sciences in 1978 and moved right into brand new lab space in McKinly Laboratory. Life was somewhat busy while he was an assistant professor since he had two very small children at home, was teaching the then new subject of molecular virology and was still very active in the research lab. This led to his developing a regular schedule of working until 6pm, going home for dinner to be with his family, then returning to the laboratory sometime after 9 pm to finally go home to bed at 1 or 2 in the

morning. While Dr. Simmons' children are long grown and he has been promoted to full professor, it is still possible to find him in the lab late at night pursuing his passion for bench research.

In the past 27 years at Delaware, Dr. Simmons has published over 50 papers on the molecular biology of viruses, particularly the SV40 virus which is tumorigenic in rodents, but sets up a persistent infection in its host, the monkey. In recent years, he has developed a strong interest in the mechanisms controlling the replication of viral genomes, work that has been continuously funded by the National Institutes of Health for over 20 years. Dr. Simmons also spends a lot of effort "paying back" that early start in research, mentoring over 35 undergraduates, 11 Ph.D. students and several postdoctoral fellows over the years, including Dr. Florence Schmiege, another longtime faculty member in the Department of Biological Sciences. Dr. Simmons remains in contact with many of his former students and would like to encourage the rest to contact him with updates on how they are doing.

Dr. Simmons' commitment to undergraduate education is also evident since he is one of the faculty members who developed the Bachelor of Science in Biotechnology major. He currently coordinates the major, advises all of its students and teaches several of the required courses. His close interaction

with the biotechnology majors is evident since they often return to visit him, even well over a decade after graduation. Dr. Simmons also teaches Molecular Biology of the Cell, Nucleic Acids Laboratory, a graduate level Virology course and Introduction to Biotechnology. While it does not seem possible that Dr. Simmons has any spare time, he is an avid bicyclist and runner and has competed in a number of biathlons over the past few years.



Have exciting and interesting things happened to you since you left UD? Do you wonder if the same is true of other students you knew here? The Department of Biological Sciences is asking you to tell us so we can share your stories with fellow Biology alumni in future editions of our newsletter. Let us know what special things have been going on with you, personally or professionally, by filling out the form below and sending it in, or better yet, complete the online form at: <http://www.udel.edu/bio/news/alumni/>

Please fill-out the following form, cut along dotted lines and return.
Name

Last First M.I. Maiden

Biology Degrees and Dates ____BA ____BS ____MS ____PhD

Comments

Please return completed form to Dr. David W. Smith, Department of Biological Sciences, University of Delaware, Newark, DE 19716. Thanks for your cooperation!

We need your help!

Biology has been busy on all fronts. Your tax-deductible gifts are deeply appreciated and make a huge difference in program development. If you are already planning on donating to the University of Delaware, you may target your support to the Department of Biological Sciences. Please join us in this effort by sending your donation to:

Department of Biological Sciences

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Please make the check payable to: University of Delaware. Contributions can also be made by credit card online at <http://www.udel.edu/bio/about/support/>

Dr. Smith Receives Advising Award



Dr. David Smith

In April, Dr. David W. Smith received an award from the College of Arts and Sciences for Outstanding Advisement. Dr. Smith, who has been the Undergraduate Program Director in Biology since the fall of 2001, was honored for his effectiveness in coordinating the advisement program of the department, where there are now nearly 1,000 undergraduate students majoring in

Biology. The award citation praised him for "quality of advisement, availability, communication, knowledge of college programs and overall impact on students through advising." Specific examples include his personal advisement of over 100 students, checking the progress of all seniors to make sure they are on track for graduation and training other faculty in the art of advising.

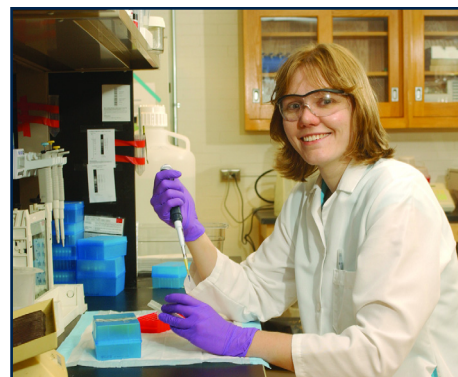
Graduate Program Gains Strength

In 1997, the department initiated a long-term plan to build its research infrastructure, which has included the complete renovation of Wolf Hall, the establishment of research core facilities and the hire of 12 new tenure-track research-intensive faculty members. This has resulted in an increase in extramural funding from \$1.1 million per year in 1997 to \$8.3 million per year in 2005. Further research opportunities for both undergraduate and graduate students in Biological Sciences are available at the A.I. duPont Hospital for Children with investigators affiliated with Nemours Biomedical Research.

As the research effort in the department has grown over the past eight years, the graduate program has expanded from 22 enrolled students in 1997 to 64 in fall

of 2005, 48 of whom are in the Ph.D. program. While all students in our program are working towards degrees in Biological Sciences, each student chooses a curriculum upon entrance that focuses their coursework on graduate tracks in Ecology and Evolution, Cell and Organ Systems Physiology, Molecular Biology and Genetics, or the Chemistry/Biology Interface. The success of students in the program is exemplified by Dr. Erin Brachman who defended in spring 2005 and was this year's recipient of the Wolf dissertation award, Joshua Idjadi, a fifth year Ph.D. student who was awarded a prestigious EPA fellowship for his dissertation work on corals, Melissa Brayman, a fifth year Ph.D. student who was awarded a Women in Endocrinology Abstract Award for her work on the regulation of embryo

implantation in the uterus and Vesselina Cooke, a fourth year Ph.D. student who received a competitive American Heart Association fellowship for her work on angiogenesis.



Melissa Brayman



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