

SURE AWARDS MADE FOR SUMMER '99

Nineteen Stonehill College students will work with twelve faculty members on a variety of research projects over the coming summer of 1999. The scholars and their faculty mentors are the fourth group to work under the Stonehill Undergraduate Research Experience (SURE) program, whose purpose is to provide students with an opportunity to perform significant, publishable research under the guidance of an experienced faculty researcher. The research experience will help to provide students with a competitive advantage in graduate and professional school applications and in post-college employment opportunities, as well as to provide assistance to faculty in research activities.

Nicole St. Amand '01 and **Jennifer A. McCullough '01** will work with **Craig A. Almeida**, Assistant Professor of Biology, on "Characterization of a Transposon-based Gene Replacement Method." St. Amand and McCullough, both Biology majors, will perform specific research activities as part of Professor Almeida's ongoing project to develop a gene replacement technique in the microscopic soil nematode *Caenorhabditis elegans*. The technique ultimately can be used as a major tool by other *C. elegans* researchers in their efforts to elucidate gene function, with the goal of understanding the molecular basis of genetically inherited diseases and the potential development of treatment strategies.

Jason Boyd '01 will work with **Robert H. Carver**, Professor of Business Administration, on "Doing Data Analysis with SPSS." The project is a publisher-commissioned adaptation of Professor Carver's book, *Doing Data Analysis with Minitab 12*, a SURE project in 1996. The new publication, containing a series of computer exercises for introductory statistics students, will be written for use with another major statistical software package, the Statistical Package for the Social Sciences. Boyd, a Business major, will prepare solutions for the solutions manual, assist in the development of additional datasets and end-of-chapter exercises, and test completed lab sessions for technical accuracy.

Marie Kehoe '00 and **Colleen Smith '01** will work with **Lincoln G. Craton**, Associate Professor of Psychology, on the preparation of a book, *A Darwinian Guide to Parenting: Universal Truths About Raising Children*, which attempts to draw on the scientific literature to give parents a way of looking at their children's behavior. Kehoe, a Psychology/English double major, and Smith, an Elementary Education/Psychology double major, have both contributed draft chapters as part of earlier course work. They will study both the scientific literature and the parenting literature in writing revisions of their chapters, write and discuss summaries of the literature on other topics that may be included in the book, and read, critique and help to fill out Professor Craton's revisions of chapters for the book.

Coreen Beaumier '01 will work with **Maria A. Curtin**, Associate Professor of Chemistry, on "Kinetics of Oxidation of Ascorbic Acid by Sodium Chlorite." Beaumier, a Biology/Chemistry double major, will have specific research responsibilities in this new systematic study of ascorbic acid, a well-known antioxidant better known as Vitamin C. Although it is well established that in order to serve as an antioxidant Vitamin C must itself be oxidized, there has never been a study on how Vitamin C is oxidized or even what are the products of this oxidation. Beaumier and Professor Curtin will initiate such a study, which has implications for both medicine and nutrition.

Rebecca Coburn '00, and **Erin Lutynski '00** will work with **Roger M. Denome**, Associate Professor of Biology, on the project, "Assays of genetic variation in coyotes in Massachusetts." The work will determine levels of genetic variation and population differentiation in Massachusetts coyotes, with the purpose of helping to determine if the original influx of coyotes into the state forty years ago was the result of migration by a large number of individuals or if the present large population (coyotes have been seen on Stonehill's campus, for example) is descended from an initial small colony. This information will allow game management personnel to make rational decisions about the potential for population reduction and control. Bonner, Coburn, and Lutynski, all Biology majors, will conduct a literature survey, develop lab techniques, and interpret and report data.

Ryan Dowson '00 will work with **Thomas P. Gariepy**, Professor of History and Philosophy of Science, on indexing the forty-six volume diary of John Farquhar Fulton, M.D. (1899-1960), prominent neurophysiologist and historian of science and medicine. The index, which will appear as a joint project between the Yale University School of Medicine, where the diary is housed, and Stonehill College, will provide significant support for research in many fields of twentieth-century American science, medicine, government, and academic life. Dowson, a History/Political Science double major, will learn and apply indexing techniques.

Robyn Pelletier '00 will work with **Bonnie Klentz**, Associate Professor of Psychology, on "Jury Decision Making: Analysis of Individual Juror Verdicts and Group Deliberations." The study, which has been underway over the past three years, will produce information of great interest to trial lawyers. Pelletier, a Psychology major, will help to analyze the data already collected, code data, and prepare a poster/paper presentation for the American Psychological Society.

Rita Capotosto '00, Janelle Comita '01, Craig Lenz '01, and Christine Treffer '00 will work with **Louis J. Liotta**, Associate Professor of Chemistry, on a group of individual studies that are part of Professor Liotta's long-term research funded by the Research Corporation and the Petroleum Research Fund of the American Chemical Society. Capotosto, a Biology/Chemistry double major, will work on "Inhibitors of Pectate Lyase;" Comita, a Chemistry major and Lenz, a Biology major will work on "Synthesis and Study of Polyhydroxylated Pyrrolidines;" and Treffer, a Biology major, "Synthesis of Precursors to Polyhydroxylated Pyrrolidines." These projects, at the forefront of chemical research, have the potential for applications in both medicine and agriculture.

Andrew Deslaurier '00, Ryan Dowson '00, and Joelle Reed '00 will work with **Erika Schluntz**, Assistant Professor of Religious Studies, on "The Archaeology of Stonehill College: Excavation and Research of the Daily Homestead." This project, whose goal is to expand the Stonehill community's knowledge and appreciation of our campus's social history, focuses on the historical research and archaeological excavation of an eighteenth century farmhouse located on the campus. Deslaurier, a Religious Studies major; Dowson, a History/Political Science double major; and Reed, an English major, will research the history of the site, and learn and apply the processes of archaeological excavation. Dowson will work part time on this project and part time on his project with Professor Thomas Gariepy.

Jeremy Duvall '01 and Shawn Prevoir '01 will work with **Leon J. Tilley**, Assistant Professor of Chemistry, on the project, "Synthesis of Isotopically Labeled Gamma-silyl Substituted Trifluoromethyl Alcohols," a study aimed at understanding the mechanisms of reaction processes that can provide synthetic organic chemists with greater ability to control reaction outcomes so as to achieve a product that may have commercial or medicinal value. Both students will perform literature searches, handle chemicals, and conduct reactions.

Kathy Neff '01 will work with **Maura G. Tyrrell**, Associate Professor of Biology, on "Developing a Harbor Health Index." The project will study fish from ten to twelve eastern Massachusetts harbors to determine levels of sublethal pollution stress in the fish population, stress that can affect growth and reproduction. Neff, a Biology major, will be responsible for helping with the specimen collection and for performing tissue processing and analysis.

SURE Scholars will begin the program on June 1 for an eight or ten week period. They will engage in weekly meetings to discuss the progress of their projects and other topics of general interest, and will be paid a stipend for their full-time service. All SURE Scholars will present summaries of their summer's work at an all-campus poster session in the early fall. Students and faculty members who wish to pursue a SURE research project for the summer of 2000 may contact the Office of Academic Development Duffy 119-A, Ext. 1069, for further information. Deadline for applications for the summer of 2000 is December 15, 1999.