SURE AWARDS MADE FOR SUMMER '04

Twenty Stonehill College students will work with thirteen faculty members on a variety of research projects over the coming summer of 2004. The scholars and their faculty mentors are the ninth 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.

Cara Patten '05 and **Margaret Stratton '05** will work with **Craig A. Almeida**, Assistant Professor of Biology and Director of the Biochemistry Program, on *The Effect of the mut-2 Gene on Recombination Frequencies in Caenorhabditis elegans*. The free-living soil nematode *C. elegans* is a favorite model organism for molecular genetic analysis of a wide range of problems in biology. Patten and Stratton, both Biochemistry majors, will assist in further elucidating the as yet unknown function of the *mut-2* gene.

Stacey Beavers '05 and **Gabriela Mastrangelo '07** will work with **Karen Anderson**, Assistant Professor of Education, on *Imagery In Early Childhood Block Play*. Spatial skills play a critical role in mathematic achievement. In early childhood, these spatial relations skills are best demonstrated through young children's problem solving experiences during block building. Beavers, a Psychology major, and Mastrangelo, a double major in Early Childhood and Psychology, will assist Prof. Anderson in investigating the strategies young children employ when solving block building problems, and the role of imagery in block building strategies. The results of this study can be translated into ideas for incorporating more structured block building activities into the early childhood curriculum. A corresponding presentation at a National Association for the Education of Young Children (NAEYC) affiliated conference is anticipated.

Jason Zysk '05 will work with **Katie Conboy**, Vice President for Academic Affairs and Professor of English, on *Women, Politics, and Poetics in Contemporary Ireland*. Zysk, an English major, will collaborate with Prof. Conboy on the revision, expansion, and updating of three unfinished manuscripts. Zysk will learn library research methods, be responsible for responding to all literary and theoretical texts and previous work accomplished, and make personal creative contributions to the articles. The goal of the project will be two-co-authored publications and a presentation of the work at the New England Conference for Irish Studies next fall.

Melissa Chesarone '05 will work with **Roger M. Denome**, Associate Professor of Biology, on the *Development of Tools to Study the Population Genetics of Native Orchids*. Chesarone, a Biochemistry major, will assist Prof. Denome in developing techniques to characterize genetic variation in two native orchid species: the pink lady's slipper (*Cypripedium acaule*) and the rattlesnake plantain (*Goodyera pubescens*). The work proposed in this project will make it possible to conduct population-level studies on these orchid species, and in turn, will answer questions about their population structure, reproduction, and evolution.

Heather Alfield '05 will work with **Bonnie Klentz**, Professor of Psychology, on *Jury Decision Making*. Prof. Klentz has been conducting a series of studies examining the impact of complex evidence on individual mock juror and mock jury verdicts. Alfield, a Psychology major, will further assist Prof. Klentz in reviewing the literature on the various models proposed to explain how jurors process complex information, as well as the more recent literature on the analysis of jury deliberations. The findings of the project will be submitted to a conference for presentation during the following academic year.

Laura MacFee '05 and **Paul Sacco '05** will work with **Patricia Leavy**, Assistant Professor of Sociology, on *Feminist Research and Body Image*. Leavy is co-authoring a comprehensive feminist research primer. This text will uniquely use one substantive topic, body image, throughout the book as the lens through which various feminist research methods, both qualitative and quantitative, are presented. MacFee, a Political Science major, and Sacco, a Communications major, will aid in the preparation of this book by conducting in-depth interviews with a range of people on body image issues, gathering and synthesizing data found within a literature review and from interviews from prominent feminist scholars.

Nicole Houle '05 will work with **Ronald Leone**, Assistant Professor of Communication, on *R versus PG-13: An Analysis of Language used by the MPAA in Rating Descriptions*. Since 2000, over 75% of all movies submitted for a rating received an R or PG-13, and the Motion Picture Association of America (MPAA) has standardized the language used in rating descriptions. Houle, a Communications major, will conduct a systematic content analysis of the MPAA's descriptions of movies rated R and PG-13 from the years 2000-2003, focusing on the differences between the descriptions of movies in these two categories. This project is an extension of Prof. Leone's previous research, which has been selected for publication in a peer-review journal.

Leighanne Brammer '06, **Jessica Falco '06** and **James T. Hummel '06** will work with **Louis J. Liotta**, Associate Professor of Chemistry, on *The Synthesis, Purification and Characterization of Vinyl Pyrrolidines Starting from D-Galactopyranoside, L-Glucopyranoside, D-Allopyranoside, D-Mannopyranoside and L-Mannopyranoside*. **Ellen Sletten '06** will assist in the direction of Prof. Liotta's research group and will continue her work on *The Synthesis of Polyhydroxylated Pyrrolizidines and Indolizidines from Commercially Available Sugars.* A means of efficiently converting commercially available sugars into hydroxylated pyrrolidines has been previously developed in Prof. Liotta's laboratory. Brammer and Falco, both Biochemistry majors, and Sletten, a Chemistry major, will work to continue projects Prof. Liotta began with previous SURE scholars.

Elisha Allan '06, **Heather Bickford '06**, and **Amy Curdie '06** and **Robert Doiron '06** will work with **Robert Peabody**, Professor of Biology, **Diane Peabody**, Research Professor of Biology, and **Maura Tyrrell**, Associate Professor and Chair of Biology, on *Exploration and Exploitation in Armillaria gallica*. The Armillaria Research Team at Stonehill (ARTS) has made important discoveries demonstrating that, in comparison to other organisms, *A. gallica* has an extra layer of genetic variation built into its life cycle. Allan, Bickford, Curdie, and Doiron, all Biology majors, will investigate among-cell-line genetic differences that might allow single individuals to evolve over time as new conditions are encountered. A manuscript will be submitted to a refereed journal and a presentation will be made at an Eastern New England Biological Conference (ENEBC) the following spring.

Lynn Bennett '05 will work with **Allyson Sheckler**, Assistant Professor of Fine Arts, on *Boston Early Church Architecture*. Bennett, an English major, will assist Prof. Sheckler with investigating Boston area church architecture dating to the eighteenth and early nineteenth centuries. This project will focus on eleven early churches still extant in Boston and document their architectural designs photographically, which will help determine how the local congregations and local rituals influenced the church designs. This project will allow the Fine Arts Department to reuse this information for future courses on Boston architecture as well as for comparative material for already established architecture courses. A manuscript documenting their hypothesis regarding church design and its relation to function will be ready for publication by the end of the summer.

Bryanna Glod '06 and **Ryan Smith '06** will work with **Leon J. Tilley**, Associate Professor of Chemistry, on the *Synthesis and Solvolysis of Trifluoromethyl-substituted Gamma-silyl Systems.* Knowledge of the mechanisms of these processes can provide chemists with ability to control reaction outcomes so as to achieve a desired product that may have commercial or medicinal value. Glod, a Biology major, and Smith, a Biochemistry major, will work to continue and complete a project Prof. Tilley began with previous SURE scholars and will be responsible for conducting organic syntheses, characterizing compounds by spectroscopic techniques, and studying the reaction rates of these compounds to determine the influence of structure on reactivity.

SURE Scholars will begin the program on June 1, 2004 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 2005 may contact the Office of Academic Development, Duffy 119, ext. 1069, for further information. The deadline for applications for the summer of 2005 is December 10, 2004.