

SURE AWARDS MADE FOR SUMMER '07

Twenty-four Stonehill College students will work with eighteen faculty members on a variety of research projects over the coming summer of 2007. The scholars and their faculty mentors are the twelfth 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.

Jennifer Collins '08 will work with **David Almeida**, Associate Professor of Education and Chair of the Education Department, on *The Juvenile Justice Drama Project: Examining the Role of Attachment as a Contributor to Task-Engagement for Adolescent Juvenile Offenders*. Classroom drama is an educational approach that focuses on using plays as a teaching tool, placing students "center stage" in the classroom as they produce a play of substance. This study will investigate the psychological constructs of attachment and attachment disorders to determine if these issues might play a role in answering why using drama seems to be such an effective approach to successful instruction of juvenile offenders. Collins, an Education and a Psychology major, will help review films and literature on the topic and will spend six days at the Old Colony YMCA Brockton Adolescent Treatment Facility and six days at the Teamworks Treatment Program in Plymouth, MA, helping to produce an historical drama with students detained there. The results will be presented as a conference paper to the International Correctional Educator's Conference and will hopefully be published in a future issue of *The Journal of Correctional Education*.

Katherine Ring '09 will work with **Karen L. Anderson**, Assistant Professor of Education, on *Developing a Measure of Representational Abilities*. Limited empirical work has been done investigating the presumptions underlying the role of imagery in Early Childhood Education, particularly its importance to a play based curriculum. Although there is a vast literature base on play in general, the literature regarding construction play is limited. This study is designed to investigate young children's abilities to translate between different forms of representations while engaged in construction play. The team will design and field test items for a 'measure of a student's ability to translate between 2-D and 3-D representations.' Both Hogan, a Psychology major, and Ring, an Early Childhood and Psychology major, will be involved in all aspects of the measure design and pilot testing process. Their findings will be presented at the annual meeting of the Association for Teachers of Mathematics in New England.

Zachary Ennis '08, Kerry Potter '08, and Elizabeth Ruginis '08 will work with **George Branigan**, Associate Professor of Education, on *The Providence Reform School Project*. This project is a continuation of an ongoing investigation into the records of the Providence Reform School, 1850-1880. This year the group brings together a variety of majors with the intention of bringing different points of view to the cross-disciplinary work. Ennis will contribute with knowledge from his major in History and a minor in Secondary Education, while both Potter and Ruginis are Elementary Education majors, with second majors in Mathematics. Together, they will finish transcribing the final Superintendent's Journal found at the Providence City Archives and will finalize the proofreading process for many other recently uncovered documents, including those that continue to reconstruct the life course trajectories of the inmates including details such as living conditions, family dynamics, marital status and occupational track. The outcomes of this project include an indexed CD, a searchable inmate database, made available to Rhode Island Historical Society, as well as various publications and presentations at conferences around the nation. Zachary Ennis is returning to this project in a leadership role as the '07 SURE Leader.

James Teebagy '09 will work with **Jane De Luca**, Instructor of Biology, on *The Effect of Phenolic Compounds on Hsp70 Expression and Apoptosis in Cultured PC3 Cells*. HsP70, a type of heat shock protein, is associated with many human diseases and has been studied in the normal processes of aging, spermatogenesis, and menstruation. De Luca is conducting on-going research investigating the curcumin-induced stress response in cultured cells. Curcumin is an herb that has many medicinal purposes. This study will evaluate the potential for curcumin-related phenolic compounds to induce HsP70 in prostate cancer cells. Teebagy, a Biology major, will gain essential knowledge of cell culture and will be entirely responsible for the growth, feeding, maintenance, and experimental manipulation of cultures. The results will be reported in a co-authored publication and/or a conference presentation.

Melissa Martin '09, Margaret Szerszen '09, and Jessica Tatarek '08 will work with **Roger M. Denome**, Associate Professor and Chair of Biology, on *Analysis of Genetic Differentiation in Local Redback Salamander Populations*. Extinction rates for amphibians are extremely high compared to other groups of organisms. One likely explanation for this phenomenon is population fragmentation. The redback salamander is one of the most common vertebrates in eastern North America, but because of the rapid expansion of paved roads in the last century, their population has been carved into multiple small populations. This study will test the predictions made by population genetics theory for fragmented populations by determining the levels of genetic variation in two Stonehill redback salamander populations and comparing these data to data derived from other local populations that are separated from Stonehill by roads. Martin, Szerszen, and Tatarek are all Biology majors. They will conduct a literature survey to gain a broad knowledge of salamander biology, and each student will be responsible for genetic testing of one of the four populations being studied. The results will be presented to the college community in an open forum and at the Eastern New England Biological conference in April 2008.

Lindsay Bogner '08 will work with **Richard B. Finnegan**, Professor of Political Science, on *An Analysis of Education Policy in Ireland 1922-2002*. The project will examine the linkage between the intended results of three key educational policy choices and their unintended consequences on Irish society. The issues are: the Irish language, the Catholic Church, and economic development. The larger point will be to illuminate a facet of the policy process that resulted in unforeseen consequences. Bogner, majoring in International Studies, will selectively review the vast amount of literature and data from sources at Stonehill and Boston College and internet sites under the guidance of Professor Finnegan, and she will then assemble the evidence supporting their theme. The results will be compiled first into a paper for a conference of undergraduate research. Bogner would then prepare a scholarly article to be submitted to a journal of undergraduate research. Finnegan's longer term efforts will result in a book length manuscript.

Chris Tirrell '09 will work with **Susan Guarino-Ghezzi**, Professor of Sociology and Criminology on *Juvenile Justice Initiatives: Examining the Latest Trends*. A primary outcome of the SURE collaboration will be the advancement of the current scholarly understanding of the philosophies, policies, and programs in the U.S. juvenile justice system. Tirrell, a double major in Psychology and Sociology focusing on Youth and Family Services, will conduct research for and coauthor two conference papers for the *American Society of Criminology's* November meetings titled "Performance-based Standards for Improving Safety in Juvenile Correctional Facilities: An Empirical Analysis," and "Advocacy in Juvenile Corrections: Does it Exist?" He will also aid in reviewing and revising the book, *Balancing Juvenile Justice*, co-authored by Professor Guarino-Ghezzi.

Ken Michek '08 will work with **Daniel Itzkovitz**, Associate Professor of English, on an essay commissioned by the journal *Prooftexts* on the state of the field of Jewish American studies. Their research will focus on four major areas around which recent critical work in Jewish studies has been organized: Black- Jewish relations, popular culture studies, Jewish American literary studies, and the rise of contemporary Yiddish culture. Michek, an English and American Studies major, will help research and locate appropriate books and articles for the project, reading and writing brief response-summaries of these in order to help determine which to include in the final product, and additionally he will aid in the process of editing and revising drafts toward publication.

Joseph Conley '08 will work with **John R. Lanci**, Professor of Religious Studies, on *Isn't It Just Time to Get Over Religion?* Some suggest that the students at Stonehill College are noticeably less involved in religion. And yet, religion still plays a significant part in public life and hovers at the edges of experience. The goal of this project is to put together an anthology of readings to encourage young adults to think about and discuss the nature and possible value of religion in the U.S. Conley, a Religious Studies major, will assist in locating texts to include in the anthology, research introductions for the readings, and compose discussion questions for each section. Conley will serve as a teaching assistant for Lanci in the fall, and they plan to "test drive" their findings. They hope to continue working on the manuscript in the fall and perhaps interest a publisher in generating a textbook based on the results.

Laurie Barowski '08 will work with **Ronald Leone**, Associate Professor of Communication, on *Inside Ratings Creep*. "Ratings Creep" refers to the commonly held belief that the content of movies more suitable for an adult audience is making its way into films with "lower" ratings, making this type of content more readily available to children. A systematic analysis of film content over time has not been conducted. Thus, the primary question of this research project is: Do the data support the "ratings creep hypothesis"? Barowski, an English major, will conduct a preliminary literature review and will assist in establishing the coding frame, selection criteria, and coding scheme. This "pilot" study (10-film analysis) should yield a conference paper that could be revised and submitted to a journal.

Naomi Crilley '09, Ashley Lajoie '09, and Samantha Sheller '08 will work with **Louis Liotta**, Professor of Chemistry, on *The Synthesis of Polyhydroxylated Pyrrolidines and Pyrrolizidines from Commercially Available Sugars*. Carbohydrates are the most widely distributed naturally occurring organic compounds on earth. Over the last ten years, SURE scholars in collaboration with Dr. Liotta have developed a means of efficiently converting commercially available sugars into vinyl pyrrolidines. Crilley, a Biology major, along with Lajoie and Sheller, both Biochemistry majors, will further develop the synthesis to allow for the synthesis of polyhydroxylated pyrrolidines and pyrrolizidines. Results of the research will be presented at various chemistry conferences. The project will also include the preliminary preparation of a manuscript that will be submitted for publication once sufficient results have been obtained.

Jillian Howard '09 will work with **Min Lu**, Assistant Professor of Marketing, on *A Study on the Effectiveness of Online Digital Music Sampling*. Despite the wide application and publicity of online digital music sampling, there are few studies tapping this topic in literature. This project will comprehensively address the effectiveness of online digital music sampling. For example, digital product samples can be created at almost zero marginal cost and be distributed instantly around the world on the Internet. Howard, a Marketing major, will develop a basis of marketing research methods and then implement them during this project. The results will yield a completed research paper which will be submitted to leading marketing meetings such as American Marketing Association and Academy of Marketing Science Annual conferences for presentations. The final manuscript will be submitted to a leading electronic-marketing journal.

Margaret Flynn '08 will work with **Monique Myers**, Assistant Professor of Communication, on *China's One Child Policy: A Cross-cultural Examination of Discourse in China and the U.S.* There appears to be a discrepancy between what Chinese and U.S. American citizens believe to be true about the ramifications of China's one child policy regarding human rights issues for women and girls in China. This team finds it imperative to learn more about how the discourse surrounding China's one child policy is framed and disseminated in public domains. Professor Ding Hao, Assistant Professor of Communication at the China Institute of Industrial Relations, has accepted an invitation to join this research team. Flynn, a Communication major, will have specific responsibilities including literary research from academic journals, newspaper articles, popular literature, and other news media outlets. She will also collaborate in writing the article/s to be sent out for potential publication.

Sarah Rich '08 will work with **George Piggford, C.S.C.**, Assistant Professor of English, on *Matrilineal Spiritualities in the Work of Flannery O' Connor*. Their project seeks to examine O' Connor's work in relation both to mysticism generally and more particularly to a potential genealogy of women's spiritual writing, a topic not given much attention in examining O' Connor's oeuvre. Over the course of ten weeks, they will trace the influences of spiritual works by writers such as Catherine of Siena, Catherine of Genoa, Teresa of Avila, Evelyn Underhill, and Simone Weil on the fiction of Flannery O' Connor. Both professor and student will complete lengthy critical essays on this topic, and they intend to distill their research into a shorter paper to be presented at a professional conference during the 2007-2008 academic year.

Emily LeDonne '08 will work with **Christopher Poirier**, Assistant Professor of Psychology, on *Developmental Changes in Face Perception*. Many studies have documented that participants show an "own-race bias" in perceiving and remembering faces; that is, they perform better with faces of their own race. LeDonne, a Psychology major, will aid Poirier in investigating whether a comparable "own-age bias" influences developmental change in face perception. This includes running a face perception experiment, this year with children, as well as creating an entirely new database of stimuli for future experiments. The resulting data will be prepared for submission to a research conference.

Eric Dombrowski '09 will work with **Cheryl Schnitzer**, Assistant Professor of Chemistry, on *Studying Metal Complexes at the Gas-Liquid Interface using a Bubble Column*. Run-off from industrial processes has created heavy metal contamination in drinking water, which has become an environmental concern for many inner-city residents. One way to remove metals from drinking water is to add a surface-active complexing agent followed by bubbling air through the solution. The newly formed metal complexes jump onto the rising air bubbles, causing impurities to rise to the top which can then be skimmed off to create suitable drinking water. Dombrowski, a Chemistry major, will help determine the average surface area per bubble and will be collecting data for copper- and nickel-complex solutions in order to improve wastewater remediation efficiency. The outcome of this project is a poster presentation at the National American Chemical Society meeting in Boston and a paper submission to the journal, *Environmental Science and Technology*.

Christopher Kelly '10 will work with **Leon Tilley**, Associate Professor of Chemistry, on *Tetrahedrane: Synthesis and Model Systems*. The ultimate goal of this research is the synthesis of the highly symmetrical hydrocarbon tetrahedrane. Aside from an academic interest in the synthesis of this unusual molecule, highly strained hydrocarbons have potential as fuels and their nitro derivatives as potential explosives. Kelly, a Biology major, will perform synthetic organic reactions, while also using a state of the art program for research. The outcomes of the project would be a minimum of one publication and a presentation at American Chemical Society national meetings.

Jeralyn Boccuzzi '08 will work with **James E. Wadsworth**, Assistant Professor of History, on the *James Richards Project*. The *James Richards Project* involves the detailed study of the James Richards' family ledger from Weymouth, Massachusetts. The ledger includes financial records, legal documents, and letters dealing with the family's financial and economic affairs between 1692 and 1804. Rarely are any primary documents of this kind discovered, so this is a unique opportunity to investigate the social, economic, and political life of early colonial America using a document never before seen by historians. Boccuzzi, a History major, will have the chance to work with primary sources and develop her research skills. The final outcome of this project will be two-fold. Boccuzzi will write an essay describing the project's methods and research results and submit it to the New England Archivist Newsletter for inclusion in their *Archival Insight*. She will also identify and summarize the relevant archival holdings, enabling students in future semesters to analyze the documentary evidence more efficiently.

SURE Scholars will begin the program on May 29, 2007 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 2008 may contact the Office of Academic Development, Duffy 119, ext. 1069, for further information. The deadline for applications for the summer of 2008 is December 7, 2007.