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Faculty Grants Quarterly

Published by the Office of Foundation, Corporate and Government Relations, *Faculty Grants Quarterly* is an internal newsletter created for Hamilton College faculty members to report on funding and research trends of public and private funding sources, as well as the grant and scholarly activities of their colleagues.

Considering writing a grant proposal?
Have an idea, but don't know what to do next?
Need help sorting out your budget?
Contact our office.

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Hamilton

Domack with Dragon, an East Greenland sled dog, following his one-month expedition in pursuit of the Snowball Rocks of East Greenland, August 2004.

Domack honored with prestigious Guggenheim Award

Eugene Domack, professor of geology, is an anomaly in the grants world. Since beginning to seek external research support in 1987, he has never received a rejection. Domack is 16 for 16 — 16 proposals submitted; 16 awards received. This remarkable streak continued in the spring when he received an award letter from the prestigious John Simon Guggenheim Memorial Foundation.

The Guggenheim Foundation is internationally renowned for supporting exceptionally talented scholars. The award, designed to give scholars as much freedom as possible, comes with few limitations. There is no monetary cap. Award amounts are based on the individual needs of the Guggenheim Fellows, their access to other resources, and the purpose and scope of their research projects. As such, Guggenheim Fellowships are among the most competitive grant opportunities in the world — winning one affirms that scholars have become authorities in their fields.

Domack intends to use his Guggenheim award to further examine a hotly debated historic event known as "Snowball Earth." Some scientists speculate that Snowball Earth occurred some 600 to 750 million years ago during the Neoproterozoic period. Rocks from this period, gathered from all seven continents, contain evidence of glaciation. Yet the glacial strata are overlain with carbonate sedimentary rocks. Carbonate rocks are hallmarks of warm climates and tropical oceans.

"The juxtaposition of rock types is hard to explain without invoking rapid swings in the Earth's climate,"

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Domack asserts. "It becomes more interesting because this phenomenon is not observed in other glacial periods of the earth's history."

New arguments, however, have recently been developed that dismiss the idea of severe fluctuations in climate and, instead, focus on the nature of the glacial strata themselves. Scientists believe that sorting out exactly what happened during these glacial periods can contribute to the scientific community's attempt to better understand global warming.

Domack's interest in the Snowball Earth debate is a bit of a new direction for him. "I was fortunate enough to be asked to consult on a project directed by a few of my colleagues at Cal Tech and Harvard. Their work was intriguing and soon we began collaborating together on a regular basis," he said.

When his colleagues began preparing their next major proposal to the National Science Foundation, they asked Domack to join their team. Because he has spent years examining the sedimentary record of glacial events, they were certain that his perspective would substantively add to the debate. Domack has been the chief scientist on more than 13 expeditions to the Antarctic, where he observed and examined that continent's response to atmospheric and oceanic changes. On his most recent trip, for example, he and his research team studied the break up of large Antarctic ice shelves caused by rapid regional warming.

Domack also has conducted research on older glacial strata in Australia and has investigated Snowball Earth rocks in Namibia. It will come as no surprise that the newly formed research partnership between Harvard and Hamilton was successful — Domack and his colleagues were awarded a $441,974 grant from the National Science Foundation to support their project, "Glacial History of Snowball Earth."

"I've had an extraordinary opportunity to observe and learn from gifted and talented scientists and to travel the globe to exotic locales to conduct research," he explained. "Delving into the Snowball Earth debate was a natural extension of my research. The most recent NSF grant provided me with sufficient funding to conduct most of my field research trips, but what I needed most was time without teaching commitments. The Guggenheim award will give me the intellectual freedom to pursue thought, collegial discussion and to absorb the literature. I am privileged that the Guggenheim Foundation made this possible."

Domack has completed much of the ground work needed for his project. During the current academic year, he plans to address three questions: 1) Are the transitions in and out of the glacial intervals consistent with the type of glaciation implied by the Snowball Earth hypothesis?; 2) Are the glacial intervals representative of a single glacial advance and retreat or are they punctuated, as some believe, by fluctuations of ice cover that goes beyond the static system envisioned by the proponents of Snowball?; and 3) Are the supposed glacial strata indeed glacial, or can they be explained by some other process?

He will spend the first portion of this academic year traveling to East Greenland, the Mackenzie Mountains in the Yukon and Namibia before returning to College Hill to synthesize his data. As with all of his projects, the Snowball Earth project will involve undergraduate researchers.

The John Simon Guggenheim Memorial Foundation was established in 1925 by United States Senator Simon Guggenheim and his wife as a memorial to their son, who died April 26, 1922. The foundation offers fellowships to further the development of scholars and artists by assisting them to engage in research in any field of knowledge and creation in any of the arts, under the freest possible conditions and irrespective of race, color or creed.

Domack is only the second Hamilton faculty member to receive a Guggenheim fellowship. Jay Reise, former assistant professor of music, received one in 1979-80 and spent the year composing a symphony.

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— Eugene Domack, professor of geology

Grant news

'Flagging' returns to the NEH

A *Chronicle of Higher Education* article published early this year set off a firestorm of controversy in the world of federal grants. The article examined the re-emergence of the practice of "flagging" at the National Endowment for the Humanities (*The Chronicle of Higher Education*, January 2004).

Flagging refers to the practice of identifying grant applications for an additional layer of review. Generally, this extra scrutiny comes from people in positions appointed by the president, such as the National Council on the Humanities — which is comprised of appointees from various administrations — or the endowment's chairman.

Critics of the process argue that flagging most often occurs with projects that are not "traditional" enough — often projects that deal with sexuality, gender and race. The *Chronicle* article maintained that, in some cases, flagging resulted in the rejection of high-scoring proposals. Meanwhile, lower-scoring "traditional" projects were funded.

Flagging first became an issue in the 1990's when Lynn Cheney led the agency during the first Bush administration. It was widely known that Cheney flagged many grant proposals during her tenure. In fact, after her term as chairman, she testified in front of Congress and advocated for the dismantling of the agency, arguing that it supported "leftist scholarship." Ultimately, the agency was not dismantled, but its budget was cut by more than a third. Because of this, many fear that becoming vocal about the process may damage the agency in the long term.

The Chronicle article notes that Bruce Cole, the current chairman, and Lynne Munson flag applications as a "matter of quality, not ideology." In fact, many who voiced concern over Cheney's actions are not sounding the alarms yet. Stanley Katz, president emeritus of the American Council of Learned Societies was quoted as saying that Mr. Cole has been "reasonably nonideological and nonpolitical."

NIH to make minor updates to review criteria

Beginning January 10, 2005, reviewers who judge NIH proposals will be asked to pay additional attention to the idea of innovation.

NIH uses five evaluation criteria in its review process: significance, approach, innovation, investigators and environment. NIH frequently received complaints it was not "placing appropriate emphasis on some important types of biomedical research." It hopes the added emphasis will encourage researchers to challenge paradigms, address a novel hypothesis or employ original methodologies.

NIH, however, is not attempting to discourage applicants whose work may not be viewed as innovative. "The score should reflect the overall impact that the project could have on the advancement of science. Each of these criteria will be addressed and considered in assigning the overall score, weighting them as appropriate for each application. Note that an application does not need to be strong in all categories to be judged likely to have major scientific impact and thus deserve a high priority score. For example, an investigator may propose to carry out important work that by its nature is not innovative but is essential to move a field forward."

Spending bills still in limbo

Congress, wary of upsetting voters before the election, missed the annual September 30 year-end deadline for finalizing budgets, except in the case of the Defense Department. Its budget was passed in August.

Most of the major grant-making organizations are operating under a series of stopgap measures, the first of which expires on November 20. Many agencies are expecting modest decreases in their budgets. The National Science Foundation's budget, for example, is expected to be cut by 2 percent – mainly from the research directorates. The National Aeronautics and Space Administration, the Environmental Protection Agency, and the Housing and Urban Development Department are also expecting small cuts to their budgets.

The National Institutes of Health and the Education Department seem to be the exceptions. NIH is expecting a modest increase – 2.6 percent proposed by the House and 3.6 percent proposed by the Senate. Additionally, the Education Department is expecting a small increase to its discretionary account, which drives competitive funding.

NSF seeks to boost success rates

Once again, the National Science Foundation has shelved its perennial goal of increasing the size and duration of its grants in favor of awarding more grants. The change in plans is spurred by budget pressure.

NSF has decided that it will also make an effort to reach out to institutions that traditionally have low funding rates. One step toward this goal is the elimination of program-specific cost sharing. Cost sharing, according to some, had essentially turned into a bidding war between resource-rich institutions. Therefore, NSF will require only statutory cost sharing of one percent for most programs.

A Sampling of Awards and Submissions

Please join the Office of Foundation, Corporate and Government Relations as we extend congratulations to the following faculty members who have recently received awards or submitted proposals.

Karen S. Brewer, associate professor of chemistry, has received tentative approval for a $50,000 grant from the American Chemical Society's Petroleum Research Fund to support her project, "Rare Earth Calixarene Complexes in a Sol-Gel Matrix: Synthesis and Luminescence." A final decision will be made by PRF's board in December. She also submitted a proposal to the Camille and Henry Dreyfus Foundation's Special Grant Program in the Chemical Sciences requesting $36,500 for support of her project, "Materials Chemistry Project Laboratories for Descriptive Inorganic Chemistry."

Timothy E. Elgren, associate professor of chemistry, along with **Michael L. McCormick**, assistant professor of biology, was awarded a $211,450 grant from the National Science Foundation's Major Research Instrumentation program for support of their project, "Acquisition of a Raman Microscope."

Derek C. Jones, the Irma M. and Robert D. Morris Professor of Economics, was awarded a $29,250 grant from the National Council for Eurasian and East European Research for support of his project, "Economic Performance and Human Resource Management." Jones was also awarded a $28,000 Fellowship Grant from The William Davidson Institute of the University of Michigan for support of his project, "Insider Econometrics: Evidence for the Balkans." Jones also submitted a proposal to the National Science Foundation's Social and Economic Sciences program requesting $342,163 for support of his project, "The Nature and Effect of Human Resource Policies: Econometric Case Studies of Firms in the US, China and Finland."

Seth A. Major, assistant professor of physics, submitted a proposal to the National Science Foundation's Research in Undergraduate Institutions program requesting $108,218 for support of his project, "Discrete Geometry: Phenomenology and Dynamics."

Heidi M. Ravven, professor of religious studies, was awarded a $150,000 planning grant from the Ford Foundation for support of her project, "Spinoza and Contemporary Democratic Pluralism."

George C. Shields, the Winslow Professor of Chemistry and chair of the chemistry department, submitted, along with colleagues from Hobart & Williams Smith Colleges, Mount Holyoke College and Connecticut College, a proposal to the National Science Foundation's Research Experiences for Undergraduates program requesting $171,462 for support of their project, "REU: A Dispersed REU Site Involving the Molecular Education and Research Consortium in Undergraduate Computational ChemistRY (MERCURY)." Shields also submitted, with Visiting Assistant Professor **Karl N. Kirschner**, a proposal to the National Science Foundation's Research in Undergraduate Institutions program requesting $278,377 for support of his project, "RUI: Calculating Acid Dissaciation in Constants in Aqueous Solution." Shields was also nominated for the National Science Foundation's Director's Award for Distinguished Teaching Scholars. The program recognizes individuals who have contributed significantly to the scholarship of their discipline and to the education of students in science, technology, engineering or mathematics, and who exemplify the ability to integrate their research and educational activities.

Ann J. Silversmith, professor of physics, was awarded, in collaboration with Davidson College, a $119,953 grant from the National Science Foundation's Major Research Instrumentation program for support of her project, "Acquisition of Equipment for Thermal and Optical Studies of Sol-gel Materials Containing Rare Earth Ions."