

Vanderbilt University Beckman Scholars Program
www.vanderbilt.edu/AnS/Chemistry/research/BeckmanScholars.php
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Overview

The Vanderbilt University Beckman Scholars Program was established in 2008, and involves the Departments of Chemistry and Biological Sciences. The Beckman Foundation has supported Beckman Scholars Programs throughout the United States since 1997, and this tradition continues now into its second decade. This three year grant at Vanderbilt will support a total of six Vanderbilt undergraduates as Beckman Scholars over the three year period beginning in 2008. An additional undergraduate will be supported as a Dean's Beckman Scholar through the generous support of the Dean of the College of Arts & Science. The tenure for each student as a Beckman Scholar will begin during the summer, and extend through the end of the following summer. No other program on campus supports such a long (15 month), sustained (continuous financial support) effort by an undergraduate to study a scientific research problem. The Beckman Foundation supports research in chemistry, biochemistry, the biological and medical sciences, and interdisciplinary studies involving these focus areas. The singular goal of the program is to identify and support Vanderbilt's most promising students bound for a career in scientific research.

Beckman Scholar Mentors

With the exception of the Dean's Beckman Scholar, all Scholars will be guided by one of the BSP Mentors. The mentors include:

David Cliffler (Chemistry)	Jens Meiler (Chemistry)
Ellen Fanning (Biological Sciences)	Sandra Rosenthal (Chemistry)
Kathy Friedman (Biological Sciences)	Michael Stone (Chemistry)
Todd Graham (Biological Sciences)	David Wright (Chemistry)
Chris Janetopoulos (Biological Sciences)	

The Dean's Beckman Scholar is supported by the generosity of the Dean's Office in the College of Arts & Sciences. Students who work with a faculty member in the Departments of Biological Sciences or Chemistry, but not on the Mentor list above, are eligible to compete for the Dean's Scholar position. Only one Dean's Scholar will be named over the course of the three year grant.

The role of the Mentor is to guide the Scholars through the study of a research problem, and to provide an environment that trains the Scholar both intellectually and experimentally in the discipline of their choice. The Mentors are experts in their scientific field, and represent a diverse cross section of the Vanderbilt faculty in Chemistry and the Biological Sciences, so it is likely that the Scholars will pursue very different courses of training. The mentors are solely responsible for the scientific direction of the Scholar.

Support

The Beckman Scholar is expected to dedicate two summers and the intervening academic year to their research problem. To accommodate this, the Scholar will receive \$6000 for each summer, and \$4000 for the academic year. The time required to solve an open-ended research problem varies greatly, and the mentor will better guide the Scholar in this estimate, but the average time commitment to research during this program is expected to be a minimum of 40 hours per week during the summers, and an average of 15 hours per week during the academic year. To defray a portion of the cost of research, the mentor will receive a research supplement (overhead-free) for each summer and the academic year. The Scholars will also be expected to travel to the Beckman Foundation for the annual Beckman Scholar Symposium held each July. Arrangements and reimbursement for this event will be handled directly by the Beckman Foundation.

Expectations for the Scholar

Above all else, the Scholar will be expected to develop a research problem of high quality. While some independence (ownership) in their study is likely to occur, the greatest successes normally result from teamwork. A necessary component of this team is the Scholar Mentor, and these individuals were chosen in part due to their successful track record in mentoring undergraduate research. All mentors maintain active graduate research programs into which you will be fully integrated.

Aside from their research duties, the Scholars will be asked to support the VU BSP in future years during the selection process. Most importantly, Scholars are expected to develop into peer role models for

others interested in scientific research careers. Consistent with the motives and directives of the Beckman Foundation, Scholars are expected to be competitive for, and apply to, national awards. The VU BSP is designed to support undergraduates interested in research careers, and Scholars traditionally continue this track into graduate school (PhD) or MD/PhD programs.

The Scholars must agree to travel to the Beckman Foundation each July of their tenure as a Scholar for the Beckman Scholars Symposium. This event convenes the Scholars from active programs across the nation in a two day conference that highlights Scholar research accomplishment. Details for the symposium are provided at the Beckman Foundation website, and all arrangements and reimbursement are made by the Foundation.

Your duties as a Scholar are to be your only activity during the summers. Since you will receive a stipend, it is inappropriate to take courses, including standardized test prep courses, during this time. Scholars must consult the College to determine whether it is appropriate to register for research credit during the academic year – your receipt of a stipend during the academic year may complicate this. However, all Scholars will be expected to complete a Senior Honors Thesis.

The Scholar tenure is for 15 *consecutive* months. As a result, all plans by the Scholar to travel abroad should be completed before, or begin after, their tenure as a Scholar.

Beckman Scholar Selection

Eligibility

Any student who is able to complete the tenure of a Scholar is eligible to compete. The Scholar must be able to devote 15 consecutive months beginning in one summer (May) and ending in August of the second summer. During this period (including the academic year), the Scholar cannot hold a secondary income-generating position. To meet this requirement, it is possible that students at the freshman-junior level may apply during the Spring selection process. The Director of the VU BSP is held responsible by the Beckman Foundation for the success of the VU BSP, and s/he reserves the right to withdraw a Scholar's financial support should the Scholar be unable to fulfill the requirements of the program.

Selection Overview

Application to the VU BSP will be made by submission of 1) VU BSP Cover Sheet, 2) a short description of proposed research, 3) undergraduate transcripts, 4) a summary of completed research or other laboratory experience, 5) supporting letters from your mentor and a secondary, and 6) a short statement of career goals. Following a full evaluation of these applications, the top four-six candidates will be invited to interview. Each interview will consist of a public presentation of the proposed research (10 minute presentation, 5 minute question period), and a brief discussion with the selection committee. The committee will deliberate the potential for each candidate to succeed in a research environment, and through this, his/her potential to become a peer leader in undergraduate research at Vanderbilt. Completed applications should be submitted to Professor Jeff Johnston, Department of Chemistry, by the deadline.

VU BSP Cover Sheet

The application cover sheet summarizes key information in the application – your name, mentor, transcript information, class status (freshman, sophomore, junior). Signatures for you and your mentor are required for the completed application, indicating that both agree to fulfill the responsibilities of the VU BSP should you be selected.

Research Proposal (2-3 pages)

As part of the application, candidates must submit a short research proposal (2-3 pages, single spaced, graphics included, bibliography additional). You are encouraged to work with your mentor to develop this proposal, but the writing must ultimately be yours.

Undergraduate Transcripts

An unofficial transcript detailing courses and grade through the current semester is required.

Summary of Completed Research or Prior Laboratory Experience (max. one page)

If you have completed one or more research experiences, a summary of the work accomplished should be provided. Approximately one page is recommended. If you have not had prior laboratory experience in research, please provide a description of laboratory coursework and be sure to ask your laboratory instructor or TA to provide the secondary supporting letter.

Mentor & Secondary Supporting Letter

Your mentor should supply a sealed envelope containing a supporting letter that describes your strengths and weaknesses as a potential Scholar, and your respective contributions to the application. The secondary letter can be from a teacher in a Vanderbilt course, but will be most helpful if this individual is familiar with your laboratory skills. Supporting secondary letters from Teaching Assistants are acceptable.

Career Plans (max. half page)

Prepare a short statement that describes your long term career goals and how the VU BSP might help you achieve those goals.

Deadlines (2009)

Applications Due:	Friday, January 16
Finalists Announced:	Monday, January 26
Oral Presentations and Interviews:	Tuesday, February 10
Scholars Announced:	Wednesday, February 11
Scholar Tenure Start:	May

VU Beckman Scholars Program Management

The Vanderbilt University Beckman Scholars Program is directed by Professors Jeff Johnston (Chemistry), Ellen Fanning (Biological Sciences), and Michelle Sulikowski (Chemistry & VICB). Please direct questions regarding the program to them by email.

The Beckman Foundation

"The Arnold and Mabel Beckman Foundation is an independent, non-profit foundation established by Dr. and Mrs. Beckman in 1977. The mission of the foundation is to make grants to non-profit research institutions to promote research in chemistry and the life sciences, broadly interpreted, and particularly to foster the invention of methods, instruments, and materials that will open up new avenues of research in science."

VU BSP Web Page

See the VU BSP web page for answers to frequently asked questions.