

ADVANCE at Brown NSF Third-Year Site Visit Report October 2009

Mission

ADVANCE at Brown seeks to increase the retention and advancement of women faculty in science and engineering by making available those mechanisms that promote career success for all faculty scientists—mechanisms including faculty mentoring, grant seeking and external funding support, and tools for becoming leaders in academic and scientific communities. We also strive to transform the institution by utilizing the social science literature on gender equity in resources provided to department chairs and administrators in order to ensure the retention and advancement of women and minority scientists.

Program Initiatives and Progress

Our work began with a kick-off event in February 2007, which included a presentation by Brown University President Ruth Simmons on the key findings from the National Academy of Sciences report, *Beyond Bias and Barriers: Fulfilling the Potential of Women in Academic Science and Engineering*. We continue to develop collaborative relationships with administrators, faculty, and university stakeholders to undertake the program initiatives framed in the areas of a Leadership Program for Women Scientists, a Faculty Development Program, a Program for Transforming Academic Departments, and a Visiting Scholars Program.

Leadership Program for Women Scientists

The Leadership Program for Women Scientists provides funding mechanisms that allow women faculty in the sciences and engineering to advance their careers to the next level. These award programs allow for new collaborations with peers and mentors (Career Development Awards), provide support to ensure that the research of women scientists continues while they undertake national roles of scientific leadership (Scientific Leadership Awards), give women scientists practical university administrator experience (Administrator Shadowing Program), and allow women scientists to attend leadership training programs provided by other institutions (Leadership Support Fund).

Career Development Awards help faculty increase their exposure to colleagues at other institutions who can serve as collaborators and mentors. These awards are particularly useful for assistant professors who are beginning to build their research program and for mid-career faculty moving in either a more collaborative direction or a new area of research. The CDA program is our longest running initiative, beginning in January 2007. To date, 28 awards have been granted to 30 faculty members (63% assistant professors and 33% associate professors). An evaluation of the 2007 and 2008 cohort of 15 award recipients shows \$1.3 million in additional grants obtained from our initial \$304,000 investment. Additionally, ADVANCE support has yielded the publication of 11 articles by Career Development Award recipients.

Scientific Leadership Awards allow women scientists and engineers to take on a leadership role in their field without jeopardizing their own research. A standing review committee of faculty and administrators evaluates the proposals, which are accepted on a rolling basis. Since the initial call for proposals in Fall 2008, three grants have been awarded with support ranging from travel funding and laboratory supplies to the hiring of a post-doctoral student for teaching relief.

Administrator Shadowing Awards were designed to give STEM women faculty the opportunity to shadow a senior University administrator and work on a semester-long project that would have institutional impact. We issued two requests for proposals with no response from women faculty.

Analysis by our external evaluator revealed that women (and men) faculty at Brown had little interest in senior-level administrative careers. In response to this feedback, the award has been modified to offer opportunities for senior faculty members to take on significant leadership roles within their departments while learning about gender equity issues. A second component of the revised program serves as an extension of our Visiting Scholars Program. This component funds departmental seminars given by visiting women and minority scientists.

Leadership Support Funds were announced in Fall 2008 with applications accepted on a rolling basis. To date, we have not received applications from women scientists wishing to attend administrator or leadership development programs sponsored by other institutions. Feedback from faculty about the program reveals that time constraints is the primary factor that prevents faculty from attending such workshops. Instead, we are redeveloping the program with a focus on women scientists attending workshops on faculty development in the context of their professional associations' national or regional meetings. As an example, Meredith Hastings, Assistant Professor of Geological Sciences and a founding member of the Earth Sciences Women's Network (ESWN), received ADVANCE at Brown funding for an ESWN-hosted workshop entitled, *Building Leadership Skills for Success in Scientific Organizations*, which was held at the 2008 National Oceanic and Atmospheric Administration (NOAA) conference. ADVANCE at Brown was one of three sponsors of the workshop, which included forty-one women scientist attendants from academic, public, and private institutions.

The **Travel Grant** program is a new initiative created in 2009, which enables women faculty in STEM disciplines to accept invitations to present papers, lectures, or symposia at professional conferences or peer institutions. We developed this program in response to a faculty-identified need for funding to support travel and conference participation. The Travel Grants go beyond the yearly Career Development Award competition, which funds more comprehensive faculty development projects.

Faculty Development Programs

The Faculty Development Program seeks to provide fair and transparent access to resources that support career success at Brown University and the wider scientific community. These resources include a formal mechanism for pretenure faculty to connect with a mentor outside of their own department as well as peer-mentoring groups that provide a circle of advisors to STEM women faculty. Our grants librarian works with faculty to identify funding opportunities and provides sponsored project support. In addition, we continue to work with offices across campus to make visible and accessible work-family policies regarding the availability of daycare, tenure-clock extension, and dual career protocol.

Faculty Mentoring Program

The ADVANCE Mentoring Program has two components, monthly peer-mentoring groups for STEM women faculty and the Faculty Mentoring Program, which matches all new tenure-track faculty members with a cross-departmental mentor.

During Spring 2009, peer-mentoring groups for women in the physical sciences, women in the biological sciences, and midcareer women in the sciences engaged 48% of the women faculty members who are in our target departments. The groups consist of junior and senior women faculty who meet monthly for individual problem-solving and topical discussions such as when to say no or how to negotiate with your department chair. In addition to reconvening these groups for the 2009-10 academic year, we also are sponsoring a peer-mentoring group for women faculty of color across all disciplines.

The Faculty Mentoring Program is a collaboration between ADVANCE and the Offices of the Dean of the Faculty and the Dean of Biology and Medicine. This initiative is offered to all faculty so as to cultivate cross-departmental, one-on-one mentoring relationships that promote openness and eliminate departmental conflicts of interest. ADVANCE created *The Faculty Mentoring Guide*, which serves as a foundation for the development of the mentoring relationships. During its first year (2008-09), ADVANCE matched 19 mentoring pairs. The program received very positive feedback. A more diverse pool of senior faculty mentors, including more women and faculty from a broader range of departments, volunteered for the 2009-10 round, with 18 new mentoring pairs matched. Our goal is to provide structured, institutionalized (“opt-out”) mentoring support, and to train a group of senior and new faculty members to have a greater understanding of gender issues in the academy by offering once-a-semester training sessions for mentors and mentees.

Sponsored Projects Support

The Research Resources Specialist’s mandate of creating new collaborative opportunities and helping women scientists improve their grant proposal writing as described in the original proposal shifted slightly based on a number of factors. Primary Investigator, Dr. Pamela O’Neil left the Office of the Vice President for Research (OVPR) to accept the position of Associate Provost prior to the awarding of the ADVANCE grant. OVPR restructured Dr. O’Neil’s position of Assistant Vice President for Research Initiatives, thereby changing the method by which Brown pursues multi-investigator opportunities. At the same time, OVPR created the position of Proposal Coordinator to help faculty navigate the proposal writing and submission process. Additionally, OVPR piloted a Certificate Program to train academic department support staff in the management of internal and external components of grant submissions and administration.

The initial responsibilities identified for the Funding Resources Specialist (FRS), who would take responsibility for the ADVANCE sponsored project, included working in close collaboration with the Office of the Vice President for Research (OVPR) to manage the restricted submission process for award programs that place an institutional limit on the number of eligible proposals. This collaboration proved quite successful with opportunity announcements released in a more timely fashion, internal processes for nomination and selection becoming more transparent, and improved communications with university administrators and colleagues who provide external funding support. Our External Advisory Board identified this work as university business and based on their recommendations, the management of restricted submissions went back in its entirety to OVPR staff in Spring 2009. The FRS continues to track and report the gender distribution of internal nominations for restricted submissions and rates of proposal success.

The FRS serves as the grants librarian for faculty and staff across campus. She manages the campus subscriptions to grant databases, provides training on their use, and advocates for a long-range collection development plan for funding resources through the University Library, OVPR, and the Office of Sponsored Projects. She also creates tools for faculty development in the area of identifying funding opportunities, such as the new wiki for Private Funding Opportunities for New Investigators in the Physical Sciences. The Office of Corporate & Foundation Relations collaborated in the development of this resource, which serves as the basis for ongoing goals of providing faculty with portfolios of private foundation and federal opportunities.

Work/Family Balance

University policies and support for work/family balance began to develop prior to the awarding of the ADVANCE grant. In 2006, Brown University became a founding member of the New England Higher Education Recruitment Consortium (NE-HERC), a free database of job openings at member institutions. In 2008, the Office of the Dean of the Faculty launched the Family-Friendly Policies and Programs for Brown Faculty website, which outlines University policies, procedures, and resources available to faculty in the areas of dependent care. Among the policies included is the opt-out tenure-clock extension for parents of a new child and the Dependent Care Travel Fund, which

provides support for dependent care expenses incurred in association with professional travel. In addition, University Human Resources has implemented a Backup Care Program at Brown to assist with caring for dependents. The Mt. Hope Childcare center opened an infant room with priority placement for Brown faculty and staff in Fall 2009. ADVANCE at Brown works with the Office of the Dean of the Faculty and Human Resources to promote these policies as well as to provide supplemental information for their website, including extensive local employment information and resources for academic leadership and policy makers.

Transforming Academic Departments

The program for Transforming Academic Departments builds on the expertise of gender equity scholars to offer a framework for department chair leadership development by providing information about best practices for recruiting and retaining women and minority faculty, managing departmental climate (including countering gender bias), and ensuring faculty success in tenure and promotion reviews.

ADVANCE at Brown has sponsored department chair sessions on the impact of gender schemas on the recruitment of women faculty, family-friendly policies as a competitive edge, issues commonly faced by women scientists in the academy, and the role of department chairs in institutional change. Other ADVANCE-sponsored sessions for chairs addressed internal departmental mentoring, recognizing gender bias in letters of recommendation, and utilizing Brown's family-friendly policies to support faculty success.

In 2009, ADVANCE at Brown created a guide entitled, *Increasing the Retention and Advancement of Women and Minority Scientists*, which utilizes social science literature on gender equity to provide support to chairs in the areas of recruitment and evaluation, research productivity, success in tenure and promotion, and promoting a family-friendly work environment

In Fall 2009, ADVANCE at Brown contracted with Kerry Herman, Assistant Director of the Global Research Group at the Harvard Business School, to develop a white paper and a case study that examines the experiences of junior women and men STEM faculty members at Brown University. The case study will be used as a training tool to promote department chairs' understanding of "departmental climate."

Visiting Scholars Program

The Visiting Scholars Program provides short residencies to scholars and consultants who specialize in helping departments and academic institutions address issues including departmental climate, faculty recruitment and advancement, and professional development

ADVANCE at Brown has hosted five Visiting Scholars. Dr. Lisa Frehill helped us develop our faculty mentoring and department chair training programs in the first year of the grant. Dr. Virginia Valian gave a series of lectures and talks to faculty, department chairs, and students regarding the impact of gender schemas on women in academia. Dr. Joan Williams gave a public lecture, department chair workshop, and strategy session with women faculty on the role of family-friendly policies and practices in recruiting and retaining faculty at elite institutions. Dr. Sue Rosser gave a public lecture and small talks with our constituents on the impact of ADVANCE programs on institutional progress toward gender equity. Dr. Nancy Hopkins gave a public lecture, department chair workshop, and session for women faculty to share lessons learned from MIT over the past decade. The Office of Women in Medicine at the Warren Alpert Medical School of Brown University co-sponsored three of the four public lectures given by visiting scholars.

External Evaluation

Dr. Janet Mancini Billson of Group Dimensions International serves as our external evaluator and provides a scope of work that includes a faculty survey administered as the pre-test and post-test evaluation of departmental climate and perceptions of advancement opportunities. Dr. Billson also undertakes an annual series of one-on-one interviews and focus groups to determine the progress of project initiatives and institutionalization of program objectives.

Second Year Monitoring Report (July 2008)

In her second-year monitoring report, Dr. Billson found that ADVANCE at Brown *is on target to achieve its goals*, and that the University community has a general understanding of our focus on faculty promotion and development practices as they impact women and men (rather than as an institutional tool to increase recruitment of women faculty in the STEM fields). The report suggests that we continue to:

- Communicate our mission in the context of institutional climate and diversity initiatives, thereby increasing our visibility;
- Position ourselves as key players in policy review (childcare, dual career hiring, tenure and promotion);
- Gather and publicize institutional research (on faculty teaching and advising loads, utilization of parental leaves and tenure-clock relief provisions, etc.); and
- Collaborate with University administrators and existing programs that demonstrate Brown's commitment to women scientists and leaders.

Pre-Test Faculty Survey Report (February 2009)

Among the key findings of the STEM faculty survey administered in 2008, strong differences exist between women's perceptions and men's perceptions of key issues, especially those regarding equitable opportunities for advancement and fair treatment in the tenure and promotion process. Generally, women see their advancement as more gender-based than men do. Based upon this feedback, the report recommends that ADVANCE at Brown continue its core programming to improve gender sensitivity, fairness, equity, and transparency in all tenure and promotion processes, and strengthening of mentoring programs. Building women's networks across disciplines, programs, and various parts of the University will continue to be important. We distributed the key finds to department chairs and administrators in a report entitled, *Faculty Perceptions of Institutional Climate and Advancement Opportunities*.

Participating & Non-Participating Faculty Perceptions of Program Progress (September 2009)

Focus groups were held in Spring 2009 with science and social science faculty as well as ADVANCE at Brown staff. The results show a mixed picture of the program's results as of the end of the 2008-09 academic year. Because of multiple staffing and leadership changes, the program has been struggling to make its mark on Brown as an institution. Thus, its objective of institutional transformation has yet to be realized, although a foundation has been laid for further progress this year. On the other hand, the program has been able to influence positively the potential advancement of individual faculty women in the physical and biological sciences through a series of Career Development Awards and through mentoring and networking activities. Program elements focused on administrator or leadership development (e.g. shadowing) have not attracted much interest because women in the physical and biological science group felt that pursuit of administrator work derails scientific careers.

Internal Evaluation

The current ADVANCE staff has identified the need for internal evaluation and better social science consultation. Dr. Carrie Spearin, Assistant Professor of Sociology, began collaborating with ADVANCE at Brown in Fall 2009. Dr. Spearin will provide impact evaluation including workshop evaluations, which will serve as a more immediate response to our faculty development programs

and department chair support. Dr. Spearin will also provide process evaluation and look at whether the ADVANCE Program is reaching its intended target audience. This more long-term evaluation will include departmental climate studies.

Outreach

Networking Event for Women Faculty & Graduate Students of Color

ADVANCE partnered with the Office of Medical Minority Affairs at the Alpert Medical School of Brown University to host a networking event in May 2009. The event was well attended by both faculty as well as graduate and medical students. Results of an informal needs-assessment issued at the reception showed that Brown women faculty of color in biological fields experience a sense of isolation, particularly at the departmental level, and that they believe gender and race impact equitable treatment in their departments and the institution.

Faculty Outreach & Networking Events (FONE)

The purpose of these networking events is to help Brown STEM faculty advance professionally by providing an opportunity to build strategic partnerships and gain recognition. It fulfills the component of outreach by providing STEM women faculty with a platform to talk about their research. Additionally, this event brings more awareness of the ADVANCE Program to faculty across campus and promotes collaboration between faculty, faculty and administrators, and the ADVANCE Program and different offices across campus. These monthly sessions began in September 2009.

Dissemination

The ADVANCE at Brown website is a robust source of information about program initiatives and resources. It includes calls for proposals, presentations made by visiting scholars, resources for identifying grant programs, thorough information on dependent care information for faculty, gender equity literature, and much more. The site averages between 750-800 on-campus and off-campus hits per month. Additionally, we created a wiki to allow for greater collaboration with steering committee members and offices with whom we work including the Office of the Vice President for Research (OVPR) and the Office of the Dean of the Faculty. OVPR and the Office of the Dean of the Faculty link to our website as do the University Library and Office of Sponsored Projects.

Institutionalization

Initial discussions with steering committee members and administrator partners have mapped institutionalization of program initiatives at the end of the award period as follows:

Leadership Program for Women Science Faculty

- Career Development Awards (**Office of the Vice President for Research**)
- Scientific Leadership Awards (**Office of the Vice President for Research**)

Faculty Development Programs

- Mentoring Programs (**Dean of the Faculty** and **Dean of Biology and Medicine**)
- Sponsored Project Support (**Office of the Vice President for Research**)
- Work-Family Balance (**Human Resources** and **Dean of the Faculty**)

Transforming Academic Departments (**Dean of the Faculty**, **Dean of Biology and Medicine**, and **Office of Institutional Diversity**)