

National Science Foundation  
ADVANCE 5-year Institutional  
Transformation Grants

University of Rhode Island (2003)

Brown University (2005)

# Origins and Contexts of ADVANCE Grants

- The “leaky pipeline”
- 1999 MIT Report: “A Study on the Status of Women Faculty in Science at MIT”
- “MIT 9” gathering in January 2001
- “Do Babies Matter?” 2002
- Duke University Women’s Initiative 2003
- Harvard President Larry Summers’ remarks 2005
- “Beyond Bias and Barriers” NAS, 2006

# National Science Foundation Interventions

ADVANCE Institutional Transformation grants  
represent shift from

“changing women to fit the academy”  
to “changing the academy” to accept and  
cultivate different models and minds for  
scientific knowledge production

4 rounds of Institutional Transformation Grants since 2001

37 awards

5 year, multi-million dollar grants to institutions to develop “innovative systemic organizational approaches to transform institutions of higher education in ways that will increase the participation and advancement of women in STEM [science, technology, engineering, and mathematics] academic careers...I[nstitutional] T[ransformation] projects must include a research component designed to study the effectiveness of the proposed innovations in order to contribute to the knowledge base informing academic institutional transformation.”

# Institutional Transformation Awardees

2001

University of Colorado, Boulder  
Georgia Institute of Technology  
University of Michigan, Ann Arbor  
New Mexico State University  
University of Puerto Rico, Humacao  
University of California, Irvine  
University of Washington  
University of Wisconsin, Madison

2003

Case Western Reserve University (OH)  
University of Montana  
Columbia University (NY)  
University of Rhode Island  
University of Alabama, Birmingham  
University of Texas, El Paso  
Kansas State University  
Utah State University  
University of Maryland, Baltimore County  
Virginia Polytechnic Institute

# Institutional Awardees, con't

2005

Brown University (RI)  
California State Polytechnic University  
Cornell University (NY)  
Iowa State University  
Rensselaer Polytechnic Institute (NY)  
University of Arizona  
University of Illinois, Chicago  
University of North Carolina, Charlotte  
William Marsh Rice University (Tx)

2008

Michigan State University  
North Dakota State University, Fargo  
Northeastern University (Ma)  
Ohio State University  
Purdue University (IN)  
Rutgers University (NJ)  
University of Nebraska, Lincoln  
Washington State University  
Wright State University (OH)



## Advance at Brown

To increase the retention and advancement of women faculty in science and engineering by facilitating the path to career success for *all* faculty members. The ADVANCE Program at Brown develops and administers formal programs that make explicit the ingredients for faculty success, thereby guaranteeing access for women faculty.

The ultimate goal is not simply to recruit more female faculty, nor to increase the rate at which they receive tenure, but to ensure that once recruited, *women faculty members have a working environment that will allow them to achieve their full potential and ultimately assume positions of leadership in their discipline or in academic administration.*

# ADVANCE at Brown major goals:

- To increase the number of women promoted to full professor
- To decrease time in the rank at associate professor level
- To prevent mid-career burnout by encouraging and brokering collaborative projects
- To increase the number of women rising in leadership positions
- To increase the amount of funded research for women faculty at Brown



# Programs and Initiatives

- Research Opportunities Coordinator
- Mentoring Programs
- Visiting Scholars
- Data gathering and analysis
- Department Chair training
- Work/life policy impact
- Career and Leadership Development Awards

# % of PhDs Awarded to Women in the U.S., 2006

	<i>1987</i>	<i>2006</i>
Biomedical Science	39%	50%
Chemistry	21%	34%
Math	16%	27%
Computer Science	14%	21%
Engineering	7%	20%
Physics	9%	18%

Association of Women in Science slide

Data from the Survey of Earned Doctorates 2006

# Gender Composition of Tenure Track STEM Faculty at Brown, Fall 2007

	Tenured & Tenure Track		
	Women	Men	%W
<b>STEM</b>			
Applied Mathematics	2	21	9%
Biology			
Ecology and Evolutionary Biology	5	9	36%
Molecular Bio, Cell Bio & Biochemistry	8	20	29%
Molecular Microbiology & Immunology	3	4	43%
Molecular Pharmacology, Physiology & Biotechnology	5	7	42%
Neuroscience	2	12	15%
Chemistry	3	18	14%
Cognitive and Linguistic Sciences	5	10	33%
Computer Science	3	22	12%
Engineering	4	36	10%
Geological Sciences	4	16	20%
Mathematics	3	23	12%
Physics	2	23	8%
<b>STEM TOTAL</b>	<b>49</b>	<b>221</b>	<b>22%</b>

# What we've learned at Brown

- Brown's women faculty are excellent scholars, teachers, researchers, and role models
- Institutional positioning of program is crucial
- Promote, promote, promote
- Faculty development as foreign concept
- Working on equity and discrimination in post-gender, post-race identified community
- Assessment is challenging
- Institutionalizing approaches, policies, and practices is very difficult.