RU FAIR ADVANCE
Rutgers University for Faculty Advancement and Institutional Re-imagination

Year Two Annual Report
June 1, 2009 – May 31, 2010

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Section 1. Program Overview

1.1 Introduction

The vision of the Rutgers University Faculty Advancement and Institutional Re-imagination (RU FAIR) NSF ADVANCE grant, and its administrative unit, the Office for the Promotion of Women in Science, Engineering, and Mathematics (WiSEM), is to increase the participation and advancement of women in academic science, social science, engineering, and mathematics careers by changing institutional climate and practices at Rutgers University, the State University of New Jersey. Part of a multi-sited, diverse constellation of campuses that together form a complex, research-intensive, public institution, WiSEM and the RU FAIR grant share this vision with many institutional partners and provide a bridge for women SEM faculty across Rutgers’ three campuses in New Brunswick, Newark, and Camden. RU FAIR builds upon the strong foundation of the university’s efforts to address issues of diversity and equity by offering several independent and parallel strategies to increase the retention, recruitment, and promotion of women in the sciences, engineering, and mathematics academic disciplines at Rutgers University. It is a model for how university programs can make a lasting difference through infusing an awareness of gender equity into existing programs, by celebrating the success of distinguished women, by fostering environments that respect diversity, and by making the university a more family-friendly institution. The goal of the RU FAIR program is to remove barriers to recruitment and retention of women faculty, to advocate for greater diversity in senior leadership positions, and to provide higher visibility to the achievements of Rutgers’ women faculty in SEM disciplines. These goals can be summed as five core initiatives that drive institutional transformation and RU FAIR programs and activities. The grant provides several mechanisms for accomplishing these goals.

Table 1.1

<table>
<thead>
<tr>
<th>Major Grant Initiatives</th>
<th>Program Mechanisms</th>
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<tr>
<td>• Recruitment and Retention</td>
<td>• RU InStride Partnerships</td>
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<td>• Communications</td>
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<td>• Life-cycle grants</td>
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<td>• Work-Life Balance</td>
<td>• Institutional Research</td>
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Note: Throughout this report, STEM and SEM are commonly used acronyms. STEM stands for Science, Technology, Engineering, and Mathematics. SEM is a designation to indicate the inclusion of Social and Behavioral Sciences (SBS) to the group of NSF-supported disciplines. In other words, STEM + SBS = SEM.

1.2 Significant Accomplishments

- Forward momentum across each of the five major “pillars” of the RU FAIR grant: recruitment and retention, communication, networking and liaisons, visibility, and family life through activities, research, and outreach
• Targeted face-to-face meetings with key executive administrators on all three Rutgers University campuses—Camden, Newark, and New Brunswick
• Publication of best practices handbook for faculty recruitment by the President’s Council on Institutional Diversity and Equity, entitled: *A Handbook for Deans, Department Chairs, and Members of Faculty Search Committees*
• Expansion of RU InStride hiring and promotion workshops to Camden, Newark, and New Brunswick
• Formation of a “science” subcommittee of the President’s Council for Institutional Diversity and Equity with direct representation and input from RU FAIR leadership
• Expansion and strengthening of internal and external advisory boards
• Recruitment of additional co-PIs on the grant to replace lost personnel and enhance institutionalization efforts
• Hiring new RU FAIR Director and strengthening the critical staff directing and carrying out the project
• Training of key personnel in areas of workshop facilitation, network analysis, and media relations/marketing
• Development of streamlined “standard operating procedures” and brand-recognition marketing of RU FAIR ADVANCE through print and web media

1.3 Indicators of Institutional Change

• The percentage of SEM female faculty at Rutgers increased by 12 percent from baseline (2007-08) to year 2 (2009-10), compared to a 5 percent increase as a percent of total SEM faculty for men
• The percentage of minority female faculty in SEM at Rutgers increased by 32 percent from baseline to year 2
• The percentage (and number) of tenured and tenure-track women grew in three major disciplinary areas since the inception of the ADVANCE grant at Rutgers:
  o School of Environmental and Biological Sciences: from 18.4% (n=29/159) in 2007-08 (baseline) to 26.5% (n=44/166) in 2009-2010 (grant year 2)
  o Division of Social and Behavioral Sciences in the School of Arts and Sciences, New Brunswick: from 32.1% (n=51/159) in 2007-08 (baseline) to 36.5% (n=57/156) in 2009-10 (grant year 2)
  o School of Engineering: from 12.6% (n=16/127**) in 2007-08 (baseline) to 14.8% (n=19/128) in 2009-2010 (grant year 2) (**see Appendix B)
• Successful recruitment of two women mathematics faculty to tenure-track positions in 2010 in the School of Arts and Sciences, New Brunswick, for start date as of September 1, 2010
• Successful recruitment of three female scientists to tenure-track positions in 2010 at Newark
• Fifty percent of new hires in the Division of Mathematics and Physical Science in New Brunswick in 2009-2010 were women
• Active collaboration with decanal units in developing best practices in recruitment and retention
Section 2. RU FAIR Personnel and Infrastructure

2.1 RU FAIR Executive Team

The PI and co-PIs on RU FAIR ADVANCE are members of the Executive Team, which also includes dedicated and part-time (with respect to the grant) personnel and the four RU FAIR Professors (one of whom is also a co-PI). The Executive Team convenes monthly at a site that rotates as much as possible among the three Rutgers campuses. Video-and tele-conferencing technology allows off-site team members to participate when they cannot travel to the host campus.

2.1a Principal Investigators

- Joan W. Bennett: Principal Investigator (PI) and Associate Vice President for the Rutgers Office for the Promotion of Women in Science, Engineering, and Mathematics; Professor II in the Department of Plant Biology and Pathology
- Patricia A. Roos: Co-PI and Director of Research and Evaluation for RU FAIR and Co-Director of the Center for Women and Work; Professor of Sociology.
- Helen Buettner: Co-PI and Director of the RU FAIR Professorship Program and New Brunswick campus RU FAIR Professor; Professor of Biomedical and Chemical and Biochemical Engineering
- Kathryn Uhrich: Co-PI and Dean of Mathematical and Physical Sciences in the School of Arts and Sciences at Rutgers New Brunswick; Professor of Chemistry.
- Philip Yeagle: Co-PI and Dean of the Faculty of Arts and Sciences, Rutgers-Newark
- Nancy Rosoff: Associate Dean of the Faculty of Arts and Sciences, Rutgers-Camden; Professor of History. Rosoff served as a co-PI on the grant from its inception in September 2008 through March 2010. She resigned in March, citing workload and overcommitment as primary factors in her decision.

2.1b RU FAIR Professors

- Georgia Arbuckle-Keil, Professor of Chemistry, Camden
- Helen Buettner, co-PI and Professor of Biomedical and Chemical and Biochemical Engineering, New Brunswick
- Judith Weis, Professor of Biology, Newark and Maggie Shiffrar, Professor of Psychology, Newark

2.1c Administrative Staff and Students

- Doreen Valentine, Director of RU FAIR and Assistant Director for the Office for the Promotion of Women in Science, Engineering, and Mathematics (WiSEM)
- Christina Leshko, Program Coordinator for RU FAIR
- Natalie Batmanian, Director of Leadership and Programs and Associate Director for the Office for the Promotion of Women in Science, Engineering, and Mathematics (WiSEM)
- Crystal Bedley, graduate student in the Department of Sociology
- Alexis Merdjanoff, graduate student in the Department of Sociology
• Daitza Frydel, part-time assistant to RU FAIR Professor Georgia Arbuckle-Keil
• Ludvina Samson, part-time budget manager for RU FAIR and WiSEM
• Erin Sutherland, part-time assistant for RU FAIR and WiSEM
• Carey Murray, program coordinator for WiSEM
• Neng Wang, part-time assistant for WiSEM
• Mary Gatta, internal evaluator and assistant professor in the Department of Labor Studies and the Center for Women and Work

2.1d Other Participants
• ADVANCE Consortium (see section 3.1 below)
• External Advisory Board, chaired by Dr. Philip Furmanski, Executive Vice President for Academic Affairs (see section 3.2 below)
• Gayle Coryell, Senior Institutional Research Associate, Office of Institutional Research and Academic Planning
• Minmin Chen, graduate student (now MS) in the Department of Statistics and Biostatistics and researcher in the Office of Institutional Research and Academic Planning
• Mary McCain, external evaluator, Senior Vice President of TechVision21 (see section 10.3)

2.2 Project Management and Infrastructure

RU FAIR ADVANCE is housed in the Office for the Promotion of Women in Science, Engineering, and Mathematics (WiSEM). The mission of WiSEM is to improve the stature of women at all levels within Rutgers University. During year one, WiSEM obtained permanent and dedicated space on the Busch campus, Rutgers-New Brunswick, which is home to the School of Engineering, the Division of Mathematics and Physical Science, Psychology, Cognitive Science, and other School of Arts and Sciences departments and units, the School of Pharmacy, and the University of Medicine and Dentistry of New Jersey (UMDNJ). WiSEM is centrally located for easy networking with many science disciplines.

In the two years of the grant, there have been some “start-up pains” and significant turn-over among the central participants. Two principal investigators, Joan W. Bennett and Patricia Roos, have been committed and involved in RU FAIR ADVANCE since the beginning of proposal writing. Their original collaborator and co-PI, Catherine Duckett, resigned in January 2009, and is now Associate Dean at the School of Sciences at Monmouth University. Nancy Rosoff, who joined as the Camden campus co-PI in September 2008, resigned in March 2010. Three additional co-PIs were recruited in 2010: Helen Buettner, Kathryn Uhrich, and Philip Yeagle. RU FAIR Director Doreen Valentine replaced Thessalanuere Hinnant-Bernard in November 2009, after that position was vacant for three-and-a-half months. Christina Leshko began as a student intern in the WiSEM office in 2008 and transitioned to be the full-time program coordinator in January 2009. Her continued involvement with the office and the grant has proven to be a true asset, particularly for her longer-term history with WiSEM. Graduate student Crystal Bedley and internal evaluator Mary Gatta have been supported in part by the grant since its inception, and Natalie Batmanian, who supports RU FAIR programs and operations as Associate
Director of WiSEM, has been source of input and stability as well, serving as the interim director while the search for a new director occurred. Finally, a group of faculty leaders, particularly from the Institute for Women’s Leadership and the School of Engineering, are important sources of support. Other institutional partners are listed in section 4 below.

RU FAIR governance is built on several tiers of leadership and participation. Figure 2.1 is an organizational chart of the RU FAIR participants and the WiSEM office. The principal investigators each play critical roles in an overall strategic approach to institutional transformation at a multi-sited university as complex and decentralized as Rutgers. PI and Associate Vice President Joan W. Bennett, Professor II of Plant Biology and Pathology and a National Academy of Science member who also heads the Rutgers Office for the Promotion of Women in Science, Engineering, and Mathematics, directs our outreach and leadership efforts, and acts as a liaison to the executive administration and our institutional partners. Bennett reports directly to Philip Furmanski, the Executive Vice President for Academic Affairs, who has been highly supportive of the project since its inception, and provides regular updates regarding policies, concerns, progress, and issues pertaining to institutionalization. She is active in several national activities concerning women in science: she has served as a member of the Committee on the Status of Women in the American Society for Microbiology and is an active participant in the annual women’s breakfast at the National Academy of Sciences. In addition to her work on RU FAIR, WiSEM, other women in science initiatives, and her service to the university, Bennett heads a lab in the Department of Plant Biology and Pathology. An expert in fungal genetics, her current research focuses on volatile organic compounds produced by fungi, their role in interspecific ecological communication, and their possible health effects on humans.
Figure 2.1

RU FAIR ADVANCE Organizational Chart
Co-PI Patricia A. Roos is Professor of Sociology in the School of Arts and Sciences and Labor Studies and Employment Relations in the School of Management and Labor Relations) and Co-Director of the Center for Women and Work at the internationally acclaimed Rutgers Institute for Women’s Leadership (IWL). Roos directs the research and evaluative branch of RU FAIR and acts as a liaison to institutional research partners, including the Office for Institutional Research and Academic Planning (OIRAP) and the RU FAIR ad hoc Committee of Institutional Stakeholders, the latter of which she chairs.

With institutional transformation as a primary objective, our strategy has been to develop a team of institutional leaders who represent the grant on all three Rutgers campuses. Kathryn Uhrich, Dean of Mathematical and Physical Sciences in the School of Arts and Sciences at Rutgers, New Brunswick joined the leadership team of RU FAIR ADVANCE as a co-PI on the grant and is well-positioned to liaison with the largest group of faculty and administrators in the Rutgers system (the School of Arts and Sciences, New Brunswick). Uhrich is an award-winning polymer chemist who brings administrative experience, deep institutional knowledge, and a strong commitment to promoting women’s advancement in the sciences. Philip Yeagle, Dean of the Faculty of Arts and Sciences at Rutgers-Newark, became a co-PI on the grant in March, transitioning from being a member of the internal advisory board to a larger role in institutionalization. His campus, Rutgers-Newark, leads the nation in diversity of its student body and leads Rutgers in terms of faculty diversity. Yeagle is himself a scientist, specializing in cellular membrane proteins.

The role of a campus co-PI for Camden is currently unfilled, after the March 2010 resignation of Nancy Rosoff, Associate Dean of Arts and Sciences and Director of the Camden Office for Institutional Diversity and Equity. We hope to invite someone well-positioned to do the work of institutionalization at Camden during the next year. In the meantime, our presence and visibility in Camden is well-supported by the Camden campus RU FAIR Professor, Georgia Arbuckle-Keil. Arbuckle-Keil, a polymer chemist, is the most senior woman scientist in Camden with almost twenty years of experience on the faculty there.

In addition to an institutionalization troika of Uhrich, Yeagle, and a Camden member, RU FAIR Professor, Helen Buettner, ramped up her role to become a co-PI as well. Buettner, Professor and Vice-Chair of Biomedical Engineering (BME) and Professor of Chemical and Biochemical Engineering (CBE) in the School of Engineering (SOE) at Rutgers University, has been charged with developing a vision for the RU FAIR Leadership Professorship program as an enduring, institutionalized practice.

Other participants involved with RU FAIR include the full-time director (Valentine), the program coordinator (Leshko), and the WiSEM staff (especially Batmanian). Three graduate students have played important roles in institutional data collection and research and programming (primarily Bedley). Arbuckle-Keil in Camden has also been able to hire a part-time assistant (Frydel) to coordinate her activities.

Internal evaluation and advisory functions are carried out by an internal evaluator (Gatta) and by an internal advisory board. The internal advisory board, known as the RU FAIR ADVANCE Consortium, includes university deans, other key administrative leaders, dedicated faculty
leaders, and the RU FAIR executive team. External evaluation and advisory functions are carried out by an external evaluator, Mary McCain, and an external board chaired by Executive Vice President for Academic Affairs, Philip Furmanski. The RU FAIR Professors also serve as members of the RU FAIR executive team.

The RU FAIR executive team meets monthly to discuss ongoing projects, research, programming, and strategy. Routine workflow processes are addressed at biweekly RU FAIR staff meetings that include a subset of the principal investigators (Bennett, Roos, and Buettner) and central RU FAIR / WiSEM team (Valentine, Leshko, Batmanian, and Bedley). The ADVANCE Consortium (internal advisory board) convenes biannually and the external advisory board will meet annually. The external evaluator provides an annual report and the internal evaluator plays a role in monthly process evaluation. The team maintains regular and consistent communication through email and face-to-face meetings that take place in New Brunswick, Camden, and Newark. A common and secure repository for documents and data has been set up through the Rutgers Office of Information Technology Sakai system. Shared Google calendars as well as Doodle scheduling software enable coordinated meeting and event planning. Blog space has also been set up for RU FAIR participants and RU FAIR Professor and RU FAIR mini-grant activities.

Section 3. Advisory Boards

3.1 RU FAIR ADVANCE Consortium (Internal Advisory Board)

3.1a About the Internal Advisory Board:
RU FAIR ADVANCE structured and convened an internal advisory board soon after the inception of the grant in September 2008. After two meetings of this body, and with fresh experience in strategic outreach among diversity and administrative leaders at the university in spring 2010, the RU FAIR Executive Team re-imagined the board as a forum—an ADVANCE Consortium—to bring together the leaders for institutional diversity and equity at Rutgers. The structure facilitates connecting those faculty leaders who are interested and committed to diversity and equity issues with those who can get things done at the University.

We envision the RU FAIR ADVANCE Consortium as forming an action-based advisory board to our functions and progress, one that focuses on the institutionalization practices vital to ensuring diversity moving forward in the multi-campus university community. Administrators and faculty leaders were selected based on their expertise and policy influence with respect to diversity and equity issues, institutional memory, and representation of SEM disciplines and units across Rutgers. The Consortium members share a common vision and a common set of institutional goals for increasing faculty and student diversity at Rutgers. The RU FAIR ADVANCE Consortium presents an opportunity for that group to come together around the table to discuss these issues, share information, strategies, and expectations, and map a process of institutional transformation.

At each meeting of the Consortium, we plan two to three targeted and brief (15-20 minutes each) presentations by expert speakers around a particular theme related to the RU FAIR ADVANCE
Initiatives, leaving ample time for an open-forum discussion. Specifically, our intention is to host conversations in this style—active participation and expertise-based presentations in a crisp two-hour framework—centered on key diversity themes and issues related to the five interrelated pillars of the grant. We plan to meet twice each year through 2013.

3.1b RU FAIR ADVANCE Consortium Members:
RU FAIR Executive Team members are also part of the ADVANCE Consortium and are included in this table. The membership of the Consortium reflects the relative sizes of the three Rutgers campuses (New Brunswick is home to 70 percent of students and faculty at Rutgers; Newark is about 20 percent; and Camden is about 10 percent).

Table 3.1

<table>
<thead>
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<th>Name</th>
<th>Title</th>
<th>Unit</th>
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<td>ADVANCE Consortium</td>
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<tr>
<td>Jonathan Alger</td>
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<td>General Counsel</td>
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<td>Robin Davis</td>
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<tr>
<td>Vivian Fernandez</td>
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<td>Eric Garfunkel</td>
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<td>Jayne Grandes</td>
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<td>Mary E Hawkesworth</td>
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<td>Cheryl Wall</td>
<td>Zora Neale Hurston Prof</td>
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<tr>
<td>Mark Winston</td>
<td>Assistant Chancellor</td>
<td>Dana Library</td>
<td>Newark</td>
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</tbody>
</table>
3.1c Why this is a model for ADVANCE:
The participation and involvement of these university leaders is valuable to us and the grant, but it is also important to developing a facilitated connect-work among the various diversity units on the three campuses. The model of a Consortium implies active and shared communications around the table, more thematic-based discussion, less one-sided reporting. It will also evolve over time as a functioning body, as initiatives around institutional transformation take firmer root. In terms of advisory function, the ADVANCE Consortium will shape the strategic direction and implementation of RU FAIR, select RU FAIR Professors from faculty applicants, and represent RU FAIR both within and outside the university.

3.1d RU FAIR ADVANCE Consortium Meeting, May 5th, 2010:
The first RU FAIR ADVANCE Consort convened around the theme of “Faculty Recruitment and Retention” at the Cook Campus Center on May 5th. Eight members of the Board and nine members of the RU FAIR executive team attended the meeting. Camden, Newark, and New Brunswick campuses were represented, as were administrators at the decanal level, leaders from the Institute for Women’s Leadership and higher administration, and committed faculty.

Following a welcome by PI Joan W. Bennett, the meeting featured three presentations, and a round-table discussion. Patrick McKay, Associate Professor of Human Resource Management, presented on "The Business Case for Diversity." McKay, an expert on diversity climate and workforce issues, presented research on workplace perceptions and performance with direct relevance and recommendations for higher education and faculty diversity recruitment and retention. He was introduced by David Finegold, Dean of the School of Management and Labor Relations (SMLR), who reminded us that his school is an incredible resource on diversity and labor issues for the University, the State of New Jersey, and the nation. Following McKay, co-PI Patricia Roos and Director Doreen Valentine spoke on "Collecting Data for Institutional Change." The presentation highlighted the process of institutional data collection and the mapping of NSF indicators for Rutgers. The third speaker was Robert Goodman, Dean of the School of Environmental and Biological Sciences (SEBS). He talked about his school’s approach to faculty recruitment and retention, with particular emphasis on the successful mentoring program at SEBS. This program could provide a model for other units at Rutgers University.
3.1e Fall 2010 Meeting:
We plan to have a fall meeting of the ADVANCE Consortium in early October that builds on our relationship with key institutional partners, particularly the Office for Institutional Diversity and Equity (OIDE) and the President’s Council for Institutional Diversity and Equity (see section 4.1). The meeting affords an opportunity for RU InStride Science Subcommittee members and the RU FAIR executive team and Consortium to outline a strategy in partnership with OIDE and the President’s Council for developing and implementing a faculty-to-faculty co-mentoring approach to disseminating information about best practices in faculty hiring and promotion.

For the spring 2011 meeting, tentatively scheduled for early February, we may structure the presentations and conversation around the theme of climate and vision. The idea for this theme came out of our discussion at the May 5th meeting in which one of the participants, Dean Robert Goodman, challenged everyone to imagine what Rutgers University should look like and move towards making this ideal real. Leaders at the University recognize that the rich diversity of the Rutgers student body is not reflected in the faculty, evidenced by the fact that 17 out of 19 top-level deans are white men, and that women are underrepresented in the upper ranks and in many departments. The Consortium is an institutional mechanism for getting the work of change done.

3.1f Lessons learned from the May 5th event:
Three “keynote” presentations are too many. For the next meeting, we plan one or two to ensure more time for discussion. Further, the end of the semester is a tough time of year to coordinate calendars; for future meetings we plan to schedule the Consortium early in the semester.

3.2 External Advisory Board:
The members of the External Advisory Board (EAB) are academic, business, and scientific leaders who have received national recognition for their work in organizational transformation and commitment to diversity. Our intention is to convene the EAB for annual meetings to appraise the mission, strategic plan, programs, and progress of RU FAIR in advancing its goals for our institutional transformation and increased participation of women in SEM. The EAB provides innovative ideas, monitors progress, and, at the conclusion of the grant and in consultation with our external evaluator, Mary McCain, will assess the success of our overall program.

We have a date set for a meeting of the EAB on September 23, 2010. We are now developing a model structure and function for this board, following the requirements of NSF. Executive Vice President for Academic Affairs, Philip Furmanski, will preside as chair. Board members are external to the Rutgers University system and are positioned as senior leaders in the work of gender, race, science, and the academy. Existing board members have been invited to continue their service (see Table 3.2). In addition, President Richard L. McCormick has extended invitations to seven new members (their names are not listed here, since we are awaiting their acceptances).
Table 3.2

<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
<th>Affiliation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dr. Philip Furmanski (Chair)</td>
<td>Executive Vice President of Academic Affairs</td>
<td>Rutgers University</td>
</tr>
<tr>
<td>Dr. William English Kirwan</td>
<td>Chancellor &amp; CEO</td>
<td>University System of Maryland</td>
</tr>
<tr>
<td>Dr. Karen E. Nelson</td>
<td>Director</td>
<td>J. Craig Venter Institute</td>
</tr>
<tr>
<td>Dr. Vita Rabinowitz</td>
<td>Provost and Vice President for Academic Affairs, Co-Director</td>
<td>Hunter College, Gender Equity Project</td>
</tr>
<tr>
<td>Dr. Sheila Tobias</td>
<td>Author and Science Education Consultant</td>
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</tr>
</tbody>
</table>

Our decision to increase the size of the Boards, both the internal (ADVANCE Consortium) and the external, came from the difficulty of coordinating the schedules of high-level and high-profile academic and scientific leaders. A meeting of the EAB called for last August 2009 was canceled when, after some last minute cancellations, only one Board member was able to attend, despite the long lead time in planning. Changes in personnel on the grant and the focus on rebuilding our program structure and management resulted in delaying the meeting until fall 2010. Casting a wider net ensures a quorum for decision-making, collaboration, exchange, and advisement.

External evaluator, Mary McCain, plans a site visit to Rutgers that will overlap with the EAB event on September 23, 2010. At the visit, she will be able to meet with members of the EAB, the ADVANCE Consortium, and the RU FAIR Executive Team.

**Section 4: Institutional Partners**

The RU FAIR ADVANCE executive team collaborates with units across the university on various activities. These collaborations strengthen the institutionalization of RU FAIR ADVANCE and university-based diversity and equity initiatives. The various key units and personnel are listed here. Those with asterisks next to their names are also members of our RU FAIR ADVANCE Consortium advisory board (see section 3.1 on the ADVANCE Consortium).

- **Office of the Executive Vice President for Academic Affairs:** RU FAIR ADVANCE is housed in the Office for the Promotion of Women in Science, Engineering, and Mathematics (WiSEM). PI and Associate Vice-President Joan W. Bennett directly reports to the Executive Vice President for Academic Affairs, Philip Furmanski. (The Executive Vice President functions similarly to a Provost.) As a member of the executive leadership
at Rutgers, Bennett represents RU FAIR and WiSEM on many key committees and councils (see Section 6.4a below).

- **Institute for Women’s Leadership:** The WiSEM office is the eighth and most recent member of the Institute for Women’s Leadership (IWL), a consortium of projects and leaders dedicated to promoting women’s full participation and advancement in the professional careers in academia, business, politics, and the arts. Lisa Hetfield* is currently the Acting Director of IWL, serving in the capacity since January 1, 2010 when Founding IWL Director Mary Hartman retired. The Center for Women and Work, which co-PI Patricia Roos co-directs, is another unit in the collective.

- **President’s Council for Institutional Diversity and Equity:** A university-wide committee headed by President Richard L. McCormick and Cheryl A. Wall*, Board of Governors Zora Neale Hurston Professor of English in the School of Arts & Sciences, New Brunswick. Established in 2008, this group of 35 university leaders meets once each semester. Among its recent accomplishments is the publication of a best practices handbook for deans, department chairs, and members of search committees. WiSEM and RU FAIR were involved in the production of the handbook. PI Bennett is a member of the Council; former Director Hinnant-Bernard and current Director Valentine have also attended meetings of this group, *ex officio.*

- **RU InStride Science Subcommittee:** This newly constituted group of ten Rutgers SEM faculty who are also members of the President’s Council on Institutional Diversity and Equity aims to develop strategies to increase the recruitment and retention of a diverse faculty in the broad science disciplines. It is widely recognized that some strategies, such as cluster hiring to facilitate a more equitable climate, are more difficult to apply to science recruiting. It is also acknowledged that start-up costs and laboratory/space requirements are more difficult to negotiate in experimental science disciplines. This subcommittee, chaired by Christopher Rose*, professor of electrical and computer engineering, has had preliminary discussions at meetings of the President’s Council and convened for the first time on May 7, 2010. A second meeting is planned for July. PI Bennett is a member of this committee and Director Valentine is a member *ex officio.*

- **Office for Institutional Diversity and Equity (OIDE):** Directed by Associate Vice President for Academic Affairs, Karen R. Stubaus*, this office is based in New Brunswick but functions university-wide. It was created by President McCormick in 2008 to help meet the challenge to maintain the wonderful diversity of Rutgers' student body and to increase that of its faculty and senior leadership. OIDE serves as a clearinghouse to promote and coordinate diversity and equity initiatives, programs, and research on all three Rutgers campuses in New Brunswick, Newark, and Camden.

- **Camden Campus Office for Institutional Diversity and Equity:** Spearheaded by Chancellor Wendell Pritchett and directed by Associate Dean and former RU FAIR co-Nancy Rosoff* to promote and coordinate diversity and equity initiatives and programs at Rutgers-Camden. A committee for institutional diversity and equity at Camden has
recently been constituted with members from the Camden Faculty of Arts and Sciences and the Camden schools of Law, Business, and Nursing.

- **Diversity Research Center at Rutgers-Newark and the Newark Campus Office for Institutional Diversity and Equity**: Headed by Assistant Dean Mark Winston*, the Diversity Research Center conducts research associated with the relationship between diversity and organizational performance and promoting the dissemination of diversity research.

- **Office for Faculty Diversity Initiatives**: A university-wide initiative begun in 2004 to provide strategic and financial resources to deans and chancellors for enhancing the diversity of Rutgers educational and scholarly activities. Executive Vice President for Academic Affairs, Philip Furmanski, oversees faculty diversity initiatives.

- **Office for the Vice President and General Counsel**: A university-wide office that manages and supervises all legal affairs for the University. This office is headed by Vice President and General Counsel, Jonathan Alger*, who is a legal scholar and expert on diversity and equity in higher education.

- **Office for Institutional Research and Academic Planning** (OIRAP): A university-wide office, headed by Robert Heffernan*, that gathers, analyzes, and uses data to inform institutional planning, policy development, and decision-making. OIRAP provides critically important reporting, assessment, benchmarking, planning, and public information services to support institutional effectiveness and to respond to the needs of the university community and the citizens of New Jersey. Gayle Coryell, Senior Institutional Research Associate, and Minmin Chen, a statistician with OIRAP, assist RU FAIR’s institutional research team (Roos, Bedley, and Valentine) in data collection for NSF indicators.

- **RU FAIR ad hoc Committee of Institutional Stakeholders**: The joint Institutional Research (OIRAP) and RU FAIR team (Roos, Bedley, Valentine, Coryell, and Chen) convened the RU FAIR ad hoc Committee of Institutional Stakeholders on April 16, 2010. The ad hoc Committee emerged out of RU FAIR’s intent—as stated in the ADVANCE proposal—to establish a more streamlined and unified system for Rutgers database management across the entire university, to simplify future data collection, and to monitor progress. The Committee consists of a broad cross-section of those critically important to our institutionalization effort moving forward: OIRAP; top university administrators from Faculty and Staff Resources (Human Resources), the Office of Employment Equity, Enrollment Management, the Office of the VP for Academic Affairs, and the School of Communication and Information (SC&I); top-level representatives from Deans’ offices (New Brunswick, Camden, and Newark); social science researchers with substantive expertise in race and gender equity topics; and RU FAIR personnel.
Douglass Residential College, the Douglass Project, and Project SUPER: Douglass College was originally founded in 1918 as a liberal arts college for women. After an organizational transformation in 2007 in which Douglass dissolved as an independent academic college, the spirit of Douglass was preserved as a residential college model for women. Douglass Residential College is open to residential and commuting students enrolled in all academic units and continues to provide a small yet strong community with a well-developed mission of educating women.

The Douglass Project was established in 1986 with the goal of increasing the number of undergraduate women studying in scientific and technological fields. Through enhanced education experiences and opportunities for academic development and leadership advancement, the Douglass Project increased the number of juniors and seniors majoring in mathematics and science at Douglass College by 36 percent from 1988 to 1995. Since the Project’s establishment, it has received numerous awards and expanded its programs to include opportunities for pre-college women, as well as undergraduates. One of those awards is a STEM grant titled Project SUPER, on which WiSEM Vice President and RU FAIR PI Joan W. Bennett is the PI. Regina Riccioni, Director of the Douglass Project, is also a PI. The grant provides academic scholarships, summer research opportunities, and academic and social support to a sub-group of Douglass Project students who excel in STEM disciplines. Rutgers SEM faculty participate at many levels in the Douglass Project. For example, Bennett gives a presentation each year in the course entitled “Introduction to Scientific Research,” and she helps coordinate students’ placement in faculty laboratories. Bennett also participates annually in the NSF-sponsored Research Experiences for Undergraduates (REU) program at Rutgers-Camden.

The Interim Dean of Douglass Residential College, Harriet Davidson, will be stepping down during the summer of 2010 and will be replaced by Jacqueline Litt, the current chair and an associate professor in the Department of Women’s and Gender Studies at the University of Missouri. We look forward to collaborating with Litt, who has long experience in ADVANCE programming at two universities (Iowa State University and the University of Missouri) and has strong interests in gender and work issues. Co-PI Roos has initiated conversations with Litt about possible collaborations among RU FAIR, the Center for Women and Work, and the Institute for Women’s Leadership.

RU-STEPed Up for Success: RU-STEPed Up is a set of programmatic interventions to increase the number of undergraduate students receiving baccalaureate degrees from Rutgers. The program, funded through NSF, recruits STEM majors from underrepresented groups (women and minorities) and focuses on improving retention of first-year and transfer students through summer bridge experiences, living-learning communities, academic support, mentoring, and orientation programs. WiSEM Vice President and RU FAIR PI Joan W. Bennett is a co-PI on this grant. WiSEM staff work with this group to develop and integrate programs and initiatives. One of the goals is to connect undergraduate students to women, particularly minority women, in academia and industry who have navigated the STEM path successfully. A new residence hall for
undergraduate women in science, known as the Rosalind Franklin House, has been established through support from this program.

- **Innovation through Institutional Integration (I³):** The Rutgers University I³ National Science Foundation grant is based in the Graduate School – New Brunswick and focuses on three transitions related to graduate education: the transition from undergraduate to graduate education, the successful transition to graduate school, and the preparation of graduate students to be future researchers, teachers, and mentors. The goal of the program is to integrate “best practices” in graduate education both across graduate programs and within undergraduate research programs. WiSEM is working closely with Dean Jerome Kukor, a co-PI on the I³ grant, and Claudia Farber, Operations Manager of the grant, to integrate initiatives and programs that target women in STEM.

- **Center for Women and Work:** The Center for Women and Work encourages the study of women and workplace issues and promotes dialogue among decision-makers in corporations, government, labor and community organizations to develop public policies and company practices that promote women’s advancement. Founded in 1993, the Center is located within the School of Management and Labor Relations (SMLR) at Rutgers University and is also a unit of the Institute for Women's Leadership (IWL). The Center disseminates research findings and benchmarks best practices in the workplace with the goal of improving outcomes for working women. In addition, the Center draws on the substantive faculty expertise on women and work within the Rutgers community to carry out the long-standing SMLR tradition of delivering quality educational programs to the labor and management communities of New Jersey and the nation. Along with WiSEM, it is one member of the eight-unit consortium, which examines leadership issues and advances women's leadership in education, research, politics, science, the arts, the workplace and the world.

- **NJ/Eastern PA/DE HERC:** Serving New Jersey, Eastern Pennsylvania, and Delaware, the Higher Education Recruitment Consortium, provides resources for people seeking positions in institutions of higher education. The HERC concept began in California. The NJ/Eastern PA/DE HERC was created in 2006 as a collaboration among New Jersey’s institutions, particularly Princeton University and Rutgers University. The HERC consortium is committed to finding effective ways to assist the spouses and partners of faculty and staff to secure area employment and ways to address issues of faculty and staff diversity. Bennett and Valentine met with Gilda Paul, director of NJ/Eastern PA/DE HERC and Assistant to the Special Assistant to the Dean of the Faculty in the Office of the Dean of the Faculty at Princeton University. In addition, Bennett and Valentine met with Joan Girgus, Special Assistant to the Dean of the Faculty and Professor of Psychology at Princeton, where she chairs a committee on women faculty in science and engineering and plays a major role in policy development and implementation and oversight.

- **New Jersey State Employment and Training Commission (SETC) Council on Gender Parity in Labor and Education:** Established first as a gender parity task force in 1993 and
made permanent by legislation as a council in 1999, the Council is the only one of its kind in the nation and brings together representatives from business, education, and government to address barriers to full and gender-equitable participation in the workforce. SETC partners with the Center for Women and Work (CWW) at Rutgers University to provide operational support to carry out program initiatives and day-to-day operations of the Council. Since 2007, the Council has brought together a diverse group of stakeholders to share perspectives and develop comprehensive and integrated recommendations for addressing gender issues in science, technology, engineering and mathematics (STEM) education, employment, and leadership. Valentine, Batanian, and Leshko participated as members of the Council Gender Parity Summit and as presenters at the May 21st, 2010 summit event as the Conference Center at Mercer County Community College. Roos, Gatta, and others associated with the Center for Women and Work and the Institute for Women’s Leadership also play key roles in Council activities and functions.

- **Bio-1 WIRED:** In June 2007, the John J. Heldrich Center for Workforce Development and the Rutgers School of Management and Labor Relations (SMLR) procured funding for the Central New Jersey region (Hunterdon, Mercer, Middlesex, Monmouth, and Somerset counties) in the form of a $5 million, three-year U.S. Department of Labor Generation III WIRED grant. The goal of Bio-1 WIRED was to retain and expand the number of high-quality jobs in Central New Jersey's bioscience sector by coordinating the efforts of the workforce development, education, economic development, and employer communities. WiSEM, in partnership with Mary Ellen Clark, Executive Director of Bio-1 Wired and through Bio-1 WIRED funding, expanded its OASIS Leadership Program for women in SEM, attracting more than 70 women from academia and industry to workshops series and co-mentoring networks. During the 2009-2010 academic year, seven assistant- and associate-level Rutgers faculty members from SEM departments received training through the program.

- **University of Medicine and Dentistry of New Jersey (UMDNJ):** UMDNJ has become an institutional partner with WiSEM as a result of the OASIS Leadership Program. Alice C. Lustig, Chief Finance and Operating Officer, and Jerome A. Langer, Associate Professor of Molecular Genetics and Microbiology and Associate Dean for Faculty Affairs, are committed to working with WiSEM to find additional institutional partners for joint programs in faculty development in SEM fields. UMDNJ and Rutgers have a joint MD/PhD program, are partners in several undergraduate and graduate research projects in science and engineering, and are members of Northeast Alliance for Graduate Education and the Professoriate (NEAGEP). NEAGEP is one of 26 NSF-funded Alliances for Graduate Education and the Professoriate (AGEP) programs in the United States. The goal of the NEAGEP is to increase the number of domestic students receiving doctoral degrees and entering the professoriate in the sciences, technology, engineering, and mathematics (SEM). WiSEM is particularly interested in recruiting, supporting, and mentoring students of those population groups underrepresented in SEM fields (i.e., African Americans, Hispanics, American Indians, Alaska Natives, Native Hawaiians or other Pacific Islanders).
Section 5. Initiatives with Institutional Support

- **Best Practices in Faculty Hiring and Promotion**: The President’s Council for Institutional Diversity and Equity published a handbook for deans, department chairs, and members of search committees on best practices for faculty hires that increase gender and racial diversity and ensure equity in the search and recruitment process. The Office for Institutional Diversity and Equity and the Office of the Executive Vice President for Academic Affairs are now widely disseminating this handbook to faculty across the three Rutgers sites. In our outreach to department chairs (see section 6.1 below), we highlight the handbook to ensure the best practices and resources outlined there are well-known and incorporated into the faculty search process. Our involvement in this effort is helping to foster university-wide acknowledgment of the RU FAIR ADVANCE mission, as well as enhanced awareness of diversity issues in hiring at Rutgers.

The next step in institutionalizing these best practices in hiring is to create a more interactive, web-based “training” module that deans, department chairs, and members of search committees can easily access and incorporate in their standard practices and processes. Karen Stubaus in the Office for Institutional Diversity and Equity, Cheryl Wall of the President’s Council on Institutional Diversity and Equity, and Jonathan Alger in the Office for the Vice President and General Counsel, together with RU FAIR ADVANCE, are developing our first RU InStride modules through a workshop approach to disseminating information on best practices for gender and racial diversity and equity. The workshop will adopt a co-mentoring process that facilitates diversity hiring and addresses issues specific to individual departments and schools. The fall meeting of the RU FAIR ADVANCE Consortium (see section 3.1e above) will focus on this collaborative workshop project.

- **The President’s Faculty Diversity Cluster Hiring Initiative** invites proposals from Deans and Chancellors for Faculty Diversity Cluster Hires—groups of three, four, or even five faculty of the highest quality who would come to Rutgers as a group or “cluster,” and whose addition to our faculty ranks would strategically and significantly increase the diversification of our scholarship and pedagogy. Such hires might be all in one department or could cross departmental or even school or campus lines. Interdisciplinary and multidisciplinary proposals will receive particular consideration. The Office of the President will provide half the salary of each faculty member in the cluster for their first three years at Rutgers.

- **Faculty Recruitment**: Within individual decanal or chancellorship units at Rutgers, financial and strategic assistance in recruitment may be available to support cluster hires or target of opportunity hires at the university. This enables these units to make offers to a limited number of faculty candidates of high quality whose presence in their unit will either increase the diversity of our research and instructional offerings, or increase diversity among the faculty ranks at the department, decanal, or campus levels. In
addition, assistance may be provided for recruitment, start-up costs, or research expenses. These hires may be at either the junior or senior levels; we are particularly interested in attracting senior scholars of excellence.

- **Dual-Hire Facilitation:** Assistance in placing a spouse or partner at Rutgers usually involves dean-to-dean conversation and negotiation. The Office for Faculty Diversity Initiatives may facilitate the process and provide resources. For non-Rutgers academic positions, faculty and staff should consult NJ/Eastern PA/DE HERC, the higher education recruitment consortium serving the New Jersey, Eastern Pennsylvania, and Delaware region.

- **Extending the Tenure Clock:** Rutgers University allows faculty—women and men—to extend their tenure-track appointment by one year before coming up for tenure and promotion review to facilitate family work/life balance. Child birth and adoption are among the most common reasons for faculty to extend the time to tenure review, but the university also considers other personal circumstances.

- **Start-up Packages and Space Allocation:** Academic deans are active leaders in an individualized process to respond to the needs of faculty being recruited or retained, often in the context of competing offers.

- **Presidential Postdoctoral Fellowships:** Diversity of all types within the academic community is achieved not only through the recruitment of tenured and tenure-track faculty, but also by identifying younger scholars who may have just completed their graduate degrees, or who may still be in graduate school. There are available a limited number of Presidential Postdoctoral Fellowships for such scholars. These Fellows receive two-year appointments, and are selected for the extent to which they represent excellence in their scholarship and teaching and can contribute to gender, racial, ethnic, background, experiential, or curricular diversification of departments or programs where diversification is educationally indicated and would be of benefit to our students.

- **Faculty Retention:** Most schools and departments have active mentoring programs to help ensure that individual tenure-track faculty obtain tenure and get promoted to associate-level. Among the schools and departments in SEM disciplines, the School of Environmental and Biological Sciences has implemented a best practices approach to faculty mentoring. We are now working with Dean Robert Goodman to develop this approach as a model for other schools and departments at Rutgers.

- **Best Practices in Recruitment Advertising:** Dean Margaret Marsh and Associate Dean Nancy Rosoff at Camden have developed and encouraged an active and strategic approach to advertising for faculty positions at Rutgers. Their text is a model for other campuses and units. Executive Vice President Philip Furmanski has requested that Rutgers advertisements on all campuses mention that Rutgers is an ADVANCE institution, something that the Camden model includes.
• **Faculty Re-Investment Program:** Announced by President Richard L. McCormick in March 2010, this one-time program offers some of the university’s longest-serving faculty members a lump-sum payment in exchange for voluntarily relinquishing their positions at the university. If enough senior faculty elect to retire, it will create opportunities for hiring new faculty. The impact of this program on retirement and recruitment is not yet known.

### Section 6: Outreach Initiatives

#### 6.1 Outreach to Deans, Key Administrators, and Faculty Leaders

As part of our ongoing efforts to outreach to the Rutgers community and highlight the mission and objectives of the ADVANCE program, members of the Executive Team have met with vice presidents and chancellors as well as deans in SEM disciplines on the three Rutgers campuses. The agenda for each meeting is similar: to discuss our shared mission of institutional diversity and equity for women and minority faculty and students; to establish an overall rapport, greater familiarity, and sustained involvement with RU FAIR; to advance the five interrelated initiatives of the grant (recruitment and retention, communication, network and liaisons, visibility, and work/family issues); to learn what our office and the grant can do for the university or the decanal unit; to probe the overall vision and climate perspectives of the university or decanal unit; to develop plans for meetings with department chairs; and to deliver publicity and informational materials as well as personal invitations to attend events, particularly those related to RU FAIR InStride (see below).

During the past six months, we have met with twenty-one members of the executive-level administration. Each meeting included one or more of the Principal Investigators of the grant as well as Director Doreen Valentine and Christina Leshko, our program coordinator. At the executive leadership level, we have met with the Executive Vice President of Academic Affairs, Philip Furmanski, Newark Chancellor Steven Diner, and Camden Chancellor Wendall Pritchett. The meeting with Diner included Assistant Chancellor and Director of the Dana Library, Mark Winston, who is also leading a new Center for Institutional Diversity and Equity at Newark, and Suzanne Piotrowski, Faculty Fellow and Associate Professor in the School of Public Affairs and Administration. In Camden, Pritchett was joined by Dean Margaret Marsh and Associate Dean Nancy Rosoff. We’ve met with Karen Stubaus, Associate Vice President for Academic Affairs and Director of the Office for Institutional Diversity and Equity; Jonathan Alger, Vice President and General Counsel for Academic Affairs; and Brent Ruben, Executive Director of the Center of Organizational Management and Leadership.

At the decanal level, we have met with the entire decanal group of School of Arts & Sciences (SAS) New Brunswick (Douglass Greenberg, Executive Dean; Robin Davis, Vice Dean; Kenneth Breslauer, Life Sciences; Kathryn Uhrich, Mathematical and Physical Sciences; Ann Fabian, Humanities; Allan Horwitz, Social & Behavioral Sciences); Thomas Farris, School of Engineering; David Finegold, School of Management and Labor Relations; Robert Goodman, School of Environmental and Biological Sciences; Margaret Marsh, Faculty of Arts and
Sciences, Camden; Philip Yeagle, Faculty of Arts and Sciences, Newark. In a less formal setting (preceding the more structured meetings), we also met with Robert Goodman, Dean of the School of Environmental and Biological Sciences, New Brunswick, and Vice Dean of SAS, New Brunswick, Robin Davis. We also have met with Richard DeLisi, Dean of the Graduate School of Education.

WiSEM initiatives for women in science and leadership connected our team to the Institute of Women’s Leadership (IWL) and Douglass Residential College. We met with Harriet Davidson, Interim Dean of Douglass Residential College and Associate Professor of English and Women's and Gender Studies; Barbara Balliet, Associate Dean of Douglass Residential College; Regina Riccioni, Assistant Dean and Director of the Douglass Project; Lisa Hetfield, Acting Director for IWL; and Mary Trigg, Director of Leadership Programs and Research at IWL. Another group of meetings took place with Jerome J. Kukor, Dean of Academic Programs and Research and a number of assistant deans and directors for integrating student-related programs and research. We met with Barbara Bender, Associate Dean for Academic Support and Graduate Student Services; Evelyn Erenrich, Assistant Dean and Program Director of Research in Science and Engineering at Rutgers and University of Medicine and Dentistry of New Jersey (UMDNJ); Claudia Farber, Assistant Dean III and Operations Manager of the Rutgers I$^3$ grant; and Teresa Del Corso, Assistant Dean and Director of External Funding. We also met with Rochel Gelman, Professor II of Cognitive Psychology and Director of Cognitive Development and Learning Lab; Eileen Kowler, Professor II of Cognitive Psychology and Director of Perceptual Science Integrative Graduate Education and Research Traineeship, and co-PI of the Rutgers I$^3$ grant; and Thomas Papathomas, Busch Campus Dean and Professor of Cognitive Psychology and Biomedical Engineering. In the School of Engineering, we met with Evelyn Hanna Laffey, Assistant Dean for Engineering Education and Assistant Director of the Educational Opportunity Fund. We also met Alexander Gates, Professor of Earth and Environmental Sciences and co-PI on the Newark Campus for the Louis Stokes Alliance for Minority Participation (LSAMP) grant. In addition, we met with Vice President for University Relations, Kim Manning, and Brent Ruben, Professor II, Executive Director of the Center for Organizational Development and Leadership and Director of the Predoctoral Future Leaders Program. Finally, we met with Gary Gigliotti, Associate Vice President for Academic Affairs and the Center for Teaching Advancement and Assessment Research (CTAAR) and Monica Devanas, Director of Faculty Development and Assessment Programs in CTAAR.

There were several immediately recognizable outcomes to the meetings with chancellors, vice presidents, deans, and faculty leaders. One was attendance at and/or support for mini-grant-funded workshops and lunch-discussion groups on hiring and promotion biases. The Office for Institutional Diversity and Equity (OIED) and each decanal unit passed along the information about these events to key faculty, including department chairs and faculty on search committees, and several deans and university leaders attended the events as well. The meetings with the deans and vice presidents also directly facilitated structuring the ADVANCE Consortium. Dean Robert Goodman of the School of Environmental and Biological Sciences presented at the ADVANCE Consortium on his school’s best practices in recruitment, promotion, and mentoring. Dean David Finegold of the School of Management and Labor Relations recruited and introduced Patrick McKay at the Consortium event. In addition, Finegold has reported on RU
FAIR ADVANCE several times in his weekly newsletter and blog, which is distributed to about 530 people across the university. Thomas Farris, Dean of the School of Engineering, has joined several meetings with faculty women in engineering for lunch discussions about the climate for women in engineering. After a meeting with School of Arts and Sciences Dean, Douglas Greenberg, that included the Vice Dean, Robin Davis, and the four area deans, Kenneth Breslauer (life sciences), Ann Fabian (humanities), Allan Horwitz (social and behavioral sciences), and Kathryn Uhrich (mathematics and physical sciences), PI Joan W. Bennett and Director Doreen Valentine were invited to present at a monthly Dean’s meeting of department chairs. Other meetings have helped establish WiSEM as a strategic partner in undergraduate and graduate science education and outreach and are positioning the WiSEM to expand its programs and grant funding.

Each and every one of these meetings has been effective in meeting our goals of outreach, information exchange, rapport, support, and institutionalization. We have learned more about the challenges and achievements that shape each administrator’s perceptions, vision, and actions. We have made strides in building a coalition to advance institutional change at Rutgers and expect to see a more cohesive Consortium established as a result of these efforts. The university leadership is committed to increasing the number of women and minority faculty at Rutgers at all ranks even in the face of the current fiscal emergency affecting the state of New Jersey and the nation.

6.2 Interviews with Department Chairs for Outreach and Evaluation of RU FAIR ADVANCE Initiatives

RU FAIR Director Valentine and Program Coordinator Leshko have initiated interviews with department chairs and directors of key research centers and institutes in SEM disciplines at Rutgers. We have two important goals. First and foremost, we use these meetings to provide outreach to all science and engineering departments and centers. We want to increase their awareness of NSF ADVANCE in general and RU FAIR ADVANCE in particular. In addition, we want to hear what their needs are – different disciplines have different priorities, challenges, and traditions. Simultaneously, we are collecting primary data from the chairs to use in our evaluation process. During these interviews, we are learning more about on-going, department-level activities for developing and instituting initiatives dedicated to gender and racial equity among faculty at Rutgers University. To evaluate the progress of institutional change, we will interview chairs at three points in time: baseline at an early stage of the program grant (Spring 2010), mid-cycle to assess progress (approximately fall 2011), and final evaluation (spring 2013). We are using structured interviewing techniques and have received Institutional Review Board (IRB) approval from the Rutgers Office of Research and Sponsored Projects (IRB #09-039-6; exempt status). RU FAIR Director Doreen Valentine is the Project PI for this project, and works with Project Coordinator Christina Leshko to conduct all the interviews, in consultation with sociologists Co-PI Patricia Roos and Project Research Assistant Crystal Bedley.

This project began in mid-February with the first of 55 SEM interviews (assuming we have 100% participation). As of May 31, 2010, we have conducted 19 interviews on the New Brunswick and Camden campuses, reaching chairs across departments in Arts and Sciences, Engineering, and Environmental and Biological Sciences. Another eight are currently scheduled.
to take place in June, when the pressures of the academic year are lessened. We hope to finish our first round interviewing in July or early August of 2010.

Our outreach interviews cover familiarity with diversity initiatives and funding opportunities at Rutgers, probe the department’s involvement in and commitment to institutional diversity and equity, ask about best practices in faculty recruitment and retention, and gather information on department faculty structure and resources. In turn, the department chair gains familiarity with RU FAIR objectives and programs.

Several themes have emerged from the interviews to date. In terms of recruitment, many chairs expressed some frustration with their ability to recruit successfully women and underrepresented minorities (i.e., African Americans, American Indians and Alaska Natives, Pacific Islanders, and Latinos/as) to Rutgers. In some fields, it was felt that there were not enough “qualified” women and URM applicants in the pool. For those applicants who are assessed favorably as qualified for a research-intensive, highly competitive institution like Rutgers, these promising applicants often have multiple offers from other prestigious schools. In these days of financial constraint, particularly for a public university like Rutgers, some chairs perceived the top women and URMs as too expensive to hire in terms of start-up packages and salary.

Channels for identifying potential faculty hires varied by department, with many departments targeting the broadest possible venues for advertising an active search and others homing in on discipline-specific yet well-known forums. All chairs mentioned professional conferences and word-of-mouth networks as important to the recruitment process. Many used national and international listservs to spread the word about an active search at Rutgers. The Rutgers best practices handbook for faculty recruitment was familiar to most chairs, though many were not specifically aware of the President’s Council for Institutional Diversity and Equity that had produced it. Few seemed to be deeply knowledgeable about the actual content of the handbook, citing the lack of an active search in their department as a reason for not having perused the handbook. Others seemed to have incorporated some of these best practices out of personal experience and an intuitive sense of a fair and equitable process despite a lack of systematic training in this area. Many chairs were familiar with RU FAIR ADVANCE, either through association with one or more of the Principal Investigators or word-of-mouth. A few had no prior knowledge of RU FAIR or NSF ADVANCE until we contacted them to set up the outreach appointment. Our presentation at the April meeting of chairs within the School of Arts and Science, New Brunswick, was likely to have been a venue through which certain department chairs first became aware of RU FAIR programs.

Department chairs play critical roles in the tenure and promotion process at Rutgers and most departments have some form of mentoring program in place for tenure-track faculty. Most chairs meet with assistant professors for an annual review during the years leading up to tenure evaluation. The mentoring program in the School of Environmental and Biological Sciences stands out as a “best practices” approach to mentoring. Assistant professors in SEBS receive support from a mentoring committee composed of two senior departmental faculty plus one senior faculty external to the department. Across the university, however, there is no formal mechanism for ensuring that associate-level faculty get promoted to full professor; most assume
that associate professors already have a fair understanding of the requirements to attain full professor. Our conversations with women associate professors run counter to this expectation.

Gender and racial diversity and institutional equity are important values for the university. During our interviews, many department chairs focused on diversity and equity issues in terms of the student body. They have an interest in diversifying undergraduate student population, yet frequently do not mention having diverse faculty role models as a method for recruiting more diverse students. Overall, the chairs seemed very open to doing their part to increase institutional diversity, and many were interested in having RU FAIR personnel present and provide information to their department faculty. They were also eager to join our listserv and circulate information and “call for proposal” documents.

Our outreach to SEM department chairs also touched upon a study that we will undertake more formally this summer: space allocation. In general, departments at Rutgers have insufficient or inadequate office and lab space for all faculty, regardless of gender and race. Several chairs mentioned that more recently recruited faculty tended to get the better, more up-to-date lab space. A trade-off, however, was that this space was sometimes in a different location from where the majority of department faculty work. Our space study will attempt to examine how proximity affects climate, which in turn, may play a role in faculty retention.

6.3 Outreach to Other Institutions

As one of the largest academic institutions in the Northeast and Mid-Atlantic region, Rutgers is a natural hub for intercollegiate and industry networks. The Office for the Promotion of Women in Science, Engineering, and Mathematics has worked to build relationships and partnerships with other schools, particularly other ADVANCE institutions, in the area. We also participate in professional organizations like the Association of Women in Science (AWIS), which has an active Philadelphia chapter. This section highlights some of our outreach to and participation with other institutions. The activities of the Principal Investigators are listed separately in section 6.4.

- Mid-Atlantic Consortium: RU FAIR is spearheading an effort to link up with other ADVANCE institutions in the Mid-Atlantic region. Discussions have taken place about the possibility of creating a Mid-Atlantic ADVANCE Consortium to share knowledge, information, and resources among local universities with the goal of improving the status and diversity of women in science throughout the region. We reached out to seventeen institutions in the area and three ADVANCE leaders participated in preliminary discussions with RU FAIR Program Coordinator Christina Leshko: Diane Bates (ADVANCE-PAID, The College of New Jersey), Brenda Johnson (ADVANCE-PAID, Union College), and Nancy Steffen-Fluhr (ADVANCE-IT, New Jersey Institute of Technology).

Despite enthusiasm and interest in developing a Consortium, the idea has not yet fully gotten off the ground. A recent conversation with Ohio State University’s ADVANCE
Director and former NSF program officer, Mary Juhas, suggests that a Mid-Atlantic Consortium is both possible with the right leadership and important for building a grassroots level network of women in science advocates. Juhas has successfully organized a similar group in the Mid-West; the Mid-West Consortium brought people from several universities to Ohio State for a conference on faculty advancement and diversification. With Juhas’s help, we are renewing our effort to organize a conference among Mid-Atlantic universities, both ADVANCE and non-ADVANCE.

- New Jersey Institute of Technology: Rutgers-Newark and the New Jersey Institute of Technology (NJIT) share the same city streets in the central part of Newark. These schools also partner through a formal agreement, known as the Rutgers-Newark/New Jersey Institute of Technology Federation, to coordinate many activities of their respective departments. The goal is to increase the quality of teaching and research by drawing from the larger, combined resource base. The Federation also involves the sharing of office and laboratory facilities, the coordination of research, and long-term strategic planning. Participating departments include biological sciences, earth and environmental sciences, mathematics and computer science, history, and theater arts.

With such close ties, we are working to expand upon our existing communication and collaboration with NJIT. Professor of Civil and Environmental Engineering and former Provost, Priscilla Nelson, has expressed interest in organizing a Rutgers-NJIT Women in Engineering event, and NJIT ADVANCE Director, Nancy Steffen-Fluhr, is eager to bring faculty women together from the two universities. We are developing an event for fall 2010.

- Delaware State University: Delaware State University is a historically black college based in the state capitol of Dover. RU FAIR hosted a site visit by three faculty from DSU on April 20, 2010. Supported by a pre-ADVANCE grant from NSF, DSU is building toward a supported institutional transformation initiative. Drs. Dahlia Jackson, Sabrina McGary, and Gulnihat Ozbay met with key members of the RU FAIR team to discuss strengths and weaknesses of the grant and to review how the structure of the grant has evolved to its current form. We prepared a comprehensive PowerPoint presentation and exchanged advice and information in several informational sessions. The DSU faculty group left feeling highly satisfied with their visit, both in terms of productive information sharing and networking.

- Council of Colleges of Arts and Sciences (CCAS), University of Northern Colorado: Lucinda Huffaker, Program/Research Manager of the CCAS ADVANCE grant attended the May 7, 2010 mini-grant panel, “Unconscious Bias,” organized by Drs. Nancy DiTomaso and Laurie Rudman. Huffaker first heard about the event through word-of-mouth about speaking engagements by one of the featured panelists, Brian Nosek, an associate professor of psychology at the University of Virginia who is well-known for his work on implicit cognition. Huffaker traveled from Colorado to attend the event, and spent the afternoon meeting with RU FAIR staff to discuss resources for current
social science research on gender and science as well as social media in the work of increasing diversity and equity issues in academia.

- **Villanova University:** On March 17, 2010, the Association of Women in Science (AWIS) Philadelphia Chapter convened at Villanova University for a conference that featured Dr. Nicole Else-Quest, assistant professor of Psychology at Villanova University. Else-Quest gave a talk on “Cross-National Patterns of Gender Difference in Mathematics: Attitudes, Affect, and Achievement.” Program Coordinator, Christina Leshko, attended the event as an opportunity to network and exchange information and stories regarding programs to enhance climate at both Villanova and Rutgers Universities. We hope to build the idea of the Mid-Atlantic Consortium with support and involvement from Villanova.

6.4 RU FAIR Executive Team Outreach, Publications, and Service

6.4a Joan W. Bennett

RU FAIR ADVANCE Principal Investigator, Joan W. Bennett, is an accomplished fungal geneticist as well as a renowned “women of science.” As such, she is frequently invited to present at conferences and symposia, as well as to participate on science committees. She also has a keen interest in women in science history. Her presentations and committee participation over the past year, both nationally and internationally, include:

**Women in Science Presentations**
- Women's Scholarship and Leadership Trustees Learning Group, Rutgers University, New Brunswick, New Jersey, April 29, 2010. Presentation to Trustees on the status of women in science at Rutgers University
- University of Washington Genome Sciences, Seattle, Washington, March 3, 2010, Presentation and individual meetings with members of Women in Genome Sciences (WIGS)
- Rosalind-Franklin House for Women in Science, Rutgers University, New Brunswick, New Jersey, December 14, 2009
- Seton Hall University, South Orange, New Jersey, November 18, 2009, “Doing Science with Two X chromosomes: Floods, Fungi, and Feminism”
- Nicholls State University, Thibidaux, Louisiana, November 5, 2009, “Doing Science with Two X chromosomes: Floods, Fungi, and Feminism”
- NSF ADVANCE Annual Conference, Washington, DC, October 29, 2009
- Mercer County Lecture Series, Mercer County Community College, West Windsor, New Jersey, October 27, 2009, “Don’t Take This Wrong, But You Are Really Good for a Girl and Other Stories About Being a Woman in Science”
- Fairleigh Dickinson University, Madison, New Jersey, October 20, 2009, “Don’t Take This Wrong, But You Are Really Good for a Girl and Other Stories About Being a Woman in Science”
o Research Experience for Undergraduate (REU) Program, Rutgers University, Camden, New Jersey, July 7, 2009. Presented to undergraduates on research
o 3rd Annual New Jersey Women in Science and Technology Workforce Summit, West Windsor, New Jersey, June 6, 2009

Science Presentations
o American Society of Microbiology, 110th General Meeting, San Diego, California, May 24, 2010, “History of Microbiology Lecture: The Miracle of the Eukaryotic Microbe” and “From SAB to ASM: How bacteriology became microbiology and why it didn't make much difference”
o Chulalongkorn University, Thailand, Visit to Rutgers University, New Brunswick, New Jersey, May 4, 2010. Presented research to science delegation from Thailand and led tour of Bennett laboratory
o New Jersey Mycology Society, Willowbrook Arboretum, April 11, 2010
o National Academy of Sciences Annual Meeting, National Harbor, Maryland, April 24, 2010
o Mycoherbicide Committee Meeting, Washington, DC, April 20, 2010
o Pan-Fungal Data Resources Strategy, Alexandria, VA, February 22, 2010
o Class Membership Committee (CMC), Orange County, California, February 7, 2010
o Tenth International Fungal Biology Conference, Ensanada, Baja California, Mexico, December 6-10, 2009
o National Academy of Sciences Regional Meeting, Rockefeller University, New York, New York, December 2, 2009
o Advanced Mycology Meeting, Chatsworth, New Jersey, October, 26, 2009
o International Symposium at the National Academy of Sciences, Washington, DC, October 8, 2009. Keynote presentation on the value proposition for research in microbiology
o Fungal Genomics Meeting, China, September 18, 2009
o Society for Industrial Microbiology (SIM) Annual Meeting and Exhibition, Toronto, Canada, July 27, 2009

Service and Leadership
o Dean’s Council, School of Arts and Sciences, Rutgers University, New Brunswick, 2006-present
o President’s Council for Institutional Diversity and Equity, Rutgers University, 2008-present
o Institute for Women’s Leadership Director’s Group, Rutgers University, 2008-present

6.4b Patricia A. Roos

RU FAIR ADVANCE Co-PI Patricia A. Roos is a sociologist with research interests in inequalities, gender and work, stratification, and work/family. She has published on such topics as the feminization of traditionally male jobs, the gender gap in earnings, occupational
integration, work/family, and gender equity in higher education. She works actively on behalf of
gender equity in higher education through her research, her teaching and mentorship of faculty
and students, and through her departmental and university service work.

Publications and Presentations
- Roos, Patricia A. 2009. “Subtle Mechanisms: Reproducing Gender Inequity in
  Academia.” Pp. 27-40 in Mustafa F. Özbilgin (ed.), Equality, Diversity and Inclusion At
  Elgar Press
  Mechanisms and the Production of Inequality.” Research in Social Stratification and
  Mobility, 27:177-200
  in Women’s Work Status and Attitudes.” Women’s Studies Quarterly 37:103-120
  Promoting Gender Equity in Higher Education.” Gender, Work and Organisation, 6th
  Biennial International Interdisciplinary Conference, Keele University, Staffordshire, UK,
  June 2010
  of the American Sociological Association, Atlanta, August 2009
- Invited speaker, “Gender (In)equity in the Academy: Subtle Mechanisms and the
  Production of Inequality.” Temple University, Department of Sociology, March 26, 2010
- Invited speaker, “Subtle Mechanisms of Inequity: Identifying Gender Inequality and
  Promoting Institutional Change in the Academy.” Harvard University, Faculty of Arts &
  Sciences, Office of Development and Diversity, May 6, 2010

Service and Leadership
- OASIS Leadership Program for STEM Women Faculty: Coaching Skills for Mentors,
  Rutgers University, Spring 2009
- Editorial Board, Gender & Society, 2007-2010
- Editorial Board, Rose Series in Sociology, 2009-2011
- Affirmative Action Committee, School of Arts and Sciences, Rutgers University, New
  Brunswick, 2009-11
- Institute for Women’s Leadership Director’s Group, Rutgers University, 2008-present
- Faculty Mentor, Department of Sociology, Rutgers University, New Brunswick, 2001-
  present
- Honors Program Mentor, School of Arts and Sciences, Rutgers University, New
  Brunswick, 2007-present
- Personnel Committee, Department of Sociology, Rutgers University, New Brunswick,
  2007-present
- Faculty Mentor, School of Management and Labor Relations (SMLR), Rutgers
  University, New Brunswick, 2008-present

6.4c Helen Buettner
RU FAIR ADVANCE Co-PI and Professor, Helen Buettner, is a biomedical engineer whose research focuses on tissue mechanisms of acupuncture and neuro-cellular engineering of spinal cord repair. She has been a dedicated teacher and mentor, known for taking extra time with students, especially women. As a university leader in science and engineering, she is working to educate other senior leaders on matters of gender and racial bias and to enhance the level of communication among faculty.

Publications and Presentations
- Julias M, Buettner HM, Shreiber DI. “Varying assay geometry to emulate connective tissue planes in an in vitro model of acupuncture,” Submitted to The Anatomical Record. In Review

Service and Leadership
- Vice Chair, Department of Biomedical Engineering, School of Engineering, Rutgers University, New Brunswick, 2003-present
- Promotion Review Committee (appointed), Department of Biomedical Engineering, School of Engineering, Rutgers University, New Brunswick, 2008-present
- Peer Evaluation Committee (elected), Department of Biomedical Engineering, School of Engineering, Rutgers University, New Brunswick, 2005-present
- Junior Faculty Mentor, Department of Biomedical Engineering, School of Engineering, Rutgers University, New Brunswick, 2003-present
- Applied Sciences Committee, School of Engineering, Rutgers University, New Brunswick, 2009-present
- College Planning Committee, School of Engineering, Rutgers University, New Brunswick, 2006-present
- Next Generation of College and University Leaders Advisory Planning Group, Rutgers University, New Brunswick, 2009-present
OASIS Leadership Program for STEM Women Faculty: Coaching Skills for Mentors, Rutgers University, Spring 2009

6.4d Kathryn Uhrich

RU FAIR ADVANCE Co-PI Kathryn Uhrich is a polymer chemist and university leader at Rutgers University. The focus in her laboratory is on the synthesis and characterization of biocompatible polymers for medical and dental applications such as drug delivery and tissue engineering. In addition to her research accomplishments, which include hundreds of publications, conference proceedings, patents, and invited presentations at local, national and international levels, Dr. Uhrich serves the University as the Dean of Mathematical and Physical Sciences.

Publications and Presentations
- Symposium Organizer, New Jersey section of the American Chemical Society, “Polymers in Drug Delivery” with R. Demartino, Piscataway, New Jersey, May 2010
- Plenary Speaker, Herbert D. Doan Nanotechnology Symposium, “Polymeric Therapeutics: from PolymerDrugs to Polymeric Micelles,” University of Michigan, Ann Arbor, Michigan, September 2009
- Workshop Organizer, “Polymers in Medicine and Biology” with B. Ratner (U. Washington) and J. Riffle (Virginia Tech), POLY Division, Sonoma, California, June 2009
- “All Science, All the Time”, New Jersey Sally Ride Science Clubs, Morristown, New Jersey, June 2009
- deRonde, BM; Carbone, AL; Uhrich, KE “Storage Stability Study of Salicylate-based Poly(anhydride-esters)”, Polymer Degradation and Stability, accepted
- Iverson, N; Sparks, S; Demirdirek, B; Uhrich, KE; Moghe, PV “Controllable Inhibition of Cellular Uptake of Oxidized Low Density Lipoprotein: Structure-property relationships for nanoscale amphiphilic macromolecules”, Acta Biomateriala, accepted
- Del Rosario, LS; Demirdirek, B; Harmon, A; Orban, D; Uhrich, KE “Micellar nanocarriers assembled from doxorubicin-conjugated amphiphilic macromolecules”, Macromol. Biosci., accepted. 10.1002/mabi.200900335
Prudencio, A; Carbone, AL; Griffin J; Uhrich, KE “A Novel Approach for Incorporation of Mono-functional Bioactive Phenols into Polyanhydrides”, Macromol Rapid Comm, 30, 1101-1108 (2009)


Service and Leadership

- Member, Biotechnology Advisory Board, Middlesex County College, New Jersey, 2010-present
- Member, Advisory Board, International Conference on Modern Materials and Technologies, 2009-2010
- Committee Member, Intellectual Property & Tech Transfer, Center for Clinical and Translation Science of New Jersey, March 2006-present
- Member, Executive Committee of the Institute for Advanced Materials and Devices, Rutgers University, 2006-present
- Advisor, External Advisory Committee, NSF IGERT on “Micro/Nanosystems for Diagnostics and Therapeutics”, Iowa State University/University of Nebraska, September 2006-present
- External Evaluator, RISE Program and Bridge to the Doctorate Programs, Long Island University, New York, 2004-present
- Co-Director, NSF IGERT program, Rutgers University, October 2003-present
- Member, Academic Oversight Committee for Intercollegiate Athletics (AAOC); Rutgers University, 2001-present (appointed)
- Committee, Tissue Engineered Medical Products (TEMP) study section, American Society of Testing and Materials ASTM, August 2000-present
- Scientific Founder and Chair of the Scientific Advisory Board, Polymerix Corporation, Piscataway, NJ, June 2000-present
- Special Advisor, Daegu-Gyeongbuk National High-Tech Medical Complex, Daegu, Korea, October 2009
- Member, Advisory Council for Women & Philanthropy, Rutgers University Foundation, Piscataway, NJ, July 2005-present (appointed)

6.4e Philip Yeagle

Dr. Philip Yeagle is Dean of the Faculty of Arts and Sciences, Chief Academic Research Officer, and Professor of Biology at Rutgers-Newark. In his capacity as the Dean of Faculty, Yeagle is also Dean of the College of Arts and Sciences, University College, and Honors College enrolling 60% of undergraduates on the Newark campus of Rutgers University. The teaching of 5000 undergraduate and graduate students at Newark is supported by about 500 full and part-time faculty and staff members in seventeen departments, eight programs, four centers and institutes, and the Academic Foundations Center. Yeagle's campuswide responsibilities include: student
advising, orientation and testing for new undergraduates, academic judicial affairs, leading the Learning Center, the Writing Center, and ESL programming, providing career services for students and alumni, offering pre-professional advising, international student services, and immigration services for faculty. As the Chief Academic Research Officer, Yeagle provides the campus voice on research to external agencies, research policy development, promotion of responsible conduct of research, managing limited submission grants, planning matches for grant applications, and supervising the vivarium. He is the author of over 150 research articles and book chapters and six books. He is currently writing his seventh.

6.5 Other Outreach and Product Deliverables

Participating and presenting at national and local conferences, publishing on issues related to gender and science, and engaging in service and leadership activities is an important goal for the RU FAIR Executive Team. The preceding section lists the outreach work, publications, and service activities of the PI and co-PIs. Here we present other outreach, service, and product deliverables not reported elsewhere in this report.

- National Science Foundation Annual Conference, October 29-30, 2009: RU FAIR team members Bennett, Roos, Batemanian, and Valentine attended the 2009 ADVANCE/AWIS conference, Broadening Participation: A Societal Imperative for Gender Equity
- National Women in Engineering ProActive Network (WEPAN) Conference, April 2010: co-authors Natalie Batemanian, Associate Director of WiSEM, Evelyn H. Laffey, Assistant Dean of Educational Opportunity Fund Special Programs in the School of Engineering, and Christina Leshko, RU FAIR Program Coordinator, "Effects of Faculty-Student Interactions on Faculty Career Satisfaction"

Section 7: Key Initiatives of RU FAIR ADVANCE

RU FAIR supports five major initiatives to increase the participation and advancement of faculty women in science, engineering, and mathematics on all three campuses. This section provides a brief overview of the five initiatives—recruitment and retention, communication, networking and liaisons, visibility, and family/work-life balance—and highlights some of the specific interventions aimed at advancing these initiatives. Additional details on events, activities, and outcomes listed here are given in sections 8 and 9 below, where specific mechanisms—mini-grants, life-cycle grants, and RU FAIR Professorships—are elaborated and evaluated in detail.

7.1 Retention and Recruitment (RU FAIR InStride)

This initiative seeks to increase the number of women, especially minority women, on the Rutgers SEM faculty. This initiative is being addressed through our RU InStride model and the President’s Council for Institutional Diversity and Equity. This model has created committees and formed partnerships; it also seeks to provide training for inclusive practices in hiring and diversifying the pool faculty applicants.Retention of women and minority SEM faculty is equally critical to an overall goal of increasing institutional diversity and equity.
7.1a Best Practices in Hiring and Promoting a Diverse Faculty: The original RU FAIR grant proposal identified skills training in faculty recruitment and retention as a mechanism for increasing women’s participation and advancement in SEM disciplines. The President’s Council on Institutional Diversity and Equity, which includes PI Joan W. Bennett and members of the ADVANCE Consortium, developed and published A Handbook for Deans, Department Chairs, and Members of Faculty Search Committee. The handbook has been widely disseminated to faculty across the three Rutgers sites and it is available as a pdf file on the Internet. (http://www.diversityandequity.rutgers.edu/documents/TableofContents11-13-09Web.pdf). Our involvement in this effort is helping to foster university-wide acknowledgment of the RU FAIR ADVANCE mission, as well as enhanced awareness of diversity issues in hiring at Rutgers.

Important next steps for integrating best practices in diversity hiring involve making deans, chairs, and search and promotion committee members more aware of best practices. The Diversity Council succeeded in reaching an important percentage of this population with the November 5th, 2009 launch of the Handbook. At this university-wide, whole-day event 92 (out of 116 invited) deans, department chairs, and members of faculty-search committees were present. Twenty deans representing 12 schools, 48 faculty chairs of search committees, and 24 staff members participated. Key social science concepts that contribute to bias in faculty selection were introduced to the attendees by the Cornell Interactive Theater Ensemble. The play they presented, “It Depends on the Lens,” depicted a search committee interaction. The goal of the play and an interactive exercise that followed was to introduce audience members to individual perspectives behind decision making and factors that contribute to productive and unproductive outcomes. The event also included a lecture on the concept of “unconscious bias,” emphasizing the importance of a high-accountability/low-blame working environment in minimizing bias in the hiring and promotion process in academia.

On March 24th, 2010, the Cornell Ensemble returned to Rutgers to present the program to deans and faculty at Camden. Chancellor Wendell Pritchett and the Camden Office for Institutional Diversity and Equity, led by Nancy Rosoff, working closely with Karen Stubaus and the Office of Institutional Diversity and Equity in New Brunswick, organized the event as part of a program to create awareness of unconscious biases and promote best practices. Mark Winston, Assistant Chancellor at Rutgers Newark, is organizing similar workshop sessions for Newark, again using the Cornell troupe. Winston aims to expand the program to address issues of racial and ethnic bias as well as gender bias. New Brunswick is seeking to host the Cornell-based program in fall 2010 as well.

Along the same theme, but with a deeper, research-based approach, Nancy DiTomaso, professor of management and global business at the Rutgers School of Business-New Brunswick and Newark, and Laurie Rudman, professor of psychology in New Brunswick, organized workshops that took place on April 9th and May 7th of 2010 (for additional details on this event, including invited speakers and participants, see section 9.2d). Funded by an RU FAIR ADVANCE mini-grant, with supplemental funding from the Office for Institutional Diversity and Equity and Business School, these workshops provide a more detailed account of the social science research that explains biased behavior at individual and structural levels for an audience of chairs, deans, and search committee members. Both workshops were professionally videotaped by Rutgers.
Office of University Relations and will be made available for viewing by Rutgers faculty and staff, and in particular, members of future search committees.

The expanded scale of programs and participation on themes of diversity and equity in the academic workplace are a step in the process of institutionalization. RU FAIR personnel have supplemented these programmatic efforts through personal outreach to executive administrators and department chairs, as discussed above. We plan department-level training workshops for the coming year, in collaboration with institutional partners.

7.1b Mini-grants and Recruitment: Some RU FAIR-sponsored programs are already having a direct effect on recruitment and retention of women faculty. Funded mini-grants, for example, that bring in external speakers who are also actively seeking faculty positions have worked to recruit women. Amy Corwin-Cohen, Professor of Mathematics, invited five women speakers as part of an effort to increase departmental awareness of the work of outstanding female mathematicians, foster research collaborations between these women and members of the department, and lay the groundwork for job candidacy. These stated goals were met at every level, contributing to a successful cluster hire in mathematics and fostering mentoring and collaboration between one of the speakers (an NSF ADVANCE professor at another ADVANCE institution) and department faculty and students. Three women mathematicians were made offers, and two are coming to Rutgers in AY 2010-11. Another speaker who holds an executive position in a national mathematics professional association met with key leaders in the Rutgers School of Arts and Sciences to discuss issues related to hiring, promotion, and retention. She also met with graduate students to discuss professional advancement of women in mathematics. Importantly, a number of male faculty across various sub-specializations in mathematics participated in the talks, enhancing the sense of intellectual community in the department and promoting the visibility of women in the field.

7.2 Communication Initiative

This initiative focuses on communications across campuses and departments. We are encouraging collaborations through strategic partnering on events that bring together faculty across diverse disciplines. And we are bridging the physical distance between the three campuses through use of the RU FAIR/WiSEM website and the sciwomen listserv, by coordinating cross-campus events, and by holding meetings on each campus. To facilitate our coming together for RU FAIR executive team meetings, for example, we have utilized a combination of video- and tele-conferencing and have also rotated the physical site of the meeting, in order to accommodate the life and work styles of our twelve participants.

New Brunswick is home to the WiSEM office and “RU FAIR Central,” as we sometimes call our core personnel. On the Camden and Newark campuses, our RU FAIR Professors, Arbuckle-Keil, Weis, and Shiffrar, have helped to arrange for satellite offices with wireless internet access. Valentine, Leshko, and Batmanian travel to and from the central New Brunswick location to work and network in Camden and Newark. Our internal evaluator, Mary Gatta, has traveled to the Newark campus to present on process evaluation and the Agents of Change Project (see section 8.7). Bennett, Buettner, and Roos have traveled from New Brunswick to Camden and
Newark; Arbuckle-Keil attended meetings in New Brunswick; Weis, Shiffrar, and Yeagle have come to New Brunswick from Newark.

The state of New Jersey has completed construction on the local highway, US-18, that connects campuses on opposite sides of the Raritan River. Our efforts to improve interdepartmental and inter-school communication have benefitted from the resulting improvement in inter-campus travel. A trip by car or bus that took 30-45 minutes at the height of the construction only a couple of years ago now takes 5-15 minutes. We hypothesize that inter-campus attendance at Rutgers events will steadily increase, resulting in greater communication among faculty on both sides of the Raritan River.

7.2a Sponsored Programs: Several mini-grant and RU FAIR Professorship programs afforded opportunities for formal and informal communications among faculty across our multi-sited and geographically disperse landscape. WiSEM and RU FAIR also collaborated with institutional partner units to bring distinguished speakers to Rutgers. Temple Grandin, whose work in animal behavior and husbandry and writings on autism are internationally known, brought out faculty and students across campus for two major lectures on December 1, 2009. In the morning, Grandin lectured to the animal science department; that evening she also gave a public lecture through the Rutgers writer’s workshop. In between she participated in an intimate talk and luncheon that brought her together with Douglass Residential College undergraduate students and Douglass women leaders.

Evelyn Fox Keller, Professor of the History and Philosophy of Science, Emerita at MIT, came to Rutgers on March 9th and 10th, 2010 as the distinguished speaker for the Center for Critical Analysis. Her talk, entitled "Climate Science, Truth, and Democracy," brought together faculty and students from the departments of English, environmental science, geology, history, and anthropology, among others, to discuss the issues around climate change and the role of climate scientists in communicating to the public. Like Grandin, Fox Keller presented a public lecture and joined students and faculty for a more intimate lunch at the Rutgers Club over the course of a two-day New Brunswick campus visit. WiSEM, the Institute for Research on Women (a member of the IWL Collective), and the Center for Critical Analysis partnered to sponsor the event.

In collaboration with the School of Environmental and Biological Sciences (SEBS) and Dean Robert Goodman, RU FAIR / WiSEM gave support to the Northeastern Symposium on Evolutionary Divergence Time held in New Brunswick on January 8, 2010. The symposium was organized by Jessica Ware and Jessica Thomas. Ware is currently an NSF-supported postdoctoral fellow at the American Museum of Natural History whose work focuses on dragonfly phylogenetics. She has recently been successfully recruited to join the faculty in biological science at Rutgers-Newark in September 2010. Jessica Thomas is a postdoctoral researcher in the Department of Ecology, Evolution, and Natural Resources. Over 80 faculty and students participated in the event, which was highly rated as “interesting” with a “good variety of talks” and much to offer.

RU FAIR professors Judith Weis and Maggie Shiffrar organized four fall and three spring semester symposia in Newark to highlight established women in science, probe topics related to gender and science, and bring people together across disciplinary divides. The fall series, funded
through a mini-grant to Shiffrar, focused on topics in cognitive psychology and neuroscience. The spring speakers came from both government and academia and represented women scientists trained in environmental science, biology, gender studies, and social psychology. One of the highlights was a talk given by Anne Fausto Sterling, the Nancy Duke Lewis Professor and Professor of Biology and Gender Studies at Brown University entitled “Gender, Sexuality, and the Problem of Memory.” Another was the visit by Jacquelynne Eccles, the McKeachie-Pintrich Distinguished Professor of Psychology and Education at the University of Michigan. Eccles talked about gendered participation in the social and biological sciences versus the physical sciences. The details of these and the other Newark events are presented in section 9.

7.3 Networking and Liaisons: This initiative seeks to build collaborations between Rutgers SEM faculty and the strong programs in women’s studies at Rutgers University, in particular, the Rutgers Institute for Women’s Leadership (IWL). Mechanisms such as the RU FAIR Professors and RU FAIR mini-grants have been particularly effective in developing networking and liaisons.

7.3a Institute for Women’s Leadership: The Office for the Promotion of Women in Science, Engineering, and Mathematics (WiSEM) is one of eight centers in the Institute for Women’s Leadership (IWL) consortium at Rutgers. RU FAIR PI Joan W. Bennett, co-PI Patricia Roos, director Doreen Valentine, and associate director of WiSEM, Natalie Bateman, participate as active members of the IWL Directors’ Collective and play roles in many aspects of the group’s operations. Valentine and Bateman offered support to IWL’s Institute for Research on Women (IRW) in planning their 2010-11 program on “The Art and Science of Happiness,” and Bateman is spearheading a project on women, science, and cinema.

One of the RU FAIR-funded mini-grants grew out of the IRW. The fall 2009 semester workshop, “Negotiating Basics for Women in Academia,” brought together four female speakers from different academic departments and different ranks and almost 90 faculty, post-doctoral, and advanced graduate student participants to discuss and train in effective negotiating in the academic workplace. The participants completed a post-event survey that was overwhelmingly positive (an average rating of 4.6 on a scale of 1-5; n=43 survey respondents).

7.3b Women of Color Scholars Project: Funded by an RU FAIR mini-grant, Zaire Dinzey-Flores in the departments of Latino and Hispanic Caribbean Studies and Sociology and Robyn Rodriguez in the department of Sociology organized a group of junior women of color faculty at Rutgers New Brunswick. Building on the very successful Black Women Academics in the Ivory Tower conference (held at Rutgers on March 5-6, 2009), this project aims to foster a nurturing and supportive academic community for this cohort, which is underrepresented in all disciplines, but particularly in SEM fields. The group began to meet regularly, holding formal workshops and informal networking events, this past September, and a first wave of feedback is now available. The participants have all expressed how vital a group like this is—both for the opportunity to build a supportive network as well as for exchanging strategies and ideas about how to balance pre-tenure life as a woman of color. One of the outcomes of the group meetings was to create a resource center on the Rutgers’ Sakai site (an Internet repository and social media resource platform), where the group has been able to share insights in a comfortable, secure setting. Junior faculty also worked with senior women of color faculty to learn tips related to
tenure and advancement. The group’s teaching workshop provided strategies that the women could immediately apply in the classroom; one participant described that session as "fantastic." As Dinzeay-Flores put it, “my sense, now, is that the grant has really helped create an important network for junior women of color and that, with continued support, would continue to be a core support structure for women of color faculty. The group has turned out to be nothing short of necessary, in my estimation, for the success of women of color faculty. And there is a lot of interest among those who have become part of the core group, in addition to those who are on leave this year and have been unable to participate, to continue the group.” We anticipate that this ADVANCE-supported initiative will evolve into an enduring community of support for women in color.

7.3c Leadership and Networking Training (OASIS): Originally piloted in the spring of 2008 with a group of twenty-nine women science faculty from biological, social, and physical sciences, engineering, and computer science, the OASIS Leadership Program, which is sponsored by WiSEM, is modeled after the renowned leadership program offered for executive women in business by the Institute for Women’s Leadership (IWL). The OASIS program provides leadership training and career development for women in SEM fields. It also creates opportunities for participants to develop supportive and collaborative networks between industry and academia. One specific goal is to cultivate female members of the Rutgers faculty to prepare for leadership and administrative roles within the university. In the spring of 2009, thirteen Rutgers faculty members (nine full professors and five associate professors) participated in a follow-up OASIS Coaching and Mentoring workshop. An off-shoot of this program is the newly formed OASIS Circle co-mentoring group, which began in spring 2010, and includes twelve members of the pilot group with two new additions. The group meets monthly as an informal support network. In summer of 2011, one of these faculty members—someone who is poised to take on a leadership role—will participate in the HERS Bryn Mawr Summer Institute with funding from the Office of the Executive Vice President for Academic Affairs.

During the academic year starting in September of 2009, WiSEM, with sponsorship from Bio-1 Wired, organized and facilitated two series of its OASIS Women’s Leadership Training and Co-Mentoring workshops. For the series that took place each semester, we recruited women faculty members at the assistant and associate professorial levels, along with women from industry and health care, to participate in the five-session leadership, networking, and collaboration workshop. These professional development sessions concentrated on building skills related to time and resource management, representing and communicating one’s work, refining one’s leadership style, negotiating in personal and professional arenas, and networking and co-mentoring in SEM environments.

This year marked the third for which OASIS workshops were held. The workshop materials, activities, and presentations for this past year’s sessions were developed and implemented by WiSEM based on focus groups conducted in previous semesters in conjunction with an external consultant. Members of our RU FAIR and WiSEM staff also received specialized facilitation training this year that now allow us to take the reins as workshop facilitators. Not only did we learn tips and techniques related to workshop development and facilitation, we were trained in how professional style in the workplace can impact collaborations. Co-PI and RU FAIR professor Helen Buettner brought these skills to the Tenure and Promotion Workshop for
Women in Engineering that she sponsored and organized this spring; Christina Leshko has developed and implemented a social networking presentation; Natalie Bateman and Doreen Valentine facilitated an OASIS workshop at the intersection of family life issues and negotiation; and Valentine is currently putting together a program on developing scientists’ skills in communicating their research to others. Bateman invited women faculty leaders who participated in the pilot OASIS program in the spring of 2009 to meet monthly as a networking and support group. The OASIS Circle is modeled on Every Other Thursday: Stories and Strategies from Successful Women Scientists by Ellen Daniell, a book that details the experiences of a support group of women scientists.

7.4 Visibility Initiatives

This initiative promotes Rutgers women SEM faculty through expanded faculty profiles and mini autobiographies on the WiSEM website, sponsorship of a lecture series of prominent women faculty, targeted nominations of distinguished faculty members for awards, and solicitations of press coverage.

7.4a Awards: RU FAIR ADVANCE facilitated several faculty nominations for both national and internal Rutgers awards.

- The WEPAN (Women in Engineering Program Advocates Networks) Change Agents Award seemed perfectly suited to recognize the RU FAIR co-PI and Leadership Professor, Helen Buettner, who has done so much to advance the cause of women in engineering and science at Rutgers. During the summer of 2008, the Executive Vice President for Academic Affairs selected her to attend the acclaimed HERS Bryn Mawr Summer Institute. She also participated in Faculty Leadership Training and Mentor Coaching Training programs offered through WiSEM. As a co-PI and RU FAIR ADVANCE Professor, she has joined a select group of national leaders in bringing the policies and best practices around institutional diversity and equity to her home university and the School of Engineering.

Buettner received notice that she was selected for the Change Agent Award in late March. RU FAIR and WiSEM staff Leshko and Bateman accepted the award on her behalf at the April WEPAN conference. The plaque was presented to Buettner by the Dean of the School of Engineering at a faculty event this past spring.

- We also nominated Nina Fefferman, assistant professor in the Department of Ecology, Evolution, and Natural Resources (EENR) and the Center for Discrete Math and Theoretical Computer Science (DIMACS) for the prestigious New York Academy of Sciences Blavatnik Awards for Young Scientists for her pioneering work in establishing interdisciplinary research at the intersection of biology and mathematics—methodologically, theoretically, and collaboratively. Multidisciplinarity is more than a research tool for Fefferman; it is an institutionalized practice. In her lab, she mentors and trains undergraduate and graduate students from diverse backgrounds and different departments (EENR, entomology, mathematics, statistics, and computer science) and her research sits at the forefront of new approaches to social problems.
The Blavatnik Award acknowledges highly successful scientists under the age of 42 who live and do research in the tri-state area (New York, New Jersey, and Connecticut). To qualify for this award, life science, physical science, or engineering faculty must have “highly innovative, impactful, and interdisciplinary accomplishments.” Although Fefferman was not selected for the award this year, we plan to resubmit her application next year.

- RU FAIR’s Valentine and Leshko submitted a nomination for Dr. Diana Sanchez to the American Psychological Association for consideration of their Distinguished Scientific Award for Early Career Contribution to Psychology. This award recognizes excellent psychologists who are at early stages of their research careers, with social psychology as one of the areas of focus. Sanchez is a social psychologist with Rutgers affiliations in health psychology, the Health Institute, the Center for Race and Ethnicity, and the Women’s Studies department. Her research program consists of two lines, one of which concerns racial identity and minority status and the other, gender roles and identity in close-relationships. We are awaiting the results of this nomination.

- In April of 2010, Valentine and Leshko began preparing a nomination packet on behalf of Dr. Nina Shapley, a professor of Chemical and Biochemical Engineering in the Rutgers School of Engineering, for the Denise Denton Emerging Leader award, which is organized by the Anita Borg Institute for Women and Technology. The award recognizes a tenure-track (non-tenured) faculty member (under the age of 40) at an academic or research institution who is pursuing high quality research in engineering or physical sciences, while contributing significantly to promote diversity in his/her environment. While Shapley’s work distinguished her as highly qualified for the award, she learned of her tenure and promotion a couple of weeks before the submission materials were due. Though she no longer qualified for the Denton award, the news of tenure at Rutgers was cause for celebration in its own right.

- The Office for the Promotion of Women in Science, Engineering, and Mathematics nominated three of its Executive Team—co-PI Patricia Roos, co-PI and RU FAIR Professor Helen Buettner, and RU FAIR Professor Judith Weis—for the Rutgers University Faculty Leaders in Diversity awards in recognition of their exceptional work on behalf of diversity and institutional transformation at Rutgers. The four faculty ultimately selected for the award—Karen D’Alonso of Nursing, Alexander Gates of Earth and Environmental Science, Newark, Rigoberto Gonzalez of English, Newark, and Regina Marchi in Journalism and Media Studies—are recognized leaders in community-based diversity activism, support, and outreach.

- Rutgers University recognizes its faculty for research, teaching, and public service. This year, Eva Andrei, professor of physics and astronomy, was honored by the Rutgers Board of Trustees for Excellence in Research (specifically for her pioneering work in low dimensional electronic systems and in mesoscopic physics). Eugenia Etkina, associate professor in the Department of Learning and Teaching in the Graduate School of Education, received the Warren I. Susman Award for Excellence in Teaching for her
contributions to science education. A total of twenty-two awards were given to twenty-one faculty members (a female assistant professor in a non-SEM discipline received two awards). Half of the awards were given to faculty in SEM fields. Of these, women received two out of eleven (18%), a percentage that is less than the percentage of faculty women in SEM at Rutgers (see Appendix B on Quantitative Indicators of Activity and Progress). The Promotion and Tenure Review Committee (PRC), which is comprised of top-level administrators at the University, selected the awardees. Open nominations for these awards were not actively solicited.

- The Rutgers Committee to Advance Our Common Purposes champions individual and collective humanity and respect for our differences. To honor those exceptional individuals and programs at Rutgers that exemplify the Committee’s goals, the Committee has developed an awards program, the Human Dignity Award, open to all university individuals, organizations, departments, units, from the Camden, Newark, and New Brunswick campuses. This year, Rutgers-Camden LEAP Charter School was one of the recipients of the prestigious Human Dignity Award. The visionary who developed the LEAP program, Dr. Gloria Bonilla-Santiago, accepted the award in a ceremony in April 2010. Currently, LEAP serves 870 children in grades pre-K through 12, with every graduating student from the LEAP Academy University High School having been accepted into college. The LEAP initiative has replicated its best practices in serving children and their families at schools across the state and region. Rutgers selected the LEAP charter school for this Rutgers honor due to its achievements as a national model for urban school reform, and its innovative approach to connecting a major public research university such as Rutgers with children, parents, community members, business leaders, and a public charter school.

Dr. Gloria Bonilla-Santiago has worked hard to develop a curriculum for the LEAP University High School that will adequately prepare Camden city students for college-level science and math. She works closely with the science and math teachers to ensure that their instructional methods and content delivery are adequate. The WiSEM office has provided support to Bonilla-Santiago in developing plans for a science and mathematics LEAP academy high school.

7.4b New Media and the RU FAIR Website: Over the past year, our WiSEM (Science Women) website (http://sciencewomen.rutgers.edu) received over 300 visits per day, while the dedicated RU FAIR site (http://rufair.rutgers.edu) received far fewer visits (about 38 per day). (Visits are defined by the number of new remote sites that access our web server; this does not include other non-URL hits, which can add a false sense of the number of actual encounters). Seventy percent of the visits targeted our faculty profiles / Our Stories page (see section 8.10). Based on these data and the challenges of managing and maintaining two separate sites, we identified a need to redesign our website as an integrated, multi-leveled site for RU FAIR and our home base, WiSEM. The new website is currently in the final stages before our expected June roll-out. Based on a storyboard that our core personnel developed, the website will feature news, events calendar, faculty profiles, resources, and data on women in science. It is also a place for faculty
to learn about our programs and funding opportunities. Importantly, it is a Web 2.0-type forum for enhancing the visibility of SEM women.

During the past year, and through use of both the WiSEM (Science Women) and RU FAIR websites, we have enhanced the visibility of several faculty women and promoted awareness of programs and current research on gender and science. These women are incredibly talented researchers, and it is worth mentioning them here.

- Susan Cachel, an associate professor in the New Brunswick Anthropology Department, was elected AAAS Fellow for her “incisive contributions to hominization theory, the role of nutritional fat in human occupation of high latitudes, and primate evolution.” This news was linked to Cachel’s “My Story,” part of a collection of narratives hosted on the WiSEM site to document women’s formative experiences as scientists and engineers.

- Joanna Burger, Professor II in the Cell Biology and Neuroscience Department, New Brunswick, was awarded the Brewster Medal (the highest award in ornithology) from the American Ornithologist's Union in August 2009. Burger has done extensive work on seabird behavior and ecology. This news too linked up with Burger’s My Story.

- Judith Weis, RU FAIR Professor at Newark, was recently appointed Chair of the New Jersey Department of Environmental Protection (NJ DEP) Science Advisory Board, leading a group that also includes five other environmental and biological science faculty at Rutgers: Keith Cooper, Joan Ehrenfeld, Josh Kohut, Peter Morin, and Eric Powell.

- Kathryn Uhrich, RU FAIR co-PI and Professor and former Department Chair of Chemistry, became Dean of Mathematical and Physical Sciences in New Brunswick last July in recognition of her leadership, scholarship, innovation, and achievements.

- Robin Davis, a nationally recognized expert in auditory neuroscience and professor in the Department of Cell Biology and Neuroscience, assumed the position of Executive Vice Dean of the School of Arts and Sciences, New Brunswick in July 2009.

- Sarah Ralston received the 2010 Rutgers School of Environmental and Biological Sciences (SEBS) Academic Innovation Award, an award presented to highly innovative, sustainable, and forward thinking faculty. Ralston is an associate professor in the Department of Animal Sciences at SEBS who specializes in equine nutrition and an associate director of teaching with the Equine Science Center.

- Barbara O’Neill, Professor II in the Department of Agricultural, Food and Resource Economics and Rutgers Cooperative Extension Specialist in Financial Resource Management, was selected by the JumpStart Coalition for Personal Financial Literacy to receive the 2009 William E. Odom Visionary Leadership Award. The Odom Award is the highest award given nationally for individual contributions that further personal financial education/literacy among students in kindergarten through college.

- Gabriella D’Archangelo, associate professor of cell biology and neuroscience, was featured in Rutgers Focus, a university-wide newsletter, for her work on pharmacological treatments of childhood epilepsy.

- Mine Subasi, a postdoctoral associate in the mathematics department, and Melike Baykal-Gursoy, an associate professor in industrial engineering, spoke on their experiences in the field of operations research and encouraged discussion on encouraging more women to get involved in OR.
Lisa Rodenburg, a newly tenured associate professor in the Department of Environmental Science, created the Super Sewers Blog in an effort to educate the public, specifically young women, about her research on PCBs, toxic chemicals that were used in industry and manufacturing until they were banned in 1979.

Recognizing the importance of new media to faculty visibility and professional development, RU FAIR Professors in Newark, Judith Weis and Maggie Shiffrar, have been investigating options for assisting women SEM faculty in Newark with updating their websites and enhancing their visibility. On the Rutgers-Newark campus, website development and revision is handled within each department; individual faculty members have little control over the format of their website and the university as a whole lacks standard operating procedures for website technology (though University Relations and the Office for Information Technology are working to establish these). Since the Internet and social media technology are primary tools for visibility, Weis and Shiffrar are currently searching for a student to work one-on-one with women faculty to assist them in updating the content and enhancing the design of their websites.

In our leadership training programs—from OASIS to the New Jersey Gender Parity Summit—professional “branding” is seen as essential to full participation and recognition in one’s field. From individual websites to effective use of professional networking technology (such as LinkedIn), women recognize the importance of web-based resources. RU FAIR promotes the development of effective branding strategies for women, and we plan to offer strategy support for women interested in using social-media tools.

7.4c WiSEM / RU FAIR Newsletters: WiSEM’s first newsletter was produced and distributed in January 2009, and we have produced a newsletter each semester since then. Every edition of the newsletter is delivered electronically to members of the sciwomen listserv, disseminated in informational packets about RU FAIR and WiSEM, and posted on the WiSEM website. The fall 2009 semester newsletter focused mainly on enlightening the Rutgers community to past and future events and programs hosted by WiSEM. Two brief sections emphasized the RU FAIR Life-cycle Grants, which had issued its first call for applicants during the fall 2009 semester. The spring 2010 semester focused on programs and informational outreach. The new “best practices” handbook, “Increasing Faculty Diversity: A Handbook for Deans, Department Chairs, and Members of Faculty Search Committees,” was highlighted, as were the OASIS leadership program and HERS Bryn Mawr Summer Institute. Informational articles included a piece on social networking, data on current earning potential in science and engineering fields, and PI Joan W. Bennett’s presentations on women in science. Currently, the summer 2010 newsletter is under development.

7.4d Listserv: At this time, our sciwomen faculty listserv registers 313 members and is open to any members of the community who are interested in receiving posts. Our recent outreach program to department chairs has recruited additional SEM chairs to be part of our listserv and to disseminate listserv-based information to their department faculty and students. In 2009, 65 messages were posted to the listserv, including call-for-proposal documents, invitations to events, and general information dissemination. To date in 2010, 37 messages have been posted.
As our relationships with partner organizations deepen and improve, we have gained the ability to post information on several other listservs, such as the Institute for Women’s Leadership (IWL) affiliates listserv and the School of Management and Labor Relations (SMLR) listserv. We encourage individuals to post information to group listservs that they are a part of in order to disseminate information as widely as possible.

7.4e Liaisons with University Relations: Kim Manning, Vice President of University Relations, is responsible for the university’s internal and external communications and is a member of the Administrative Council and the President’s Cabinet. Manning oversees executive communications, media relations, publications, photography, web site development, trademark licensing, Rutgers Magazine, campus information services, the RU-tv campus cable network, community affairs, marketing and brand management, strategic communications, and the faculty-staff enewsletter, Rutgers Focus. She is the first African American to hold the senior communications post at Rutgers.

Valentine and Batmanian met with Manning in January to learn more about University Relations, build rapport with that department, and connect with Manning as a university leader and member of the ADVANCE Consortium. This meeting facilitated another with Joanne Dus-Zastrow, Director of Creative Services. Dus-Zastrow’s team is now developing branded paraphernalia for our WiSEM office and RU FAIR. We have also connected with Carl Blesch of Media Relations through co-PI Kathryn Uhrich. Blesch is a liaison for SEM deans and department chairs in covering “Science News” for the university.

7.5 Family and Work-Life Balance Initiative

This initiative seeks to provide resources to faculty facing personal challenges at critical career junctures through the life-cycle grant program. It also seeks to address child-care needs, bolster resources and support for dual-career families at Rutgers, and enhance work-life balance skills for women faculty.

7.5a RU FAIR Professor Programs in Work/Life Balance: Based on feedback from a focus group that Camden RU FAIR Professor Georgia Arbuckle-Keil held in December 2009, she planned and development a spring 2010 workshop on work-life balance for Camden faculty. The two-day workshop (scheduled on two different days a couple of weeks apart in April) was facilitated by professional career coach, Julie Cohen, who works with faculty and industry leaders in the greater Philadelphia region. Fourteen faculty women from a wide number of Rutgers-Camden departments, including chemistry, biology, computer science, public policy, and sociology, attended the workshops. The feedback was overwhelmingly positive. Cohen’s interactive style encouraged full participation and open communication. The group explored personal and professional style as well as exchanged tips and strategies for balancing career and personal challenges. Cohen’s book and workbook, Seven Keys to Work-Life Balance, guided the discussions and were distributed to the workshop attendees as a resource. Not only was the workshop informative, but this group of women stated the need for more opportunities to meet with female faculty on campus (a finding different from what we learned at the December 2009 focus group; see section 8.6 below). Arbuckle-Keil has now started a monthly networking group
for Camden women. Fifteen faculty members came together for a lunch meeting in May 2010, and the group intends to convene monthly as a networking circle.

7.5b Child Care Initiatives: In 2008, President Richard L. McCormick and Executive Vice President Philip Furmanski appointed Marianne Gaunt, Vice President for Information Services and University Librarian, and Barbara Lee, Professor in the School of Management and Labor Relations, as co-chairs of a university-wide committee on work and family issues comprised of 24 faculty leaders from Camden, Newark, and New Brunswick. The committee developed several sub-committees to address issues related to work/family balance and career navigation: child care, student life, elder care, faculty tenure-track, dean/administrator education, wellness, and work flexibility. Former RU FAIR co-PI Catherine Duckett was a member of the committee and on the work flexibility subcommittee.

The committee’s comprehensive report on work and family issues was published in June 2009 (as a pdf available on the Internet; http://www.rutgersaau.org/work-family/work+family-committee+report_062209.pdf). The report details existing infrastructure, policies, and available resources and, based on facilities research and focus group interviews, offers strategies for improving work/family support systems.

The committee’s work began under the auspices of the Rutgers Council of AAUP Chapters (AAUP-AFT) in 2007 with a renewed charge by President Richard McCormick and Executive Vice President Philip Furmanski in 2008. Since report was published in June of 2009, it has been in review with university and union administration. Though the work of assessing work/family issues and recommending policies to improve work/family balance has been completed, implementation of these recommendations remains to be done. Moreover, a recent university-wide survey to plan the development of Livingston Campus at Rutgers-New Brunswick (where one of only two campus child-care centers, both small, is located) failed to include any plans for child care or elder care facilities. Identifying the inertia on the issue at Rutgers University, RU FAIR plans to meet with Gaunt and Lee this summer in order to partner and support a renewed push to address work/family concerns.

The Newark campus is home to far more encouraging progress on child care issues. RU FAIR professors Judith Weis and Maggie Shiffrar worked with Marcia W. Brown, Vice Chancellor for Student and Academic Affairs at Newark, and the Chancellor’s Advisory Committee on Child Care to scope out and move forward on an initiative to have on-site campus child care facilities at Rutgers Newark. That effort has progressed well, and the campus soon expects to open child care services for the Rutgers-Newark campus.

7.5c Life Cycle Grants: Life Cycle grants are designed to support SEM faculty (women and men) during times of personal crisis that would impact career development at critical junctures. RU FAIR re-issued a call for proposals for life cycle grants in January 2010, distributing the call via the sciwomen e-mail listserv, the RU FAIR website, word-of-mouth, and event announcements. In our outreach to key administrators, the life-cycle grant program is specifically mentioned and an informational sheet is included in a packet that is prepared and hand-delivered. Our current life-cycle grant cycle closed in early April 2010, and we funded four applicants. With available funds allocated for year two, we issued another call in April for applications due
in July 2010. We plan to continue an active program with several calls for applicants each year. (See also section 9.3 below).

Section 8: Projects

8.1 Institutional Data Collection

Under the leadership of co-PI Patricia Roos and in collaboration with the Office for Institutional Research and Academic Planning (OIRAP), Faculty and Staff Resources (HR), and Dean’s Offices, an RU FAIR team that includes Roos, Doreen Valentine, Crystal Bedley, and OIRAP’s Gayle Coryell and Minmin Chen has been collecting data required by NSF on indicators of women’s participation and advancement in science, social science, engineering, and mathematics. To date, we have collected the data for NSF Indicators 1 through 10 for baseline year (2007-08) and year 1 (2008-09). These data are reported in Appendix B, along with the data tables as per the NSF Toolkit for Indicators, January 2005 in Appendix C.

One important goal of the RU FAIR project is to enhance the university’s capacity to collect, systemize, and analyze data on gender and race/ethnic equity. Given its historical and organizational complexity, Rutgers University is somewhat unique among academic research institutions. In the past, the multi-campus and multi-school nature of the university led to separate and incompatible systems of data collection and reporting. Data collected before 1997 are problematic; data prior to the mid-70s are almost nonexistent. Certain NSF required indicators are available through extant university data systems (some of which are already part of OIRAP’s data warehouse—e.g., sex, race, rank, department, salary), while others need to come from the Deans’ Offices or other sources (e.g., summer salary, startup costs, research accounts, promotion outcomes, space allocation). Co-PI Roos and others have worked closely with OIRAP to develop a more streamlined and unified system for Rutgers database management across the entire university so as to simplify future data collection and also to monitor progress.

We have made good progress toward that goal. In spring 2009, Executive Vice President Philip Furmanski supported the hiring of a half-time person in OIRAP to partner with us. Minmin Chen (a graduate student, now MS, in statistics and the OIRAP hire) and Gayle Coryell (Senior Institutional Research Associate) have worked with us since April 2009 to further our goals. The group of Roos, Valentine, Bedley, Coryell, and Chen meets at least once each month. These meetings have produced a set of procedures and criteria to monitor progress over the years of the grant and to set standards for beyond. The indicator tables and analyses presented in the Appendix are the result of a deliberative, collaborative, and ultimately successful process.

A second major initiative aimed at facilitating our ability to collect institutional data was to constitute and convene the ad hoc Committee of Institutional Stakeholders. The Committee consists of a broad cross-section of those critically important to our institutionalization effort: OIRAP; top university administrators from Faculty and Staff Resources (Human Resources), the Office of Employment Equity, Enrollment Management, the Office of the VP for Academic Affairs, and the School of Communication and Information (SC&I); top-level representatives from Deans’ offices (New Brunswick, Camden, and Newark); social science researchers with substantive expertise in race and gender equity topics; and RU FAIR personnel. The stakeholders are listed in Table 8.1.
Roos convened the committee on April 16, 2010, led the discussion, and worked with staff to write up minutes that will facilitate moving forward. At this meeting, committee members made significant progress toward addressing two specific goals around which the meeting was convened: (1) determining which data elements of interest are not available centrally, but are most important to building the emerging database, and (2) developing a set of procedures to institutionalize data collection. Ad hoc Committee subgroups will meet with us moving forward to further these goals. For example, we have already met with relevant university staff to address a major limitation of the OIRAP data, lack of full electronic data prior to 1997. We have now set in motion a process that will facilitate our gaining access to data back to 1976.

Table 8.1 RU FAIR ad hoc Committee of Institutional Stakeholders

Institutional Research (OIRAP)
Minmin Chen (Institutional Research)
Gayle Coryell (Institutional Research)
Robert Heffernan (Institutional Research)

Administration
James Drumheller (HR)
Sharon Fortin-Kramer (Oracle implementation)
Jayne Grandes (Office of Employment Equity)
Courtney McAnuff (Enrollment Management)
Karen Stubaus (Office of the VP for Academic Affairs)
Ryan Womack (Alexander Library)

Deans’ Offices and Campus Representatives
Michael Beals (SAS)
Helen Buettner (Engineering)
Steven Director (SMLR)
Christopher Dougherty (FAS-Camden)
John Graham (Economics, FAS-Newark)
Jerome Kukor (SEBS; Graduate School)
Jan Lewis (FAS-Newark)
Mark Winston (Dana Library, Newark)

Social Science Faculty (with substantive interests)
Nancy DiTomaso (Organization Management)
Angelique Haugerud (Anthropology)
Mary Hawkesworth (Women’s and Gender Studies)
Mark Killingsworth (Economics)
Patrick McKay (SMLR)
Laurie Rudman (Psychology)
Alvin Tillery (Political Science)
8.2 Faculty Recruitment and Retention Study

Beyond demographic indicators is an assessment of the diversity climate of an institution. One mechanism for investigating climate and documenting institutional transformation is to interview faculty at several stages with respect to their employment at Rutgers. We conceptualized this as conducting “entrance,” “exit,” and “stayer” interviews with male and female faculty members (tenured and tenure track). We submitted a protocol for this study to our Institutional Review Board and received approval for all interviews in September 2009.

Entrance interviews are with those faculty hired at the associate professor level or higher; stayer interviews are with those faculty who received offers elsewhere, but chose to stay at Rutgers; and exit interviews are with those faculty who voluntarily left Rutgers. Our initial approach was to identify the names of candidate interviewees through the Deans’ offices, but we encountered difficulty from several higher level administrators in moving forward with that plan. After receiving expressed support from top administrators at the Office of Research and Sponsored Programs, we explored alternative mechanisms to generate sample pools, and eventually created entrance and exit lists through OIRAP data based on a clear set of criteria. The studies are now underway, and to date, we have completed exit interviews of Camden faculty who left the university between 1998 and 2008. This past spring semester, we began to recruit SEM faculty who came to the University at the associate rank or higher from 2003 onward, to explore the factors that motivated those faculty to accept a position at Rutgers (the entrance interviews). We have now completed several of these entrance interviews, and expect to complete more over the summer months. We also will continue interviews with faculty who left the University from the other two campuses (Newark and New Brunswick). These complementary studies investigate both the university’s strengths in recruiting faculty and challenges that remain to foster faculty retention. We hope that our new ADVANCE Consortium, and our individual meetings with Deans, will facilitate our moving forward on the stayer project as well.

8.3 Career Trajectory Study

In partnership with OIRAP, the RU FAIR evaluation team has completed groundwork for a career trajectory study, despite issues in data collection and analysis that have delayed our work on this project, as well as the Faculty Recruitment and Retention Study (section 8.2). For example, OIRAP lacked data on when faculty left the university and the reason for separation. We have now addressed these issues, and this summer we will begin conducting a quantitative, statistical analysis to better understand retention and promotion for a cohort of faculty from their hire date (which includes all SEM faculty hired from 1997 to 2000) to the present day. This study will look at promotion and years in rank for each faculty member, by gender. We plan to expand this project to include a cohort who came to the University prior to 1997-2000 (specifically 1987-1990) to assess promotion and retention for more senior faculty. For those faculty who entered the University prior to 1997, we are addressing limitations on the availability of electronic data. In joint discussions with OIRAP and HR, we have initiated a
process to obtain these data, and are hopeful that we can eventually include faculty hires back to 1976. The career trajectory study complements our qualitative studies of faculty who have left, entered, or stayed at Rutgers and will illuminate some of the mechanisms affecting retention and promotion outcomes.

8.4 Associate Professor Study

This study aims to trace the post-tenure career advancement of faculty in SEM fields and to identify the factors that both facilitate and block the transition between associate and full professors and produce differences in men’s and women’s experiences as associate professors. We conceived this study after consulting with Dr. Dana Britton (Professor of Sociology, Kansas State University, and Editor of Gender and Society), who has been working on this issue for several years under the auspices of an NSF ADVANCE Partnerships for Adaptation, Implementation and Dissemination (PAID) Award. To date, Britton has conducted more than 130 interviews on five major university campuses. Our plan is to bring Britton to Rutgers for research related to the associate-level cohort. The data collected at Rutgers will be available to Britton as part of her own research, as well as to RU FAIR to complement the faculty recruitment and retention study, the career trajectory study, and the associate women’s focus group. Mary Hawkesworth, chair and professor of Women’s and Gender Studies at Rutgers-New Brunswick (and her IWL colleagues) are proposing a mini-grant to facilitate this study through our Mini Grant Cycle III (proposals are due July 16, 2010).

8.5 Department Chair Interviews

This project has several aims: to reach out to department chairs in the SEM disciplines to learn more about what RU FAIR and WiSEM can do for them and their faculty; to establish rapport and enhance our communications; to expand our SEM networks at the university; to provide information about best practices in faculty hiring and promotion; to raise awareness about diversity and equity issues in the academic workplace; to disseminate information about RU FAIR and WiSEM activities, events, and funding opportunities, and to spread the word in general terms about the RU FAIR NSF ADVANCE grant and its initiatives. This project is described in detail in section 6.2.

8.6 Focus Groups

Focus groups are a mechanism to explore particular issues and concerns among targeted groups, to gain insight into participants’ experiences, to facilitate program evaluations, and to encourage communications in a confidential space. Our internal evaluator, Mary Gatta, has worked with RU FAIR personnel to conduct focus groups with specific cohorts: women in engineering, SEM women at Camden, associate professors in New Brunswick, mini-grant recipients, and the Women of Color Scholars Program participants. To date, all but the Women of Color Scholars focus group have taken place, and that one is scheduled to take place shortly with Crystal Bedley acting as facilitator.

Focus groups have been instrumental in providing us with feedback and insight on our programs and processes. We have also learned that focus groups inherently reflect the perspectives and experiences of the participants. In other words, a focus group can help identify and describe impact, concerns, experiences, mechanisms, new ideas, and valid critiques in generalizable
terms; it can also bring into relief particular forces at work among a select group. For example, the December 2009 focus group in Camden felt that there were ample opportunities to network and communicate with other women on campus, yet the work/life balance workshop that took place in Camden in April 2009 revealed that the women who participated did feel isolated in their departments and were eager for more opportunities to get together. The broader variety of departments represented at the April workshops compared to the December focus group produced a different response and called for us to explore a new opportunity. RU FAIR Georgia Arbuckle-Keil has now started a network circle for Camden women, and they plan to meet monthly (see section 7.5a).

We’ve also felt more included in the culture of academic science as a result of reading the transcripts of focus group sessions as well as from attending small working lunch meetings with particular cohorts. The divide among disciplines—between science and social science and between humanities and science—has been pronounced in a few cases. One scientist thought that the suggestion on our mini-grant “call for proposals” to “support an art exhibition that examines scientific and technological themes in contemporary culture” was somehow too soft, too unscientific. Another interpreted mention of social science research related to gender disparities in hiring as not applicable to the methods used in her STEM department to conduct faculty search or promotion committees—as if best practices in hiring developed by social scientists were not relevant to SEM departments outside of the social sciences. Others have been skeptical of these social science data as not being sufficiently rigorous or statistically valid, and not based on hypothesis-driven research. There is also a sense that the time spent working on behalf of women in science can be to the detriment of working as a scientist. For the most part, though, women in all SEM disciplines see the value of social science perspectives on diversity and equity issues in the academic workplace and embrace interdisciplinarity as an important context for collaboration and broadened awareness.

8.7 Agents of Change

Insights gleaned from focus groups and small working luncheons are incorporated in the overall process of institutional transformation. The Agents of Change project is a mechanism for exploring the experiences of RU FAIR personnel over the course of the grant. It is also an opportunity to cast a wider net to explore the parallel and intersecting experiences of some of our institutional partners in the work of diversity and equity in the sciences. Led by internal evaluator Mary Gatta and co-PI Helen Buettner, with the assistance of co-PI Patricia Roos and graduate students Alexis Merdjanoff and Crystal Bedley, the project seeks to investigate the experiences of senior faculty members and staff in achieving their goals. To accomplish this goal, we first proposed a two-pronged approach: electronic journaling and one-on-one interviews (with confidentiality being maintained in both cases). A number of RU FAIR personnel expressed reluctance to journaling, and interviews became the primary methodology. A few interviews have taken place, and we now plan to expand the cohort if other agents of change at the university are willing to participate (e.g., women deans, VPs, center/institute directors). We anticipate conducting one to two interviews a year with a group of twenty to thirty participants. The IRB documentation for this project was approved on July 20, 2009 and will be revised and renewed in compliance with the new protocol.
8.8 Network Analysis

Network analysis can be applied to study how patterns of ties allocate resources in a social system. It can provide insight into how we determine what mechanisms are producing social change over time (for an overview of social networks, see Wellman 1983). This past year, we’ve investigated using network analysis to probe the question of gender in the structural dynamics of an organization like Rutgers as well as to map the temporal unfolding of institutional transformation at the university. Several studies have been proposed, asking different but related questions of actors (science faculty, RU FAIR personnel) in SEM networks. And we’ve sought the expertise of scholars like Paul McLean and Marya Doerfel (associate professors of sociology and communications, respectively, at Rutgers), who use network analysis in their work, to help us develop these studies. This past February 2010, McLean conducted a training workshop with RU FAIR personnel on using network analysis for RU FAIR research evaluation. Out of this session came the idea to study how the composition of qualifying and dissertation (Q&D) committees are structured with respect to gender and race and to explore, for example, how service on a Q&D committee might influence retention and advancement of junior faculty at Rutgers? McLean plans to apply for a cycle III mini-grant this summer to initiate this study.

Another network-based study involves documenting the progress of outreach in the day-to-day operations and interactions of the RU FAIR team. Through a form of e-journaling (spreadsheet and calendar tracking), we are documenting a process of social interactions as strategy in an overarching approach to disseminating information and fostering institutional change. Tracking our networking and correspondence shows that the number and strength of social ties expands and thickens over time; these interactions in advancing the work of diversity and equity can be visualized as a measure of the impact of the grant on the climate for women at the university.

8.9 Space Allocation Study

Laboratory and office space, as well as access to critical equipment and resources, are important parameters in assessing gender equity in science disciplines. We have begun to explore this issue at Rutgers and plan to make significant headway this summer in investigating space in the School of Engineering and the School of Environmental and Biological Sciences. We have discussed the project with the deans of both schools and have begun to map out an approach to linking blueprints and spreadsheet inventories to people and function. We have enlisted the support of central offices that have carried out facilities assessment for accreditation and other purposes. We have also queried department chairs in our outreach interviews to get a sense of space allocation as an issue for the department in general. Space is a problematic resource: many buildings and laboratory facilities are outdated, overpopulated, and/or inadequate. For some departments, faculty are dispersed across different buildings—a wet lab at one site, an office in another, the department hub in yet another. New hires—including many of the women who came to the university in recent years as assistant professors—are often given space in one of the newer and better equipped facilities on campus, but when the main departmental home is in a different building, a sense of isolation may develop. Female faculty in some schools perceive space as being hoarded by senior male faculty; only a systematic study will verify whether this perception is accurate. We have also asked department chairs how space is assigned to faculty: is there a transparent process at work? Our interviews reveal a variety of allocation policies—from
democratic, committee-based resource allocation that takes into account research needs to more traditional models based on seniority.

8.10 Salary Studies

Faculty and Staff Resources (HR)-based data on salaries for the university as a whole have been collected for baseline and year 1 (see Table 10 Appendix C), and a more comprehensive salary study was conducted by John Graham, professor and chair of economics at Rutgers-Newark with data support from co-PI and Newark Dean, Philip Yeagle and Associate Dean Jan Lewis and funding support from RU FAIR Professors Judith Weis and Maggie Shiffrar (Appendix D). A study of gender and climate at the School of Engineering by Melike Baykal-Gürsoy, an associate professor in the department of industrial and systems engineering and her assistant, Laurie Cohen (with the help and support of Joan W. Bennett, Helen Buettner, Lisa Klein, Uta Kroegmann, Mina Pelegri, Lisa Rodenburg, and Patricia Roos), also reports on salary beyond the basic quantitative measures.

Graham’s study of Newark was based on an administrative data set covering all 175 (65 women, 110 men) full-time, tenured and tenure-track faculty (excluding EAMs, executive/administrative/managerial). The data set included names, affiliations, rank, tenure status, first-hire date, date of tenure, subsequent promotion dates, and the budgeted salary for the 2008-09 academic year. These data were supplemented with an external measure of scholarly productivity for SEM faculty members obtained from Web of Science, an internet portal to the largest collection of academic citations (http://thomsonreuters.com/products_services/science/science_products/a-z/web_of_science).

The data were used to generate average salary and academic rank tabulations by discipline as well as by individual departments. In addition, multiple regression analysis was used to isolate the impact of specific factors on salaries and promotion rates, for example, whether or not gender was a statistically significant determinant of salary differences, controlling for other factors such as years of employment, academic rank, discipline, and scholarly productivity.

Among current full-time faculty at Newark, the average salary of all women on the faculty is 93 percent that of all men on the faculty. Within departments, there is variation: it is 97 percent in mathematics and the sciences, 82 percent in the social sciences, 98 percent in the humanities, and 114 percent in other fields (education and social work). Average salary differentials are largely the result of gender differences in rank. Women are disproportionately assistant or associate professors while men are disproportionately full professors (Professor I and Professor II at Rutgers). When the data on men and women are calculated within academic ranks, females earn 99 percent of what males do among assistant professors; 107 percent among associate professors; and 108 percent among full professors. Controlling for a small set of factors that are significantly related to individual salary differences (like academic discipline, academic rank, years since tenure, and scholarly productivity), the study finds that gender is not a statistically significant determinant of salary among Newark faculty. Similarly, gender is not found to be a determinant of time spent in rank or in the likelihood of promotion to Professor II.
The salary study in the School of Engineering employed data obtained from the dean’s office and interviews. This data set included salary statistics on 22 women and 116 men in engineering (SoE) and environmental engineering (SBS). Here too, the average salary for female faculty is 93 percent that of men’s. This was true in every department and at every rank, ranging from 79 percent for PII to 99 percent for PI faculty. Systematic multiple regression analysis was not applied to these data, but in the interviews with women in engineering, several senior women faculty members felt that they were not fairly compensated.

Now that we have completed the NSF Indicator tables for salary, we plan additional multivariate analyses on the full range of faculty across the Rutgers campuses. We have been exploring the proper salary variables to be used. The NSF Indicator tables (see Table 10 in Appendix C) refer to base salary. Our current plan is to do analyses of both salary rates (base salaries) and gross salary.

8.11 Our Stories

Our website features two types of faculty profiles: professional biographies with links to personal and departmental websites and illustrated first-hand accounts of women’s coming-of-age experiences as scientists or engineers. These profiles, initiated by Catherine Duckett (an initial ADVANCE co-PI), introduce people from around the world to the contributions of Rutgers’ outstanding female scientists, foster a sense of community among Rutgers’ women scientists, and enable young women to explore careers in science, social science, engineering, mathematics, and health/medicine. Currently, the site connects visitors via professional biographies to 221 SEM female faculty at Rutgers. We will update the links to include the faculty who’ve arrived at Rutgers during the past year. We also plan to continue building the Our Stories database, which now features the personal stories of 43 women. We have hired a part-time student assistant to work on this project and help us maintaining the content on our website.

8.12 Professional Development and Leadership

OASIS is our core initiative in professional development and leadership, and a mechanism that has firmly connected WiSEM and RU FAIR to organizations within the university (Institute for Women’s Leadership, Center for Women and Work, School of Management and Labor Relations) and outside the university (Bio-1 Wired, New Jersey Council on Gender Parity, professional coaching consultants), not to mention the individual faculty who have participated in the program. OASIS is discussed in detail in section 7.3c. Here it is mentioned in the context of our project to develop expertise in facilitating workshop programming. Natalie Batmanian and Doreen Valentine created and presented an interactive workshop on personal negotiation for OASIS this past spring. Christina Leshko has developed a presentation on the use of Web 2.0 social media for professional networking. Helen Buettner, together with Valentine, Leshko, and Alexis Merdjanoff, created a model for workshops on tenure and promotion that can now be customized for units beyond the School of Engineering. Valentine is now developing a PowerPoint presentation on scientists and communicating with the media that will be given this fall at local Rutgers workshops and next February at the annual meeting of the American Association for the Advancement of Science (AAAS).
In addition to modules developed for live, facilitated programs, WiSEM and RU FAIR have created brochures on topics such as grant writing, mentoring, networking, and negotiation. These are disseminated at our outreach meetings with deans, administrators, and chairs and provided to faculty at events, such as OASIS or lectures sponsored by mini-grants or RU FAIR Professors. Our growing collection of presentation materials and professional development information provides faculty with a toolkit for navigating academia, advancing in science, communicating effectively, and maintaining work/life balance. We plan to expand our offerings of print and electronic resources to faculty.

**Section 9: Mechanisms for Advancing Institutional Transformation**

Mechanisms for advancing institutional transformation at Rutgers include RU InStride Partnerships, RU FAIR Professorships, Mini-grants, Life-cycle grants, and Institutional Research. These mechanisms overlap and reinforce each other (see section 7). In this section, we provide summaries on three of the five mechanisms—RU FAIR Professorships, Mini-grants, and Life-cycle grants. (Efforts related RU InStride Partnerships are presented in detail in section 7.1; institutional research, including data collection and analysis of NSF Indicators, is given in Appendices B and C.

9.1 RU FAIR Professorships

The original model for the RU-FAIR professorship program came from Georgia Tech’s ADVANCE professorships (Fox et al., 2007). The program at Rutgers has been modified to fit the needs of faculty on three campuses and to address challenges and opportunities specific to Rutgers. Three professorships, one for each of the three Rutgers campuses, were awarded in March 2009 to senior faculty leaders based on a competitive application process and review by a selection committee that included the PI, co-PIs, and the Internal Advisory Board. Georgia Arbuckle-Keil is the RU FAIR professor for Camden, Judith Weis and Maggie Shiffrar are RU FAIR professors for Newark, and Helen Buettner is the RU FAIR professor (and a co-PI) for New Brunswick. Buettner has subsequently been named as a co-PI.

The professors are charged with organizing and implementing, with the help of staff, planned programs, as outlined in their RU FAIR professorship proposals. They serve as university leaders who foster mentoring, promote diversity, facilitate communication among our geographically dispersed faculty, and mediate between faculty and administration. Professorship programs aim to create a climate for the recruitment and retention of women and minorities in specific units—campus, school, and department.

To date, RU FAIR professors have spearheaded four workshops, funded eight lectures or colloquia by external speakers, initiated or participated in nine research projects, hosted eight networking or focus group events, presented at three professional meetings, and mentored numerous students and junior faculty members. Simultaneously, RU FAIR professors teach, conduct research, and publish as scientists. Less visible to people outside of the RU FAIR Executive Team are the countless face-to-face meetings and decision-making emails that the RU FAIR professors have participated in or responded to. They play critical roles as members of the
Executive Team and assist in the overall strategic planning, implementation, and governance of the grant. Their activities have strengthened existing women’s networks and fortified ties across campus communities, including those in SEM fields that are male-dominated. After a year of programming and active engagement, these professors are poised to take their role to the next level.

Ramping up to hire extra student or staff support and to develop and implement programming was more challenging at Camden and New Brunswick. The programs in Newark have run a bit like clockwork from the get-go. As such, the initial level of funding was spent at a slower pace than anticipated (see Appendix A). Each RU-FAIR professor received $50,000 in funding for a first year of programming that started in March 2009 and will receive a second cycle of funding at that same level to carry on with efforts begun in the first year. The term for these professors has been extended to August 31, 2011 in order to capitalize on the local momentum that they have each generated on their campuses and to maintain continuity in their leadership role with the RU FAIR Executive Team and the ADVANCE Consortium. Co-PI Helen Buettner is now in charge of re-articulating the vision for the RU FAIR Professorship program, so as to ensure the enduring impact of this mechanism at Rutgers. We plan to recruit new RU FAIR Professors next year, for a start-date of September 1, 2011. These professorships will run through to the end of the grant in 2013.

9.1a Camden RU FAIR Professor Georgia Arbuckle-Keil
Georgia Arbuckle-Keil is Professor of Chemistry at Rutgers-Camden, one of three faculty women in the natural sciences there. During the past year, she has developed and sponsored workshops, mentoring relationships and networks, and research on women’s participation and advancement in SEM at Camden.

One event was a grant-writing workshop to assist both female and male faculty with writing and receiving federal research support. The workshop, led by Catherine Duckett, who is now Associate Dean at the School of Sciences at Monmouth University, was well-received, and plans are in place to run a second workshop on grant writing. Another workshop was a two-day series designed to help women deal with multiple personal and professional demands. This was facilitated by Julie Cohen, a professional coach and the author of *Your Work, Your Life, Your Way: 7 Keys to Work-Life Balance* (Cohen 2009). Fourteen faculty women from Camden attended the workshops, and the feedback was overwhelmingly positive. This workshop will be offered again in the upcoming academic year. A series of professional development and leadership workshops modeled on the OASIS program is planned for the upcoming academic year as well. The program will include sessions on leadership development, communications, and faculty-to-faculty coaching. Michael Pazzani, Vice President of Research and Graduate and Professional Education in charge of the Office of Research and Sponsored Programs (ORSP), and Cami Morrison, Director of Camden ORSP, are scheduled to present on strategies for successful grantsmanship.

The faculty recruitment and retention project (see section 8.2) has been carried out at Camden for a small group of male and female physical science tenure-track faculty. The results provide one source of documentation about the campus environment. Areas of concern included resources,
professional development, and promotion/tenure criteria. Interviewees noted that there is very little technical staff support available in the laboratory science departments at Rutgers-Camden. Faculty teaching laboratory courses are fully responsible for reagent preparation, testing/calibration of instrumentation, and laboratory clean-up. Limited student assistance is available via work-study, although this varies from semester to semester. Shared research instrumentation that might be available in a larger department are located off-site and may incur user fees. This is fairly common for a predominantly undergraduate institution (PUI). The challenge, though, is maintaining sufficient progress in one’s primary research to obtain tenure while juggling the ups-and-downs of undergraduate research and teaching expectations.

Faculty mentioned the need for research collaborations in order to advance their productivity. The university as a whole is a vast resource, but developing individual productive collaborations requires commitment from both researchers for the length of the project. The teaching responsibilities of the Camden faculty often preclude traveling to New Brunswick or Newark to develop these interactions, which especially impacts junior faculty. Promotion criteria are clearly stated when faculty are hired. These are research, teaching, and service. However, department chairs are generally clear that the primary tenure requirements for physical scientists are the demonstration of federal research support (grants) and the publication of papers in highly respected journals. Rutgers University, of which Camden is a part, is a research-intensive AAU institution. The faculty at Camden are proud to be part of this AAU Institution that includes many notable scholars in their disciplines. All tenure/promotion decisions are made by the same university-wide body: the Promotion Review Committee (PRC). Camden faculty do not want different review criteria that could lead the Camden faculty to be perceived as lesser scholars. However, the exit interview results note that the amount of time devoted to teaching is perceived to have a negative influence on scholarly productivity.

The research context at Camden impacts the process and progress of institutional transformation. Arbuckle-Keil experiences a sense of isolation in the natural sciences and is working to build a broader, more inclusive network of women in Camden. The participants at her workshops have brought together women faculty, staff, and students from Camden’s SEM departments and the professional schools who care about gender and workplace issues.

The challenges and rewards of being a scientist at Camden apply to being an RU FAIR Professor. Programming was slow to ramp up and support from a reliable part-time assistant with the right skill set was difficult to obtain. Indeed, there were many “false hires” before Arbuckle-Keil found Daitza Frydel. Frydel, a graduate from Rutgers-Camden who came recommended by RU FAIR graduate student, Crystal Bedley, has provided more consistent, project-oriented support. This has enabled Arbuckle-Keil to turn her focus to management and leadership with regard to women in science, as opposed to the clerical.

Arbuckle-Keil presented on the experiences of being a scientist and an RU FAIR Professor at Camden at the March meeting of the American Chemical Society (ACS). She is co-authoring a chapter with RU FAIR Director Doreen Valentine for an edited volume to be published by ACS.

9.1b Newark RU FAIR Professors Judith Weis and Maggie Shiffrar
Among peer public institutions (public AAU universities, N=35/63), Rutgers is 5th in the nation for full-time female faculty (tenured, tenure-track, and non-tenure-track), 7th in the nation for full-time African-American faculty, and 11th in the nation for full-time total minority faculty. Rutgers-Newark, especially, stands out nationally for its institutional diversity. Indeed, it ranks first in the U.S. News and World Report of Best Colleges as having the most diverse student body in the nation, a distinction the campus has held since 1997. Rutgers-Newark partners with New Jersey Institute of Technology (NJIT), literally a neighbor down the city street, to offer a dynamic program in SEM as well as non-SEM disciplines, known as the Federated Departments. The Center for Molecular and Behavioral Neuroscience is especially well-known. It is in this context that RU FAIR Professors Judith Weis and Maggie Shiffrar have implemented a number of projects and initiatives.

Their program has launched several initiatives: to recover Newark’s history as a central player in the Women’s Rights Era of gender equity (the Strausser/Dinnerstein project); to document present-day salaries as an indicator of gender equity (the Graham study); to promote women’s participation in science fields through a distinguished speaker series; to develop a strong mentoring program; to facilitate communications through effective websites; and to sponsor child-care facilities at Newark.

In the late 1960s and early 70s, Helen Strausser was a professor of zoology and Dorothy Dinnerstein, a professor of psychology. They led the effort to identify and rectify gender discrimination in the academic workplace in the 1970s. Weis and Shiffrar, working with history graduate student Katherine Mahaney, researched and reported on these historic events in which Strausser, Dinnerstein, and six other tenured women scientists at Rutgers-Newark petitioned the federal government in 1971 for workplace equality. Dinnerstein and Strausser spearheaded a federal complaint against Rutgers University’s Newark College of Arts and Sciences (NCAS), charging discrimination against female faculty in several aspects, including the number of female faculty hired, salaries, promotion opportunities, and numbers of tenured female professors. The federal government ultimately ruled in their favor (http://news.rutgers.edu/medrel/media-advisories/2009/10/two-professors-who-1-20091002). The October 12, 2009 event commemorating these women’s bold accomplishments brought one of the participants—Grace Spruch, Professor of Physics at Newark—together with students, science faculty, retired faculty, and the daughters of now-deceased, Helen Strausser and Dorothy Dinnerstein. Two plaques have now been affixed to the esteemed halls of Hill Hall, the administrative center of campus, to honor Professor Strausser and Professor Dinnerstein for their work promoting equity for women at the Newark campus, thanks to the efforts of Weis and Butler.

Newark Professor of Economics, John Graham, looked at salary equity in the current day. In short, his data indicate that there is no statistical difference between men’s and women’s salaries that are not attributable to number of years in employment at Rutgers (see Appendix D).

The lectures sponsored by the RU FAIR Professors in Newark have been first-rate. Funded through a mini-grant, Shiffrar organized a fall 2009 seminar series in social, cognitive, and neural science. The series promoted cross-disciplinary interactions among women scientists and set a foundation for developing mentorship programs for junior women scientists on the Rutgers-
Newark campus. The four speakers—LoBue, Patterson, Mateer, and Fiez—were role models for students in SEM fields as well as examples of women’s leadership in the broad cognitive sciences (see section 9.2).

The spring speakers showcased women who are singularly in positions of leadership and prominence. Geraldine Knatz, Executive Director of the Port of Los Angeles came to campus on February 22, 2010 to talk about, “From Copepods to Containerships: Dealing with the BIG and small in Los Angeles Harbor.” Knatz is the first woman to head a major port authority in the United States. In that position, she combines her expertise as an environmental engineer with leadership and executive management skills to launch a green growth/sustainability program for Los Angeles. With the Port of Newark being another major port facing similar issues of growth and sustainability, Knatz’s coming to Newark generated interest across campus and attendance from scientists and scholars in biology, public policy and administration, business leadership, and sustainability reflected that interest.

The March 10, 2010 seminar by Anne Fausto-Sterling, the Nancy Duke Lewis Professor and Professor of Biology and Gender Studies at Brown University entitled “Gender, Sexuality, and the Problem of Memory” brought together faculty and students in psychology, biology, women’s and gender studies, political science, and other disciplines from Rutgers and NJIT. The topic, the social science and the neuroscience of memory in the experience of gender, invoked a rich discussion during the lecture as well as at the post-reception.

Another highlight was the April 2, 2010 visit by Jacquelynne Eccles, the McKeachie-Pintrich Distinguished Professor of Psychology and Education at the University of Michigan. Eccles talked about aspiration, identity formation, and the gendering of social and biological sciences versus the physical sciences in the university today. What factors account for women’s preference for biological, social, psychological, and medical sciences over the physical sciences, engineering, and mathematics? For Eccles, these differences in participation rates reflect occupational values.

The Newark child-care and social media projects are described elsewhere (section 7.5b and 7.4b, respectively).

9.1c New Brunswick RU FAIR Professor Helen Buettner

A Professor of Biomedical Engineering and Chemical and Biochemical Engineering, vice chair in the first of these departments, graduate of HERS Bryn Mawr, WEPAN Change Agent for 2010, committee member and advocate, RU FAIR Professor and co-PI, Helen Buettner has emerged as a leader for institutional transformation at Rutgers. Buettner’s participation in RU FAIR has been less about bringing distinguished speakers to campus, and more about fostering community, developing leadership skills, and spearheading research on women’s participation in engineering and science fields.

Buettner is involved in the day-to-day operations of RU FAIR and attends the smaller RU FAIR staff meetings as well as the monthly Executive Team meetings. She plays an active role in nuts-and-bolts decision-making as a co-PI while sustaining a professional development perspective
with respect to women in engineering and science. From a tenure-and-promotion workshop to research on female faculty’s experiences as researchers, teachers, and colleagues, Buettner is involved in moving forward our barometer of SEM women’s experiences at Rutgers.

The climate for women in engineering is shifting under Helen Buettner’s and Dean Thomas Farris’s leadership. Buettner and Farris play active, engaged, and empathic roles in the efforts of diversity and equity. Increased advocacy and community, outreach to engineering chairs, SoE’s prominence at the level of the President’s Council on Institutional Diversity and Equity and Science Subcommittee additionally contribute to an overall enhanced climate for women’s and minority participation in engineering and in SEM more broadly.

Moving from engineering to WiSEM, Buettner’s role has been to couple engineering culture to both social science research on gender and the workplace and to practical tips on how to succeed as an academic engineer. The April 16, 2010 workshop on tenure and promotion in the School of Engineering featured a panel of senior faculty trading tips with the junior female faculty. A December 2009 focus group, as well as two luncheons with Dean Farris, have been mechanisms for women to communicate on issues related to their advancement in the field and at Rutgers. The space allocation project as well as a network analysis of faculty’s participation on qualifying and dissertation committees have been set up for summer and fall 2010. Several leadership development workshops are in the planning stages for the coming year.

As someone committed to the overall effort and mission around RU FAIR, Buettner is interested in process as much as progress with respect to women in SEM. Partnering with internal evaluator Mary Gatta, she is a principal investigator for the Agents of Change project (see section 8.7). In collaboration with Professor of Psychology Laurie Rudman, she is investigating perceptions of female faculty by undergraduate students in SEM (see section 9.2); in a project with sociologist Paul McLean, she and her part-time graduate assistant, Alexis Merdjanoff, are hoping to capture mechanisms around women’s and men’s participation in academic social networks (see section 8.8).

9.2 RU FAIR Mini-grants

The RU FAIR mini-grants are a successful program with momentum for expansion and enhanced visibility and reach. The program is a mechanism for funding a broad array of research-, networking-, and symposia-related projects; it expresses a value-based opportunity for collaboration and support; it contributes to an ongoing process of research on climate and equity at Rutgers; and it provides pathways for collaborative networks among constituents.

We have nearly completed two cycles of the mini-grant program. Twelve mini-grant proposals were accepted; these supported 23 events and projects.

9.2a Mini-grant application process: The mini-grant application process begins with a call for proposals that is widely disseminated across the university campuses using listservs, word-of-mouth, and targeted encouragement. At every meeting with executive administrators and department chairs, the mini-grant program has been explained in detail to encourage
applications. All mini-grant proposals are evaluated and selected by members of the RU FAIR Executive Team. The criteria for evaluating proposals include feasibility, campus need, and potential to promote interdisciplinary, inter-school, and intercampus collaborations that will foster institutional transformation. We received eleven proposals for cycle I and funded seven of these (64%); we evaluated five proposals in Cycle II and funded four (83%).

We received feedback that our criteria for selecting proposals to fund were not sufficiently transparent. We then revised the call for proposals document to stress the disciplines eligible for funding under NSF guidelines and the types of activities that are appropriate to fund (e.g., we do not fund an individual’s research unless that research directly pertains to issues of gender and science). These criteria seem to preclude our funding most SEM faculty outside of the social sciences, since their research is not coupled to research on gender. As such, natural scientists, engineers, and mathematicians identify the opportunity to bring in external speakers in their disciplines as a primary interest in mini-grant funding. Workshops, research, and network-facilitation programming come primarily from social science faculty. Our close ties to the Institute for Women’s Leadership (IWL) have yielded successful collaborations through mini-grant funding.

The first call for proposals was issued in April 2009. These first-round mini-grants supported programs that took place during the fall through late winter of the 2009-2010 academic year. A second call (cycle II) went out in late spring 2009 for a funding cycle that started in fall 2009. About half of cycle II mini-grant projects or events have taken place; the others are still pending, meaning that the event has yet to take place or that the research has yet to be concluded. A third call for proposals (Cycle III) was issued in early February 2010 with a July 2010 deadline. Cycle III will support fall 2010 and spring 2011 programming.

9.2b Mini-grant program evaluation: We used on-site exit surveys as part of an evaluation of programming events. The response rate on paper evaluation surveys was significantly lower than the response rate to online pre-registration surveys plus follow-up or post-event surveys. As a result, we are now encouraging all forthcoming and future award recipients with plans to host colloquia, research seminars, or networking events to use an online pre-registration form in addition to the post-event paper survey. A systematic approach to soliciting post-event feedback via survey evaluations is under development, and we intend to reinforce our “standard operating procedures” around this effort.

We have produced event flyers in print and electronic form for targeted and university-wide distribution. Our canvassing of attendees of mini-grant events suggests that most participants learn of the event through e-mail messaging, either via a department listserv or by an individual “word-of-mouth” message. To this end, the RU FAIR Program Coordinator is compiling a list of department listservs and the gatekeepers who administer them in order to reach a more personalized audience.

9.2c Mini-grant Program Summary: Table 9.1 lists the projects and activities supported through the mini-grant program in cycles I and II. The summary highlights that grantees have come from
a variety of units on all three campuses. Half of the programs are what we term SLC events: Symposium, Lecture, or Colloquium.

Table 9.1

<table>
<thead>
<tr>
<th>Investigators</th>
<th>Campus</th>
<th>Unit</th>
<th>Project Cycle</th>
<th>Type (number)</th>
<th>Evaluation or Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bernstein*</td>
<td>Camden</td>
<td>WGS</td>
<td>I</td>
<td>SLC (2)</td>
<td>Highly rated</td>
</tr>
<tr>
<td>Cohen-Corwin</td>
<td>NB</td>
<td>Math</td>
<td>I</td>
<td>SLC (6)</td>
<td>Facilitated successful recruitment</td>
</tr>
<tr>
<td>Dinzey-Flores &amp; Rodriguez</td>
<td>NB</td>
<td>Soc</td>
<td>I</td>
<td>Community/ multi-valued (3)</td>
<td>Highly rated</td>
</tr>
<tr>
<td>Hodgson &amp; Hutchinson</td>
<td>NB</td>
<td>IRW</td>
<td>I</td>
<td>Workshop (1)</td>
<td>Highly rated</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Forum (1)</td>
<td>Did not happen</td>
</tr>
<tr>
<td>McCarthy &amp; Vicario</td>
<td>NB</td>
<td>Psych</td>
<td>I</td>
<td>SLC (2)</td>
<td>Highly rated</td>
</tr>
<tr>
<td>Shiffrr</td>
<td>Newark</td>
<td>Psych</td>
<td>I</td>
<td>SLC (4)</td>
<td>Highly rated</td>
</tr>
<tr>
<td>Zhang</td>
<td>NB</td>
<td>Plant</td>
<td>I</td>
<td>SLC (2)</td>
<td>Highly rated</td>
</tr>
<tr>
<td>Buettner &amp; Rudman</td>
<td>NB</td>
<td>Psych-SoE</td>
<td>II</td>
<td>Research</td>
<td>Ongoing</td>
</tr>
<tr>
<td>Cohen</td>
<td>NB</td>
<td>Math</td>
<td>II</td>
<td>Travel</td>
<td>Ongoing</td>
</tr>
<tr>
<td>Cook-Chennault</td>
<td>NB</td>
<td>SoE</td>
<td>II</td>
<td>SLC (1)</td>
<td>Extension granted</td>
</tr>
<tr>
<td>Dinzey-Flores &amp; Rodriguez</td>
<td>NB</td>
<td>Soc</td>
<td>II</td>
<td>Community/ multi-valued (3)</td>
<td>Ongoing</td>
</tr>
<tr>
<td>DiTomaso &amp; Rudman**</td>
<td>NB</td>
<td>Psych-Bus</td>
<td>II</td>
<td>Workshop (2)</td>
<td>Highly rated</td>
</tr>
<tr>
<td>Laffey</td>
<td>NB</td>
<td>SoE</td>
<td>II</td>
<td>Research</td>
<td>Conf Pres.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>SLC (1)</td>
<td></td>
</tr>
</tbody>
</table>

Note: SLC stands for “Seminar, Lecture, Colloquium”  
* RU FAIR Professor, Georgia Arbuckle-Keil supported additional funds in the amount of $1,500  
**The Office for Executive Vice President of Academic Affairs supported additional funds in the amount of $4,000 on behalf of the President’s Council for Institutional Diversity and Equity

9.2d Cycle I mini-grants: Details and Outcomes

- Laurie Bernstein, Associate Professor of History & Director of Women’s Studies, Rutgers-Camden: *When Sex Meets Science: An Interdisciplinary Colloquia Series*
  - The invited speakers are known for their ability to move across disciplines in teasing apart issues related to gender and the sciences. These scholars gave lectures and also met with faculty members and students. The events brought
together colleagues from different disciplines, providing an intellectual forum for raising awareness of gender issues in science.

- Scott Gilbert, the Howard A. Schneiderman Professor of Biology, Swarthmore College, “Misconceptions of conception: A confluence of science and feminism” (September 24, 2009) (This event received an average rating of 4.9 on a scale of 1-5, with five being the highest rating; n=9 survey respondents.)
- Amy Bug, Professor of Physics, Swarthmore College, “Why do physicists have mistresses? When sex meets physical science” (November 19, 2009)
- Arbuckle-Keil supplemented the mini-grant with support from the RU FAIR Professor funds in order to demonstrate support for this Camden initiative.

**Amy Cohen-Corwin**, Professor of Mathematics, Rutgers-New Brunswick: *Women in Mathematics Lecture Series*
- Five female mathematicians were invited to Rutgers for presentations and networking, with a second goal of initiating and/or enhancing collaboration and recruitment
- Networking opportunities were coordinated with faculty, postdoctoral researchers, and graduate students to provide an environment for conversations about topics of interest
- Wing Li, Professor of Mathematics, Georgia Institute of Technology, “Eigenvalues of sums of self-adjoint operators, Horn inequalities, and intersection of Schubert varieties in a finite von Neumann algebras” (September 25, 2009)
- Inessa Epstein, Post-Doctoral Associate, California Institute of Technology, “Orbit equivalence and ergodic theory” (October 21, 2009)
- Georgia Benkart, Professor of Mathematics, University of Wisconsin, “Quantum $sl(2)$ and Temperley-Lieb-type Combinatoric” (October 28, 2009)
- Natasa Sesum, Assistant Professor of Mathematics, University of Pennsylvania, “On ancient solutions of the Ricci flow” (December 4, 2009)
- Martha Lewika, Assistant Professor of Mathematics, University of Minnesota, "Scaling laws and reduced theories of the prestrained elastic films" (January 26, 2010)

**Zaire Dinzey-Flores**, Assistant Professor of Latino and Hispanic Caribbean Studies and Sociology, and **Robyn Rodriguez**, Assistant Professor of Sociology, Rutgers-New Brunswick: *Women of Color Scholars Project*
- This program fosters a nurturing academic community for women of color at Rutgers University. The objectives of the project are: 1) to offer workshops featuring both outside experts and more senior Rutgers colleagues that address the challenges junior women of color at Rutgers face as emerging scholars and new teachers; 2) to provide a forum for junior women of color faculty at Rutgers to convene and develop strategies amongst themselves to address challenges faced in the academy more broadly and at Rutgers specifically; 3) to provide an opportunity for junior women of color at Rutgers to network and establish supportive and mentoring relationships across university units; and 4) to
document the experiences of junior women of color faculty throughout Rutgers University.

- The group has met formally at least six times, in addition to informal and more social get-togethers. Workshops on teaching with Chavella Pittman and professional development and leadership with Kerry Ann Rockquemore, networking events to connect junior and senior women of color faculty, and collaborations with the Center for Race and Ethnicity and the Institute for Women’s Leadership have fertilized a sustained network of women faculty.

- Chavella Pittman, Assistant Professor of Sociology, New College of Florida, “Teaching in Color: Effective Teaching Strategies for Women of Color Faculty” (December 14, 2009)

- Kerry Ann Rockquemore, PhD, CEO, New Faculty Success, LLC, “What to do when you’re the only ___ in the room” (April 1, 2010)

- Dorothy Hodgson, Professor of Anthropology and Director of the Institute for Research on Women (IRW, 2007-2010), and Beth Hutchison, (former) Associate Director, IRW, Rutgers-New Brunswick: Negotiation Basics and Science of Women/Women in Science

  - The “Negotiating Basics for Academic Women” workshop featured four women faculty leaders from a cross-section of academic SEM departments at Rutgers who addressed the issue of gender and negotiating skills by demystifying the process, making participants aware of resources and benefits of negotiating, and providing an inclusive, open forum for probing sensitive issues.

  - Lisa Klein, Distinguished Professor of Materials Science and Engineering

  - Nina Fefferman, Assistant Professor in the Department of Ecology, Evolution, and Natural Resources (EENR) and the Center for Discrete Math and Theoretical Computer Science (DIMACS)

  - Nikol Alexander-Floyd, Assistant Professor of Women’s and Gender Studies

  - Alison Isenberg, Associate Professor of History

- Almost 90 faculty, postdoctoral, and advanced graduate student participants attended the workshop to discuss and train in effective negotiating in the academic workplace. The participants completed a post-event survey that was overwhelmingly positive (an average rating of 4.6 on a scale of 1-5; n=43 survey respondents).

- “The Science of Women/Women in Science” forum was canceled after RU FAIR had evaluated and approved the funding. Several factors contributed to this turn of events, most notably the departure from Rutgers of one of the grantees and a concomitant lack of submissions from faculty members. The concept for the program—to bring together an interdisciplinary and inter-campus group of faculty to discuss research and experiences as they relate to scientific scholarship about and by women and to the work lives of women scientists—generated considerable interest, and we have encouraged the applicants to resubmit their proposal. (Note: the funds for this grant have been returned to the RU FAIR account.)
• **Danielle McCarthy**, Assistant Professor of Psychology, and **David Vicario**, Associate Professor of Psychology, Rutgers-New Brunswick, *Hyena Science: Gender Roles in Research and Real Life*
  o This two-day event brought Kay Holekamp, Director of the interdisciplinary program in Ecology, Evolutionary Biology, and Behavior and Professor of Zoology at Michigan State University. Holekamp gave a keynote lecture on her behavioral ecology research on gender equity in Spotted Hyenas. (an average rating of 4.1 on a scale of 1-5, with five being the highest rating; n=42 survey respondents).
  o Holekamp also conducted a lunch seminar on training and professional development issues for women in sciences and met with junior faculty and graduate students to mentor on research and professional development issues. (an average rating of 4 on a scale of 1-5, with five being the highest rating; n=32 survey respondents).

• **Maggie Shiffrar**, Professor of Psychology, Rutgers-Newark, *Seminar Series for Women in the Neural, Cognitive, and Social Sciences*
  o This seminar series in social, cognitive, and neural science had the goal of promoting cross-disciplinary interactions among women scientists.
  The series also focused on developing mentorship programs for junior women scientists on the Rutgers-Newark campus as well as showcasing women scientists to make it more feasible for future search committee members to think of examples of potential women applicants.
  o Vanessa LoBue, Professor of Psychology, New York University, "The narrow fellow in the grass: Biological preparedness in infants and young children" (September 18, 2009)
  o Charlotte Patterson, Professor of Psychology, University of Virginia, "Living under the rainbow: New research on lesbian and gay family lives" (September 25, 2009)
  o Catherine Mateer, Professor of Psychology and Vice-President of the University of Victoria, British Columbia, "Can executive functions be rehabilitated? Evidence for plasticity in cognition, behavior, and self-efficacy" (October 9, 2009)
  o Julie Fiez, Professor of Psychology, University of Pittsburgh, "The consequences of making a decision: Feedback signals and learning" (October 23, 2009)

• **Ning Zhang**, Assistant Professor of Biology, Rutgers-New Brunswick, *Seminars in Biological Science*
  o Women biologists led seminars and discussions on interdisciplinary and broad topics in biological science
  o Meredith Blackwell, Professor of Biological Sciences, Louisiana State University, "Fungal phylogeny: It takes a community" (October 2, 2009) (an average rating of 4.1 on a scale of 1-5, with five being the highest rating; n=19 survey respondents).
  o Amy Y. Rossman, Research Leader of Systematic Mycology and Microbiology Laboratory, United States Department of Agriculture – Agricultural Research
Service, “Advances in the systematics of plant pathogens with emphasis on canker-causing fungi” (December 4, 2009) (an average rating of 4.4 on a scale of 1-5, with five being the highest rating; n=15 survey respondents).

- The speakers met with faculty and students, expanding and strengthening research networks and collaborations and increasing the visibility of distinguished women in the biological sciences at Rutgers University. The sponsored lectures also enhanced the visibility of assistant professor Zhang, who joined the Rutgers faculty in January 2009.

- **Helen Buettner**, Professor of Biomedical Engineering and Chemical and Biochemical Engineering, RU FAIR Professor, and (currently) co-PI, and **Laurie Rudman**, Professor of Psychology, Rutgers-New Brunswick, *Implicit Gender Stereotypes and Student Evaluations of SEM Professors*

  - Students in both engineering and chemistry courses are surveyed to assess their implicit gender stereotypes and their evaluations of both male and female faculty members. The findings are predicted to demonstrate the importance of hiring female scientists in academia as a means of reducing implicit biases that can negatively impact gender equality. The results will form a quantitative basis for Buettner, in her capacity as RU FAIR Professor, to initiate discussions with select deans and department chairs about the role of teaching evaluations in faculty promotion and tenure. Independently, Buettner will undertake analysis of teaching evaluations from the past three years, publicly available through the Center for Teaching Advancement and Assessment Research, for Rutgers engineering departments and the New Brunswick department of chemistry: Are women faculty members viewed as grading less fairly? Do overall teaching effectiveness rating correlate with student ratings on other dimensions? This study is aimed at encouraging deeper discussion.

- **Amy Cohen-Corwin**, Professor of Mathematics, Rutgers-New Brunswick, *Travel Grants for Rutgers Women in Mathematics*

  - These funds were distributed to professors in the Mathematics Department as travel awards. Cohen-Corwin anticipates covering travel expenses of up to $750 per trip; funding priority will go to women in the ranks of tenure-track assistant and associate professors to enable them to attend meetings at which they will present the results of their research and discuss further progress with leaders in their fields.

  - In addition, Cohen-Corwin proposes to host a one-day meeting in New Brunswick for women in mathematics at all three campuses at which there will be some research talks, possibly a poster session for graduate students, and discussion of general issues relevant to professional advancement.

- **Kimberly Cook-Chennault**, Professor of Mechanical and Aerospace Engineering, Rutgers- New Brunswick, School of Engineering, *The Application of Laser Technology to Energy Related Fields: How Development in These Fields Can Enhance the Intellectual Capital Needed for Green Jobs in the United States*
Funds awarded for dual seminars in order for applicant to establish an informal mentorship relationship with a senior researcher, to strengthen networks between academia and industry in the hopes of leading to future collaborations and funding opportunities, exchange ideas, and establish a “common-interest platform on energy”, wherein female students can comfortably interact with faculty doing research in energy related fields.

- Marshal Jones, Senior Researcher, General Electric
- Anne Marie Sastry, Professor of Materials Science and Engineering, University of Michigan
- So far, Cook-Channault has been unable to schedule these speakers; we granted her an extension until December 31, 2010

- Nancy DiTomaso, Professor of Management and Global Business, Rutgers Business School, Newark-New Brunswick, and Laurie Rudman, Professor of Psychology (Rutgers-New Brunswick), Resource Guide for Faculty Recruitment and Evaluation Committees
  - DiTomaso and Rudman developed two workshop/training sessions with the goal of providing a foundation for faculty and administrators to understand and confront the kinds of subtle and often unconscious influences that shape decision making about hiring, promotion, and opportunity within the university. The workshops aimed to reinforce the tools and perspectives critical to launching an enduring process of professional development in diversity recruitment and institutional equity.
  - Three panelists (Foschi, Yoder, and Gorman) presented at the “Evaluation of Competence and Merit” workshop, facilitated by DiTomaso (April 9, 2010); Three panelists (Nosek, Dasgupta, and Valian) presented at the “Unconscious Bias” workshop, facilitated by Rudman (May 7, 2010)
  - Martha Foschi, Professor Emerita of Sociology, University of British Columbia, “Double Standards for Competence: Activation Conditions and De-Activation Strategies”
  - Jan Yoder, Professor of Psychology, University of Akron, “Competence and Merit: Objective Indicators of Individual Ability, Effort, and Worth”
  - Elizabeth Gorman, Associate Professor of Sociology, University of Virginia, “Gender, Hiring, and Promotion: Evidence from Law Firms”
  - The second workshop, “Unconscious Bias,” was facilitated by Rudman and brought another panel of three to the university(May 7, 2010)
  - Brian Nosek, Associate Professor of Psychology, University of Virginia, “Mind Bugs: The Ordinary Origins of Bias”
  - Nilanjana Dasgupta, Associate Professor pf Psychology, University of Massachusetts-Amherst, “STEMing the Tide: Effect of Educational Environments on Women’s Participation in Science, Technology, Engineering, and Mathematics”
  - Virginia Valian, Distinguished Professor of Psychology and Linguistics, Hunter College and CUNY Graduate Center, “What to Do Right Now: Addressing Gender Equity”
  - Following each panel presentation, there was a Question and Answer session,
where participants were invited to ask questions related to the panelists presentations, research, and experience.

- After the Q&A, participants were invited to attend a formal luncheon and continue the conversations that began in the session.
- Both panels were professionally videotaped, with panelists’ permission, in order to disseminate DVDs of the workshop to interested faculty, staff, and higher administration.
- The evening prior to each workshop, panelists engaged in conversation with the facilitators and key RU FAIR and WiSEM personnel at intimate, local dinners. The dinners provided a venue to engage more deeply in conversation and to learn more about panelists’ research and background.
- DiTomaso and Rudman will work with a graduate research assistant to create a resource guide, including a list of relevant additional reading, that can be used for self-study by faculty and administrators who want to learn more about these dynamics. In the development of this guidebook for use in the transformation of the culture and climate of the university, they draw from extensive research within management, psychology, sociology, and the broader social sciences to anchor the content of our proposed resources and to provide legitimacy to potential audiences about the research support for our claims.

- **Evelyn H. Laffey**, Assistant Dean of Engineering, Candice White, Program Development Specialist of Engineering; Ilene Rosen, Assistant Dean of Engineering; Lisa Klein, Professor of Materials Science and Engineering, Melike Baykal-Gursoy, Professor of Industrial Engineering; Kimberly Cook-Chennault, Professor of Mechanical and Aerospace Engineering; Nina Shapley, Professor of Chemical & Biochemical Engineering, Nada Boustany, Professor of Biomedical Engineering; and Deborah Silver, Professor of Electrical and Computer Engineering (Rutgers-New Brunswick), Networking Lunches with Faculty and Students

- This group of engineering faculty, led by Laffey, planned to host two luncheons for both engineering faculty to encourage collaboration among faculty and staff, set a precedent for hosting community building events, and allow faculty to view the talent pool of both undergraduate and graduate students enrolled in engineering programs at Rutgers.
- The first luncheon was held on November 4, 2009 with eight faculty attending: four assistant professors, two associate professors, and two full professors from most of the departments in Engineering. The faculty interacted with a group of about 50 female undergraduate and graduate engineering students.
- Of the eight faculty who attended the luncheon, four were interviewed regarding their experience one month after the event. Data collected from these interviews was presented as a paper at the annual Women in Engineering ProActive Network (WEPAN) conference on April 13, 2010.
- The second luncheon event is planned for early in the fall semester, and we envision this as an annual kick-off type of event for the School of Engineering.
9.3 Life-cycle Grants: Life-cycle grants are designed to support SEM faculty (women and men) during times of personal crisis that would have negative impacts on careers at critical junctures. RU FAIR issued three calls for life-cycle grant applications this year: in early October 2009 for awards in November 2009; in late January 2010 for early April 2010 awards; and in mid-April 2010 for a July 2010 deadline. The requests for proposals were distributed via the sciwomen e-mail listserv, the RU FAIR website, word-of-mouth, and event announcements. In addition, our staff delivered hard copies to SEM faculty on Camden and Newark campuses and to every department chair outreach interview that we conducted. For the second and third requests for proposals, the concept of the life-cycle grants program and the availability of these funds for SEM faculty were presented in detail to department chairs at the individual meetings that took place between February and June 2010.

The life-cycle grant review/selection committee includes two senior women faculty as Rutgers as well as two senior members of the RU FAIR Executive Team. The selection committee met twice during the past year: on November 17, 2009 and on April 20, 2010. Altogether, seven applications were received and reviewed; five were fully funded at the level requested, one was partially funded, and one was denied. Due to requirements for confidentiality, the specifics parameters associated with individual life-cycle grants are not given.

Both women and men at critical career junctions who had been affected by a life event were eligible to apply. Applications came from a variety of departments throughout Rutgers, indicating that our publicity on the call for applications reached far and wide. We also learned, at a focus group of associate-level professors from SEM disciplines, that the typical range of funding available through the life-cycle program ($500 - $7000) was not perceived as sufficient to make a difference to science faculty whose requirements for research funding are magnitudes above this amount. Department chairs, on the other hand, view life-cycle grants as an effective mechanism to strengthen faculty members’ advancement at critical junctures in work/life balance.

Section 10: Strategy Evaluation

10.1 Overview

With several mechanisms in place for moving forward our key initiatives, evaluation is critical at the level of individual projects and at the level of process and outcome. Evaluation allows us to assess our progress toward institutional transformation and make “course-corrections” in our overall program. Process evaluation, outcome evaluation, and research evaluation are overlapping, yet distinct categories for capturing the success of the grant in meeting its goals for increasing the number and leadership status of women in science, social science, mathematics, and engineering at Rutgers University. Strategy evaluation involves process evaluation (did we accomplish what we set out to?) as well as outcome evaluation (did our achievement impact recruitment, retention, and leadership advancement of women?)

In terms of strategy evaluation, we have accomplished goals both large and small this year. The production of a university handbook on best practices in hiring and promotion for search and tenure committees was a major achievement, and the institutionalization of the practices and
policies outlined therein has percolated through the university, as our outreach interviews clearly show. Importantly, RU FAIR has formed and supports institutional partnerships throughout the university, at the level of individual faculty and department chairs to the university’s administrative leaders and units. We have made major progress in developing the infrastructure for a more streamlined and unified system for Rutgers database management. This will simplify future data collection and allow the university to monitor progress on its dashboard indicators. The changes in the internal governance of RU FAIR and the outreach to administrators are other significant and strategic accomplishments. We have also created a recognizable RU FAIR brand for our informational and publicity materials. Though we’ve felt ourselves to be at baseline for an extended period as changes in personnel impacted progress, RU FAIR has made major steps forward. We are poised to make considerable strides in year three.

10.2 Internal Evaluation

Mary Gatta has been both a participant and an observer in her role as internal evaluator. She leads projects related to documenting experiences of women in SEM at Rutgers (focus groups, section 8.6) and female faculty and staff involved with RU FAIR (Agents of Change, section 8.7). She attends key meetings of RU FAIR personnel and confers regularly with members of the group. She reviews survey evaluations, activities reports, and documents submitted to NSF. Gatta is also the liaison, along with RU FAIR Director Valentine, to the external evaluator, Mary McCain (see section 10.3)

Gatta’s approach to internal evaluation has been to gather documents on programming and research projects, interview personnel, and attend RU FAIR meetings and events where time permits. Pulling together the various forms of information, Gatta has provided the RU FAIR Executive Team with valuable and insightful feedback. Her report is appended to the RU FAIR Annual Report (Appendix E). It documents fluxes in the staffing of RU FAIR that led to a leadership vacuum, and the subsequent revamping with the hire of a new Director (Doreen Valentine). Through the Agents of Change project, Gatta is gaining insight on the new leadership structure and its program of institutional transformation.

The internal evaluation also identifies the distinct disciplinary cultures of “science” and “social science” as impacting the RU FAIR grant. Focus groups and Agents of Change have provided this insight, and it seems to bear out in relation to a small fraction of male and female faculty. It also resonates with a body of literature, mostly coming out of Science and Technology Studies (STS) and Gender Studies, that documents the tensions among professional actors with respect to disciplinary and leadership status (Segerstråle 2000; Fox Keller 1985). Social science research is seen as soft; physical science research as hard. One is seen to be more hypothesis-driven, statistically robust, and controlled by experimental design; the other is viewed as influenced by loose variables and data sets, qualitative measures, and vague design. Like unconscious biases around gender and racial/ethnic inclusiveness, disciplinary biases can be brought to awareness. Our outreach to department chairs is an important first step in identifying particular science subcultures. A “best practices” approach to faculty-to-faculty information sessions on “best practices” in recruitment and retention may involve “customized solutions,” to borrow from industry. A workshop on training search committees should be both generally applicable and
tailored for STEM disciplines. We plan to work with the Offices of Institutional Diversity and Equity (OIDE) on each campus to advance this effort.

The internal evaluation for year two (Appendix E) has charged us with improving our efforts to collect survey evaluations and feedback on programming; addressing racial/ethnic diversity within and beyond RU FAIR; strengthening the OIDE collaboration; and developing plans for a sustained and support effort after the close of the ADVANCE grant. The report also recommends that we coordinate planned external mechanisms for strategic development (the External Advisory Board) and evaluation (Mary McCain) this fall 2010.

10.3 External Evaluation

Mary McCain, RU FAIR External Evaluator, is the Senior Vice President of TechVision21, a consulting firm based in Washington, D.C. with expertise in solutions that optimize organizational processes and workforce development. McCain reviews information, evaluates data, discusses reports, and develops detailed plans of action for and about the RU FAIR program.

After an intensive interview process, we contracted with McCain as the external evaluator for RU FAIR in March of 2009. Strategic plan development to identify process and outcome measures against which RU FAIR would be assessed dominated McCain’s first year efforts. She traveled to Rutgers and met with RU FAIR and WiSEM personnel, including the RU FAIR PIs and Professors, on November 11 and 12, 2009. This visit also included meetings with representatives from the President’s Council on Institutional Diversity and Equity—Karen Stubaus and Cheryl Wall—as part of our overall engagement with institutional partners. In addition, McCain met with strategic planning facilitator and Director of New Jersey Bio-1 Wired, Mary Ellen Clark. Clark has broad and highly relevant expertise in program grant management in her capacity with Bio-1 Wired, which receives funding from the U.S. Department of Labor. Clark’s and McCain’s perspectives have been leveraged to guide our implementation of RU FAIR initiatives, including RU FAIR professorship activities. Subsequent to her visit, McCain provided feedback regarding the need to define the goals and objectives of RU FAIR initiatives. Such scoping has allowed us to obtain measures and outcomes around each project and activity.

McCain made a second trip to Rutgers in December 2009 in order to meet with the new RU FAIR Director, Doreen Valentine, internal evaluator Mary Gatta, and Program Coordinator Christina Leshko. The meeting produced a program sketch and a timeline for finalizing a strategic plan, completing baseline indicator data collection, and convening advisory boards. We are on target with respect to each of these areas: the completion of the baseline and year 1 data set of NSF Toolkit Indicators and the constitution of the ADVANCE Consortium are among the most significant accomplishments.

McCain is writing a detailed report on RU FAIR that we expect to receive by mid-July 2010. She has accepted an invitation to attend the meeting of the External Advisory Board (EAB) scheduled for September 23, 2010. Her visit will include meetings with members of the EAB,
Executive Vice President Philip Furmanski, OIDE Director and Associate Vice President Karen Stubaus, and other members of the Consortium and the RU FAIR Executive Team.

Section 11: Challenges and Best Ideas

11.1 Economic and Legislative Issues

Rutgers University is a public institution; workforce and financial policies of the University are shaped by legislative rulings, government processes, and state budgets. As New Jersey's state university, Rutgers derives a significant part of its revenue from state appropriations (tuition and fees cover the rest of educational costs). Employees of the University—faculty as well as staff—are considered to be public employees of the State. Thus the economic crisis facing New Jersey and the rest of the nation impacts faculty, staff, and students in a number of ways.

The declared fiscal state of emergency in February 2010 by New Jersey Governor Chris Christie translated to a 6.3% midyear cut in the University budget for 2010. Under the Governor’s proposal, Rutgers’ direct state operating aid in 2010–11 would be cut 15.1 percent and therefore would be $46.6 million lower than the university’s original appropriation for the current fiscal year. In actual dollars, Rutgers’ operating aid would be the lowest the university has received since 1994. The governor’s proposed budget also does not provide funding for the salary increases that were negotiated between Rutgers and its bargaining units last year. Furthermore, the State is seeking to impose a cap on tuition and fees increases, thereby limiting the degree to which tuition dollars can close the budget gap.

The new budget is set to go into effect on July 1, 2010. Announced in early June, Rutgers University has canceled scheduled pay increases and frozen salaries, citing an “extreme fiscal crisis” that “is unprecedented.” The policy move is aimed at avoiding lay-offs, furloughs, or a hiring freeze. The University is committed to “preserving the academic core of the institution” in the face of a huge budget deficit. Recruiting and retaining top-level researchers and scholars and the work of diversifying its workforce remain priorities for the University, but the possibility of an institutional hiring freeze is a concern.

The University leadership recognizes that the State financial crisis may affect Rutgers’ ability to compete for the best candidates. The State legislature is now on the verge of creating another barrier to faculty recruitment: a requirement of state workers, including faculty, to reside in the State of New Jersey. Even with certain exemptions, such a law, if passed, would impose a hardship for faculty and staff. Dual-career hiring that would bring faculty to the New York, New Jersey, Pennsylvania corridor would be particularly affected by such a law, impacting Rutgers’ ability to compete for scholars of international repute. President McCormick and Vice President for Public Affairs, Jeannine LaRue, are advocating for a complete exemption for higher education under the residency bill.

RU FAIR ADVANCE aims to increase the participation and advancement of women, particularly women from underrepresented groups, in SEM disciplines. The policy implications of the fiscal crisis as well as other mandates imposed by the State legislature may impact our
progress towards the goals of recruitment, retention, and family work/life balance. These are challenges facing the University as a whole and in partnership with Rutgers administrators, we will continue our efforts to move forward with the work of institutional transformation.

11.2 Other Areas of Difficulty

Several challenges have been documented over the course of the year in our quarterly reports and by our evaluation process. These include personnel turnover and vacancies, difficulty ramping up RU FAIR Professorship programs, and some lack of support for our interviewing initiatives among several higher level administrators. Each of these areas of difficulty has been addressed strategically with direct action. New personnel were hired, additional co-PIs were recruited, the ADVANCE Consortium was set up to foster institutional partnerships, and work-around solutions were developed to allow our faculty interview project to move forward.

With the resignation of co-PI Nancy Rosoff in Camden, we have an institutional leadership presence on that campus currently unfulfilled. On the other hand, the Camden RU FAIR Professor, Georgia Arbuckle-Keil, is one of the senior SEM women on campus, and her outreach and visibility as a leader has increased over the course of the grant. Our interviews with departmental chairs at Camden, as well as at Newark and New Brunswick, have enhanced RU FAIR’s visibility as well.

Another area of difficulty relates to the sheer size and complexity of an institution like Rutgers. Section 4 lists RU FAIR’s institutional partners, who together represent a multi-tiered commitment to a diverse workforce, a positive institutional climate, and a rich educational experience for students. In practice, however, the multiple and overlapping units can lead to fragmented and duplicate efforts across campus to address underrepresentation of women and minorities in SEM. RU FAIR ADVANCE has operationalized several mechanisms to develop partnerships and to coordinate activities related to institutional transformation. A challenge remains in how to assess the distinct impact of the grant in such partnership roles and how to steer the grant as front-and-center in the overall effort. Our strategy here has been to function as a “boots-on-the-ground” facilitator in a university-wide process. Focusing on our goals, our key initiatives, and our core mechanisms will allow us to link specific outcomes and accomplishments to initiatives and mechanisms.

11.3 Best Ideas Yet

Clear goals related to increasing women’s participation and advancement in science, social science, engineering, and mathematics were articulated in our original proposal to NSF, and a strategic plan was developed to implement these goals. The process of evaluation allows us to determine whether and how particular activities translate to meaningful progress towards these goals. As RU FAIR begins its third year, we are partnering with Dr. Brent Ruben, Professor of Communications and Organizational Psychology and the Executive Director of the Rutgers Center for Organizational Development and Leadership. With his input, we developed the model for the ADVANCE Consortium this past spring 2010. Currently, he and his staff are working with us to take our strategic process to the next level, both in terms of implementation and
evaluation. We have also engaged our evaluation team in this effort. Mary Gatta, our internal evaluator, together with co-PI and RU FAIR Professor Helen Buettner, have initiated a project called Agents of Change which we hope will allow us to capture the impact of the grant (see section 8.7).

Institutional partnering has proven to be a “best idea” time and time again. The science subcommittee of the President’s Council on Institutional Diversity and Equity (see section 4) has been empowered to strategize and develop innovative approaches to address diversity and equity issues in the sciences. A committee that brings together leaders of Douglass Residential College, the Institute for Women’s Leadership, and the Department of Women’s and Gender Studies with the Office for Women in Science, Engineering, and Mathematics to develop “women in science” programming has recently convened. Women and Sustainability is the theme for academic year 2010-2011 and several activities—a Women of Color Scholars showcase event, a panel on environmental disasters, a distinguished lecture series, a Science and Health Fair, and a Science and Art event are all in the planning stages for the coming fall and spring.

RU FAIR ADVANCE is one of several NSF Division of Human Resource Development grants awarded to Rutgers University. Others include IGERT grants, an I3 award, RISE, RU STEPed Up for Success, MSP, LSAMP, and REU grants. The WiSEM office, as a distinct unit charged with promoting women’s advancement in the sciences at all stages in the pipeline, is providing leadership in bringing these different groups together to increase participation and awareness of shared goals.
Appendix A: Personnel and Financial Report

*This section has been omitted from this open-access document*
Appendix B: RU FAIR ADVANCE Quantitative Indicators of Activity and Progress

B.1 Overview

Fundamental to our mission of recruiting, retaining, and advancing women faculty in science and engineering fields is the assessment of the faculty population at Rutgers University, a multi-sited and diverse academic community using baseline and longitudinal quantitative and qualitative data. Specifically, an important goal has been to develop appropriate tables and analyses for reporting on the twelve required NSF indicators. To that end, co-PI Patricia Roos, graduate assistant Crystal Bedley, and RU FAIR Director Doreen Valentine have worked with a team from the Rutgers Office of Institutional Research and Academic Planning (OIRAP) that includes Robert Heffernan, Gayle Coryell, and Minmin Chen to optimize configuration of a comprehensive “data warehouse” under development at Rutgers. The RU FAIR ADVANCE team has collaborated with this group to define research parameters, cull critical data, develop appropriate tables, choose proper selection mechanisms, and ensure accuracy and conformity to NSF evaluative standards. We have also convened an ad hoc Committee of Stakeholders, comprised of key staff from OIRAP, Rutgers administrators, representatives from Deans’ offices, social science researchers with experience in equity studies, and RU FAIR ADVANCE personnel. The committee has two main charges: (1) to discuss which data elements not now available centrally are most critical for the ADVANCE grant and subsequent equity studies, and (2) how those data might be collected with as little inconvenience to the Deans’ Offices as possible (see also Section 8.1).

Once complete, the data warehouse will support the long-term, systematic, and fully institutionalized collection, storage, and analysis of gender and race data, thereby facilitating equity studies at Rutgers. It will ameliorate many of the problems associated with the fragmented multi-school and multi-campus legacy systems that have characterized Rutgers in the past, and provide a lens onto the broader issues around women’s hiring, retention, and advancement at a national scale.

B.2 Research Data Collection and Reporting

The data that have now been collected are shown in Table 0, the first in the series presented in Appendix C. Appendix C includes tables that are new since the last quarterly report (baseline year for Tables 5 and 6; year 1 tables) as well as slightly revised tables produced and submitted with earlier reports. Tables 11 and 12, which report on space allocation and start-up packages, have not yet been produced. These studies are planned for year 3.

Reviewing the data collection criteria for each table, we found that the number of SEM faculty reported in earlier versions of Table 1 (tenured and tenure-track by rank and department) also included a few dozen research professors who are not considered to be regular tenured and tenure-track faculty assigned to specific departmental lines. These research faculty have been eliminated from these tables. The data collection criteria to date for the data set as a whole and for individual tables are as follows (see footnotes of relevant tables for details):

All Tables
- Primary reporting relationships are used to determine counts of faculty
- The only people counted in the centers are people whose primary reporting relationship is in the center
- Baseline measures from July 1\textsuperscript{st} 2007 to June 30\textsuperscript{th} 2008; Year 1 measures are from July 1\textsuperscript{st} 2008 to June 30\textsuperscript{th} 2009; Year 2 measures are from July 1\textsuperscript{st} 2009 to June 30\textsuperscript{th} 2010
- Counts are done effective September 30\textsuperscript{th} for each year, where noted
- Faculty designated as research professors are excluded from tables (with the exception of Table 2)

**Table 1: Number and Percent Women**
- Includes tenured and tenure track faculty (Assistant Professor, Associate Professor, Professor I, and Professor II)
- Excludes faculty who are currently in Executive/Administrative/Managerial (EAM) positions; retired faculty; faculty without pay; postdoctoral fellows and associates; visiting faculty of all ranks; research professors of all ranks

**Table 2: Tenured and Non-tenured Women**
- Includes as Tenured and Tenure Track: Lecturer, Assistant Professor, Associate Professor, Professor I, Professor II designated as Tenured or Tenure Track.
- Includes as Non-Tenure Track: Assistant Instructor, Instructor, Lecturer, Assistant Professor, Associate Professor, Professor, Professor II designated as Non-Tenure Track; and Primarily Research Professors (all ranks)
- Excludes current EAM faculty; retired faculty; faculty without pay; postdoctoral fellows and associates; visiting faculty of all ranks

**Table 3 and 4: Promotional Outcomes**
- Data produced by staff in the Office of the Executive Vice President for Academic Affairs

**Table 5: Years in Rank**
- Includes tenured and tenure-track faculty (Associate Professor, Professor I, and Professor II) who entered Rutgers University after March 31, 1997 (due to limitation of data)
- Excludes current EAM faculty; faculty without pay; postdoctoral fellows and associates; visiting faculty of all ranks; and primarily research professors of all ranks
  - For faculty who served in EAM positions prior to the year in question, these years of service are included in years in rank calculation (e.g., a faculty member who has been at the full professor rank since 1997, but served as an area dean from 2003-2006, will be counted at the baseline measurement as having been at the full professor rank for 10 years)
  - Years on sabbatical leave are similarly counted in years in rank, but years without salary are not.

**Table 6: Attrition**
- Includes tenured and tenure-track faculty (Assistant Professor, Associate Professor, Professor I, and Professor II)
• Excludes current EAM faculty; faculty without pay; postdoctoral fellows and associates; visiting faculty of all ranks; and primarily research professors of all ranks
• Based on separation date (i.e., the date that the faculty’s retirement/resignation became effective in HR data) and department-reported separation reason (specifically, faculty who are designated as having either accepted a new position, family, health, personal, or other). Those excluded are faculty who separated for the following reasons: disciplinary, laid off, long-term disability, not qualified, retirement, and death.

Table 7: New Hires
• Includes faculty hired in Tenured and Tenure-Track positions (Assistant Professor, Associate Professor, Professor I, Professor II) between July 1 and the following June 30 in designated year.
• Excludes current EAM faculty; faculty without pay; postdoctoral fellows and associates; visiting faculty of all ranks; and primarily research professors of all ranks

Table 8: Leadership
• Data produced by staff in the Office of the Executive Vice President for Academic Affairs

Table 9: Race
• Includes tenured and tenure track faculty (Assistant Professor, Associate Professor, Professor I, and Professor II)
• Excludes current EAM faculty; retired faculty; faculty without pay; postdoctoral fellows and associates; visiting faculty of all ranks; research professors of all ranks
• Human Resources is currently implementing a new method of collecting race data that will allow faculty and staff to self-identify race and ethnicity and multi-racial and multi-ethnic status.

Table 10: Salary
• Includes tenured and tenure-track faculty (Assistant Professor, Associate Professor, Professor I, Professor II)
• Excludes current EAM faculty; faculty without pay; postdoctoral fellows and associates; visiting faculty of all ranks; and primarily research professors of all ranks
• Based on 10-month salaries (12-month salaries are adjusted accordingly)

Despite having developed systematic rules to anticipate every contingency with respect to data collection, we acknowledge that the institutional or source data set from which we obtain our indicator data may be flawed due to input errors. Too late for this report, we found that a woman in the School of Engineering was counted as “male” in academic years 2007-08 and 2008-09, but correctly counted as a woman in 2009-10. We were not able to correct these tables or rechart the data in our graphical visualizations, but we will do so for the next quarterly report and certainly for the annual report next year. We do correctly report the growth in the School of Engineering in Section 1.3**, Indicators of Institutional Change.

B.3 Analysis
B.3a University-wide and by Campus Data: For the current year, academic year (AY) 2009-2010, published data from OIRAP show that there are 2803 faculty (SEM and non-SEM) employed full time across all campuses at Rutgers (OIRAP Institutional Characteristics 2009). Based on data that we have collected using the criteria specified above, 983 (35.1% of the OIRAP reported total faculty) are tenured or tenure-track regular professors (assistant, associate, professor I, and professor II; see Table 1 in Appendix C) in SEM disciplines and another 378 (13.5% of the OIRAP reported total faculty) are non-tenure-track or tenured/tenure-track lecturers, for a total of 1360 (48.5% of the OIRAP reported total faculty) in SEM. Figure B.1 shows the number of full-time tenured and tenure-track SEM faculty (women + men) on each of the three campuses for the three years of the grant. The total number of full-time SEM faculty in New Brunswick is almost 14.5 times the number of SEM faculty in Camden and more than 6.5 times the size of Newark.

The percentage of full-time SEM faculty who are women, by rank, is shown in Figure B.2 for each campus. In general terms, women comprise about one-third of the Rutgers faculty who are non-tenure-track or at the assistant and associate levels; about a fifth of the full professors (Professor I); and approximately one-tenth of the faculty at the highest regular rank (Professor II). Figure B.2 charts the percent women for all five of these groups, based on data collected in Tables 1 and 2 in Appendix C for the year prior to receiving the ADVANCE grant and for the two years since.
Viewed another way (excluding non-tenure-track and lecturer-status faculty), Figure B.3 shows the distribution by rank for full-time tenured and tenure-track women and men in SEM departments, university-wide in the current year (AY2009-2010). The trend lines show the gap between women and men widens at higher ranks. The percentage of women faculty for the university as a whole in 2009-2010 is 23.3%, above the baseline (2007-08) level of 22.1%. The rate of change from baseline to year 2 is 12.3% (204 SEM faculty women in AY2007-08 compared to 229 in AY2009-10).
The percentage and number of women for each campus is shown in Table B.1. The university as a whole, driven by New Brunswick hires, saw an increase in the number and percentage of women; the Newark faculty expanded, but the percentage of SEM women remained flat; and Camden showed a loss of female faculty (from 22 of 71 to 18 of 70) and a gain of male faculty (49 of 71 to 52 of 70).

Table B.1: Change in Percent Female SEM Faculty, AY 2007-08 to AY 2009-10

<table>
<thead>
<tr>
<th></th>
<th>Number AY2007-08</th>
<th>Percentage AY2007-08</th>
<th>Number AY2009-10</th>
<th>Percentage AY2009-10</th>
<th>Rate of Change (t2-t1/t1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>University-wide</td>
<td>204 (924)</td>
<td>22.1%</td>
<td>229 (983)</td>
<td>23.3%</td>
<td>12.3%</td>
</tr>
<tr>
<td>Camden</td>
<td>22 (71)</td>
<td>31.0%</td>
<td>18 (70)</td>
<td>25.7%</td>
<td>(18.2%)</td>
</tr>
<tr>
<td>Newark</td>
<td>35 (119)</td>
<td>29.4%</td>
<td>37 (126)</td>
<td>29.4%</td>
<td>0.0%</td>
</tr>
<tr>
<td>New Brunswick</td>
<td>147 (734)</td>
<td>20.0%</td>
<td>174 (787)</td>
<td>22.1%</td>
<td>18.4%</td>
</tr>
</tbody>
</table>

Table B.2 summarizes data from Table 7 in Appendix C, which charts the number of new hires by gender, rank, and department for the three campuses.

Table B.2: Number and Percent of Female SEM Faculty Hired University-wide and by Campus

<table>
<thead>
<tr>
<th></th>
<th>AY2007-08</th>
<th>AY2008-09</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Women</td>
<td>Men</td>
</tr>
<tr>
<td>University-wide</td>
<td>5</td>
<td>31</td>
</tr>
<tr>
<td>Camden</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Newark</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>New Brunswick</td>
<td>5</td>
<td>29</td>
</tr>
</tbody>
</table>

Clearly, AY2008-09 saw a dramatic increase in the total number of hires. The largest gain was in the number of women hired to tenure-track positions at the level of assistant professor, as shown in Figure B.4. For the baseline year (2007-08), women comprised only 7.4% of new junior faculty; the following year, 50.0% of new assistant professors were women. At the higher ranks, trends in hiring maintain the gender gap apparent in Figure B.3.
Half of the new hires (19 out of 36) in 2007-08 were in the areas of mathematics and physical science (18 in New Brunswick and 1 in Newark); here, women comprised 10.5% of new hires. Only 11 faculty were hired in these same disciplines in 2008-09 (2 women and 9 men; 2 women and 6 men in New Brunswick, 2 men in Newark, and 1 man in Camden). We do not yet have OIRAP data on hiring for 2009-10, but the deans report half of the new hires in mathematics and physical sciences in New Brunswick were women. The School of Environmental and Biological Sciences (SEBS) ramped up its recruitment effort during year 1 of the grant, from 2 new hires in 2007-08 to 10 in 2008-09. Of the ten faculty that joined SEBS in 2008-09, 6 were women.

Diversity hiring and successful recruiting in general remain priorities at Rutgers University. The current global fiscal crisis, however, may affect recruitment activity over the next couple of years. For the time being, though, there is no call to freeze hiring, and there is an initiative in place to facilitate retirement of the longest-serving faculty (see section 5). The net result should be a continued increase in the number of women and minority faculty successfully recruited to Rutgers.

B.3b Department Demographics: New Brunswick is composed of four geographic sub-campuses (Busch, College Ave, Cook/Douglass, and Livingston) and is home to multiple schools, divisions, and centers. Within the School of Arts and Sciences (SAS), SEM faculty have appointments in the Divisions of Mathematics and Physical Sciences (MPS), Life Sciences (LS), Social and Behavioral Sciences (SBS), and one of several affiliated centers. Faculty in the Division of Humanities (H) may work in NSF-supported areas as well (for example, linguistics). The School of Environmental and Biological Sciences (SEBS) assembles researchers in fields such as marine and coastal science, plant biology and pathology, nutritional science, and human ecology, for a total of eleven departments and four major centers. The School of Engineering (SoE) is composed of seven departments and several centers. Figure B.6 presents the percentage and number of women in each of these main campus divisions and schools and compares those

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1 As we were completing this report (early June, 2010), the Executive Vice President instituted a freeze on salary increases across the entire university.
data with the percentage of women employed nationally in tenured or tenure-track positions in 2006 and with the doctoral pool for 2007.

Figure B.5

The demographics of SEM departments at Camden and Newark (as opposed to the scale of divisions and schools shown for New Brunswick) are shown in Figures B.7 and B.8. Rutgers-Camden employs three women in natural science and mathematics, out of a faculty of 36 (8.3%), and 18 SEM women out of a faculty of 70 (25.7%). There are no women in the Department of Biology out of a total of ten faculty lines. Nationally, women comprise about 43% of all life sciences faculty (NSF 2006) and 32.3% of all tenured/tenure-track faculty (Burrelli 2008) and receive nearly half of the PhDs granted in the field (NSF 2007); the Department of Biology at Camden “underperforms” in this discipline with respect to gender parity (AWIS, Women in STEM). There are also no women in physics and economics, where parity to the doctoral pipeline would expect the percentage of women to be closer to 18% and 32%, respectively (NSF 2007).
Rutgers-Newark employs 14 women in natural science and mathematics, out of a faculty of 56 (25.0%), and 37 SEM women out of a faculty of 126 (29.4%). Tenured or tenure-track women are on the faculty in every department, at levels that are near or better than parity. One exception to this is the Department of Psychology, which employs four women out of thirteen tenured/tenure-track faculty. However, Newark is also home to the Center for Molecular and Behavioral Neuroscience (CMBN). Four women (out of thirteen) have primary appointments through CMBN. These women’s research, as well as many of the male CMBN faculty, focuses on neural mechanisms of behavior at the intersection of neurobiology and psychology. Combining CMBN demographic data with those from the Department of Psychology brings the number of women to 8/26 or 30.8%. While this is still below the parity line in terms of percentages of female faculty employed full-time with tenure or tenure-track (46.2%; Burrelli 2008), there is a sense that parity is not too far off. Our faculty recruitment and retention interviews, career trajectory study, and department chair interview outreach project will provide us with a better sense of the climate for women at Newark and the other campuses.
Understanding departmental climate is a critical component in interpreting demographic indicators. Many departments at the three campuses are small. For the core, traditional SEM disciplines, the small scale and low numbers of women in the case of departments in Camden and Newark reveals a particular concern. A recent article in Chemical & Engineering News, entitled “Women Now 17% of Chemistry Faculty,” provides some insight on this point, even if the report homes in on chemistry departments. Data indicate that more women decide to accept appointments in chemistry departments that have six or more women, while departments with fewer than three women show a decline. The National Academy of Science report “Beyond Bias and Barriers” reached a similar conclusion: When women reach a “critical mass” in a specific department, they “join together to press for improvements in policies.” Rosabeth Moss Kanter’s theory of proportional representation suggests that tokens (the numerical minority in a social category) will underachieve (experience more stress, not achieve tenure or promotion) compared to dominants (members in the numerical majority) (Kanter 1977). The departments in which there are fewer than the critical mass may have more trouble successfully recruiting and retaining women or minority faculty.

B.3b Career Advancement Indicators: Several of the attached tables document career advancement statistics for women. The first of these—Table 3 in Appendix C—tracks tenure (assistant professor to associate professor) outcomes by gender and institutional unit. Table 4 in Appendix C documents promotion from associate professor to Professor I (Table C.4a) and from Professor I to Professor II (Table C.4b).
The process of promotion at Rutgers University, whether it is for tenure or advancement to full professor (Professor I or Professor II), begins in the department, progresses to the decanal unit, and ends up in the hands of a central review board known as the University Promotion Review Committee (PRC). The PRC is an advisory group to the President of the University and consists of the Vice President for Research and Education, the Vice President for Undergraduate Education, the Chancellor of Camden, the Chancellor of Newark, and five faculty members at or above the rank of Professor to be named by the President of the University. The PRC is chaired by the Executive Vice President for Academic Affairs. The President refers to the Board of Governors all appointments that involve the acquisition of academic tenure and all recommendations for academic appointments are made to the President of the University through the office of the Executive Vice President for Academic Affairs. The constitution of the PRC is discussed in section 8.3c under women’s leadership at Rutgers.

Summarized from Table 3 in Appendix C, Table B.3 below shows the number of tenure reviews and the number of approved tenure promotions. For the university as a whole (SEM plus non-SEM units), 55 faculty in AY 2007-08 (baseline) and 51 faculty in AY 2008-09 (year 1) came under review for tenure. Of these, five were denied in the baseline year; four were denied in year 1, for overall approval rates of 90.9% and 92.2%, respectively. The number of faculty—women and men—coming up for promotion review reflected the gender demographics of the faculty as a whole, or indicated considerable progress for women (Camden stands out in this regard). The approval rate for women overall was higher than for men.

Table B.3: Faculty Reviewed and Approved for Tenure and Promotion in AY 2007-08 and AY 2008-09

<table>
<thead>
<tr>
<th>BASELINE 2007-08</th>
<th>Promotion Review</th>
<th>Approval Rate (N)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Campus</td>
<td>Women</td>
<td>Men</td>
</tr>
<tr>
<td>New Brunswick</td>
<td>13</td>
<td>25</td>
</tr>
<tr>
<td>Newark</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Camden</td>
<td>7</td>
<td>1</td>
</tr>
<tr>
<td>Business - N &amp; NB</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>TOTAL</td>
<td>26</td>
<td>29</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year 1 2008-09</th>
<th>Promotion Review</th>
<th>Approval Rate (N)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Campus</td>
<td>Women</td>
<td>Men</td>
</tr>
<tr>
<td>New Brunswick</td>
<td>10</td>
<td>24</td>
</tr>
<tr>
<td>Newark</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>Camden</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Business - N &amp; NB</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>TOTAL</td>
<td>18</td>
<td>33</td>
</tr>
</tbody>
</table>

Tables 4a and 4b in Appendix C follow the next two tiers of rank advancement for women, from Associate Professor to Professor I, and from Professor I to Professor II (the highest regular rank
for Rutgers faculty, other than Special Professors, who typically also have a Professor I or Professor II rank; see Table C.8 for addition information on Special Professors). Overall, 46 faculty in AY2007-08 (baseline) and 33 faculty in AY 2008-09 (year 1) were reviewed for promotion to one of two ranks of full professor. For the baseline year, the portion of women under review was 45.7%, more than the percentage of women overall at Rutgers, which is 37.1%. For year 1, the number of promotion reviews dropped to 33 and of these, only 7 were women (21.2%). In terms of approval rate, women were more likely to succeed in getting promoted than men were (95.2% compared to 80.0%) in baseline year; the following year, nearly all (32/33) reviews were approved by the PRC.

The next set of indicator tables maps the years in rank relative to rank at the time of hire for baseline and year 1, following the NSF toolkit. The group of tables (see Appendix C) shows the number and percentage of women faculty with respect to years in rank (aggregated over three-year time periods) relative to the following ranks at hire:

- 5a: Years in Rank at Associate Professor for Faculty Hired as Assistant Professors
- 5b: Years in Rank at Associate Professor for Faculty Hired as Associate Professors
- 5c: Years in Rank at Professor I for Faculty Hired as Assistant Professors
- 5d: Years in Rank at Professor I for Faculty Hired as Associate Professors
- 5e: Years in Rank at Professor I for Faculty Hired as Professor I

The data set on years in rank is constrained by the lack of electronic and central databases at the University before 1997 (see section 8.1 on institutional data collection). Our ability to track beyond a window of 11 years limits a more informative longitudinal view, especially for the more senior ranks. We are now working with Human Resources to obtain these data going back to the 1970s, which should allow for a more robust analysis, including the average number of years in rank by gender. The data for the baseline year show that in both STEM and SBS fields, men who were hired as assistant professors and who were promoted to associate professor at Rutgers were more likely than women to spend two or fewer years in rank as associate professors (56 vs. 47 percent for STEM and 50 vs. 42 percent for SBS). Women were more likely than men in both fields to spend 3-5 years in associate rank (53 vs. 44 percent for STEM and 53 vs. 40 percent). This trend appears in the data for year 1 as well, particularly for SBS departments. A fuller analysis awaits additional data availability.

Table 6 in Appendix C looks at voluntary attrition—those faculty who left the university for reasons other than retirement, “not qualified,” long-term disability, disciplinary dismissal, laid-off, or death. The faculty included in table 6 left Rutgers to accept other offers or cited family or health reasons as factoring in their decision. For the university as a whole, a total of six faculty in 2007-08 and 15 faculty in 2008-09 left the university. Of these, one-third were women (2/6) in the baseline year and 27 percent (4/11) in year 1. Women were more likely than men to leave the university as assistant professors (100 vs. 50 percent for baseline; 75 vs. 36 percent for year 1).

8.3c Women’s Leadership: Rutgers University ranks full professors as Professor I, Professor II, and Special Professors. Special professors include: Board of Governors Professorships, Board of Governors Distinguished Service Professorships, Endowed Chairs, Named Professors, and University Professors. In addition to professorial rank, faculty may hold various administrative
titles or serve on leadership committees, such as the Promotion Review Committee (PRC) that reviews and votes on every faculty candidate for promotion. Table 8 in Appendix C gives the number and percentage of women in leadership positions for the university as a whole (SEM + non-SEM) and by campus. Overall, women comprise about a quarter of the leadership roles, with roughly equivalent levels of participation on the three campuses. The data on professorships does not distinguish SEM from non-SEM disciplines and so we cannot now report on whether women’s representation among the elite faculty is different for the sciences. We also do not yet have gender data on the number and percentage of women who are department chairs or graduate directors. These data too should allow us to collect information on women’s leadership participation in SEM, separate from the university as a whole. Other leadership categories are aggregated across disciplinary lines: deans, executive administrators, and PRC members.

The number and percentage of women deans at the university dropped from 19 percent (4/21) in 2007-08 to 9 percent (2/21) in 2008-09. Along with other women on campus (most notably Professor (now emerita) Mary Hartman, founding director of the Institute for Women’s Leadership), PI Joan W. Bennett, and co-PI Patricia Roos initiated discussions with the President and Executive Vice President about this decline in the number of deans at New Brunswick, and the administrators responded with useful ideas for moving forward. RU FAIR has set as one of its priorities the task of reversing this trend. We have also cultivated relationships with several senior deans, who are now members of the RU FAIR ADVANCE Consortium. We also plan to obtain data on the broad number of EAMs (executive/administrative/managerial) at Rutgers by year where we expect to see that more women are now playing leadership roles at the tier below the top-level deans.

8.3d Race and Gender: In terms of total minority faculty, Rutgers ranks eleventh among all AAU public institutions (out of a total of 35). Currently at Rutgers University, 21.3% of faculty identify as American Indian/Alaskan Native Asian/Pacific Islander, black, Hispanic, or other non-white. In the 2009-10 academic year, there were 49 minority women in SEM disciplines at Rutgers University (New Brunswick, Camden, and Newark), out of 229 SEM women (21.4%). The comparable figure for minority men is 21.2% (160/754).

From 2007-08 (baseline) to 2009-10 (year two), the SEM faculty (tenured and tenure-track) increased by 6 percent. The number of men grew by 5 percent and the number of women by 12 percent. Taking race into account as well, the percentage of faculty who identified as minority grew by 15 percent, from 19.6% of the total SEM faculty in 2007-08 to 21.3% in 2009-10. White faculty grew by only 4 percent in this same time period. The largest percent increase was for minority women, whose presence on the SEM faculty grew by 32 percent. The rate of increase for minority male faculty was 11 percent. These data are shown in Table 9 in Appendix C.

8.3e Salary Studies: Table 10a in Appendix C shows salary by gender and department across all ranks, while Table C.10b captures rank as well as gender and department. For the baseline year, the earnings ratio of female to male across all SEM departments and centers in Camden, Newark, and New Brunswick is 88.0%, with women’s average salary being over $13,500 less than men’s (n=924 faculty).
Figure B.8 shows the distribution of earnings ratios across the total number of SEM departments for which a ratio can be calculated (for SEM departments and centers in which there are no tenured or tenure-track faculty an earnings ratio cannot be reported). For the baseline year, a quarter of SEM women earn more than men, while SEM men earn more than women in the remaining three-quarters of departments. In Year 1, the comparable percentages are 35 and 65 percent, respectively. These percentages, however, reflect small numbers and may not accurately represent salary disparities.

We have not yet carried out a systematic statistical analysis on these data, but expect to do so over the next year. The salary data compiled by economist John W. Graham for Newark, however, were analyzed using multiple regression to isolate the impact of specific factors on salaries and promotion rates. The most general finding from Graham’s study is that gender is not a statistically significant determinant of either current salary or academic rank (see section 8.10 for a fuller discussion and Appendix D for the complete report). We plan similar analyses for the other campuses.

Returning to the university-wide data set, Table B.4 demonstrates that higher earnings ratios based on average salary do not cluster by field, though the salaries for female faculty compared to male faculty tend to be less in the Social and Behavioral Sciences, Engineering, and among SEM faculty at Camden and Newark. Salaries for male and female faculty in the School of Environmental Sciences-New Brunswick and at Rutgers-Camden tend to be lower than other units, as reflected in lower earnings ratios in these units. The range of men’s salaries is larger than women’s, with higher maxima for men. Again, multiple regression analysis would be required to determine whether these differences are an important net of other differences that differentiate the sexes.
Table B.4: Earnings Ratio and Range of SEM Women’s Salaries Compared to Men’s Salaries for AY 2008-09

<table>
<thead>
<tr>
<th>Field and Campus</th>
<th>Earnings Ratio (W/M)</th>
<th>Range Limits for Female and Male Faculty</th>
</tr>
</thead>
<tbody>
<tr>
<td>Life Sciences, New Brunswick</td>
<td>96.3%</td>
<td>74,251 – 176,757</td>
</tr>
<tr>
<td></td>
<td></td>
<td>72,773 – 237,465</td>
</tr>
<tr>
<td>Math and Physical Sciences, New Brunswick</td>
<td>97.5%</td>
<td>75,039 – 206,949</td>
</tr>
<tr>
<td></td>
<td></td>
<td>67,078 – 235,575</td>
</tr>
<tr>
<td>Social and Behavioral Sciences, New Brunswick</td>
<td>87.2%</td>
<td>65,000 – 189,145</td>
</tr>
<tr>
<td></td>
<td></td>
<td>64,162 – 229,533</td>
</tr>
<tr>
<td>Environmental and Biological Sciences, New Brunswick</td>
<td>91.7%</td>
<td>64,800 – 175,864</td>
</tr>
<tr>
<td></td>
<td></td>
<td>61,111 – 192,301</td>
</tr>
<tr>
<td>School of Engineering, New Brunswick</td>
<td>86.6%</td>
<td>79,198 – 163,748</td>
</tr>
<tr>
<td></td>
<td></td>
<td>76,340 – 244,171</td>
</tr>
<tr>
<td>SEM, Newark</td>
<td>86.4%</td>
<td>60,480 – 133,898</td>
</tr>
<tr>
<td></td>
<td></td>
<td>63,000 – 269,101</td>
</tr>
<tr>
<td>SEM, Camden</td>
<td>82.7%</td>
<td>54,099 – 171,797</td>
</tr>
<tr>
<td></td>
<td></td>
<td>60,000 – 161,612</td>
</tr>
</tbody>
</table>

Salaries can also be tabulated by rank. Table B.5 shows the average salary for women and men by rank. The largest difference in earnings is seen at the level of assistant professor, warranting additional study of start-up packages for male and female faculty.

Table B.5: SEM Women’s and Men’s Average Salary and Earnings Ratio by Rank for AY 2007-08 and AY 2008-09

<table>
<thead>
<tr>
<th>BASELINE (2007-08)</th>
<th>Women (n=204)</th>
<th>Men (n=720)</th>
<th>Earnings Ratio (W/M)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assistant Professor</td>
<td>71,637</td>
<td>77,404</td>
<td>92.5%</td>
</tr>
<tr>
<td>Associate Professor</td>
<td>88,235</td>
<td>90,161</td>
<td>97.9%</td>
</tr>
<tr>
<td>Professor I</td>
<td>116,774</td>
<td>114,801</td>
<td>101.7%</td>
</tr>
<tr>
<td>Professor II</td>
<td>152,332</td>
<td>151,464</td>
<td>100.6%</td>
</tr>
<tr>
<td>YEAR 1 (2008-09)</td>
<td>Women (n=222)</td>
<td>Men (n=749)</td>
<td>Earnings Ratio</td>
</tr>
<tr>
<td>Assistant Professor</td>
<td>76,656</td>
<td>81,377</td>
<td>94.2%</td>
</tr>
<tr>
<td>Associate Professor</td>
<td>90,453</td>
<td>95,105</td>
<td>95.1%</td>
</tr>
<tr>
<td>Professor I</td>
<td>123,919</td>
<td>120,699</td>
<td>102.7%</td>
</tr>
<tr>
<td>Professor II</td>
<td>157,523</td>
<td>161,053</td>
<td>97.8%</td>
</tr>
</tbody>
</table>