Office for the Promotion of Women in Science, Engineering and Mathematics (SciWomen)

Rutgers, The State University of New Jersey

RU FAIR/ NSF ADVANCE

Quarterly Report
June 1, 2011 – August 31, 2011
Significant Accomplishments

Site-Visit Follow-up: Progress at Camden

After completing the 6/1/11 Annual Report, we spent much time and energy working on a response to the May 17, 2011 report on our February 3-4 site visit. Buettner and Roos led the effort, culminating in our June 20, 2011 response. The site visit members provided valuable feedback that has helped reshape our thinking and reorient our approach. We describe several of our critical new initiatives below, including the Women of Color Scholars initiative and the data warehouse.

In addition to these critical initiatives, we developed a more refined logic model that better connected our interventions to needs and outcomes, and reviewed the allocation of resources by campus and initiative. One important outcome was a reallocation of our resources, sending more funding to Camden for the last two years of the grant. Reflecting that reallocation, we made key additions to our Camden team, including William Whitlow (co-PI), Suneeta Ramaswami (RU FAIR Professor, joining Georgia Arbuckle-Keil), and a new project coordinator (a search is now under way). We also targeted additional funding to ramp up the Camden mini-grant program and provide additional support funding for the co-PI and RU FAIR Professors.

Women of Color Scholars Initiative (WoCS) Initiative

We made great progress this past quarter in ramping up our support for the Women of Color Scholars Initiative. As part of our re-budgeting process as we move into year 4, we allocated additional dollars to the WoCS Initiative. We will begin to link more directly with the new Consortium for Diversity and Equity (CDE) to further institutionalize support for Women of Color faculty.

We are delighted to announce the addition of Professor Yolanda Martinez-San Miguel (SAS-Latino Studies and Comparative Literature) to our leadership team, as an RU FAIR Professor focused on women of color issues. She joins co-PI Helen Buettner as a New Brunswick RU FAIR Professor (other RU FAIR Professors were also named for Camden and Newark, and we now have two on each campus). We also significantly increased the allocation of resources to support the WoCS Initiative. We will provide a minimum of $35,000 per year (the same amount allocated to each RU FAIR Professor) for AY 2011-12 and AY 2012-13, and are already hard at work supporting the WoCS Initiative leadership’s efforts to leverage these funds moving forward.

Joining Prof. Martinez-San Miguel are Prof. Rocio Magana (SAS-Anthropology), who is serving as Director of the WoCS Initiative for 2011-12, and a half-time graduate student, Abe Weil (@20 hours per week). This new structure places the program in exceedingly good hands, with significant resources, as we move to institutionalize and build on its prior successes. In consultation with her colleagues, Professor Magana has designed an exciting program of events for this academic year, and Professor Martinez-San Miguel has agreed to house the WoCS Initiative at the Institute for Research on
Women, assist with programming, and help to provide an institutional home for the WoCS Initiative after the RU FAIR ADVANCE funds phase out. Martinez-San Miguel, Magaña, and Roos are drafting a letter to the Executive Dean of the School of Arts & Sciences (SAS) to both request additional funding, and to work with SAS to do additional fundraising, to leverage the $35,000 RU FAIR funds. We will continue to meet with relevant university administrators to fundraise for this effort.

With the assistance of IRW staff, Professors Martinez-San Miguel and Magaña have been working hard to develop an exciting set of plans for AY 2011-12 (see Appendix A), including the second annual Women of Color Research Symposium (to be held in February or March 2012). Early this semester, the WoCS Initiative held a Third Year Review Faculty Narrative Clinic in which faculty coming up for promotion had the opportunity to converse with each other, as well as receive one-on-one feedback on their promotion narratives. To continue efforts to foster a sense of community for the faculty who participate, WoCS Initiative will also host a monthly off-campus gathering, RU FoCUSED Hour—Rutgers Faculty of Color & University Scholars for Excellence in Diversity Hour—which will support faculty in community building as well as create positive networking and collaborating opportunities.

To tie these initiatives to our research goals, we are well underway in mounting a new interviewing project. In October 2010, Crystal Bedley, RU FAIR graduate assistant and liaison to the WoCS group, conducted a focus group with faculty who participate in the WoCS Initiative. One goal of this focus group was to assess challenges facing these scholars in their professional lives and in the tenure process. We learned how valuable the WoCS Initiative has been in helping faculty to navigate the complexity of Rutgers’ bureaucracy and cultures. These findings informed our strategies for expanding the WoCS Initiative. Bedley is spearheading (with WoCS initiating faculty member Robyn Rodriguez and co-PI Roos) an intensive interview schedule for self-identified women of color across the Camden, Newark, and New Brunswick campuses. This project will allow us to address a lack of data and analyses about the barriers impacting the retention and promotion of women of color faculty, and will supplement the data warehouse data we have been collecting through the NSF Indicator data. The design of this project not only will allow us to determine barriers affecting women faculty of color, but will also allow us to compare the experiences of women of color faculty who participate in the WoCS Initiative with those who do not. Grounded in the literature describing the isolation faced by faculty women of color at large research universities, we will explore the extent to which a sense of belonging can serve to mitigate barriers to retention and promotion. The IRB process for this interview project is now complete, and we anticipate commencing interviews this Fall, with analyses occurring over AY 2011-12.

As we are completing this report, we just learned that Interim Executive Vice President Richard Edwards has appointed a new diversity working group that will offer recommendations for his office re moving forward on enhancing the recruitment and retention of a diverse faculty. The group is an excellent and diverse group of faculty and administrators, and includes our newest RU FAIR Professor, Yolanda Martinez-San
Miguel. We look forward to hearing more from this group, and expect to work with this
group to further our fundraising efforts for the WoCS group.

**Participation of Two Rutgers Faculty in Women Take Flight Program**

Introducing women in STEM fields to aviation to yield the development of
leadership skills for alternate settings, this novel program started in 2005 by Linda
Castner --with the financial help of the US Department of Transportation Garrett A.
Morgan Technology and Transportation Education Program-- hopes to spread Castner’s
enthusiasm for aviation and science to young female students as well as faculty.
Through education and implementation of skills acquired through workshops, this
program works to build women’s confidence by introducing them to unfamiliar terrain
where they take control of their own destinations as well as destinies (see Appendix B).

**Program Chair at WEPAN Conference**

Our Program Coordinator, Christina Leshko, took on the role of Program Chair for
the 2011 Women in Engineering ProActive Network (WEPAN) Annual conference held in
Seattle, Washington from June 21-23, 2011. As Program Chair, Christina coordinated the
submission, review, and revision of 60 abstracts and 28 papers for inclusion in the
conference. Christina’s role not only contributed to her professional development, but
also promoted national recognition of the RU FAIR ADVANCE program and the Office for
the Promotion of Women in Science, Engineering, and Mathematics through her
interactions with members of the WEPAN community.

In addition to serving as Program Chair, Christina presented two posters, “Building
Foundations for Change: The Mini-grant Mechanism” and “A Leadership Program for
Women: Meeting Professional and Personal Goals,” which are published in the 2011
Conference Proceedings.

**Stony Brook Summer Institute on Science Communication**

Alby Luchko (Coordinator, Science Communication) joined 35 university leaders
from around the country, and actor Alan Alda, at an innovative conference dedicated to
improving the way scientists communicate with the public. The four-day Communicating
Science Summer Institute was conducted by the center for Communicating Science at
Stony Brook University in New York, which is developing dynamic ways to help scientists
speak and write about their work clearly and conversationally in ways non-scientists can
understand. The meeting, held June 5 - 9, was supported by funding from The Kavli
Foundation and the U.S. Department of Education. SciWomen will be introducing these
techniques into the OASIS program through two workshops: Distilling Your Message
(led by Alby Luchko) and Improvisation for Scientists (led by Kevin Kittle from the Mason
Gross School of the Arts).

**Institutional Reform Sparked by Brochure**

The new RU FAIR Brochure features the Women of Color Scholars (WoCS)
Initiative and all six RU FAIR Professors. We have been working with members of
Rutgers University Relations to put together a professional brochure. The brochures are due for delivery by the end of the month. In the process, we have learned that diversity is not well represented in the photo selection available through Rutgers Creative Services. Specifically, we were not able to find any women of color or women of any other underrepresented group shown in a leadership position. We will be working with Creative Services and our WoCS team to rectify this.

Award Nominations

Over the course of the last few months we have submitted nominations for awards ranging in criteria from successful engineering entrepreneurs and lifetime achievements to honoring extensive efforts to engage the public in the sciences. We nominated professor of materials science & engineering, Dr. Lisa C. Klein, for the American Society of Mechanical Engineers’ Kate Gleason Award for her innovational research and patenting of various uses of sol-gel processing—including the design of “smart” electrochromic windows. For her many contributions both as an educator and practitioner of gynecology and reproductive medicine, we nominated Professor Gloria A. Bachmann for Rutgers’ Hall of Distinguished Alumni Award. The final nomination that we submitted this quarter was for professor of cell biology & neuroscience, Dr. Kathleen M. Scott. In mid August, we nominated Dr. Scott for the American Association for the Advancement of Science’s Public Engagement in Science Award for her tireless efforts to involve and excite the general public about the sciences through such novel programs as the Rutgers Science Explorer bus and GK12: Building a Learning Community in Science & Mathematics through Educational Partnerships.

Thus far, we have received an abundance of cooperation from nominees and reference faculty who aid us in the nomination process through the submission of such items as updated curriculum vitae and glowing letters of recommendation for these remarkable women. In the hopes of continuing the headway that we have made this quarter, we have circulated announcements about upcoming awards through our listserv so that SciWomen faculty members can continue to get the visibility and recognition that they so richly deserve.

Data Warehouse

The existing data warehouse is an important component of our developing strategy, and we have made significant strides over this past quarter. As noted in the Annual Report (see Sections 8.1b & c, and 9), we identified and rectified problems with the existing data (e.g., “the 1997 problem,”) and the operationalization of earnings. This unique data warehouse is now nearly ready for data analyses, to be conducted both by team members and mini-grant recipients.

An important program strategy is to institutionalize the data warehouse, and the partnerships that support it (RU FAIR ADVANCE, OIRAP, UHR, deans units, campus leaders, social scientists). The physical data warehouse itself is housed in OIRAP. To ensure its future vitality and growth, however, we also need to institutionalize the set of partnerships that have created, and will continue to develop and maintain, the data
warehouse beyond the term of the grant (2013). Our vision is to institutionalize those partnerships into a joint Center for Women & Work/SciWomen unit that will provide much needed social science and substantive research input into the future growth of the data warehouse. We've already made important steps toward that goal, and will bring this to fruition in the final two years of the grant. This unit will fulfill a promise that originated in the 2001 FAS Gender Equity report, which recommended just such a unit. The RU FAIR grant has delivered on that recommendation 10 years later. We have received modest funding from the SMLR and SAS Deans offices (specifically, for a one-course release for Roos) to leverage RU FAIR ADVANCE funds toward this end over this next year.

We have two research projects that will be the first to use the data warehouse. We have funded mini-grant recipient Mark Killingsworth (SAS-Economics) to conduct a multivariate analysis of earnings on all three Rutgers campuses. Importantly, with the new HR data management system (as of January 1, 2011), we can move beyond a simple focus on pay rate to take into account other sources of earnings, such as out-of-cycle pay. Institutional Research, in conjunction with HR, is now readying these data to make them available for Prof. Killingsworth, addressing important issues of confidentiality in the process. All indications suggest that these data should be available soon. Roos and Bedley also plan a career trajectory study—now possible with our longitudinal data warehouse—to follow three cohorts of faculty through the promotion system (those entering 1977-80, 1987-90, and 1997-2000). This study has not previously been conducted at Rutgers precisely because the relevant data were not available.

Finally, in moving toward institutionalizing the data warehouse, Roos has initiated further conversations with the Center for Women & Work to house the data warehouse partnerships we have developed over the years. Toward that end, Teresa Boyer (CWW) and Roos applied for a grant from the Elsevier Foundation (submitted 9/1/11) to leverage RU FAIR ADVANCE funding for the data warehouse. As discussed in the July 1 Annual Report and Site Visit response, we plan to institutionalize the data warehouse in a joint, permanent unit at CWW and SciWomen. The 9/1/11 proposal seeks funds from the Elsevier Foundation to institutionalize the longitudinal data warehouse on gender and race/ethnicity in academic careers to inform policy and programs to recruit and retain diverse new scholars in science, engineering, and mathematics (SEM) fields.

Rutgers is uniquely poised to serve as an exemplar among higher education institutions in increasing the number of women and minorities in university faculty and leadership positions. A key component of the ADVANCE grant is the development of a Data Warehouse on academic careers. Toward that end, we have created a model using resources available at many institutions that can be integrated to form the sort of comprehensive data set needed to inform change. The Elsevier proposal requests three years of funding to expand and institutionalize this research capacity into a joint, permanent unit in the Center for Women & Work and the Office for the Promotion of Women in Science, Engineering, and Mathematics (SciWomen). This joint unit is key to
the institutionalization of a basic research capacity on gender and race equity issues into ongoing institutional research efforts. With funding from Elsevier, we propose to convene a faculty work group that will assist us to:

- Make recommendations for practical use of the Data Warehouse,
- Provide access to the Data Warehouse for Rutgers and external scholars and policy-makers,
- Create a scalable model that can be used by other institutions seeking to increase the retention and advancement of diverse new scholars, and
- Disseminate the model and best practices.

Exemplifying the organic nature of the data warehouse, and the need for ongoing partnerships to manage the data and its use, there continue to be remaining issues to be resolved. Rutgers has a serious problem moving forward in measuring race, a problem it shares with other universities. Because of changes in federal guidelines, from Jan. 1, 2011 all data on race must be self-reported, and employees cannot be compelled to provide their race (see Section 9.1 in 2011 Annual Report for additional details on this issue). When Rutgers moved to its new Human Capital Management system as of January 1, 2011, they created a self-service component that encourages staff and faculty to self-report race. From our conversations with HR and OIRAP personnel, however, we understand that as of 5/3/11, 97 (or 76 percent) of the 127 faculty hired since January 1, 2011 currently have “null” as their race. As recently as June 15, 2011, Vice President of Faculty & Staff Resources (HR) Vivian Fernandez sent an email to all faculty and staff with detailed instructions about how to change race/ethnicity information online. HR is exploring other options to enhance compliance, but federal guidelines expressly forbid mandating employees to self-identify race. In the long run, we will likely have to include a “null” code for those who do not self-identify race. We will continue to monitor this issue as we move forward.

Just last week, we learned of yet another example of the need to continue to manage the data warehouse: while we have addressed “the 1997 problem” for many of the important variables needed, this problem is not fully solved for all variables available through the OIRAP/HR data base. While we have fully longitudinal data for many of the important variables (e.g., rank, job title), other variables are still only available from 1997 on (e.g., separation code, department and campus, part-time vs. full-time status, earnings). We will continue to work with OIRAP and HR to bring as many of these variables online for the full period of data availability (1976 on).

Interviewing: Exit and Entrance Interviews

We have continued to make slow but steady progress in our interviewing of those faculty leaving and entering Rutgers over this past quarter. More broadly, over this past year, we successfully revived our exit and entrance interviews, and to date have completed 12 exit interviews and 16 entrance interviews of faculty in SEM disciplines, with other potential respondents contacted. Those interviews are almost
completely transcribed and analyses will commence this fall. [We currently have stayer interviews on hold, and will reconsider whether to proceed with them once we have completed the exit and entrance interviews (to date we have completed only the pilot stayer interview).]

With respect to exit interviews, we began with a successful pilot interview, and then worked with RU Professor Georgia Arbuckle-Keil to secure exit interviews with SEM faculty who left Camden between 1998 and 2007 (successfully reaching 5 of the 7 exiting Camden faculty members recommended by Dr. Arbuckle-Keil). We then focused more directly on those who left any Rutgers campus (Camden, Newark, or New Brunswick) from 2007 to the present, using lists provided by OIRAP of faculty who indicated "accepted new position" as their reason for separating from Rutgers. We interviewed nine such faculty, one faculty member refused, and ten others have been invited to participate (we were unable to locate one exiting faculty member).

With respect to entrance interviews, following a successful pilot interview, we conducted six interviews with senior SEM faculty entrants who arrived prior to AY 2008-09. Using the OIRAP entrance list, we then more systematically sought out faculty in SEM disciplines who arrived at Rutgers from 2008-09 to the present, starting with the most recent year and moving backward. Of the 21 senior faculty arriving since 2009-10, we have interviewed eight, one has refused, one could not be found, and the others have been invited to participate but have not responded or are in the process of having interviews set up. We are hopeful that we will continue to secure additional interviews into this next year. By October 2011, we will have names of new exiters and entrance faculty with whom we can follow-up.

Other Research in Progress

Our mini-grant recipient, Patrick McKay (SMLR) made good progress over the summer on his study of the effects of diversity climate on work attitudes and retention. With the help of Roos and Bedley, McKay has completed a consent form and survey and the project is now ready to go. McKay has submitted the required IRB amendment, and we expect to field this survey early in the semester. Roos and Bedley will field the survey, and send the de-identified data to McKay for his analyses.

Paul McLean, who is another mini-grant recipient, and his grad assistants met over the summer to review the data obtained from the pilot social science department for the networks of opportunity and influence study. Roos assisted in getting linked data from Institutional Research for networked faculty identified from the relevant department. McLean has now begun to meet with Co-PI Helen Buettner in Engineering, and the leadership in other departments, to secure their cooperation in generating additional department data.

Best Ideas Yet

In addition to the above mentioned increased allocations and administrative support for the Camden Campus and two RU FAIR profs on each campus, additional
funding to WoCS Initiative, and the institutionalization of the data warehouse in a joint unit at CWW/SciWomen to centralize partnerships moving forward, below please find additional “Best Ideas Yet” items highlighted below.

New Budget/Administration Support: Sharon Fortin-Kramer

Sharon Fortin-Kramer, Project Manager in the Office of the Executive Vice President for Academic Affairs, and Office of Institutional Diversity and Equity, will work with SciWomen/RU FAIR ADVANCE group at least for the next quarter to guide decisions related to budget and administration of the RU FAIR grant. Ms. Fortin-Kramer is an academic administrator for budgeting & finance, and an expert in human resources & compensation, policy & process development, and labor contract interpretation. In previous projects she has proven to be a great asset to the teams she supported because of her insistence on accuracy and excellence and has a proven history of leading performance. Ms. Fortin-Kramer has excellent oral and written communication skills with supervisory & team leadership experience. She understands organizations small to large, internal & external political climates, and change management strategies and execution. Ms. Fortin-Kramer has a B.A. in Political Science from Rutgers College and is a candidate for a Masters in School of Management & Labor Relations (SMLR) in Human Resource Management (2012).

New Faculty Welcome, hosted by Rutgers Human Resource Department

On August 31st, Natalie Batmanian, and new program coordinator for RU FAIR, Yvonne Gonzalez, reserved a table at the Rutgers human Resource Department’s “New Faculty Welcome” Event. Along with the opportunity to get RU FAIR ADVANCE information and presence out there, Natalie and Yvonne were able to network and verbally connect with at least a dozen of the faculty members new to Rutgers this year. Overall, our participation in this event was a successful venture that helped to increase our office’s visibility to faculty members as well as inform them of the invaluable resources we provide, and gave us an opportunity to invite these new faculty to the first Annual SciWomen New Faculty Welcome event on September 16, 2011. We are inviting new male and female faculty in science, engineering, and math departments to an afternoon dessert reception. The program includes meeting new faculty and also introducing the new faces at SciWomen and RU FAIR. We hope to make this an annual event.

Bench to Bedside Panel Series

The “Bench to Bedside Panel Discussions” is a new series of panels that include a researcher, a clinician, and their patient. Each panel follows the story of a particular disease from the research lab to the clinic and into a patient’s life. We aim to feature women scientists as well as women’s health issues whenever possible. The inaugural panel will be featured at the Third Annual Science & Health Fair on September 27.
**Areas of Difficulty**

Our greatest challenge continues to be the vacancy of the RU FAIR Director position, which has been vacant since February 2011. We have identified an excellent candidate, but our continuing budget difficulties have made it difficult to ensure that we have the funds required to fund this position. We expect Sharon Fortin-Kramer to help us move forward to getting our Director in place.

**Personnel Update**

Joining our outstanding team of educators this year are four new faces: professors Suneeta Ramaswami, Yolanda Martínez-San Miguel, Jyl Josephson, and J.W. (Bill) Whitlow. Although they are new faces to the RU FAIR ADVANCE program, they are by no means new to the world of academia here at Rutgers.

Professor Suneeta Ramaswami earned her PhD in computer and information science from the University of Pennsylvania. She then served as a post-doctoral fellow for the Computational Geometry Group at McGill University before coming to teach for the Department of Computer Science at Rutgers-Camden. She specializes in computational geometry, adaptive meshing techniques for applications in medical imaging, and multivariate data depth computation.

Professor Yolanda Martínez-San Miguel joined the Department of Latino and Hispanic Caribbean Studies and the Comparative Literature program at Rutgers-New Brunswick after earning both her masters and PhD from the University of California at Berkeley. She both researches and teaches such topics as Latin-American literature, colonial and postcolonial theory, and literary theory. She also has authored several books on related subject matters. Additionally, she is the current Director of the Institute for Research on Women (IRW) at Rutgers.

After her invaluable service as a Co-PI for the RU FAIR ADVANCE program, Professor Kathryn Uhrich stepped down as Co-PI. She remains as Dean of Mathematical and Physical Sciences, School of Arts & Sciences at Rutgers, New Brunswick. She also recently was named as the first woman to be selected for the distinguished Turner Alfrey Visiting Professorship, hosted by Dow and Michigan Schools, since its inception in 1974. Filling her position as Co-PI is Camden Professor of Psychology J.W. (Bill) Whitlow. As a professor of psychobiology and cognition, Professor Whitlow’s research focuses on basic cognitive mechanisms of learning, memory, and judgment. As a teacher and a mentor he has encouraged many female and minority undergraduates to enroll in doctoral programs. For the past two decades, he has directed the Science Partnership Alliance of Rutgers and Camden (SPARC), a science education outreach initiative supported by Federal, state, and local grants that is designed to increase diversity in the science pipeline, working with teachers and students in Camden, NJ and its surrounding communities as well as with teachers in the Eastern Cape province of South Africa.

Maggie Shiffrar has stepped down as co-RUFAIR Professor, and a new colleague is replacing her. Judith Weis is looking forward to working with Professor Jyl Josephson, an Associate Professor of Political Science and former Director of Women’s Studies at
Rutgers-Newark. She is the author of Gender, Families, and State: Child Support Policy in the United States (1997) and co-edited Fundamental Differences: Feminists Talk Back to Social Conservatives (2003) with Cynthia Burack as well as Gender and American Politics: Women, Men, and the Political Process, 2nd ed., (2005) with Sue Tolleson Rinehart. She is studying projects that seek to make schools safer for lesbian, gay, bisexual, and transgender students and their allies. Her other major projects include a book that examines privacy and intimate life from the perspective of groups whose privacy claims most frequently have been disparaged and foreclosed, and research on the development of a faith-based community organization in west Texas. While on a Fulbright fellowship during the spring semester of 2011, she taught the Politics of Sexuality at the Centre for Women's and Gender Research (RIKK) at the University of Iceland in Reykjavík. The course introduced Icelandic students to gender and public and social policy and politics in the American context, while Jyl studied gender policies and politics in Iceland, a country known for its progressive views on gender equality.

Another addition to the RU FAIR ADVANCE program—as well as the SciWomen office—is our new program coordinator, Yvonne Gonzalez. After graduating from Rutgers with a bachelor’s degree in urban planning & public policy, Yvonne stayed at Rutgers to work for the New Jersey Statewide Systemic Initiative—a program designed to improve STEM education in New Jersey. Before joining the SciWomen team, she also worked for the Franklin Township Public School District as a data specialist. Having only joined our team in August, she has already proven to be an impressive addition to our team. As we welcome Yvonne, we would also like to wish our former RU FAIR ADVANCE program coordinator Christina Leshko good luck pursuing doctoral studies in sociology at Michigan State University. She was a tremendous and tireless asset and will be sorely missed.

**Behind the Scenes on the SciWomen Team!**

Arian Craig graduated from Rutgers’ School of Arts and Sciences in 2011 with a bachelor’s degree in psychology. Prior to joining our team, Arian was the event coordinator of Rutgers Campus Coalition Against Trafficking. As part of the SciWomen team, she works to promote and coordinate events such as the 2011 Science & Health Fair, lectures by guest speakers, and networking events.

Margaret Hare graduated from Douglass College in 2010 with a bachelor’s degree in English. She is now putting her writing skills to use composing segments for the “News” section of the SciWomen website, updating faculty profiles—including working on the “My Story” sections of the profiles—and drafting and coordinating award nominations. She also helps organize and draft various other projects—including the RU FAIR and OASIS programs—within the office.

Alvin Nyaboga graduated from Rutgers University with a bachelor’s degree in cell biology and neuroscience. Currently, Alvin is attending the Graduate School of Biomedical Sciences at UMDNJ in Stratford, New Jersey. While working for the SciWomen team, Alvin assisted in development of the RU-FAIR Interactive New Faculty Search Committee Training Module. He also used the completed training modules of other ADVANCE grant universities to help shape the focus and structure of the RU-FAIR
training module. Alvin also researched several journals and papers for any references that could be added to the training module, and participated in the recording of the voice segments used on the module web page.

Devangi Patel graduated from Rutgers May 2011 and worked as a program assistant at the Institute for Women’s Leadership before coming to SciWomen. While working with the team, she helped to streamline public relations and increase awareness of the programs the SciWomen office offers to students. She is now a first year osteopathic medical student School of Osteopathic Medicine at UMDNJ.

Website: http://sciencewomen.rutgers.edu/
Appendix B Rutgers women take on the challenge of flight – Rutgers Focus Article:


Rutgers News Center

July 20, 2011

Off We Go Into the Wild Blue Yonder

Rutgers women take on the challenge of flight

By Robin Lally

Christine Zardecki, a research associate in the Protein Data Bank, takes to the sky.

Christine Zardecki, a research associate at the Rutgers-based Protein Data Bank, and Tahreen Chowdhury, who graduated this spring with a master’s degree in physics education, aren’t the type of women who turn down a challenge. Still, sitting in a cockpit, flying a plane, they both insist, was never on their radar screen or bucket list.

“Never in my life did I think I would do this,” said Chowdhury, who was selected along with Zardecki and 10 other New Jersey and Pennsylvania STEM, science, technology, engineering, and math educators to participate in a “Leaders Take Flight” program that concluded with a two-hour flying lesson. The same could be said for Zardecki who believed that, other than Amelia Earhart, more often than not, it was men who piloted planes.

“I have to say that I never gave it much thought and didn’t think it was something that I would ever do,” Zardecki said.

A unique program aims to open up the world of aviation to women in science, engineering, technology, and math. That was until these two science educators each received a $2,500 scholarship awarded by the U.S. Department of Transportation Garrett A. Morgan Technology and Transportation Education Program. The aim: to immerse these female educators in the world of general aviation in an intensive two-day program that its founders hope will encourage students, particularly girls, to pursue careers in science, technology, engineering, math, and aviation.

“Can you imagine a new generation of enthusiastic, highly motivated kids who got excited about science, technology, engineering, and math through general aviation activities,” said Linda Castner, a pilot and co-owner of Alexandria Field, a small airport in Hunterdon County where the program is offered. “It could reshape our country and the world.”

Tahreen Chowdhury, who recently earned her master's from Rutgers in physics education, participated in the Leaders Take Flight program.
Castner, who started the program in 2005, said the “Take Flight” workshops use airplanes as a learning environment where a person can develop leadership skills important for the classroom or a business setting.

In order for someone to know courage, Castner believes, they must first understand fear and risk. In the classroom and in the cockpit women who participate in the program gain a sense of seeing other women do what society has long said they could or should not do, Castner said. Although the number of licensed female pilots has increased in the last decade, from 5.6 percent in 2001 to 6.7 percent today, a relatively small number of pilots are women.

Zardecki, who works with students, educators, and research scientists to promote an understanding of biology at the molecular level, said the experience – including classroom instruction, experiential activities and two hours in the air – gave her the self-confidence needed to adapt to new situations and go beyond her comfort zone.

“When you just think about going up in the small plane and actually flying, it is a scary thought,” Zardecki said. “But it is also challenging and when you get through it, you think to yourself that was not as bad as I thought. In fact, it was exhilarating.”

Chowdhury, who will start teaching physics at New Milford High School in September, said when she was flying the plane she felt empowered, a feeling she believes is important if you are to master any task.

“I felt like I was in control of something huge,” said Chowdhury who plans on sharing her experience with her students this fall. “I would do it over again.”

Appendix A - WoCS Initiative: Schedule of Events & Budget