

Career Development FY 2005

A major part of the ORWH mandate is to develop opportunities and support for recruitment, retention, re-entry, and advancement of women in biomedical careers. To accomplish these goals, ORWH held a public hearing and major career development workshop in 1992. ORWH invited and interacted with the scientific and medical communities, organizations with an interest in women's health, the Congress, and other components of Government about NIH's programs related to women's health as well as the public.

The ORWH initiated a number of programs to nurture the participation and advancement of women in biomedical careers in order to ensure that interest and priorities in women's health remain at the forefront of our nation's research agenda. ORWH has developed strategies and programs to implement the recommendations made at this workshop and to address career issues, barriers, and concerns of women and minorities in science. These programs include support for mentored research training in areas related to women's health; support for biomedical scientists who have interrupted careers in research in order to fulfill family obligations to re-start their research careers; outreach to young girls and women who have an interest in pursuing careers in biomedical science; and collaboration with professional societies to encourage their support of the career advancement of women scientists.

OFFICE OF RESEARCH ON WOMEN'S HEALTH/OFFICE OF SCIENCE EDUCATION Fiscal Year 2005 Joint Program Highlights

For several years, the Office of Research on Women's Health (ORWH) and the Office of Science Education (OSE) have provided educational resources for pre-college students and others who are interested in science and health careers. The partnership sponsored two programs and one special project during fiscal 2005.

In fiscal 2005, there were over 21,000 "unique hits" on the OSE URL for ORWH/OSE programs, or an increase of approximately 14 percent. There seems to be an increase in website traffic that coincides with OSE's attendance at teacher conferences. Overwhelmingly, the customers were from the United States, however, over 4 percent were from international email addresses. The popularity of the ongoing two programs makes it evident that they are filling an important need for material about careers for women in science.

Women are Scientists Video and Poster Series: *Colorful, informative videos and posters for middle-school students that feature women scientists. The series is designed to stimulate the interest of girls in science at a time when they are making decisions about the course choices that may affect their career options later. In the middle-school years, many girls are discouraged from pursuing advanced levels of study in math and science. This series is intended to make them aware of the many interesting and rewarding careers in the medical sciences and the educational requirements necessary to pursue them.*

Highlights: [The Women are Scientists video series continues to be popular among students and educators. Because of the volume of requests for these videos, the supply of the first three video](#)

kits has been exhausted, including the reprints of these kits. (A few are being held for emergency purposes.)

The total number of videos distributed in fiscal 2005 was 11,631. Of that total, the distribution was: 2,183 for *Women Scientists with Disabilities*; 4,822 of *Women are Pathologists*; 4,623 of *Women are Researchers*; 3 of *Women are Surgeons* (low number based on lack of availability at the beginning of the year). The reported usage included requests from middle and high school teachers, home school teachers, and libraries and for outreach activities and career counseling.

The OSE, with concurrence by ORWH, is in the process of reproducing the first three videos in DVD format. A cardboard wallet has been designed as a self mailer. The artwork for the first video has been approved and is being used as a template for the other two. The master DVDs are being reviewed prior to reproducing 10,000 of each. Working through the NIH art staff, the cost for this project will be approximately \$20,000 under the original estimate. The excess funds were returned to ORWH.

Work is well underway for the fifth video kit, *Women in Dental Research*. The contract was awarded to Beck Shoup & Associates, Inc. in February 2005. A draft script treatment was developed and finalized, and three women were identified to be profiled:

- Dr. Deborah Greenspan, Clinical Professor, Stomatoloty and Clinical Director, Oral AIDA Center, University of California at San Francisco
- Dr. Marjorie Jeffcoat, Amsterdam Dean, The Robert Schattner Center, School of Dental Medicine, University of Pennsylvania
- Dr. Jennifer Webster-Cyriaque, Associate Professor, School of Dentistry, University of North Carolina at Chapel Hill

Filming of the three women at their institutions has been completed and poster shots for each have been selected along with quotes to match the still photos.

An article for the University of Pennsylvania's Alumni newsletter about the filming of Dr. Jeffcoat for the video was reviewed.

Women in Science Poster Series: *A series of free posters, with a companion website, aimed primarily at middle-school girls. The series emphasizes that science and medical research offer many different career paths, all of which are excellent opportunities for women. They feature careers in neuroscience, heart disease, and cancer research.*

Highlights: Posters are distributed primarily at the science teacher conferences attended by the OSE, and by mail through a request form on the OSE website. The posters have been especially popular at teacher conferences, where there is a dearth of materials that focus on women in science. In fiscal 2005, 1600 copies of each poster were distributed to teachers, State departments of education, and local school systems.

ORWH/OSE Bookmarks: This is a special project requested by the director, ORWH. The directors of ORWH and OSE approved the bookmark design. The bookmarks were printed in early fiscal 2005 and are being distributed at special events attended by ORWH and OSE staff.

Women's Reproductive Health Research Career (WRHR) Development Program (RFA HD04-014)

For FY 2005, ORWH funded 10 new Centers.

(1) 2 K12 HD001255-06

Robert L. Barbieri, M.D.

Brigham and Women's Hospital/Harvard Medical School

Title: Development of Scholars in Ob-Gyn for the 21st Century

This continuing program builds on a long tradition of investigation and teaching in women's reproductive health. Dr. Barbieri has put together an outstanding plan that will make available biomedical resources in the extensive Harvard-affiliated system. The didactic component along with the clinical breadth and biomedical research capabilities of the system will provide a rich foundation for career development. Individualized plans are personalized for each scholar and could include enrollment in Masters or PhD programs. In particular, assignment to one of three career tracks based on the scholar's background can only optimize a quality research experience. Mentoring from both a research and academic career advisor make-up a cohesive plan to solidify career development. Strengths include the five core strategies and key functional components that leverage the full potential of research training to ensure successful career development of ob/gyn physician scientists.

(2) 2 K12 HD001258-06

John C. Hauth, M.D.

University of Alabama at Birmingham

Title: Ob/Gyn Faculty Research Career Development Program

This renewal application is based on a research infrastructure that can accommodate and sustain an independent program dedicated to future generations of physician scientists. Dr. Hauth plans to include the program as a division within the Center for Research in Women's Health, thereby allowing scholars access to research programs and senior mentors. The Center's mission to maximize educational opportunities complements the institution's plan to provide a resource-rich environment for research training. This application offers a formal structured pathway by which entry-level or advanced scholars at different levels of development and expertise can be expected to acquire research skills appropriate to their ultimate goal of becoming independent investigators. A major strength is the critical mass of senior academicians with enhanced interdisciplinary research skills to assist in the development of physician scientists capable of sustaining independent research careers.

(3) 2 K12 HD001259-06

Thomas R. Moore, M.D.

University of California San Diego

Title: Reproductive Sciences Research Career Development Center

This ongoing proposal includes a flexible two-phase program to accommodate the needs of potential scholars with a broad range of scientific backgrounds and experience. Dr. Moore plans to increase the opportunities for creative interdisciplinary approaches to diseases by bringing together basic scientists and ob/gyn clinical collaborators interested in the application of research advances specific to women's reproductive health. Scholars who enter this program have access to clinical translational and basic science collaborators with expertise in applying scientific findings to bedside medicine. A major strength is the Mentoring Committee, which represents a unique approach to provide scholars with an optimal research environment, and assists in sharpening their research skills as they move toward independence. Required didactic courses and opportunities for advanced degrees round out the training experience.

(4) 2 K12 HD001332-06

James R. Woods, M.D.

University of Rochester

Title: Rochester Women's Reproductive health Research program

This renewal application presents an outstanding pathway for ob/gyn physician scientists to commence their research careers. Scholars entering this program complete a basic core of didactic courses emphasizing clinical research design, data processing and analysis, writing and ethics. Dr. Woods believes that a core curriculum of knowledge, skills and research perspectives will be important in clinical investigation and practice. With this in mind and taking into account the experience of the scholars, the program offers two individualized tracks: laboratory science and clinical science. Both tracks will provide scholars with the underpinnings needed to maximize the benefit from mentored research. The environment offers a longstanding multidisciplinary research focus, including a pool of mentors who are leaders in their respective fields and experienced educators. This approach to training is the cornerstone of a program that has been successful in training physician scientists.

(5) 1 K12 HD050128-01

Joe L. Simpson, M.D.

Baylor College of Medicine

Title: Baylor WRHR Program

This application offers career development for ob/gyn clinicians pursuing molecular research related to women's reproductive health. The program is a partnership involving M.D. Anderson Cancer Center that offers scholars greater access to clinical resources and core laboratories, as well as a full range of training opportunities to facilitate a seamless transition to research independence for scholars. A major strength includes the mentoring program that complements a formal didactic curriculum consisting of five required

courses. Dr. Simpson has arranged for each scholar to have two mentors and an individualized training plan expressly designed for their professional backgrounds. These are important strengths of the program. The primary research mentor's role is to secure the development of solid investigative expertise. The secondary ob/gyn academic mentor's responsibilities are to maintain the clinical perspective and monitor academic progress.

(6) 2 K12 HD001271-06

Ronald S. Gibbs, M.D.

University of Colorado Denver/HSC Aurora

Title: Colorado WRHR Career Development Center

This continuing program has a flexible plan focused on basic cellular and molecular mechanisms and translational research for scholars seeking an independent research career in women's reproductive health. Dr. Gibbs has established milestones for advancement in the program, including an ongoing dialogue with mentors, successfully completing a model curriculum for scholars with varying degrees of experience, and writing research proposals. The institution is developing several core laboratory facilities to assist scholars in the design and implementation of their research projects. The combined expertise of these cores will provide the infrastructure for a multifaceted approach to the challenges of career development. A major strength of the program is the new interdisciplinary Graduate Program in Reproductive Science that is expected to foster interactions among scientists and clinicians and offers scholars exposure to multiple disciplines in a rich intellectual environment.

(7) 1 K12 HD050113-01

Robert C. Cefalo, M.D., Ph.D.

University of North Carolina - Chapel Hill

Title: WRHR Career Development at UNC

This application builds on the institution's climate of research growth and commitment to patient-oriented translational research. Dr. Cefalo has a program with a long tradition of preparing ob/gyn physicians for careers in clinical research and a track record of interdisciplinary reproductive health research. One objective is to orient new investigators toward large-scale collaborative research teams. Scholars entering this program will convene a mentor panel to access scientific expertise, consultation, and resources. The new Ob/Gyn Resource Core is available to provide comprehensive services to support integration of laboratory methods into the scholars' research projects. A major strength of the program is the proposed partnership with the Morehouse School of Medicine to identify eligible members of the ob/gyn faculty to participate in the program. Didactic components and a tailored program of training increase the likelihood of future research independence.

(8) 1 K12 HD050121-01

Sherman Elias, M.D.

Northwestern University

Title: Research Career Development in Obstetrics and Gynecology

This proposal has a highly innovative approach for establishing a training program for ob/gyn physician scientists. Dr. Elias proposes a custom-designed research training and career development plan for each scholar. Scholars will be exposed to research tools, graduate courses, and grant writing skills. The program is designed to accommodate scholars with a variety of research backgrounds. The scholars will enter a basic science or clinical track based on their interests and previous research experience. The program provides an outstanding pool of experienced basic science, translational and clinical research mentors whose expertise spans a wide spectrum of reproductive science research. This group has an established track record for training independent investigators. A strength of the program is its location, surrounded by six medical schools in the Chicago area that has one of the largest concentrations of highly qualified potential scholars.

(9) 2 K12 HD001254-06

Mary D'Alton, M.D.

Columbia University Health Sciences

Title: Columbia U CTR For Career Dev. In Reproductive Sciences

This ongoing program offers a unique opportunity for scholars to learn experimental concepts and techniques that will provide the necessary basics for a fruitful academic career. Dr. D'Alton plans to attract mentors primarily from the Center for Reproductive Sciences within the Department of Obstetrics and Gynecology. An important strength of the program is its long-standing history of combining basic investigation and training in the reproductive sciences. With this objective in mind, the program intends to recruit scholars who have an interest and passion for basic investigation. The underlying theme is to maintain an essential clinical link to encourage a bridge between basic research process and its application and relevance to clinical principles related to women's health concerns. Clinical advisors will be available to facilitate this linkage. This program appears well positioned to train the next generation of outstanding physician scientists in women's reproductive health.

(10) 1 K12 HD050108-01

Donald R. Coustan, M.D.

Women and Infants Hospital - Rhode Island/Brown Medical School

Title: Brown Medical School/WIHRI Dept of Ob/Gyn WRHR Program

This proposal presents a very strong program dedicated to the career development of physician scientists and clinical investigators. Dr. Coustan has a flexible program that will provide each scholar with a core curriculum essential for his/her development as an independent investigator in women's health, a suitable mentor who can provide the guidance and expertise to assure successful academic development and skills as an independent investigator, and the research infrastructure in an environment conducive to investigation into women's health. The scholars will be able to capitalize on a diverse group of senior scientific mentors and supporting investigators providing academic career

advice. A major strength of this program is the focus on the translation of basic research into patient-oriented, clinical research to improve women's health. Their goal of creating independent investigators who will be committed to research careers in women's reproductive health should be realized.

ORWH: Project Status Report, Core ACTeam October, 2004-October, 2005

Partnership Meetings

Three Partnership Events were held during this fiscal year. Each of these events was tailored to the needs of the partner society. Each included a history of AXXS, current statistics related to women in science, and discussions about the role of the society in the advancement of the career of women/members. Specific presentations are tailored to the needs of the partner society.

- Andrea Zardetto-Smith, Jong-on Hahm, Sue Shafer, presented with Joan King at the Society for Neuroscience in October, 2004. A full report, including recommendations, was sent to ORWH and the Society for Neuroscience through the Committee on the Development of Women's Careers in Neuroscience and Women in Neuroscience.
- Sue Shafer, Vivian Pinn, Pamela Marino, Elizabeth Marincola, Ric Shafer and Michael Milano hosted a Partnership Meeting at the December, 2005 meeting of the American Society for Cell Biology. The meeting presented a history of AXXS, current statistics related to women in science, and discussions about the role of the society in the advancement of the careers of women. A full report from this Partnership Event was sent to the ORWH and the ASCB.

In July, 2004, Sue Shafer along with Dr. Yolanda Cruz, Dr. Ida Chow, and Dr. Ruth Lehman hosted a 90-minute breakfast event for the members of the Society for Developmental Biology. This session was aimed at all members with Sue describing the work of AXXS. A full report of this meeting was sent to ORWH and the SDB Executive Council and the SDB Professional Development and Education Com Background:

"Effective Practices"

- The "Sixteen Effective Practices" have been printed and distributed for Partnership Events and posted on the AXXS Website.
- Both new publications call for additional effective practices and include directions for submitting such practices.

ORWH/Office of Loan Repayment, OIR

The OLRs, Office of Intramural Research (OIR) is responsible for the development and management of the Undergraduate Scholarship Program for Individuals from Disadvantaged Backgrounds (UGSP). The UGSP provides scholarships to undergraduate students who have been competitively selected from a nation-wide pool of candidates. The OLRs awards an average of 15 scholarships each year. The ORWH has been very

supportive of supporting female UGSP scholars since FY01. In FY05, six female UGSP scholars, five in their second year of the program and one in her third, are being supported by ORWH. The following is a summary report on the ORWH-sponsored Scholars.

FY05

Giselle Román Hernández is receiving her third year of UGSP support to pursue her bachelor's degree in chemical engineering from the University of Puerto Rico at Mayaguez. During the summer 2004, she studied the expression and function of EGF receptors in a human derived glial cell lines, as well as in cells differentiated towards a neuronal phenotype. She trained in both my laboratory in the National Cancer Institute and Dr. Eugene Major's laboratory in the National Institute of Neurological Disorders and Stroke and presented a poster at the NIH Poster Day titled, "Epidermal Growth Factor Receptor Expression During Neural Cell Differentiation." She also presented a poster at the 2004 Annual Biomedical Conference for Minority Students in Dallas, Texas. Ms. Román returned to my lab this summer and presented a poster at the NIH Poster Day titled, "Epidermal Growth Factor Receptor Expression during Neural Cell Differentiation." Ms. Román will graduate in the spring and is currently applying to graduate school programs.

Luciann L. Cuenca is a senior majoring in biochemistry at the Catholic University of America in Washington, D.C., who is receiving a second year of UGSP scholarship support. This summer she trained under the mentorship of Dr. Curtis Harris, in the Laboratory of Human Carcinogenesis in the National Cancer Institute. She presented a poster titled, "Characterization of Human Cancer Stem Cells" at the 2005 UGSP Poster Day. Based on financial support provided through the ORWH-UGSP partnership, she also presented a poster at the SACNAS National Conference in Denver, Colorado, this October. After graduation, Ms. Cuenca plans to pursue a Ph.D. to conduct research on drug discovery and design for cancer treatment.

Kelly R. Daigle, a junior majoring in biological sciences and biochemistry at North Carolina State University, is receiving a second year of scholarship support through the UGSP. Ms. Daigle trained under Dr. Andrew Singleton in the National Institute on Aging's Laboratory of Neurogenetics this summer and presented a poster at the NIH Poster Day titled, "Identification and Validation of the Transcriptional Responses Controlled by DJ-1." Upon graduation Kelly plans to pursue a Ph.D. in genetics or neuroscience.

Vanessa J. Flores, who is receiving a second year of scholarship support, will graduate this spring from Rutgers University with a bachelor's in biology. She completed her 10-week internship this summer with Dr. Mortimer Mishkin in the National Institute of Mental Health's Section on Cognitive Neuroscience. Her poster at the NIH Poster Day was titled, "Study of Cerebral Mechanisms for Auditory Recognition Memory in the Rhesus Monkey." Ms. Flores plans to pursue an M.D./Ph.D. after graduation.

Annie M. Le is a junior at the University of Rochester majoring in cell and developmental biology, who is receiving a second year of UGSP support. Ms. Le trained with Dr. Rocky Tuan in the Cartilage Biology and Orthopaedics Branch, National Institute of Arthritis and Musculoskeletal and Skin Diseases, this summer and presented a poster titled, "The Role of the Cytoskeleton in Chondrogenesis" at the NIH Poster Day. She hopes to obtain a Ph.D. in cell biology and a Masters of Public Health through the NIH Graduate Partnership Program.

Lisa M. Watanabe is receiving a second year of support through the UGSP to continue her studies at the University of Wisconsin, Madison, in genetics. She was mentored by Dr. Gisela Storz this summer in the Cell Biology and Metabolism Branch, National Institute of Child Health and Human Development, and presented a poster titled, "Small Non-coding RNA Regulators in *E. coli*" at the NIH Poster Day this summer.

The support of these undergraduate students by the ORWH has allowed them to focus on their studies and receive excellent research training and skill enhancement activities at the NIH. These students exemplify measurable development in their biomedical research careers, evidenced, in part, through their academic achievements and research accomplishments. The continued support of the ORWH has allowed the UGSP to select additional excellent students who receive training in the NIH intramural program. These students are superb representatives of the ORWH and the UGSP.

ORWH/OFFICE of INTRAMURAL TRAINING AND EDUCATION

The ORWH provided the Office of Education, now the Office of Intramural Training and Education, with \$111,200 in FY2005 to support a series of programs for both our postdoctoral fellows and postbaccalaureate trainees.

For **Postdoctoral Fellows**, these programs included (1) the Survival Skills Workshops, five half-day workshops that were presented by Dr. Michael Zigmund and Beth Fisher of the University of Pittsburgh and addressed the topics of resume writing, job interviewing, negotiating a job offer, grant writing, and establishing a laboratory; (2) a career series consisting of panels of experts in career fields for which a biomedical research background is essential, including biodefense, teaching, patents, and technology transfer. The speakers for the career series were all former NIH fellows, who are particularly effective with the fellows and can offer them up-to-date information and networking for the jobs; (3) courses on Speaking and Writing about Science, each a 4-5 week course offered three times per year; (4) an Advanced Course: Speaking about Science, offered twice last year, offered a forum for in-depth, individualized assistance to each participant; (5) the Job Fair 2005, held annually in conjunction with the NIH Research Festival, which brought in companies that have jobs available - more than 800 fellows participated; (6) a new pilot course Improved Language Skills, offered to first year Visiting Fellows, to enable them to improve their English skills, necessary for future professional development. The curriculum covered scientific vocabulary, diction, articulation, verbal pace, and general guidelines for speaking before a group.

For **Postbaccalaureate trainees**, the programs offered included (1) Career Enhancement Seminars designed to assist postbaccalaureate trainees as they prepare for careers in research, which include sessions on speaking about science, tips on scientific poster presentations, preparation for the MCAT and GRE tests, and the Myers-Briggs personality inventory; (2) the fifth annual Poster Day for NIH postbaccalaureate trainees, held early in May, that showcased a record total of 254 trainees, representing a wide range of institutes and centers, who presented their research accomplishments to the NIH scientific community; (3) the Premed Advising Workshop for postbaccalaureate trainees who plan to apply for admission to medical school, given by Paula Ashby, Assistant Director of Academic Services, University of Maryland Baltimore County, and Dr. Lee Ann Michelson, Assistant Director, Office of Career Services, Harvard University.

All of these programs were well attended and evaluations conducted at the end of each indicated that they were well received and accomplished their purposes. None of this would have been possible without the generous support of the Office of Research on Women's Health and we wish to express our gratitude for your funding.

MEETING SUMMARY: THE AXXS PARTNERSHIP MEETING HELD WITH THE SOCIETY FOR DEVELOPMENTAL BIOLOGY

On July 29, 2005, three representatives¹ of the AXXS Core ACTeam met with members of the Society for Developmental Biology (SDB) at the 64th SDB Annual Meeting held in San Francisco, California. Their purpose was to provide a forum for those SDB attendees to recommend to the SDB leadership how SDB might enlarge its already considerable presence in assisting their members develop their careers.

This 90-minute-long session took place during the breakfast hour. A continental breakfast was offered to those who attended. By earlier mutual agreement with the SDB Executive Officer, this meeting addressed the career development issues for all society members, not just women. 196 (of the approximately 1,000 meeting registrants) registered for this workshop; and about 100 registrants attended. About 60% of those attending are women; and about 2/3 of the presenters and facilitators are women.

Dr. Sue Shafer opened the workshop, restating its purpose, and introducing Dr. Yolanda Cruz, Professor of Biology, Oberlin College, and co-organizer of the workshop; and Dr. Ida Chow, Executive Officer, SDB, who arranged the workshop's logistics, and participated in its substantive planning².

Dr. Shafer mentioned her own involvement in advancing women's careers in science through AXXS. She outlined the agenda for the workshop; and encouraged participants to bring their two most important recommendations to Dr. Cruz at the end of the

¹ W. Sue Shafer, Ph.D.; Joyce Rudick; Richard L. Shafer

² SDB support of the session included breakfast for the participants and complimentary registration for Sue and Ric Shafer.

discussions. She then introduced Dr. Ruth Lehman, Professor of Developmental Genetics, NYU Medical Center, an SDB past president, who reviewed the society's current resources for members as they explore career options and avenues for career advancement (see Attachment 1).

Participants then separated into 8 discussion groups, each with one or two facilitators. The groups were asked to discuss how the present SDB offerings are working, and what more the SDB could do for its members. The highlights of those groups' recommendations are listed in Attachment 2.

Facilitators included:

Carolyn Bruzdzinski, American Cancer Society
Cathy Krull, University of Michigan (Midwest representative on SDB Board of Directors)
Leland Johnson, Augustana College
Ruth Lehman, NYU Medical Center (SDB Past President)
Gail Martin, University of California San Francisco (SDB President-elect)
David McClay, Duke University (SDB Past President and current Treasurer)
Mary Montgomery Macalester College (Member of SDB Professional Development and Education Committee)
Judith Plesset, National Science Foundation
Lee Niswander, University of Colorado Health Sciences Center (Southwest representative on SDB Board of Directors)
Gary Schoenwolf, University of Utah (SDB past Secretary)
William Wood, University of Colorado (Chair of SDB Professional Development and Education Committee)

Additional Facilitators who volunteered onsite included:

Scott Barolo, University of Michigan
Pete Mathers, West Virginia University (SDB representative on FASEB Board of Directors)
Phil Newmark, University of Illinois
Mike Stark, Brigham Young University
Catherine Tosney, University of Michigan (Coordinator of SDB Website Education Page and SDB past Treasurer)
Bob Zeller, San Diego State University

The recommendations included in this report as Attachment 2 will be transmitted to SDB Executive Council, and to the SDB Professional Development and Education Committee.

Attachment 1:

Society for Developmental Biology Resources for Career Advancement and Options

1. SDB Professional Development and Education Committee

--Chair: Bill Wood

--Members: Diana Darnell, Bob DeHaan, Mary Montgomery, Susan Strome and Kathryn Tosney (*ad hoc*, SDB Education Page Coordinator)

2. Travel Awards/Grants

To attend the SDB Annual Meetings

--Graduate students and Post-Doctoral fellows travel awards (traditional)

--British SDB best poster competition winner hosting at the SDB annual meeting (tradition)

--Teaching faculty travel grant (instituted in 2004)

--Travel award for the best student and the best Post-Doctoral presentations at regional meetings (instituted in 2005)

--Travel award for the two best undergraduate posters on developmental biology at the Annual Biomedical Research Conference for Minority Students (instituted in 2002 and now jointly with FASEB-MARC program)

--Latin American-Caribbean Scholarships for six awards to a combination of faculty and student/Post-Doc from the Caribbean and Latin American countries (instituted in 2000)

To attend the SDB Regional Meetings

--Traditionally students and Post-Docs have very low registration fees and in NW region subsidized housing as well

--Best poster/presentation competition awards

--Travel awards

3. Workshops at Annual Meetings

--Education and professional development booth with materials contributed by members and compiled by the SDB Professional Development and Education Committee (yearly since 2000)

--Funding opportunities (yearly)

--Career choices

--Teaching and presentation skills, ex. use of Internet, PowerPoint, Poster, course content design, innovative lab activities

Getting a job

Grant writing

--Women and minority issues

4. Workshops at Regional Meetings

--Career choices

--Grant writing

- Outreach sessions connecting university and pre-college faculties
- Educational partnerships with local governments
- Lab tours for undergraduate students from the Navajo Nation colleges (NM and AZ)
- Pedagogical approaches using the politics, ethics and biology of stem cells and cloning
- 3-D animation for illustration and education
- How students learn

5. New initiatives

- E-mentors (started in 2004) for advanced graduate students, Post-Docs, junior faculty and pre-college teachers
- Scientific Lab Management sessions (started in 2005), as partner of HHMI/ Burroughs Wellcome Foundation's program
- Satellite Short Course at the 2nd International Meeting of the Latin American SDB: *Model Organisms and Innovative Approaches in Developmental Biology* (2005). Thirty students from USA and Latin America, advanced graduate students, Post-Docs and junior faculty (major support from NSF's Pan American Advanced Studies Institutes program, also from NICHD and Brazilian agencies FAPESP and CNPq)
- Partnership with FASEB-MARC Program: seminars and workshops at regional meetings (2006)

6. Other resources

- FASEB's Individual Development Plan for Post-Doctoral Fellows:
<http://www.faseb.org/opa/ppp/educ/idp.html>

Attachment 2:

Highlights of notes from discussion groups:

About jobs, and job-related issues at SDB annual and regional Meetings

- ⇒ Have job announcements; advertise SDB job search engines to institutions
 - Job placements, job fairs at meetings
- ⇒ Offer career options: workshops like this one,
- ⇒ Have panel discussion with speakers from diverse careers (as models)
- ⇒ Provide help in international job networking

About Post-Docs and Young Faculty

- ⇒ Have student/Post-Doc scientific presentations WITHOUT faculty separate symposium for Post-Docs
- ⇒ Develop satellite meeting to include career transition, lab management, authorship, ethics, etc.
- ⇒ Post-Doc empowerment & support:
 - resource clearinghouse registry
 - link to Nat Post-Doc Assn & presentation from NPA at SDB meeting
 - develop interactions with Nat Post-Doc Association
- ⇒ Workshop on mentoring & negotiations from perspective of mentee



Mentor Training, facilitated workshops



About Grad Students Achieving XXcellence in Science

- ⇒ Increase interactions among grad students, Post-Docs, faculty
- ⇒ For grad students, offer more resources for advice on career path choices

Sponsored by the

**Office of Research on Women's Health (ORWH)
About International Students
National Institutes of Health (NIH)**

- ⇒ At meetings, offer workshops with international student issues (jobs, visas, green cards, etc.)

About the SDB website:

- ⇒ Enhance SDB website interactivity, esp. career planning info
- ⇒ Have useful information for international students

About Primarily Undergraduate Institutions

- ⇒ Have a Political Action Group at meetings to address PUI-specific issues
- ⇒ Award SDB grant funds for speakers or mentors to site-visit PUIs for meeting, interactions.

August 9, 2005

Dr. Vivian Pinn, Director
Office of Research on Women's Health
National Institutes of Health

Building 1, Room 201

9000 Rockville Pike

Bethesda, MD 20892-0161

Dear Dr. Pinn:

I am pleased to send this report on the most recent AXXS partnership meeting with the Society for Developmental Biology (SDB). The SDB Career Workshop entitled, "Career Options: Networking with SDB Resources" was held on July 29, 2005, 7:30 am to 9:00 am, at their 64th Annual Meeting in San Francisco.

The report includes a brief meeting summary; a description of present offerings by SDB for assisting its members in career development issues; and recommendations from the meeting participants to the SDB.

Recommendations made by meeting participants relate to AXXS' areas of initiative as follows:

1. Leadership, Visibility and Recognition -- Not addressed.

AXXS Coordinating Team
(Core ACTeam):

W. Sue Shafer, Chair

Abhijit Ghosh, Contractor,
ORWH, NIH

Jong-on Hahn, National
Research Council

Gwendolyn Keita, American
Psychological Association

Vicki Malick, ORWH, NIH

Elizabeth Marincola,
American Society for Cell
Biology

Pamela Marino, National
Institute of General Medical
Sciences, NIH

Page Morahan, Executive
Leadership in Academic
Medicine (ELAM) Program
for Women

Joyce Rudick, ORWH, NIH

Richard Shafer, San Francisco

Andrea Zardetto-Smith,
Society for Neuroscience

Michael Milano, Consultant
Facilitator

2. Mentoring and Networking – *See appendix 2*. Many of the recommendations relate directly or indirectly to mentoring or interactions with fellow scientists, both peers and faculty.
3. Effective Practices – *See Appendix 1*. The SDB has instituted many practices with regard to their members' career development. These may well be candidates for incorporation into the AXXS collection of Effective Practices.
4. Oversight, Tracking and Accountability -- Not addressed.

I'll be happy to expand on this brief report as you request.

Sincerely yours,

Richard L. Shafer

cc: Ida Chow, Executive Officer,
Society for Developmental Biology