

Year-End Report for
ADVANCE Institutional Transformation Project
University of Michigan
Year 4: December 2005

FOR PUBLIC RELEASE*

* Data are reported only aggregated by college (Engineering, Literature, Science, and the Arts, and Medicine) or across the six smaller schools/divisions (Dentistry, Information, Kinesiology, Natural Resources and Environment, Pharmacy, and Public Health), in this version for public release, in order to protect individual identities.

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Section I

SECTION I: Personnel and Financial Report

SECTION I: PERSONNEL AND FINANCIAL REPORT

A. BUDGET EXPLANATIONS BY AREAS AND MAJOR FUNCTIONS

(for the reporting year and the next year)

SENIOR PERSONNEL

Dr. Abigail J. Stewart, the principal investigator, is responsible for ADVANCE project oversight. In the fourth project year, 50% of Dr. Stewart's salary was cost shared during the time period of July – December 2005. (Dr. Stewart was on leave January – June 2005 and Dr. Pamela Raymond served as principal investigator during that time.) Her work has included the management and oversight of the project implementation and evaluation advisory and steering committees and the facilitation of departmental initiative implementations. Half of Dr. Stewart's salary will continue to be cost shared in the fifth project year.

Dr. Pamela Raymond served as principal investigator while Dr. Stewart was on sabbatical during the time period of January – June 2005. Half of Dr. Raymond's salary was cost shared during that time.

Salary is cost shared in this fourth project year at 5% for each of the four co-PIs (the Deans of Engineering, Medicine, LSA and a representative of the Provost's Office), and this cost sharing will continue in the fifth project year. The co-PIs facilitate project activities within their home schools and campus-wide. They serve on the project's Steering Committee, which makes decisions about program initiatives, and the three deans chair the Gender, Science and Engineering (GSE) subcommittees.

OTHER PROFESSIONALS

Dr. Janet Malley, Associate Director of the Institute for Research on Women and Gender, has served as evaluation manager for the project and has provided oversight of the quantitative research evaluation effort (data collection, analysis and reporting) of the initiative (survey and inventory) at 30% effort. Dr. Malley will continue this work in the fifth project year at 30% effort.

Carol Hollenshead and Jean Waltman from the Center for the Education of Women (CEW) are conducting qualitative evaluations of the departments with substantial Departmental Transformation Grants, as well as comparison departments. Carol Hollenshead will continue this work in the fifth project year at 20% effort (includes 10% cost share) and Jean Waltman will continue at 50% effort in the fifth project year.

Senior faculty served on the *Science and Technology Recruiting to Improve Diversity and Excellence* (STRIDE) Committee and assisted the project this year by providing consultation with individual departments on recruitment and on hiring and retention practices. Each committee member received \$20,000 in release time for this work, and funds in the amount of \$140,000 were allocated for this purpose in the fourth year (includes \$100,000 cost share). Committee members

will continue to assist the project in the fifth year. All funds associated with the STRIDE Committee will be cost shared in the fifth project year.

GRADUATE STUDENTS

This year research assistants worked on the project by assisting with programming activity. Research assistants will continue to perform similar duties in the fifth project year.

OTHER PERSONNEL

Cynthia Hudgins serves as Program Manager for the project (100% effort). Ms. Hudgins provides staff support for data collection efforts, all project initiatives, advisory, steering and selection committees, and production and dissemination of reports and presentations. She also serves as the focus group facilitator.

Keith Rainwater serves as Program Evaluation Manager (100% effort). Mr. Rainwater provides staff support for data analyses and evaluation. Mr. Rainwater's salary is paid partially by cost shared funds.

In the fifth project year, salary funds were originally budgeted for a postdoctoral associate and a half-time graduate student research assistant. These allocations will, instead, be used to fund the program manager's salary and partially fund the program evaluation manager's salary.

Lisa Parker, research administrator at the Institute for Research on Women and Gender, allocates 10% of her time to manage the budget for the ADVANCE grant (including all sub-accounts) and process financial and administrative paperwork. She will continue this work in the fifth year.

Salary funds for transcription of interviews and focus group meetings totaled \$2,550 in the fourth project year. Transcription costs associated with the work being completed by Carol Hollenshead and Jean Waltman are expected to total \$10,500 in year five.

FRINGE BENEFITS

Fringe benefit expenses are calculated at 30% for all faculty, professional and administrative staff and at 8% for all students, facilitators and transcribers.

TRAVEL/DOMESTIC

Travel expenses in year four have totaled \$6,000 for advisory meetings and University of Michigan Women Scientist Network event speakers. These costs will total \$2,200 in the fifth project year.

OTHER DIRECT COSTS – MATERIALS AND SUPPLIES

In year four, funds in the amount of \$2,650 were used for program and event publicity as well as consumable supplies and duplication. The amount of \$1,150 was allocated to CEW for similar costs. In year five, a total of \$6,000 is allocated for materials and supplies.

OTHER DIRECT COSTS – PUBLICATION COSTS

In the fifth project year, \$5,000 is budgeted for printing costs associated with the dissemination of project findings.

OTHER DIRECT COSTS – CONSULTANT SERVICES

Consultants provided information about and presentations at data-based workshops this year and consulted with project personnel and gender equity advisors about best practices. Total consultant costs in year four were \$7,200. No funds are allocated for consultant services in year five.

OTHER DIRECT COSTS – OTHER

Funds in the amount of \$19,000 were allocated in year four to the Center for Research on Learning and Teaching's (CRLT) Climate Theater to fund twelve performances of scripts developed by CRLT that are of specific relevance to the ADVANCE project. An additional \$6,000 was allocated to CRLT in year four from cost shared funds. Although no NSF funds will be provided to CRLT in the fifth project year, cost shared funds in the amount of \$25,000 will be allocated to continue their work.

In the fourth and fifth project years, funds in the amount of \$20,000 per year will be used by the UM Network of Women Scientists to support events, including visiting speakers. Expenses in the fourth year included invited speakers and social events.

The Elizabeth Crosby Research Fund (formerly the Gender Equity Resource Fund) is budgeted at \$100,000 each year (includes \$10,000 cost share) to provide awards of \$20,000 each to five applicants. This fund is used to support women faculty in ways best suited to their particular needs (special laboratory equipment, graduate student or post-doctoral support, conference travel, support for a visiting scientist, release time, etc.). Funds are awarded as a result of a call for applications and a selection process. Beginning in the second project year, the University of Michigan cost shared additional funds in the amount of \$240,000 to increase the number of awards throughout the project period. This year, nine awards were made in the total amount of \$123,193 (\$77,278 direct cost funds, \$23,493 cost shared funds, and \$22,422 in additional cost shared funds provided by applicants' departments). Additionally, a call for new proposals was recently issued and applications are currently being reviewed.

In the fourth project year, the University of Michigan provided additional funds in the amount of \$40,000 to continue the Lydia Adams DeWitt Research Fund for those who hold research scientist titles at the University. This research fund was established as the result of research scientists' strong interest in the work of ADVANCE and the University's desire to provide support for this group similar to support provided to instructional track faculty by the ADVANCE project. Two awards were made to research scientists this year. The University of Michigan will continue to contribute these additional funds (\$40,000 per year) for the remainder of the project.

The allocation of funds to support the Departmental Transformation Grants continued in year four. Seventeen awards have been distributed (selected through a review process) to carry out specific activities aimed at producing significant transformation of the climate for women faculty. The University of Michigan has allocated additional funds to increase the overall funding available for Departmental Transformation Grants. In total, \$918,800 (\$611,000 direct cost, \$307,800 cost shared and additional funds) will be allocated to departments over the entire project period. To date, \$871,300 has been allocated to specific departments, and the remaining funds will continue to be assigned in the fifth project year.

INDIRECT COSTS

Indirect costs are calculated at 51%.

COST SHARING

In the original project budget, cost sharing was committed in the amount of \$219,700 for the fourth project year and in the amount of \$155,034 for the fifth project year. The percentage of Dr. Abigail Stewart's salary to be cost shared, however, increased from 15% to 50%. As a result, the cost sharing commitment has increased to \$288,644 in the fourth project year and \$234,045 in the fifth project year.

B. ESTIMATED UNOBLIGATED FUNDS

(at the end of the fourth project year)

We anticipate no unobligated funds at the end of the period (January 1, 2005 – December 31, 2005) for which NSF currently is providing support to Abigail J. Stewart's NSF grant SBE 0123571, "ADVANCE Institutional Transformation Award." The budget allocation for the fourth project year was \$749,943 (\$496,651 direct costs; \$253,292 indirect costs). While a balance of direct cost funding will remain at the end of the fourth project period, all of these funds have been assigned to specific allocations or have been otherwise committed.

Direct costs in the amount of \$1,707,399 have been expended as of November 30, 2005 (the most recent monthly account statement available to us). It is anticipated that an additional \$49,442 in direct cost expenses (including on-going expenses such as salary costs as well as outstanding year four expenses that have been charged to this project), will be committed by December 31, 2005.

In total, NSF direct costs in the amount of \$1,136,028 have been allocated in the first four project years to various departments and colleges at the University of Michigan in the form of sub-accounts that house funds provided to Crosby (Gender Equity Resource Fund) award recipients, senior faculty gender-equity advisors (STRIDE committee members) and Departmental Transformation Grant projects. All sub-accounts are established and active (expenditures to date are included in the expended direct cost amount listed above), but the rate of expenditure of funds varies. It is anticipated that a portion of the funds in several of these sub-accounts will not be expended by December 31, 2005. However, all of these funds have been committed for use by the recipients as proposed in the original budget and it is expected that the funds will be used as planned.

As a result of the expenditures and funding allocations described above, we expect the ADVANCE project to make use of \$1,985,985 in direct costs, the total direct cost amount awarded, in the first four project years. A total of \$749,948 (\$496,654 direct costs; \$253,294 indirect costs) is requested to fund the fifth project year (January 1-December 31, 2006).

COST SHARING STATUS AT THE END OF THE FOURTH PROJECT YEAR

The University of Michigan has committed \$288,644 in cost sharing for this fourth 12-month project period. A cost sharing report will be provided to NSF from the University of Michigan's Office of Financial Operations. Financial Operations is unable to produce an accurate cost sharing report for the first four years of this project until the close of December business occurs in early January. The University will submit this report as soon as possible after December 31, 2005.

C. PROPOSED BUDGET FOR THE FIFTH PROJECT YEAR

(in accordance with NSF form 1030)

Year Five (NSF - ADVANCE)	NSF	UM Cost Share
A. Senior Personnel		
PI – Stewart		79,209
co-PI LSA		15,389
co-PI Engineering		15,811
co-PI Medicine		18,639
co-PI Senior Counselor to the Provost		10,988
<i>Total Senior Personnel</i>	0	140,036
B. Other Personnel		
B.1 Postdoctoral Associates	73,000	
B.2 Other Professionals	71,532	16,921
B.3 Graduate Students	83,634	
B.5 Undergraduate Students	2,600	
B.6 Other	36,876	
<i>Total Other Personnel</i>	267,642	16,921
<i>Total Salaries and Wages</i>	267,642	156,957
C. Fringe Benefits	59,012	47,088
<i>Total Fringe Benefits</i>	59,012	47,088
<i>Total Salaries, Wages and Fringe Benefits</i>	326,654	204,045
E. Travel/Domestic	2,200	
<i>Total Travel/Domestic</i>	2,200	
G. Other Direct Costs		
G.1 Other Dir. Costs - Materials & Supp	6,000	
G.2 Publication Costs	5,000	
G.6 Other	156,800	30,000
<i>Total Other Direct Costs</i>	167,800	30,000
H. TOTAL DIRECT COSTS year 5	496,654	234,045
I. Total Indirect Costs Rate: 51%	253,294	
J. TOTAL DIRECT AND INDIRECT COSTS	749,948	
L. Amount of This Request	749,948	
M. Cost Sharing	234,045	

D. CURRENT OTHER SUPPORT INFORMATION FOR KEY PERSONNEL

Stewart, Abigail

(Current)

Principal Investigator: Abigail Stewart
 Title: *Narratives and Numbers: Integrating Quantitative and Qualitative Methods in the Study of Gender*
 Sponsor: University of Michigan/Rackham Graduate School
 Amount of Award: \$32,000
 Duration of Award: 09/01/00 – 6/30/06
 Time Devoted to Project: 1%

Principal Investigator: Pamela Trotman Reid
 Co-PI: Abigail Stewart
 Title: *Girls Exploring Mathematics Through Social Science (GEMS)*
 Sponsor: National Science Foundation
 Amount of Award: \$842,877
 Duration of Award: 09/01/01 – 08/31/06
 Time Devoted to Project: 5%

Principal Investigator: Abigail Stewart
 Co-PI: Ronald Gibala, Allen Lichter, Terrence McDonald, Pamela Raymond
 Title: *ADVANCE Institutional Transformation Award*
 Sponsor: National Science Foundation
 Amount of Award: \$3,748,785
 Duration of Award: 01/01/02 – 12/31/06
 Time Devoted to Project: 50% (cost shared)

Principal Investigator: Abigail Stewart
 Title: *Global Feminisms: Comparative Case Studies of Women's Activism and Scholarship*
 Sponsor: University of Michigan/Rackham Graduate School
 Amount of Award: \$250,000
 Duration of Award: 07/1/02 – 06/30/06
 Time Devoted to Project: 5%

Principal Investigator: Timothy Johnson
 Title: *BIRCWH Career Development*
 Sponsor: NIH/BIRCWH (Building Interdisciplinary Research Careers in Women's Health) Career Development Program
 Amount of Award: \$2,499,797
 Duration of Award: 09/01/05 – 07/31/10
 Time Devoted to Project: 3% as advisory board member

(Pending)

Principal Investigator: Abigail Stewart
Co-PI: Janet Malley
Title: *Smartgirl Clubs: Encouraging girls' interest in math and science through computer-assisted communities of learners*
Sponsor: National Science Foundation - ISE
Proposed Amount of Award: \$1,302,326
Proposed Duration of Award: 07/01/06 – 06/30/10
Time Devoted to Project: 5%

Gibala, Ronald**(Current)**

Principal Investigator: Abigail Stewart
Co-PI: Ronald Gibala, Allen Lichter, Terrence McDonald, Pamela Raymond
Title: *ADVANCE Institutional Transformation Award*
Sponsor: National Science Foundation
Amount of Award: \$3,748,785
Duration of Award: 01/01/02 - 12/31/06
Time Devoted to Project: 5% (cost shared)

Lichter, Allen**(Current)**

Principal Investigator: Abigail Stewart
Co-PI: Ronald Gibala, Allen Lichter, Terrence McDonald, Pamela Raymond
Title: *ADVANCE Institutional Transformation Award*
Sponsor: National Science Foundation
Amount of Award: \$3,748,785
Duration of Award: 01/01/02 - 12/31/06
Time Devoted to Project: 5% (cost shared)

Malley, Janet**(Current)**

Principal Investigator: Abigail Stewart
Co-PI: Ronald Gibala, Allen Lichter, Terrence McDonald, Pamela Raymond
Title: *ADVANCE Institutional Transformation Award*
Sponsor: National Science Foundation
Amount of Award: \$3,748,785
Duration of Award: 01/01/02 - 12/31/06
Time Devoted to Project: 30%

(Pending)

Principal Investigator: Abigail Stewart
Co-PI: Janet Malley
Title: *Smartgirl Clubs: Encouraging girls' interest in math and science through computer-assisted communities of learners*
Sponsor: National Science Foundation - ISE
Proposed Amount of Award: \$1,302,326
Proposed Duration of Award: 07/01/06 – 06/30/10
Time Devoted to Project: 5%

McDonald, Terrence**(Current)**

Principal Investigator: Abigail Stewart
Co-PI: Ronald Gibala, Allen Lichter, Terrence McDonald, Pamela Raymond
Title: *ADVANCE Institutional Transformation Award*
Sponsor: National Science Foundation
Amount of Award: \$3,748,785
Duration of Award: 01/01/02 - 12/31/06
Time Devoted to Project: 5% (cost shared)

Raymond, Pamela**(Current)**

Principal Investigator: Pamela Raymond
Title: *New Neurons in the Retina*
Sponsor: NIH
Amount of Award: \$974,605
Duration of Award: 07/01/03 – 06/30/06
Time Devoted to Project: 20%

Principal Investigator: Pamela Raymond
Title: *Genetic Analysis of Cone Photoreceptor Determination*
Sponsor: NIH
Proposed Amount of Award: \$923,709
Proposed Duration of Award: 10/01/04 – 11/30/07
Time Devoted to Project: 20%

Principal Investigator: Pamela Raymond, Sponsor for Jason Meyers, Postdoctoral fellowship
Title: *Role of Wnt Signaling Stem Cell Fate in the Zebrafish Retina*
Sponsor: Fight for Sight, Inc.
Amount of Award: \$20,000
Duration of Award: 07/01/05 – 06/30/06
Time Devoted to Project: 0%

Principal Investigator: Pamela Raymond, Sponsor for Rebecca Bernardos, Predoctoral fellowship
Title: *The Role of Muller Glia and Notch in Retina Regeneration*
Sponsor: NIH, NRSA
Amount of Award: \$38,041
Duration of Award: 05/18/05 – 08/17/06
Time Devoted to Project: 0%

Principal Investigator: Abigail Stewart
Co-PI: Ronald Gibala, Allen Lichter, Terrence McDonald, Pamela Raymond
Title: *ADVANCE Institutional Transformation Award*
Sponsor: National Science Foundation
Amount of Award: \$3,748,785
Duration of Award: 01/01/02 - 12/31/06
Time Devoted to Project: 5% (cost shared)

Principal Investigator: E. Keller
Co-PI: Pamela Raymond
Title: *Development of Mature Zebrafish as an Animal Model*
Sponsor: NIH
Amount of Award: \$1,853,350
Duration of Award: 06/01/02 – 05/31/07
Time Devoted to Project: 0%

Principal Investigator: B. Hughes
Title: *Core Center for Vision Research*
Sponsor: NIH
Amount of Award: \$3,019,879
Duration of Award: 05/01/02 – 04/30/07
Time Devoted to Project: 0%

SECTION II: SUMMARY OF PROJECT ACTIVITIES, JANUARY-DECEMBER 2005

A. SUMMARY OVERVIEW

The most important activity of UM ADVANCE during this past year was preparation for the end of grant funding. Discussions about how best to continue to sustain effort on the project after the funding ends took place within the Steering Committee, the Gender in Science and Engineering Committee, and in discussions with Provost Paul Courant. In July 2005, Abigail Stewart and Pamela Raymond submitted a proposal for creation of an ongoing project office that would report to the Provost, and be housed in the Institute for Research on Women and Gender. A commitment was made for continued funding of an infrastructure for the project through June 2011. During the next year the Steering Committee will discuss precisely how to actualize this new commitment.

At the end of our fourth full year of grant-supported activity (and halfway through our fourth full academic year, since we publicly launched our project in September 2002), we believe that campus awareness about the importance of the climate for recruitment and retention of women faculty in the sciences and engineering has increased and remains high. This belief is supported by evidence collected in a climate survey conducted with women scientists in January 2004, as well as discussions with faculty in both the Network of Women Scientists and Engineers, and the LSA gender and science committee.

An important change agent has been the CRLT Players' performances on campus, including their recent launch of a third program focused on the tenure review process (called "The Fence"). In addition to their on-campus performances, CRLT Players has been much-sought-after nationally, and offered a 3-day summer institute that was very successful.

In addition, as a direct result of the policy review launched by the President and Provost to consider the impact of University policies on women scientists and engineers, the Provost appointed a committee to consider a more flexible tenure probationary period. This committee's report is under discussion on campus, and real changes in the tenure probationary period policies are being considered.

We are pleased to note that during the immediate "pre-ADVANCE" years, about 5 women scientists and engineers were hired each year in the three largest colleges. During the three "post-ADVANCE" years, about 15 women scientists were hired each year. While overall change in the demographic structure of the institution is slow, this level of change in hiring is significant in the short and the longer term.

For the second year, the *Science and Technology Recruiting to Improve Diversity and Excellence* (STRIDE) Committee presented an expanded workshop to all chairs of search committees in all fields. The deans asked all such chairs to attend and there was excellent participation in three separate workshops involving faculty from all three schools. Both informal and formal feedback indicate that these workshops were even more successful than the shorter presentations made in departments in the past.

An interesting new development has been increased attention to issues for graduate students and postdocs in science and engineering. More and more departments have noted that this is an issue, and the ADVANCE staff agreed to undertake a survey of the climate for graduate students shortly before the new dean of the Rackham Graduate School was appointed, in the hope that she would find it useful in working with science and engineering departments. The report has been initially drafted, and will be disseminated on campus during the Winter semester.

Finally, ADVANCE staff (Abigail Stewart, Janet Malley and Danielle LaVaque-Manty) have spent considerable time this year on editing a volume describing ADVANCE initiatives that might be of value to other institutions. Tentatively named *Learning from ADVANCE*, this volume will be turned into the publisher (University of Michigan Press) by the end of December.

Below, in detail, is a full accounting of activities of UM ADVANCE in 2005.

A. PARTICIPANTS

PROJECT STAFF

Abigail Stewart, Principal Investigator, is responsible for ADVANCE Project oversight. She represents the project to the larger University of Michigan community, offering presentations about the program, and consultation on mentoring, recruitment and retention strategies to units and administrators across campus and in other settings. She directs all project interventions and consults on all ADVANCE-related activities involving the project's collaborators. Abigail Stewart was on sabbatical leave January through June 2005, and she resumed her on-campus duties on July 1, 2005.

Pamela Raymond, ADVANCE Co-PI assumed the leadership as PI January through June 2005 during Abigail Stewart's sabbatical. During that time period, Pamela had responsibility for ADVANCE Project oversight, as outlined in the previous paragraph. She is a member of the Steering Committee and STRIDE.

Janet Malley directs all project evaluations. She directs the ongoing collection of data to be used to evaluate the project's progress in nine different UM colleges. She oversees the design and administration of web surveys to evaluate the effectiveness of the activities and initiatives of ADVANCE and prepares reports. During this year she has directed the collection and analysis of data on the climate for graduate students.

Cynthia Hudgins manages and coordinates activities including committee meetings, presentations, and intervention activities. She develops draft reports and publications, including materials for University publications. She coordinates plans for ADVANCE-sponsored activities, schedules ADVANCE meetings and discussions, provides administrative support to the STRIDE recruitment committee and other project committees and collaborators (e.g., CRLT). She assists with climate studies and develops text for the project Web site. She maintains the mailing lists and individual contacts with ADVANCE constituencies.

Keith Rainwater manages and coordinates ongoing project evaluation and data collection

activities under the supervision of Janet Malley. He collects and analyzes data used in evaluating the project's initiatives. He develops instruments for collecting college-level data, ensures the accuracy of the data, and represents results in charts and graphs designed to illustrate change over time. He provides liaison with the nine target schools and colleges within the university to collect data and information. He designs web surveys and writes draft reports on ADVANCE activities and initiatives. He maintains the project Web site.

Lisa Parker keeps financial records, writes budget reports, and manages ongoing account activities for the ADVANCE grant.

Patricia Smith reviews ADVANCE account activities and, along with Lisa Parker, negotiates with administrators in units cooperating with the Institute for Research on Women and Gender in administering the grant.

Adrienne Malley left the project in June 2005. Until that time, she assisted with maintaining the Web site and developing promotional materials to advertise intervention programs, and redesigning the ADVANCE brochure. She assisted with developing and maintaining contact and e-mail lists. She also provided programming support.

Lily Axelrod left the project in August 2005. Until that time, she assisted with developing and maintaining contact and e-mail lists. She provided programming support. She also worked on the archives and the electronic database of resources and articles.

Allison Schwartz joined the project in November 2005. She provides programming support and works on the archives and the electronic database of resources and articles.

Danielle LaVaque-Manty is assisting with the Department of Aerospace Engineering Climate Self-Study. She is also co-editing the volume about ADVANCE with Abby Stewart and Janet Malley.

Jennifer Churchwell assisted in the design, implementation, and analysis of a campus-wide graduate student survey. She coordinated focus groups with graduate student consultants on the survey.

Ellen Meader, a research associate in the Dean's Office of the College of Literature, Science and the Arts, was hired in part to institutionalize data collection and organization of indicators for NSF and ADVANCE, as well as for internal LSA institutional research. She participates in ADVANCE staff meetings to ensure effective coordination between LSA and the project; as a result, she also participates in many ADVANCE activities.

PARTNERS

Jean Waltman and **Carol Hollenshead** from the Center for the Education of Women (CEW) are conducting qualitative evaluations of the departments with substantial Departmental Transformation Grants, as well as comparison departments (a total of five). They are also conducting exit interviews with faculty who have left those departments during this period and

in recent years past.

Jeffrey Steiger, Devon Seybert, and other staff at the Center for Research on Learning and Teaching (CRLT), directed by **Connie Cook**, have developed three interactive theater sketches for ADVANCE. The first, called the “Faculty Meeting Sketch,” illustrates experiences of female faculty and the negative climate issues that sometimes emerge in the context of faculty recruitment. The second, “Faculty Advising Faculty Sketch,” illustrates some good and poor mentoring techniques. The third sketch, called “Tenure: The Fence” focuses on a tenure committee discussion of a candidate. This group also offered a three-day “Summer Institute” on “Setting the Stage for Change,” with support from a supplemental award.

Jane Hassinger, director of the Interdisciplinary Program in Feminist Practice, has conducted a Women Talking Science and Engineering (WTS&E) seminar in past years.

Cinda-Sue Davis, director of Women in Science and Engineering (WISE), has developed templates documenting the status of women in various engineering departments. These documents show the percentage of women students, both undergraduate and graduate, in a given engineering department at Michigan compared to other departments; the number of women faculty in various departments; and the number of women working nationally in a given engineering discipline compared to other disciplines.

OTHER COLLABORATORS OR CONTACTS

The Science and Technology Recruiting to Increase Diversity and Excellence (STRIDE) Committee was formed in 2002 and provides information and advice about practices that will maximize the likelihood that well-qualified female and minority candidates for faculty positions will be identified, and, if selected for offers, recruited, retained, and promoted at the University of Michigan. The committee works with departments by meeting with chairs, faculty search committees, and other departmental leaders involved with recruitment and retention. They advise chairs on search committee composition and search practices, work with search committees throughout the search process, and offer recruitment presentations to departments, search committees, and other groups. The membership is comprised of senior faculty in sciences and engineering and is chaired by the PI. Members are: Anthony England, Associate Dean for Academic Affairs, College of Engineering; Carol Fierke, Chair of Chemistry; Melvin Hochster, Mathematics; Gary Huffnagle, Internal Medicine, and Microbiology and Immunology; Wayne Jones, Materials Science and Engineering; Samuel Mukasa, Geological Sciences; Martha Pollack, Associate Chair of Electrical Engineering and Computer Science; Pamela Raymond, Senior Counselor to the Provost, Molecular, Cellular and Developmental Biology; and John Vandermeer, Ecology and Evolutionary Biology.

In order to recognize the University’s efforts to institutionalize the STRIDE Committee and expand both the composition and reach to include all fields, the STRIDE acronym has been reinterpreted as: *Strategies and Tactics for Recruiting to Improve Diversity and Excellence*.

Gender in Science and Engineering Committee. The President and Provost co-chair the Gender in Science and Engineering Committee. The committee members include Abigail

Stewart, Pamela Raymond, and the three deans who are co-PIs on ADVANCE.

Flexible Tenure Probationary Period Committee. In January 2005 the Provost charged a committee co-chaired by Dean Terrence McDonald and Associate Provost Janet Weiss to recommend specific policy changes including a more flexible tenure probationary period. Abigail Stewart served on this committee.

Pamela Smock, Associate Director of ISR and Associate Professor of Sociology and of Women's Studies, has provided expert consultation about mentoring to junior female faculty in the natural sciences in the Colleges of Literature, Science, and the Arts and Engineering. Based on this experience, Dr. Smock, along with Robin Stephenson, formerly the Program Manager for UM ADVANCE, developed a draft handbook on *Giving and getting career advice: A guide for junior and senior faculty*. The handbook is distributed widely to faculty and department chairs.

Lorna Hurl, Staff Counselor at UM's Faculty & Staff Assistance Program (FASAP), developed a series of programs with her staff, the Office of Institutional Equity (OIE), and the Human Resource Development (HRD) office to offer coaching sessions about topics identified by the Network of Women Scientists and Engineers. In February 2005, she facilitated a panel discussion entitled "Leading Successful Work Groups." A workshop is being developed for February 2006.

Janet Weiss, Former Associate Provost for Academic Affairs, was named Dean of the Horace H. Rackham School of Graduate Studies in August. She provides expert consultation to the UM ADVANCE project about implementation of programs. Abigail Stewart meets regularly with Dr. Weiss.

Diana Kardia, President of Diversity By Design and Leadership Consulting, Coaching, and Training for Diverse Environments, offers both coaching services to science chairs in LSA, and a workshop specifically designed for new full professors in LSA and Engineering.

Anthony Walesby, Assistant Provost and Senior Director of the Office of Institutional Equity, has been collaborating with UM ADVANCE staff regarding development of a program on sexual harassment to be presented to all graduate students in LSA. A pilot program was presented to science graduate students during the summer, and seven training sessions were conducted during the fall term 2005.

Mark Chesler, Emeritus Professor of Sociology and a member of the Evaluation Advisory Committee, has been consulting with UM ADVANCE staff about development of a program for male assistant professors. This program aims to inform this group about UM ADVANCE, encourage their active participation in efforts to improve the climate, and their alliance with women assistant professors in efforts to improve mentoring for all faculty.

B. ACTIVITIES AND FINDINGS

RESEARCH AND EDUCATION ACTIVITIES

Graduate Student Experience. A campus-wide, confidential, on-line survey about the graduate school climate was developed, funded by the Rackham Graduate School and the Office of the Provost and Executive Vice President for Academic Affairs. The survey was designed to identify aspects of the graduate school experience students find problematic and those that contribute to satisfaction and success. Some measures were designed to be parallel to the faculty climate survey, and others were specially designed to assess graduate school issues. Data from doctoral students in science, social science and humanities fields were collected, and a report is being drafted, with special attention to students in science and engineering. We will also discuss the findings with the Rackham staff and its Executive Board, with a special focus on any policy or practice implications. Working with the new dean of the Graduate School, Professor Janet Weiss (formerly Associate Provost), we hope to use these findings to draw attention to areas needing intervention in graduate education.

Survey of the Climate for Women Scientists and Engineers. In February 2005 a brief web survey was sent to all instructional track women scientists and engineers (N=202) on campus to assess their current experiences of the climate and to learn if they perceive any changes in the climate since the UM ADVANCE baseline survey was completed in the fall 2001. To enable these comparisons, survey questions were limited to specific climate questions asked in the 2001 survey as well as a job satisfaction rating. In addition, three open-ended questions about how the climate had changed positively and negatively, as well as suggestions for new efforts UM ADVANCE could make, were included.

Susan Sturm, George M. Jaffin Professor of Law and Social Responsibility at Columbia Law School, spent three days on campus interviewing faculty and administrators involved with the UM ADVANCE Project, and in the administration. She is using the UM ADVANCE Project as one example of an institutional change effort that helps her develop hypotheses about how those work. In February 2005 Dr. Sturm presented a paper to the UM Law School entitled “Public Problem Solving and the Architecture of Learning, Mobilization, and Accountability: Lessons from Gender Equity Regimes.” A second paper entitled “Building Gender Equity Regimes” was presented to an audience of faculty and staff involved with the UM ADVANCE Project.

Abigail Stewart and **Janet Malley** collaborated with NSF ADVANCE project staff at the Virginia Polytechnic Institute on the NSF ADVANCE PI Study. They conducted telephone interviews about experiences of PIs, Co-PIs, and major faculty participants at institutions with NSF ADVANCE Institutional Transformation Grants. These teams conducted phone interviews that centered on what worked, did not work, and surprised the participants about institutional change at the participants’ institutions. The purpose of these interviews was to determine “best practices” strategies based on successes of the various NSF ADVANCE programs.

Abigail Stewart interviewed LGBT science and engineering faculty about the climate for gay and lesbian faculty in their departments.

A leadership proposal entitled “**Developing Faculty Alliances to Transform Academic Science and Engineering**” was submitted to the NSF in July.

Ellen Plummer, Director of the Virginia Polytechnic Institute Women's Center, interviewed members of STRIDE and other UM ADVANCE-related individuals for her dissertation study. The purpose of her study is to examine the experiences of faculty members and administrators with organizational change strategies used to implement outcomes designed to improve the climate for women faculty members in science and engineering colleges and departments.

Mark Chesler and **Keith Rainwater** conducted four focus groups of male assistant professors in the science departments to discuss their perspective on departmental climate issues generally, and gender and other diversity issues more specifically.

OPPORTUNITIES FOR TRAINING AND DEVELOPMENT

The Strategies and Tactics for Recruiting to Improve Diversity and Excellence Committee (STRIDE) held three two-and-a-half-hour recruitment workshops for search committee chairs in the College of Engineering, College of Literature, Science, and the Arts, and the Medical School. A total of 51 faculty participated in these workshops. Additionally, STRIDE conducted formal presentations to departments across campus to educate them about bias and disadvantage.

Martha Pollack, **Wayne Jones**, and **Pamela Raymond** presented in April at a search committee in the Department of Aerospace Engineering. Following this presentation, Abigail Stewart and Pamela Raymond met with the newly appointed chair of Aerospace to discuss climate issues in the department. Subsequent to this meeting and at the invitation of the Chair, ADVANCE launched a climate self-study in this department. Faculty and staff interviews were conducted in the summer. Graduate student interviews and undergraduate student focus groups were conducted in the fall term. An online survey of undergraduate students was conducted in the fall term.

Carol Fierke, **Gary Huffnagle**, **Wayne Jones**, and **Pamela Raymond** presented in May at a search committee in the Department of Human Genetics.

At the invitation of the Chair and the Associate Dean for Academic Affairs, **Sam Mukasa**, **Gary Huffnagle**, and **Pamela Raymond** presented at a May faculty meeting in the Department of Naval Architecture and Marine Engineering in the College of Engineering. Faculty, staff, and students were in attendance.

In May and June the STRIDE Committee held a two-day **FASTER** (Friends and Allies of STRIDE Toward Equity in Recruiting) workshop. An evaluation of the FASTER Workshop was included in the September 2005 Quarterly Report. The two workshop sessions were attended by 21 senior faculty and 19 senior faculty, respectively. Because of the ADVANCE staff's agreement with the Provost that institutionalization of STRIDE would result from expansion of the committee to include all fields, these workshops included social science faculty for the first time. Faculty from the following 6 natural science departments in LSA participated (Astronomy,

Chemistry, Ecology and Evolutionary Biology, Mathematics, Molecular, Cellular and Developmental Biology, Physics), as well as 5 social science departments (Anthropology, Economics, Political Science, Psychology and Sociology). In addition, faculty from 3 departments in Engineering participated (Aerospace, Chemical, Mechanical), as did faculty from the Medical School department of Physiology and the School of Pharmacy.

The **Departmental Transformation Grant Program**, funded by the University of Michigan's NSF ADVANCE award and funds from both the Provost's and the President's offices, provided grants to selected departments to support activities leading to significant transformation in the environment for women faculty. Specific objectives included improving departmental climate and mentoring and increasing the number of women faculty recruited, retained, and/or promoted. Executive summaries of Departmental Transformation Grant Year-end Reports were included in the June Interim Report. As of November 2005, the Departmental Transformation Grant program has ended. In its place, the UM ADVANCE Project initiated the **UM ADVANCE Program of Visiting Scientists and Engineers**, a new program to support visits to campus by scientists and engineers whose presence on campus will improve our success at recruiting and retaining women scientists and engineers on the faculty, as well as in the student body.

A Departmental Transformation Grant was made to **Diana Kardia** to develop and facilitate two cross-departmental programs. The first is a Pilot Coaching Program for the LS&A Natural Science Division Department Chairs. The second is development of a workshop for new or recently appointed full professors, called *Leading Excellence: The Role of Full Professors*. The aim of this program is to encourage leadership activities among younger full professors. In May, Dr. Kardia conducted a two-day workshop for 20 faculty from 8 departments in the College of Engineering (Aerospace, Chemical, Electrical and Computer Science, Industrial and Operations, Materials Science, Mechanical, Naval Architecture and Marine; Nuclear and Radiological), and from 4 departments in the College of Literature, Science and the Arts (Chemistry, Ecology and Evolutionary Biology, Mathematics, Physics). In addition, one faculty member from the Medical School attended (from the department of Microbiology and Immunology) to advise the dean and Dr. Kardia on how to adapt the program to a Medical School audience.

A summer lunch discussion was held for **Departmental Transformation Grant (DTG)** recipients and department chairs to share the successes and challenges of various DTG models, with particular attention on "low cost—high impact" program models. Nine faculty attended the discussion. The following models were discussed:

- Speaker series had variable results. Several participants identified a need to integrate UM ADVANCE-sponsored speakers with other seminar speakers and to announce upcoming seminars to be given by "exceptional, top scientists" not "women scientists." Providing an opportunity for a guest speaker to stay in the hosting department for a longer visit yielded more positive outcomes than expected.
- The Junior Faculty Forum was identified as a successful model. Both Chemistry and the Medical School Basic Sciences have employed this model. Chemistry has recently initiated a comparable forum for associate professors. This model also was praised for providing opportunities for leadership experience at the junior level.

- Two departments had different experiences with offering release time; one department was concerned that it could be generating negative sentiment among male faculty; the other department saw it as helping the entire department. Positive examples included faculty using this release time while working toward promotion from associate to full professor, and for concentrated time while preparing an NSF Center grant.
- One department found that providing modest discretionary funds to all female faculty in the department produced a large increase in morale.
- The participants also discussed two cross-departmental projects, which were created by deans collaboratively with Diversity by Design (Kardia). The coaching pilot for chairs was lauded as providing an important forum for chairs to improve their communication strategies within their departments. The Leadership Seminars for newly promoted senior faculty provided very useful information about mentoring and stepping into leadership roles.

Monthly lunches were organized for women holding Department Chair (or equivalent) positions in science and engineering departments. These lunches provide an opportunity for the chairs to network and consult one another.

OUTREACH ACTIVITIES

CRLT performances of ADVANCE Faculty Sketches:

In January, the CRLT Players presented the *Faculty Advising Faculty* sketch for Allen Lichter, Dean of the Medical School, as well as Medical School Associate and Assistant Deans (the Associate Dean of Medical School Administration, Assistant Dean for Diversity and Career Development, Assistant Dean of Faculty Services and Research Faculty, Assistant Dean for Clinical Faculty, and Assistant Dean of Admissions). This yielded a commitment for additional performances in the Medical School. The CRLT Players also presented the *Faculty Advising Faculty* sketch to the School of Dentistry in December.

In March, the CRLT Players presented *The Faculty Meeting* to Dr. Meg Urry and invited guests. They also presented *The Faculty Meeting* for Rob Tomsho (*Wall Street Journal*), Joe Serwach (University of Michigan News Service), and selected faculty and staff.

UM ADVANCE staff members and faculty have attended three preview presentations of the sketch *Tenure: The Fence*, providing valuable feedback during the development of this new sketch. *Tenure: The Fence* was presented to LSA Chairs in September and to the University's Academic Planning Group (APG), composed of deans of all of the schools and colleges in November. It was presented to the College of Engineering chairs and "casebook" committee chairs and to the LSA Divisional Chairs in December.

The CRLT Players presented sketches to several audiences at the National Science Foundation in Washington, D.C. In January, they presented *The Faculty Meeting* to members of the National Science Foundation. In May, they presented *The Faculty Meeting* and *Faculty Advising Faculty* at the meeting of the NSF ADVANCE PIs. They have also been invited to other campuses to perform ADVANCE sketches. They performed ADVANCE sketches at Michigan Technological University, University of Minnesota, Case Western Reserve University, in addition to conferences in Georgia and Wisconsin.

Summer Institute 2005. In collaboration with the University of Michigan Center for Research on Learning and Teaching (CRLT), we hosted a three-day workshop June 15-17, 2005, entitled *Setting the Stage for Change: Using Theatre to Improve Institutional Climate*. The Summer Institute provided participants with an opportunity to learn more about how to develop and use interactive theatre programs focused on hiring, retention, and climate for women faculty in the sciences and engineering. A copy of the Institute schedule and a listing of Institute participants, are included in Appendix A. An evaluation of the Institute was included in the March 2005 Quarterly Report. The 33 participants attending the Institute came from 16 colleges and universities, including:

- Allegheny College
- Case Western Reserve University
- New Mexico State University
- Ohio State University
- Otterbein College
- Stanford University
- University of Colorado at Boulder
- University of Illinois at Urbana-Champaign
- University of Maryland, Baltimore County
- University of Missouri-Columbia
- University of Puerto Rico at Humacao
- University of Rhode Island
- University of Washington
- University of Wisconsin-Madison
- Utah State University
- Yale University

Planning is underway for the Summer Institute 2006, scheduled to occur in June 2006.

Abigail Stewart, Pamela Raymond, and Janet Malley have held several meetings with two associate deans of the **School of Dentistry** to plan a climate study to be conducted during winter term. The climate study will be conducted in conjunction with the School's strategic planning process, and the followup on their "multicultural audit."

Abigail Stewart presented at the International Workshop on Women and Science, an interdisciplinary workshop to discuss experiences and strategies for the advancement of women in science, at the University of Udine (Italy) in January.

Sam Mukasa, member of the STRIDE committee, presented a poster entitled “The NSF-Supported ADVANCE Initiative at the University of Michigan Aimed at Successful Recruitment and Retention of Women Faculty in Science and Engineering” at the American Geophysical Union meeting in San Francisco in January.

Susan Sturm, George M. Jaffin Professor of Law and Social Responsibility at Columbia Law School, presented “Gender Equity in an Age of Complexity: The Role of Linkages” in February.

Abigail Stewart, Pamela Raymond, Terry McDonald (Dean of LSA), **Tony England** (STRIDE), and **Mel Hochster** (STRIDE) made a presentation about ADVANCE to the Board of Regents of the University of Michigan in February.

Sam Mukasa, member of the STRIDE committee, participated in the Martin Luther King, Jr. Panel Discussion, “Strategies for Shattering the Glass Ceiling in Industry and Academia” organized by the College of Engineering in February.

Sioban Harlow, Professor of Epidemiology and the Associate Director of the College of Literature, Science, and the Arts International Institute presented “Strategies for Institutional Change: Federal Policies to Institutional Commitment” in Hermosillo, Sonora, Mexico at the “International Workshop on Environmental Health in Latin America: Developing a Gender Perspective” in February. Dr. Harlow’s presentation was part of a panel on Women and Environmental Science in Latin America, which explored the interlinkage between development of a gender perspective in environmental health in Latin America and development of career paths and opportunities for leadership by Latin American women scientists. Discussion focused on the needs, the barriers, and the implications for research agendas, funding programs, and government policies.

STRIDE members, **Martha Pollack, Wayne Jones, and Gary Huffnagle**, presented at the University of Chicago in March. They met with the University Provost and the Deans of Engineering and Liberal Arts and Sciences.

Meg Urry, Director, Yale Center for Astronomy and Astrophysics, was on campus as the chair of the external review committee for the Department of Physics in March. She also presented a research seminar entitled “The GOODS on Hidden Black Holes in the Young Universe.” Dr. Urry also spent a day meeting with various UM ADVANCE teams (e.g., STRIDE and CRLT).

Pamela Raymond and **Cynthia Hudgins** attended a meeting called by the University Ombudsman to discuss the status of postdoctoral fellows at the University of Michigan in April.

Abigail Stewart and Pamela Raymond met with two senior faculty candidates being recruited by science departments to discuss ADVANCE and the University of Michigan in April.

Mel Hochster, member of the STRIDE committee, gave a STRIDE-related presentation at a conference held at the University of Arkansas in April. In addition to his one-hour STRIDE presentation, Mel also gave a radio interview during his visit. The STRIDE presentation was open to the public, included many students, and ended with a long Q&A session.

Sam Mukasa, member of the STRIDE committee, gave two STRIDE-related presentations in April. He met with representatives from ADVANCE at the Earth Institute at Columbia University, specifically with their STRIDE Committee. The first talk was attended by ADVANCE representatives and was very interactive. The second talk was to an Earth Institute audience. This was a full STRIDE presentation which was well-received and very interactive.

Timothy McKay, Associate Professor of Physics and Associate Chair for Undergraduate Education, presented about ADVANCE and STRIDE at the Chicago Physical Sciences Program in May.

Abigail Stewart, Pamela Raymond, and Janet Malley attended the annual NSF ADVANCE PI Meeting in May held in Washington, DC.

Abigail Stewart made a presentation about ADVANCE to several audiences at Microsoft Corporation in Seattle Washington in May.

Pamela Raymond participated in the Dual Career Conference at the University of Michigan in June.

Abigail Stewart and Janet Malley attended the Annual Conference of the National Council for Research on Women (NCRW) in June, and presented a panel on the ADVANCE program that also included Diana Bilimoria from Case Western Reserve University and Virginia Valian from Hunter College. The conference, *Power Matters: Reshaping Agendas Through Women's Leadership*, was hosted and co-sponsored by the Center for the Study of Women and Society and held at the City University of New York Graduate Center.

Abigail Stewart and Ellen Meader attended the NSF ADVANCE Indicators meeting held in Washington, D.C. (January). **Janet Malley and Ellen Meader** attended the NSF ADVANCE Indicators meeting held at the University of California-Irvine (February). **Ellen Meader** attended the NSF Indicators meeting held at New Mexico State University (June). **Janet Malley** attended the NSF ADVANCE Indicators meeting held at the University of California-Irvine (September).

Abigail Stewart has been working with the Assistant Provost and Senior Director of the Office of Institutional Equity (OIE), an associate director in the Office of Institutional Equity, and the Program Associate for Graduate Education in LSA about climate issues in science departments.

Abigail Stewart made a presentation about the ADVANCE program at the Michigan Seminar in September. The Michigan Seminar is an annual program aimed at providing interesting opportunities for contributions to past and prospective donors. This is part of a general effort to engage donors in supporting the Crosby Awards on an ongoing basis.

Gary Huffnagle, member of the STRIDE committee, participated in a panel discussion on faculty recruitment at Georgia Technological Institute in September.

Mel Hochster, member of the STRIDE committee, presented on STRIDE at a dinner organized by the Women in Science and Engineering (WISE) in September.

Abigail Stewart attended a conference on the meaning of Affirmative Action in Cape Town South Africa. She presented an overview of Michigan's ADVANCE Institutional Transformation program, and discussed the challenges involved in programs aimed at ending inequities.

Abigail Stewart prepared a presentation for the "Women at Michigan" Lunch in New York, NY in October. This is part of a general effort to engage donors in supporting the Crosby Awards on an ongoing basis.

Abigail Stewart coordinated information for the Centre for Families, Work, and Well-Being at the University of Guelph in Ontario, Canada. The UM ADVANCE Project was spotlighted during their workshop, entitled "Addressing the under-representation of women in science and engineering: A multi-faceted approach."

Abigail Stewart presented at the LSA Gender in Science and Engineering Committee meeting held in October.

Abigail Stewart participated in a luncheon organized for LSA female faculty in the natural sciences in December.

Abigail Stewart participated in the follow-up meeting with the LSA participants who had attended the May Faculty Leadership Seminar in December.

Abigail Stewart and **Janet Malley** presented a poster entitled "ADVANCE Institutionalization Transformation Project" at the National Academies' Committee on Women in Academic Science and Engineering Convocation on Biological, Social, and Organizational Contributions to Science and Engineering Success in Washington, DC in December.

Pamela Raymond provided advice about ADVANCE and related matters to individuals at Pennsylvania State University, University of Chicago, Washington State University, Michigan State University, University of Minnesota, Virginia Polytechnic Institute, Texas A&M University, and Columbia University.

Abigail Stewart provided advice about ADVANCE and related matters to individuals at the University of Chicago, University of Illinois-Chicago, Princeton University, MIT, Harvard University, University of Nebraska-Lincoln, University of Iowa, University of Missouri, University of Texas at Austin, and M.D. Anderson Cancer Center.

Cynthia Hudgins met with Janet Kahan, the math and science coordinator for the Plymouth-Canton School district (Michigan) and Judith Hommel, Executive Associate to the President of Washtenaw Community College (Michigan) and two senior science faculty members about the poster project, "Visualizing Women in Science, Mathematics and Engineering" by the artist Pamela Davis Kivelson.

Cynthia Hudgins met with Wendy Fuller-Mora, Director of the Condensed Matter Physics Program of the National Science Foundation. Dr. Fuller-Mora's visit was connected with the Department of Physics "Life after Graduate School" series.

Members of the STRIDE Committee met with **Chuck Vest**, President Emeritus of the Massachusetts Institute of Technology, to discuss gender and race in higher education.

Sam Mukasa, member of the STRIDE committee, served on the NSF ADVANCE panel in November.

Abigail Stewart and **Pamela Raymond** met with a number of individual women in private consultation about counter-offers, accepting committee assignments, appointments to be chairs, and other related issues.

Abigail Stewart is serving on the Flexible Tenure Committee. This Committee is co-chaired by Terrence J. McDonald, Dean of the College of Literature, Science and the Arts and Janet A. Weiss, Associate Provost for Academic Affairs.

Pamela Raymond serves on the external Advisory Board for the ADVANCE Program at the University of Maryland, Baltimore County.

Abigail Stewart serves on the external Advisory Board for the ADVANCE Program at Case Western Reserve University.

C. PUBLICATIONS AND PRODUCTS

A booklet entitled *Elizabeth Caroline Crosby Research Fund Grant Winners 2002, 2003, and 2004* was published. It highlights and summarizes the projects conducted by winners to date. The booklet was distributed to all Network members, deans, chairs, president, and provost.

A complete review of the Web site took place during winter term. Changes were made to the architecture in order to address some first generation site limitations and improve navigation. Additional resources have been added to our Web site, including Good News: Awards and Recognition, ADVANCE Program of Visiting Scientists and Engineers, and UM ADVANCE Welcomes New Faculty to the University of Michigan Network of Women Scientists and Engineers. A new page, which will provide suggestions for activities outside the lab or classroom, is in development. We have begun a systematic monitoring of site activity. In an average month, our site had 36 “unique visitors” per day. The web address is: <http://www.umich.edu/~advproj/>.

Science and Engineering Deans and Department Chairs received the Chair/Dean Toolkit, which provided details of the initiatives available through UM ADVANCE.

In response to the aftermath of the controversial public remarks regarding gender disparities in science and engineering made by Lawrence Summers, President of Harvard University, the UM ADVANCE Project received multiple requests for interviews and was cited in numerous press articles. Additional articles about the efforts of UM ADVANCE were published in the past year. An article entitled *Concerted efforts draw more women to faculties* was published in *The Chicago Tribune*, which featured several remarks by Abigail Stewart regarding her strategy for encouraging diversity in hiring. *The Boston Globe* included the University of Michigan as one of

three universities nationwide who have undertaken specific efforts to address their own gender gaps in its article entitled *Gender gaps separate Harvard, other top schools*. This article referenced Michigan's use of CRLT Players sketches to reveal unconscious biases in hiring. The University of Michigan's online publication, *The University Record Online*, published several articles that referenced UM ADVANCE, including *Nine Receive Crosby Research Awards* (see Appendix B), *Regents to hear about women in science and engineering, February 17* (see Appendix C), *Panel: U-M ADVANCE makes strides, gains recognition* (see Appendix D), and *Coleman: Affirmative action synonymous with progress* (see Appendix E). The *Ann Arbor News* published an article entitled *The Women of Science, Art Exhibit's Message: They excel in many forms* about the Pamela Davis Kivelson Poster Project. *The Michigan Daily* published two articles: *Michigan Civil Rights Initiative's passage may harm women-oriented faculty programs* (see Appendix F) and *Panel discusses women in science fields* (see Appendix G). *The New York Times* published *For Women in Sciences, Slow Progress in Academia*, which featured extensive remarks by STRIDE member, Dr. Mel Hochster. *LSA Magazine* published a piece entitled *Women Faculty ADVANCE at UM* (see Appendix H). Additionally, UM ADVANCE's Abigail Stewart authored *An Opportunity for the LSI: Creating an Inclusive Culture of Scientific Inquiry in LSI Insights* (see Appendix I). Finally, *The Chronicle of Higher Education* published a lengthy article entitled *Family Science, Some colleges are giving scientists who are mothers money to pay for day care or lab assistants*. This article featured two University of Michigan professors who had received Elizabeth Caroline Crosby Fund Awards.

D. CONTRIBUTIONS

As of June 2005, the UM ADVANCE Project has administered five rounds of *The Elizabeth Caroline Crosby Fund* competitions: summer 2002, spring 2003, spring 2004, fall 2004, and spring 2005^[1]. The Elizabeth C. Crosby Research Fund has directly supported 48 University of Michigan faculty members in science and engineering as of June 2005. Grants totaling \$722,446 have funded proposals ranging from individual research projects to a disciplinary speaker series presenting prominent women in science and engineering fields. The number of applications for Elizabeth C. Crosby funding increased from 10 in summer 2002 to a high of 35 in spring 2004 and fall 2004. Due to increased competition and fixed funding, the percentage of proposals that received funding decreased from a high of 70% in summer 2002 to 26% in fall 2004.

The Elizabeth Caroline Crosby Fund awarded grants to nineteen women faculty in science and engineering in 2005. Most of these women hope to increase their chances of attaining tenure or promotion through the research supported by these funds. Some of the unique needs of this year's winners included: funding specialized child care to allow an applicant to attend and fully participate in an upcoming meeting; supporting graduate students and post-doctoral students; and funding travel to pursue joint work with national and international off-site collaborators. Crosby Awards were made to women in the following departments in Spring 2005:

- Anthropology
- Civil and Environmental Engineering
- Environmental Health Sciences

^[1] Dates refer to the calendar year and not to the academic year. Awards were announced in June 2002, April 2003, April 2004, November 2004, and March 2005.

Epidemiology
Human Genetics
Internal Medicine and Microbiology and Immunology
Kinesiology
Mathematics
Ophthalmology and Visual Services

A call for proposals was issued for the Elizabeth Caroline Crosby Research Awards in fall 2005. Proposals were reviewed in December with awards to be announced in January 2006. An evaluation of the Crosby Fund was included in the March 2005 Quarterly Report.

The Lydia Adams DeWitt Research Fund awarded grants to two women faculty on the Primary Research Scientist track in 2005. Funding for these awards was provided by the institution. We expect these awards to contribute not only to the careers of the women who receive them, but also to the morale of the women on the research science track in general. These awards were made in the following departments:

Ecology and Evolutionary Biology
Institute of Gerontology

Two *Departmental Transformation Grant* proposals, submitted by Diana Kardia, President of Diversity By Design and Leadership Consulting, Coaching, and Training for Diverse Environments, were funded in the winter term 2005. The purposes of the first proposal, entitled “Leadership Development Program for Young Senior Faculty” include providing leadership training to recently promoted faculty in order to:

- 1) broaden faculty awareness of the relationship between departmental concerns and the larger university context;
- 2) develop greater dexterity navigating between departmental, school, and university perspectives;
- 3) cultivate skills needed to take leadership at the department, school, and university level;
- 4) expand the network of senior faculty beyond disciplinary and unit boundaries to promote greater leadership collaboration across the university.

A second proposal, entitled “Pilot Coaching Program for LS&A Natural Science Division Department Chairs” was also funded. The purpose is to provide leadership support to Department Chairs in order to foster:

- 1) identification of barriers to effective department functioning and to the success of individuals within the department;
- 2) attainment of the Chair’s professional and administrative goals;
- 3) improved communication within the department, especially between the Chair and their faculty, staff, and students;
- 4) organizational change goals within the department, especially those related to the goals of the ADVANCE Project (fostering the success and advancement of women faculty in science and mathematics).

A *Departmental Transformation Grant* was made to the Department of Ecology and Evolutionary Biology. The grant supports four projects to increase the department's recruitment of women and improve the climate. These include: 1) Workshops on work/family harmonization 2) Junior faculty lunches 3) Seminars by prominent women in Ecology and Evolutionary Biology, and 4) Travel funds for women faculty.

The Network of Women Scientists and Engineers is composed of tenured and tenure-track women faculty in science and engineering across the entire campus. The Network meets several times each year to socialize, to talk about issues the members have in common, and to develop plans for the future. The Network provides women faculty in science and engineering with opportunities to define collective goals and to support one another. A Network Events Survey was included in the June Interim Report. The *Network* held the following events:

January

We organized the Pamela Davis Kivelson poster project, "Visualizing Women in Science, Mathematics and Engineering." The primary goal of this project is to change the intellectual and emotional climate surrounding the idea of scientific research in order to increase the number of women and girls who choose to pursue careers related to the physical sciences and mathematics, and to retain women who have already chosen such careers. The other major goal of this poster project is to encourage scientific literacy by humanizing the image of science and the scientist. The posters were presented in the Lane Hall exhibit space.

We held a reception to honor the 2004 winners of the Crosby and DeWitt awards. The reception was held in conjunction with the official opening of the poster project, "Visualizing Women in Science, Mathematics and Engineering" by the artist Pamela Davis Kivelson. The reception included a presentation by Margaret Kivelson, Professor of Space Physics at UCLA and Principal Investigator for the Magnetometer Investigation on the Galileo Orbiter. Dr. Kivelson is also the subject of one of the poster project pieces.

February

We sponsored a Faculty & Staff Assistance Program (FASAP) panel discussion in February entitled "Leading Successful Work Groups." Panel members included Sally Camper, chair of the Department of Human Genetics and the James V. Neel Professor in Human Genetics; Sally Johnson, Manager of Mediation Services for faculty and staff; and Judy Hallberg, a Human Resources consultant with M-Care. Eleven women attended.

A joint College of Engineering and Literature, Science, and the Arts lunch was organized for Network women.

March

We hosted MANYA: A Living History of Marie Curie, a two-hour dramatic performance by Susan Marie Frontczak in March. The performance was followed by a brief on-stage dialogue with the performer and a reception. Approximately 175 people attended.

April

We hosted the Network of Women Scientists and Engineers Spring Dinner. This social evening provided an opportunity for the participants to network and to provide important feedback about the climate in their departments and how ADVANCE can be most helpful. Sixty-four faculty women attended.

We held a reception to honor Mildred Dresselhaus, professor of physics at the Massachusetts Institute of Technology and one of the leading researchers in the field of nanotechnology. Dr. Dresselhaus was the main speaker at the University of Michigan Graduate Exercises and also received an honorary degree from the University of Michigan. Faculty and students had an opportunity to talk with Dr. Dresselhaus about her science and her career.

September

We hosted the Network of Women Scientists and Engineers Fall Dinner. This social evening provided an opportunity for the participants to network and to provide important feedback about the climate in their departments and how ADVANCE can be most helpful. Seventy-five faculty women attended.

UM ADVANCE cosponsored, along with Physics, Astronomy, and Women in Science and Engineering, a weeklong visit by Jocelyn Bell Burnell, a distinguished physicist/astronomer from Oxford University. Her visit attracted a very high degree of attention and participation by male and female scientists, as well as faculty and administrators involved directly with UM ADVANCE. During her visit, the following activities were organized:

- Dr. Bell Burnell gave an informal after-dinner talk to the Network of Women Scientists and Engineers at their fall welcome dinner. She discussed her involvement with the Inter Academy Council project on Women for Science, as well as her own career.
- Dr. Bell Burnell presented a colloquium entitled “What Astronomy has done for Einstein” in the Department of Physics. This colloquium served as a kickoff to the theme semester of the Department of Physics.
- Dr. Bell Burnell presented a colloquium entitled “Pulsar precession and pulsar evolution: Two problems” in the Department of Astronomy.
- A lunch was organized with the Physics Graduate Students (Grad Phi).
- A lunch was organized with the Women in Science and Engineering (WISE) graduate students.
- Dr. Bell Burnell also met with key members of ADVANCE, CRLT Theater Program and STRIDE over dinner.
- A breakfast was organized with the Society for Physics Students (SPS).

Results from an evaluation of this event are summarized in Section III (see Appendix K for the full-length report).

UM ADVANCE cosponsored, along with the Department of Linguistics, a colloquium by Frances Trix, Associate Professor of Anthropology at Wayne State University and Visiting Professor at Indiana University. Professor Trix was the coauthor of a key study on letters of recommendation that has had a significant impact on STRIDE committee members and on many administrators involved with the tenure review process. The title of the colloquium was

“Cautionary Tales in Letters of Recommendation for Female and Male Medical Faculty.” A dinner following the colloquium provided an additional opportunity for discussion with Dr. Trix.

October

Lotte Bailyn, Professor of Management at the Massachusetts Institute of Technology, Sloan School of Management presented a talk entitled, “Creating Gender Equity in Academia.” A dinner was also planned to provide an additional opportunity for discussion with Dr. Bailyn.

November

Kimberlee Shauman, Associate Professor of Sociology at the University of California, Davis, presented a lecture entitled, "Sex differences in the utilization of educational capital: How do science and engineering compare to other fields?" Dr. Shauman also held a workshop on Work-Family Conflict for Graduate Students and Post-Doctoral Fellows. Twenty-one women attended this workshop. A dinner was held to provide an opportunity for additional discussion with Dr. Shauman. Results from an evaluation of this event are summarized in Section III (see Appendix L for the full-length report).

December

We hosted two end-of-term luncheons for Network women. This also provided an opportunity to formally welcome new members to the Network and make a formal announcement about the University’s continued support of ADVANCE.

Abigail Stewart began meeting with new female assistant professors in science and engineering departments in individual lunches. Lunches will continue in January.

E. INTEGRATION OF ADVANCE ISSUES IN UNIVERSITY POLICY AND ADMINISTRATION

At the request of the Provost, **Abigail Stewart** and **Pamela Raymond** submitted a proposal for institutionalizing the STRIDE committee function. The Provost's office will provide supplemental funding to permit STRIDE to expand beyond science and engineering. The expanded STRIDE committee will offer its services and support to additional departments, and schools/colleges, according to a proposed schedule and timeline. The expansion of STRIDE will be accomplished through the mechanism of FASTER, an ongoing STRIDE activity that provides selected faculty with additional exposure to the research and literature on gender bias.

Janet Weiss, previously Associate Provost for Academic Affairs and now Dean of Rackham Graduate School, has continued to provide advice and consultation on implementation of GSE committee recommendations.

The **ADVANCE Steering Committee**, composed of co-PIs **Abigail Stewart**, **Pamela Raymond**, **Terrence McDonald**, Dean of Literature, Science, and the Arts, **Ronald Gibala**, Interim Dean of the College of Engineering, and **Allen Lichter**, Dean of the Medical School, meets quarterly. The Steering Committee met in March, July, and November.

The Provost, **Paul Courant**, stepped down, effective September 1. **Abigail Stewart** and **Pamela Raymond** met with the new interim Provost, Edward Gramlich, to discuss ADVANCE. **Pamela Raymond** is serving on the provost search advisory committee.

Martha Pollack, member of the STRIDE committee, is serving as the chair of the Dean of the College of Engineering search committee. **Abigail Stewart** and **Pamela Raymond** met in July with Ronald Gibala, Interim Dean of the College of Engineering, to discuss ADVANCE. In a follow-up meeting Abby Stewart and Dean Gibala laid out a plan for activities, and set some goals for this year in CoE. **Abigail Stewart** also meets regularly with Associate Dean Tony England to follow-up on activities through the Diversity Council that he now chairs for CoE.

Pamela Raymond met with Kenneth Warner, newly named Dean of the School of Public Health to discuss ADVANCE.

The **Gender in Science and Engineering Subcommittees'** recommendations are being implemented. New language concerning modified duties has been added to the University's Standard Practice Guide (SPG). New language is being developed for the recommendations from the subcommittee addressing retention and the tenure clock. In April, President **Mary Sue Coleman** announced a major new effort to enhance child care services that will actively explore opportunities for increased capacity, infant and toddler care, and significant improvements in the facilities where these services are offered.

A **Gender in Science and Engineering Committee** meeting was held in July. The meeting was attended by Mary Sue Coleman, President of the University; Paul Courant, Provost; Robert Kelch, Executive Vice President for Medical Affairs; Ronald Gibala, Dean of the College of Engineering; Allen Lichter, Dean of the School of Medicine; Terrence McDonald, Dean of LSA; Peter Polverini, Dean of the School of Dentistry; Alan Saltiel, Director of the Life Sciences Institute; Tresa Pollock, Professor of Materials Science and Engineering; Janet Weiss, Vice Provost for Academic Affairs and incoming Dean of Horace H. Rackham School of Graduate Studies. Abigail Stewart, Pamela Raymond, and Cynthia Hudgins represented UM ADVANCE.

- There was a brief discussion of different kinds of indicators of progress, including the interim climate survey (conducted spring 2005) results and data on NSF indicators of progress over time (2001-present). The Committee also discussed proposals for NSF Leadership Awards and NSF Partnerships for Adaptation, Implementation, and Dissemination (PAID).
- The Committee reviewed follow-up actions to date, including Child Care, Clinical Track titles, Flexible Tenure Clock, Academic Leadership Training, Review of Family Friendly Policies, Promotion and Tenure Training, Salary equity review, and the institutionalization of STRIDE. Because this year the flexible tenure policy will be discussed and reviewed, it was agreed that the committee to consider Senior Faculty Development would be deferred until AY07.

UM ADVANCE Mini Retreat. A small leadership group led by Provost Paul Courant met to discuss a long-term plan for UM ADVANCE once NSF's basic support ends. The group included Associate Provost Janet Weiss, Dean (and co-PI) Terrence McDonald, and co-PIs

Stewart and Raymond. The group agreed on a plan that would enable a 5-year further commitment to core funding for the program at \$800,000/year. This will permit a core staff, the ongoing (expanded) operation of the STRIDE committee, and some set of activities currently supported by the program (Crosby grants, self-studies, mentoring, coaching, leadership training, etc.). It will also provide a platform for the development of grant proposals for narrower projects, either to NSF or to other sources. One goal of this group was to provide a stable and predictable future for the program as the NSF support recedes.

SECTION III: REPORT ON NSF INDICATORS AND PROGRAM EVALUATION

Fourth Year of UM ADVANCE (AY2005) & Baseline Year (AY2001)

A. INTRODUCTION

The UM ADVANCE indicator data reported here are for the 2004-2005 academic year (September 2004 – August 2005, hereby referred to as AY2005); the fourth year of ADVANCE funding occurred midway through the academic year of interest (i.e., January 2005).

We are reporting on all science and engineering faculty (instructional, research, and clinical tracks) with budgeted appointments (i.e., greater than 0% time equivalence) in science and engineering departments in the College of Engineering¹ (CoE), the College of Literature, Science, and the Arts' (LSA) Division of Natural Sciences² and the Medical School's Basic Science departments³ (MED). In addition, individual science faculty members in six smaller schools that house science faculty at the University of Michigan, including the School of Dentistry, School of Information, Division of Kinesiology, School of Natural Resources and Environment, College of Pharmacy, and School of Public Health. Faculty members in these schools were determined to be scientists by assessing the field of study in which they received their highest degree (see Appendix J for a listing of which fields of study were included). For those highest degrees that might comprise research in both science and non-science areas, we evaluated the individual cases and included faculty based on their research areas.

For each College or School, we included faculty from the instructional (tenure), primary research, and clinical tracks. These tracks generally refer to the titles of assistant, associate, and full professor; assistant, associate, and research scientist/professor⁴; and assistant, associate, and clinical professor, respectively. Instructors, research investigators, and supplemental faculty were not included. Faculty with joint appointments (i.e., greater than 0% time equivalence) are counted in each unit of appointment.

In this report, we discuss the state of women scientists and engineers at the University of Michigan for AY2005 via a review of the changes in gender composition from the baseline year (AY2001). However, given the small number of female faculty and corresponding small changes in numbers, we did not conduct statistical analyses on these comparisons.

Following this section of the report are tables presenting all of the indicators required by the National Science Foundation (NSF). A list of the tables is included in the table of contents. In extracting data from the University's databases, the effective date of March 1, 2005, was used. We have taken this to reflect conditions in effect during AY2005. These data were verified by the individual Colleges and

¹ Engineering (CoE): Aerospace Engineering; Atmospheric, Oceanic & Space Sciences; Biomedical Engineering; Chemical Engineering; Civil & Environmental Engineering; Electrical Engineering & Computer Science; Industrial & Operations Engineering; Materials Science & Engineering; Mechanical Engineering; Naval Architecture & Marine Engineering; Nuclear Engineering & Radiological Sciences.

² Literature, Science, and the Arts (LSA): Astronomy; Chemistry; Ecology & Evolutionary Biology; Geological Sciences; Mathematics; Molecular, Cellular & Developmental Biology; Physics; Statistics.

³ Medical School (MED): Biological Chemistry; Cell & Developmental Biology; Human Genetics; Microbiology & Immunology; Pharmacology; Molecular & Integrative Physiology.

⁴On the research track, faculty may be appointed to two different paths: research scientist classifications include research scientist, associate research scientist, and assistant research scientist; and research professor classifications include research professor, research associate professor, and research assistant professor. For our purposes, faculty members at each rank are considered together (regardless of title).

Schools to ensure we did not exclude any faculty who may have been present in Fall 2004 and not in Winter 2005; the data liaisons in each academic unit also ensured that we included all additional positions (e.g., administrative positions) held during either semester. Some figures/tables may differ from the previous report (December 2004) as data were updated in September 2005.

For changes in status such as new hires and terminations/retirements, the effective dates used were between March 1, 2004, and March 1, 2005. That is, we report on faculty members who started their instructional tenure track position or who left their position between the given dates. While this means that the data for new hires and terminations/retirements do not match exactly with the academic year, the date parameters were selected to facilitate the reconciliation of changes in the number of faculty from AY2004 to AY2005. In the case of offers of employment and new hires, however, we also report on faculty members who received and responded (i.e., accepted or declined, not including pending cases) to offers of employment within the academic year of September 1 to August 31 (see page III-6). This timeframe recognizes the fact that academic hiring seasons extend well beyond the effective date of March 1, 2005. Lastly, with regard to faculty promotions, we report faculty whose promotions were effective in AY2005 (and thus were reviewed in the previous year, AY2004).

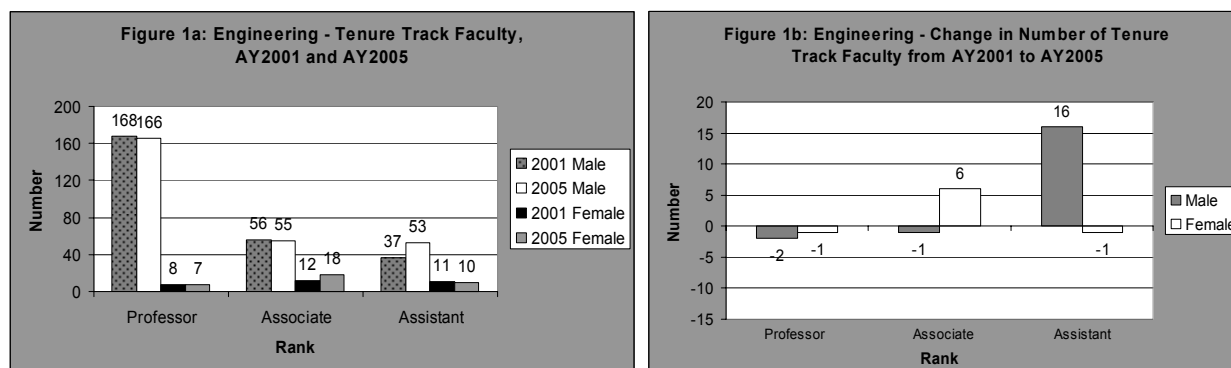
B. INSTRUCTIONAL (TENURE) TRACK FACULTY

OVERVIEW

In this section we discuss the numbers of male and female science and engineering instructional (tenure) track faculty in each College and School. The percentages reported here are based on the number of men and women in each department (i.e., head count, or position count in the case of joint appointments), and not based on time equivalents (FTE). Head counts are easier to conceptualize, and in most cases do not differ significantly from the FTE allocation (see Table 1 for percentages based on head count and FTE). Where the percentages based on head counts and those based on FTEs differ by more than 2 percentage points, the percentage based on FTE will be reported in brackets [].

COLLEGE OF ENGINEERING

In AY2005, the College of Engineering⁵ was 89% male (N = 274) and 11% female (N = 35)⁶ (see Figure 1a for aggregate data by rank comparing AY2005 to AY2001 and Table 1 for percentages based on head count and FTE); the percentage of women was unchanged from AY2001 when the comparable figures were 89% male (N = 261) and 11% female (N = 31). In AY2005, the small proportion of female faculty is particularly apparent at the professor level, where only 7 out of 173 (4%) of the faculty were women. At the associate professor level, women comprised 25% (N = 18) of the faculty, and at the assistant professor level, they comprised 16% (N = 10).



Compared to the baseline year of AY2001, CoE has experienced a net increase of 13 male faculty and 4 female faculty across all three ranks (see Figure 1b). Of the new hires in Engineering for AY2005, 9 were men (75%) and 3 were women (25%); see Table 2⁷. At the same time, Engineering lost 21 men (95%) and 1 woman (5%) to retirements and other terminations (see Table 3). In terms of faculty

⁵ Faculty with joint appointments (i.e., greater than 0% time equivalence) are counted in each unit of appointment. In AY2005, 7 faculty members (6 men and 1 woman) had joint appointments across departments within the College of Engineering; the 7 faculty members were counted in both departments in which they had budgeted appointments. With the exception of one male research professor, these faculty members were on the instructional (tenure) track. Therefore, the data contained in the table slightly overestimate the total number of male faculty members with budgeted appointments in CoE. In addition, 9 men and 1 woman on the instructional (tenure) track had joint appointments including a unit outside of CoE.

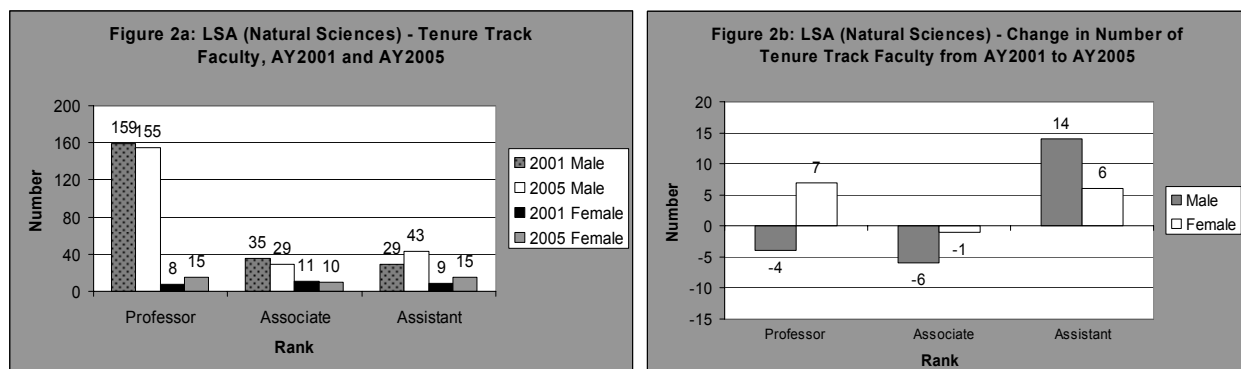
⁶ All percentages are rounded to the nearest whole number. Also, while percentages are used throughout this report for ease of comparison across colleges and sub-populations that vary widely in number, the reader must keep in mind that due to the small number of female faculty, an addition/loss of one female will result in a larger corresponding percentage change than if that addition/loss had been one male. Please refer to the tables and figures for raw numbers.

⁷ We report on faculty members who started their instructional tenure track position between March 1, 2004, and March 1, 2005.

promotions, 12 faculty were evaluated for promotion: 11 men and 1 woman were promoted and none were denied promotion (see Table 4).

COLLEGE OF LSA (Natural Sciences)

The overall composition of faculty in the Division of Natural Sciences⁸ for AY2005 was 85% male (N = 227) and 15% female (N = 40); the AY2005 data reveal an increase in the percentage of women faculty from AY2001, when the Division was 89% male (N = 223) and 11% female (N = 28). The gender disparity in AY2005 was the greatest at the highest rank: only 9% (N = 15) of the full professors were women. At the associate professor level, 26% (N = 10) of the faculty were women, and at the assistant professor level, 26% (N = 15) of the faculty were women (see Table 1). Figure 2a depicts the aggregate number of faculty in each rank across the eight natural science departments in LSA by gender.



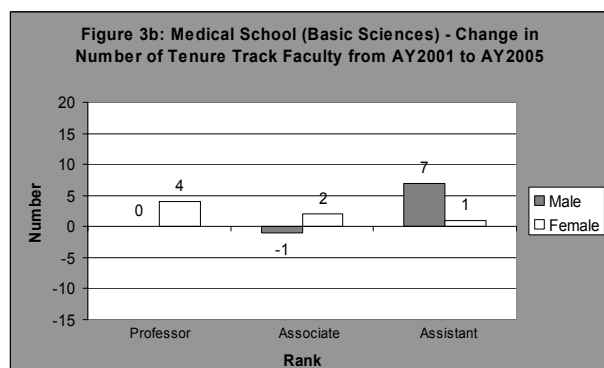
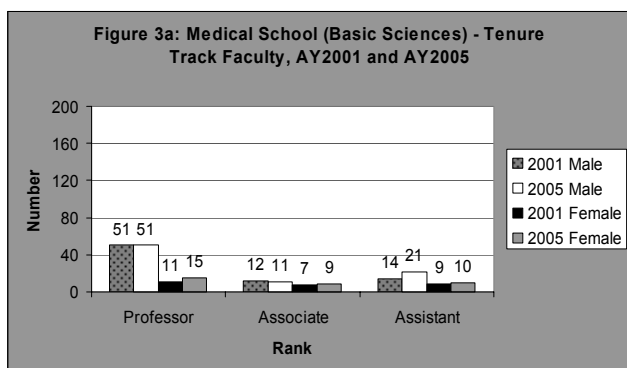
In relation to AY2001, LSA has seen a net increase of 4 male faculty and 12 female faculty across all instructional ranks (see Figure 2b). Of the new hires in LSA (Natural Sciences) for AY2005, 9 were men (75%) and 3 were women (25%); see Table 2. In the same year, the natural science departments lost 11 male faculty and no female faculty (see Table 3). Of the 14 faculty who were considered for promotion, 11 men and 3 women were promoted, and one man was denied tenure (see Table 4).

MEDICAL SCHOOL (Basic Sciences)

The basic science departments in the Medical School⁹ were comprised of 71% men [68% of FTE] (N = 83) and 29% women [32% of FTE] (N = 34) in AY2005; moreover, in AY2001, the faculty in the basic science departments were 74% male [71% of FTE] (N = 77) and 26% female [29% of FTE] (N = 27), which reflects a slight improvement from AY2001 to AY2005. At all ranks, women were in the minority: they comprised 23% of professors [26% of FTE] (N = 15), 45% (N = 9) of associate professors, and 32% of assistant professors [35% of FTE] (N = 10). Figure 3a shows the actual number of men and women at each rank in AY2001 as well as AY2005; see Table 1 for percentages based on head count and FTE.

⁸ In AY2005, no faculty members in the natural science departments had joint appointments (budgeted) in more than one natural science department within the College of LSA; 5 male instructional (tenure) track faculty members had joint appointments including a unit outside of LSA. No female faculty members had joint appointments including a unit outside of LSA.

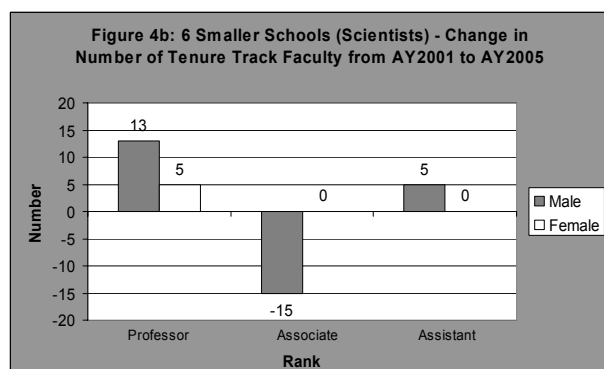
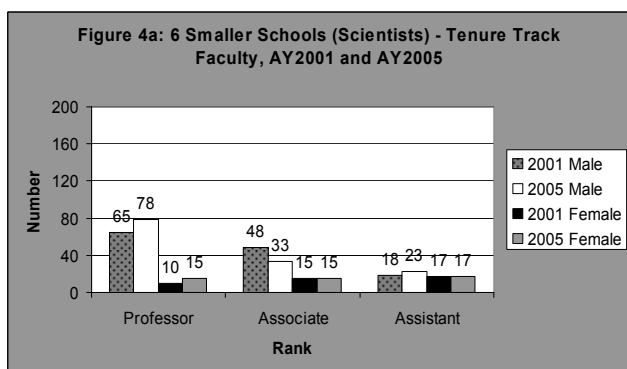
⁹ No faculty members in the basic science departments had joint appointments (budgeted) in more than one basic science department within the Medical School in AY2005; 2 men and 1 woman on the instructional (tenure) track had joint appointments including a unit outside of MED.



In part due to the fact that the basic science departments in MED are smaller than either Engineering or LSA (Natural Sciences) departments, they have not experienced much change since AY2001; however, gains in the Medical School have been nearly equal for men and women. The School saw a net gain of 6 male and 7 female faculty members since AY2001 (see Figure 3b). In AY2005, 6 men (60% of hires) and 4 women (40% of hires) joined the faculty in the basic science departments; see Table 2. At the same time, 5 men (83%) and 1 woman (17%) left the faculty in AY2005 (see Table 3). With regard to promotions, all 4 faculty (3 men and 1 woman) who were evaluated for promotion received it (see Table 4), and none were denied tenure.

SIX SMALLER SCHOOLS (Science Faculty)

In AY2005, the overall composition of science¹⁰ faculty across all six additional Schools¹¹ was 74% men (N = 134) and 26% women (N = 47); this reflects a slight change from AY2001 when men comprised 76% (N = 131) and women comprised 24% (N = 42) of tenure track faculty in the six additional Schools. Looking at all six Schools by rank, we see that while almost half of all assistant professors (43%) were female (N = 17), this proportion dropped as we ascended the academic ladder; only 31% (N = 15) of associate professors and 16% (N = 15) of professors were female (see Figure 4a). See Table 1 for percentages based on head count and FTE.



Considering all six schools together, there was a net gain of 3 male faculty members and 5 female faculty members since AY2001 (see Figure 4b). Of the new hires across all six Schools, 3 were men

¹⁰ Only scientists in each department are included; non-scientists (based on highest degree or research area) are not reported.

¹¹ In AY2005, 3 male and 3 female faculty members had joint appointments within one of the six smaller schools. In addition, 6 male instructional (tenure) track faculty members had joint appointments (budgeted) including a unit outside of the six smaller schools. No female faculty members had joint appointments including a unit outside of the six smaller schools.

(60%) and 2 were women (40%); see Table 2. In the same year, the six schools lost 10 male scientists (91%) and 1 female scientist (9%); see Table 3. Of the 10 faculty who were considered for promotion, 8 men and 2 women were promoted. No scientists in the six additional Schools were denied tenure.

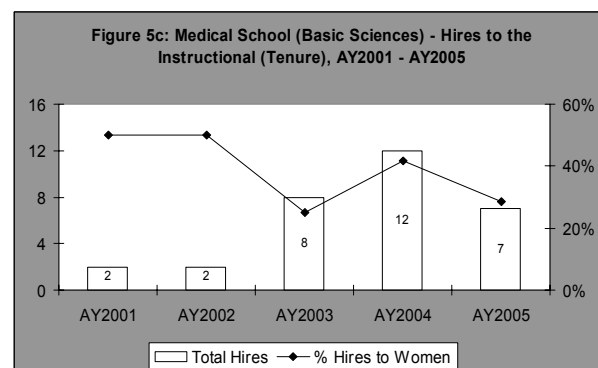
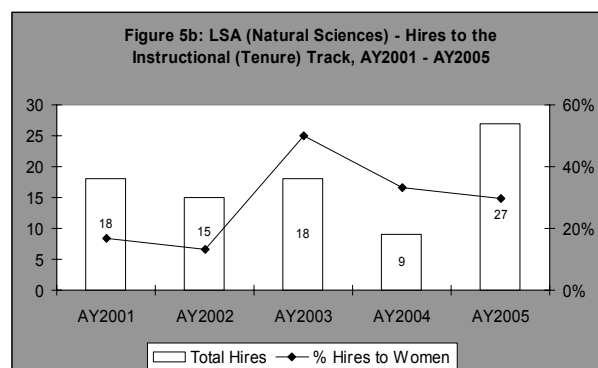
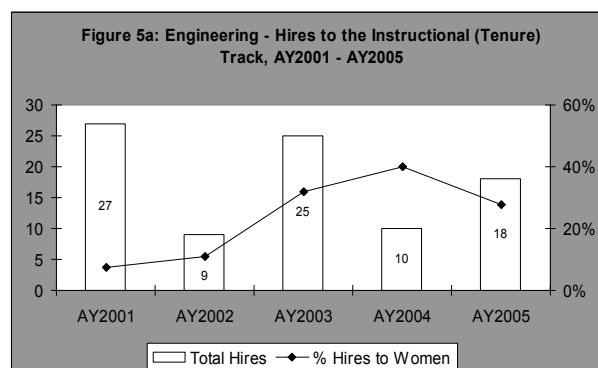
SUMMARY OF CHANGES FOR ALL SCHOOLS/COLLEGES

Relative to AY2001 (baseline year), CoE reported a comparable percentage of female instructional track faculty in AY2005, though the absolute number of women appointed to instructional track positions increased by four from AY2001 to AY2005. LSA, MED, and the six additional Schools reported slight increases in the percentage of female instructional (tenure) track faculty as well as the number of women appointed to tenure track positions from AY2001 to AY2005. Looking across the Colleges and Schools, the most striking fact is the relatively low numbers of women faculty in all ranks in comparison to their male colleagues. In a pattern unchanged from that previously reported, the majority of instructional track science and engineering male faculty were found to hold the highest rank of professor, while the female faculty were relatively evenly distributed across all ranks.

OFFERS & HIRES, INSTRUCTIONAL (TENURE) TRACK FACULTY

One way to significantly change the gender composition of the faculty is through balanced hiring. UM ADVANCE is able to report progress regarding the number women hired as a proportion of all science and engineering instructional track hires: 13% of new hires were women in AY2001 and 29% in AY2005 (i.e., September 1, 2003 to August 31, 2004); see Table 8. Furthermore, as a proportion of all science and engineering tenure track offers, 15% of offers were to women in AY2001 and 28% in

AY2005. It is important to note that these data report the number of faculty members who received and responded to offers of employment within the academic year of September 1 to August 31 (i.e., the data are not as of the effective date of March 1, 2005, which is reported in Table 2). In CoE, while the total number of new hires decreased from AY2001 to AY2005 (N = 55 and N = 34, respectively), the percentage of new hires that were women increased from 15% in AY2001 to 26% in AY2005 (see Figure 5a). LSA (Natural Sciences) hired 31 instructional track faculty in AY2001 and 35 in AY2005; the percentage of new hires that were women increased from 13% in AY2001 to 31% in AY2005 (see Figure 5b). In MED, the number of new hires increased from 5 in AY2001 to 9 in AY2005. The percentage of new hires that were women, however, decreased from 40% in AY2001 to 22% in AY2005 (see Figure 5c). Lastly, in the six additional Schools, the number of newly hired scientists decreased from 18 in AY2001 to 3 in AY2005, and the percentage of hires that were women also decreased from 55% in AY2001 to 33% in AY2005 (see Figure 5d).

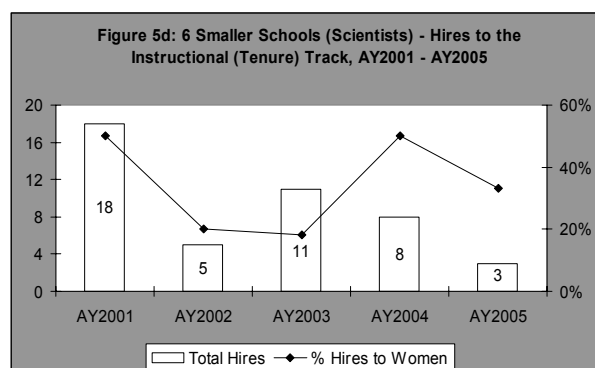


In regard to the percentage of offers to women that were accepted in AY2001 and AY2005, the percentage increased from 25% to 56% in CoE, decreased slightly from 75% to 73% in LSA, increased from 50% to 100% in MED, and increased from 82% to 100% in the six additional Schools.

Following the useful model of the Commission on the Status of Women at Columbia University

(“Advancement of Women through the Academic

Ranks of the Columbia University Graduate School of Arts and Sciences,” November 2001) we also compared the gender balance of new hires (assistant professors) against the gender balance of existing *tenure-eligible faculty* (assistant professors) for each of the Colleges/Schools women faculty comprised: 33% of new hires and 16% of tenure-eligible faculty in CoE; 32% of new hires and 26% of tenure-eligible faculty in LSA; 20% of new hires and 32% [35% of FTE] of tenure-eligible faculty in MED; and 33% of new hires and 43% in the six smaller Schools. Therefore, CoE and LSA reported a greater percentage of women among new hires than among tenure-eligible faculty and, therefore, employed new-hire processes that slightly improved the gender balance of the instructional track faculty for AY2005. MED and the six smaller Schools reported a lesser percentage among new hires than among tenure-eligible faculty in AY2005.



ASSISTANT PROFESSOR COHORT 1990 – 1997, OUTCOMES BY GENDER

With the collection of longitudinal data, UM ADVANCE monitors the employment outcomes—left before tenure was awarded, left after tenure was awarded, promoted, or off track—for assistant professors in CoE, LSA, and MED who initiated employment at the University between AY1990 and AY1997. Chart 6a reports outcomes, as of AY2005, for faculty comprising the 1990 – 1997 assistant professor cohort by College/School and gender (see Figures 6a – 6c for percentage difference by gender).

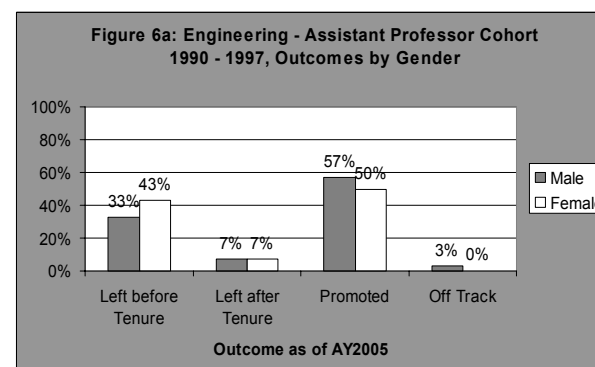
Chart 6a: Assistant Professor Cohort 1990 – 1997, Outcomes by Gender*

	ENG		LSA		MED	
	m	f	m	f	m	F
Left before Tenure	20	6	17	7	10	2
Left after Tenure	4	1	4	1	2	0
Promoted	35	7	30	8	12	10
Off Track	2	0	1	0	0	0
Total N	61	14	52	16	24	12

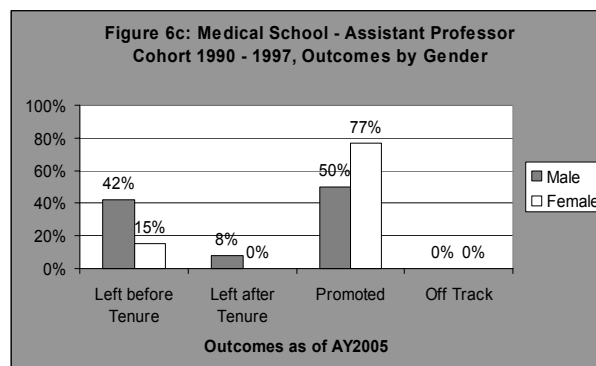
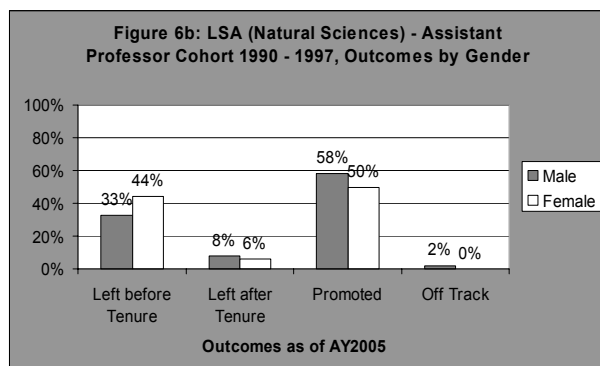
Note: College of Engineering (ENG), College of LSA (LSA) and Medical School (MED); Left – Retired & Terminated;
* Outcomes are as of AY2005

CoE hired 61 male and 14 female assistant professors. Women, therefore, comprised 19% of new hires in CoE at the assistant professor rank. Relative to the percentages for male assistant professors hired during the same period, a lesser percentage of female assistant professors were promoted (50% of female assistant professors and 57% male assistant professors) and a greater percentage left before tenure was awarded (43% female and 33% male assistant professors); see Figures 6a. Comparable percentages of male and female assistant professors left after tenure was awarded (7% of female and male assistant professors). No female assistant professors in the 1990 – 1997 cohort went off track (i.e., left the tenure-track for a non-tenure-track position), and only a small percentage of male assistant professors (3%) elected to leave the tenure track.

Between 1990 and 1997, LSA (natural science departments) hired 52 male and 16 female assistant professors at the rank of assistant professor; women, therefore, comprised 24% of new assistant professors



in LSA. As was the case in CoE, relative to the percentages for male assistant professors hired between 1990 and 1997, a lesser percentage of female assistant professors were promoted (50% of female and 58% male assistant professors) and a greater percentage left before tenure was awarded (44% female and 33% male assistant professors); see Figure 6b. Comparable percentages of male and female assistant professors left after tenure was awarded (6% of female and 8% of male assistant professors). No female assistant professors in the 1990 – 1997 cohort went off track, and only a small percentage of male assistant professors (2%) elected this option.



MED (basic science departments) hired 24 male and 12 female assistant professors between 1990 and 1997; women comprised 35% of new hires at the assistant professor rank. One female assistant professors was still classified as assistant professors as of AY2005 and was not included in the analysis. In contrast to CoE and LSA, a greater percentage of female assistant professors were promoted (77% female and 50% male assistant professors) and a lesser percentage left (15% female and 42% male assistant professors) before tenure was awarded; see Figure 6c. No female assistant professors and 8% of male assistant professors in the 1990 – 1997 cohort left after tenure was awarded. No assistant professors in MED went off-track as of AY2005.

ASSOCIATE PROFESSORS, AVERAGE NUMBER OF YEARS IN RANK BY GENDER

Figures 7a-c present the average number of years in rank (by gender) for associate professors (instructional track) in CoE, LSA, and MED, respectively; moreover, Chart 7a reports the average number of years in rank by gender for associate professors, and Chart 7b reports the ranges (i.e., minimum and maximum values) by gender for each of the academic years.

Chart 7a: Average Number of Years in Rank by Gender for Associate Professors, AY2001 – AY2005

	ENG		LSA		MED	
	m	f	m	f	m	F
AY2005	6.7	3.6	4.6	5.5	6.0	4.5
AY2004	6.6	3.0	4.7	5.8	5.5	4.4
AY2003	6.2	3.5	4.1	6.1	5.2	4.8
AY2002	5.9	3.0	5.0	4.8	3.6	4.5
AY2001	6.3	3.7	5.1	4.5	3.1	5.6

Note: College of Engineering (ENG), College of LSA (LSA) and Medical School (MED); values are rounded to the nearest tenth

Chart 7b: Range Values for Associate Professors, Average Number of Years in Rank by Gender

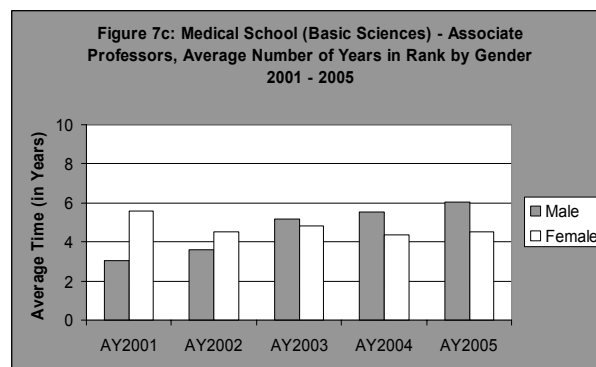
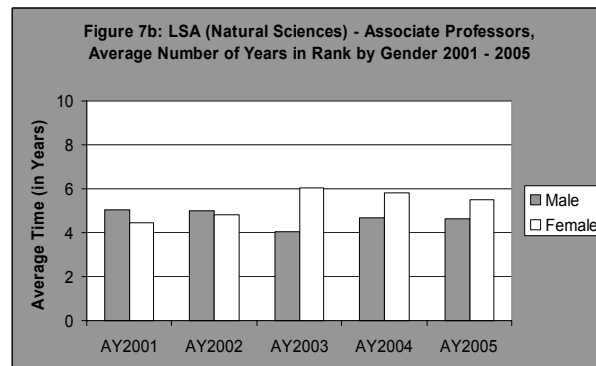
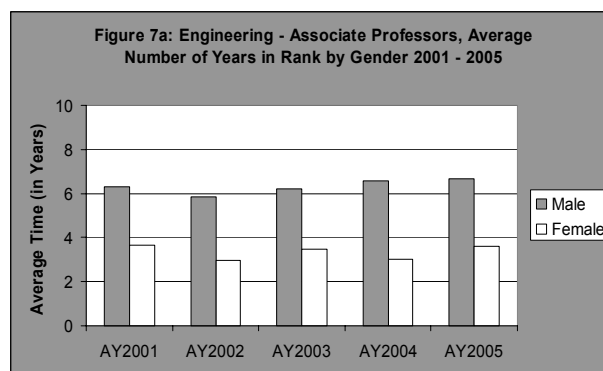
	ENG		LSA		MED	
	m	f	m	f	m	F
AY2005	1-29	1-11	1-35	1-20	1-24	2-10
AY2004	1-31	0-10	0-34	1-19	1-23	1-14
AY2003	0-30	0-9	1-33	2-18	0-22	1-13
AY2002	0-29	1-8	0-31	0-16	1-21	1-12
AY2001	1-28	0-11	0-31	2-16	1-20	3-11

Note: College of Engineering (ENG), College of LSA (LSA) and Medical School (MED); values are rounded to the nearest whole number

In CoE the average number of years in rank for male associate professors was consistently greater than the average for female associate professors during each of the five academic years (see Figure 7a). In contrast, the data for LSA and MED reveal fluctuations in whether men or women in the aggregate experienced the higher average number of years in the associate professor rank from AY2001 to AY2005. In LSA, the average number of year in rank for female associate professors was less than the average for male associate professors in AY2001 and AY2002 and greater than the average for male associate professors in AY2003 – AY2005 (see Figure 7b). The data for MED reveal the opposite pattern: the average number of years in rank for female associate professors was greater than the average for male associate professors in AY2001 and AY2002 and less than the average for male associate professors in AY2003 – AY2005 (see Figure 7c). The sources of these mean difference are likely

varied and complex, including the fact that some men have held the rank of associate professor for at least twice as long as the most senior woman. In addition, the average number of years in rank is sensitive to the percentage (by gender) of new hires, promotions, and terminations.

We will explore some alternative ways of analyzing these data (e.g., disaggregating by ranges of years in rank by gender, etc.) in order to represent the underlying issues better. In addition, we will encourage each college to consider within-college evidence carefully, and to disaggregate their own data further to draw meaningful conclusions about this issue.



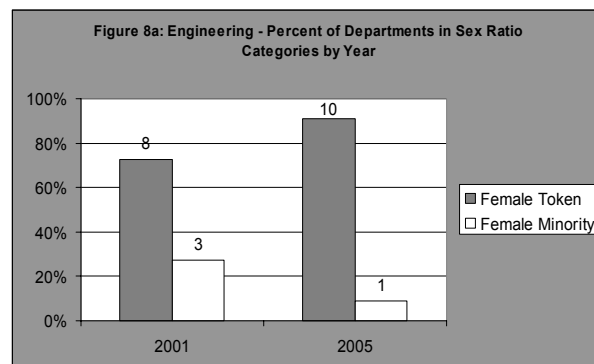
OVER TIME CHANGE ON THE TENURE TRACK BY GENDER

Now that we have begun to accrue some longitudinal data, we thought it important to develop a more systematic process for assessing change over time. Our initial efforts were directed at the tenure track faculty, looking specifically at the ratio of women on the science and engineering faculty by department within each of the three major schools (Engineering, LSA, and the Medical School). Following Lisa Frehill's suggestion (Georgia Tech Conference panel presentation, "Measuring the Status of Women: Toward Cross-Institutional Analysis to Understand Institutional Transformation," April, 2004) we assessed the sex ratio of each department in the three Colleges/Schools as well as the six additional Schools for AY2001 and AY2005. For some schools we also had data readily available for AY1990 and AY1995, which we also included in our analyses. The sex ratio categories used by Frehill are female token, female minority, sex balance, male minority, and male token. We defined the categories as follows: female token (0-17% female); female minority (18-35% female); balance (36-64% female); male minority (65-82% female); and male token (83-100% female). These percentages are based on percentages of males and females in the overall population. Consideration may need to be

taken of the specific availability of women in the pipeline when assessing the “success” of particular departments.

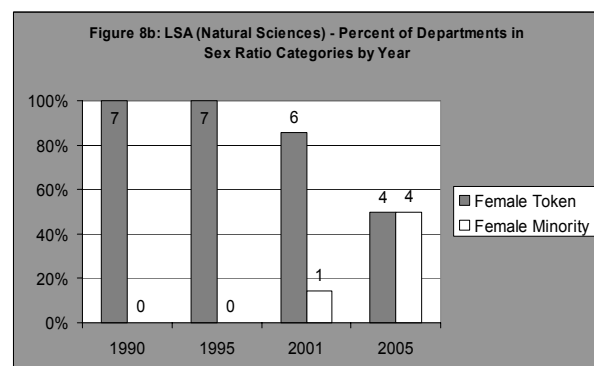
COLLEGE OF ENGINEERING

Looking first at CoE, we found that all but three of the 11 departments reflected a female token sex ratio¹² in AY2001. The three remaining departments represented a female minority sex ratio. By AY2005 the gender composition of the eleven departments in CoE was more extreme: only one department had a female minority sex ratio, and the remaining ten departments had a female token sex ratio. The graph (Figure 8a) depicts the percentage of departments in each category in AY2001 and AY005. The percentages, moreover, are based on head counts within each department.



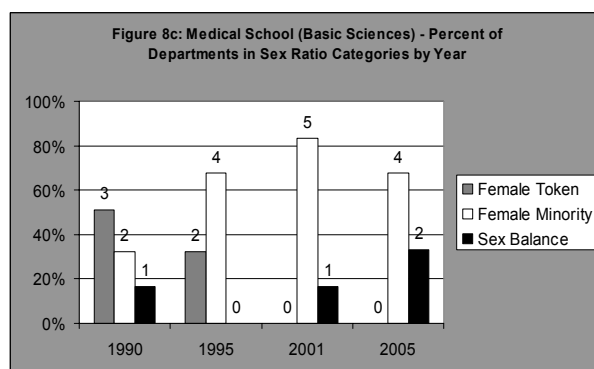
COLLEGE OF LSA (Natural Sciences)

We had data readily available for AY1990 and AY1995 as well as AY2001 and AY2005 by department for LSA. We looked specifically at the departments in the Division of Natural Sciences and found a pattern of improvement for the most recent year during which the number of female minority departments increased from zero to four. It should be noted that the total number of departments also increased between AY2001 and AY2005 because the biology department split into two separate departments in AY2002. In the earlier three years, no more than one department had a female minority sex ratio. The graph (Figure 8b) depicts the percentage of departments in each sex ratio category for the four academic years.



MEDICAL SCHOOL (Basic Sciences)

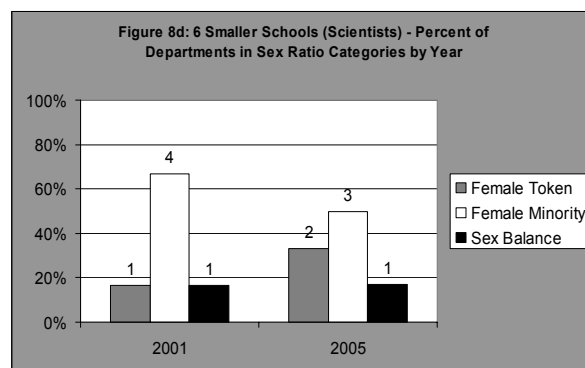
We obtained data by department for MED for AY1990 and AY1995 as well as AY2001 and AY2005 (see Figure 8c). We found a significant decline in the percentage of departments with a female token sex ratio between AY1990 and AY2005 as well as some fluctuation in the percentage of departments with female minority sex ratios and those with sex balanced ratios. By AY2005 the trend appears to reflect an increase in departments with a female minority and sex balanced ratios as well as elimination of departments with a female token sex ratio. It will be important to see if this trend continues.



¹² The reader should keep in mind that due to the small number of female faculty, an addition/loss of one female will result in a larger corresponding percentage change than if that addition/loss had been one male.

SIX SMALLER SCHOOLS (Science Faculty)

In AY2001, we found that science faculty in four Schools reflected a female minority sex ratio. The science faculty in the remaining two academic units were coded as female token and sex balanced. By AY2005, the situation had regressed slightly: one School, which was coded as female minority in AY2001, reflected a female token sex ratio in AY2005 (see Figure 8d). These analyses indicate the sex ratios for the science faculty only in the six Schools, and do not necessarily reflect the ratios of the full faculty rosters for the Schools.



Since AY2005 represents only the third full academic year of the NSF ADVANCE award, it is too soon to draw conclusions about ADVANCE project efforts to recruit and retain women scientists from these numbers. However, we find this analytic approach to be a useful tool for understanding the situation of women scientists within their respective departments and colleges and will continue to assess all science and engineering departments in this way for each of the subsequent years reported to NSF.

OVER TIME CHANGE ON THE TENURE TRACK BY RACE/ETHNICITY

We conducted a similar set of analyses looking at the racial/ethnic breakdown by department in each of the science and engineering departments for AY2001 and AY2005. In the University database faculty ethnicity is coded using five mutually exclusive categories (American Indian/Alaskan Native; Asian/Pacific Islander; Black/African American; Hispanic/Latino; and white). We looked specifically at the percentage of faculty who were identified as a member of an underrepresented minority group (American Indian/Alaskan Native, Black/African American, and Hispanic/Latino) compared to all faculty in the department.

It is not completely straightforward to select cutoffs for “representativeness” of ethnic minorities. However, using U.S. census data as our guide, we employed 25% as an estimate of “full representation” rather than 50% or “balance” as used in the gender analyses. The basis for this figure was the 2000 U.S. Census, which reported that African Americans constituted 12% of the U.S. population, Hispanics 12%, and American Indians 1%, for a total of 25% in these underrepresented groups. Accordingly, we designated 0-9% as underrepresented ethnic/racial group token; 10-19% as underrepresented ethnic/racial group minority; and 20% and over as ethnic/racial group full representation. This analysis demonstrated very discouraging information: while some departments were moved from the “token” to the “minority” coding category, a number of them declined from AY2001 to AY2005. In CoE, 2 of 11 departments were coded as “minority” in AY 2001 and only one achieved that code in AY2005. In LSA, the results were similar: 2 of 7 departments were coded “minority” in AY2001, and only 1 of 8 departments was so coded in AY2005 (in AY2002 the biology department split, creating one additional department in LSA’s Division of Natural Sciences). In MED, 1 of 5 departments was coded as “minority” in AY2001, whereas all five departments were coded as “token” in AY2005.

These data suggest that the University has not been successful either in recruiting underrepresented minority faculty in the sciences and engineering or in retaining those faculty already here. We are hopeful that the policies and procedures being institutionalized at the University of Michigan through the NSF ADVANCE project will also help to address the serious problems of under representation of ethnic/racial minorities on this campus.

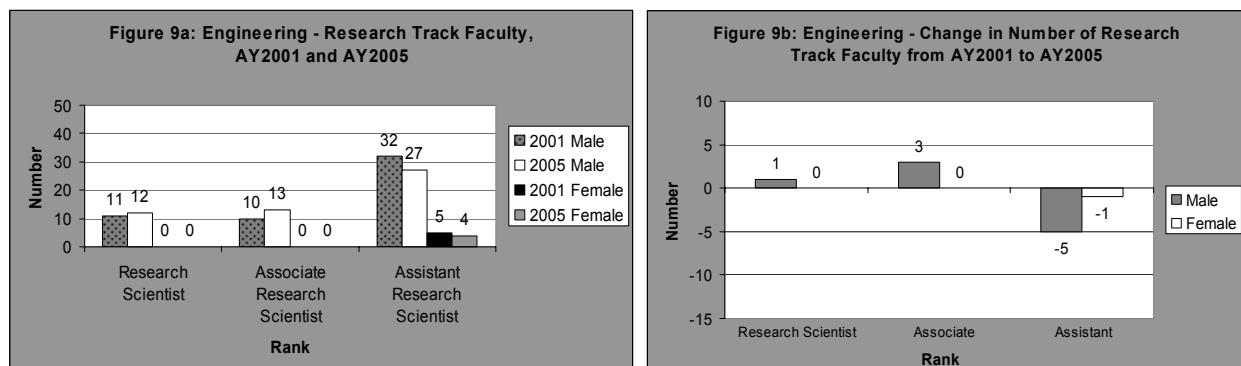
C. RESEARCH TRACK FACULTY

OVERVIEW

In this section we discuss faculty on the research track at the University. While there are actually two (not entirely distinct) research tracks, we do not distinguish between the tracks for this report. Thus, the ranks we consider are assistant research scientist, associate research scientist (including senior associate research scientist and associate research professor), and research scientist (including senior research scientist and research professor).

COLLEGE OF ENGINEERING

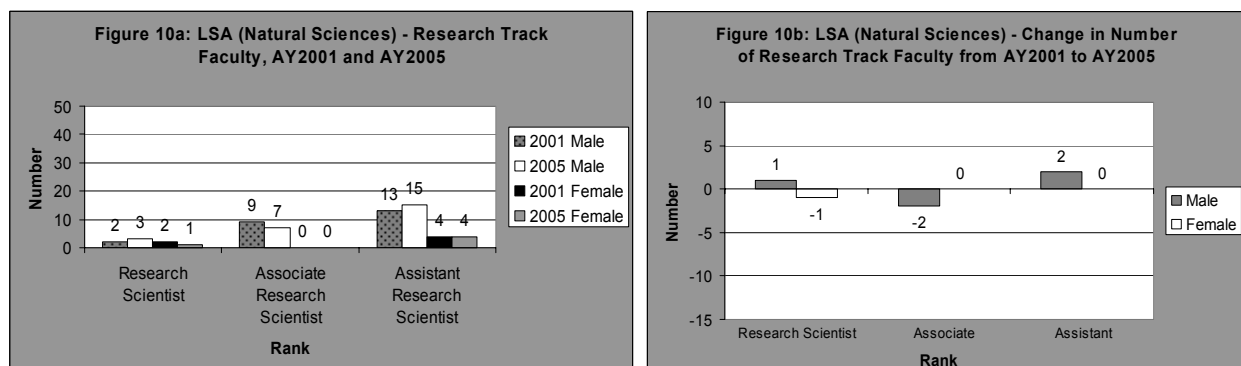
In AY2005, of the 56 faculty on the research track, 4 (or 7%) were female—all of whom were assistant research scientists; the 52 men were distributed across all ranks (see Figure 9a), although the majority were at the assistant rank (see also Table 1). In comparison to the baseline year (AY2001), the percentage of women on the research track decreased from 9% (N = 5) in AY2001 to 7% (N = 4) in AY2005.



Since AY2001, CoE has seen a net decrease of 1 male and 1 female research track faculty members (see Figure 9b).

COLLEGE OF LSA (Natural Sciences)

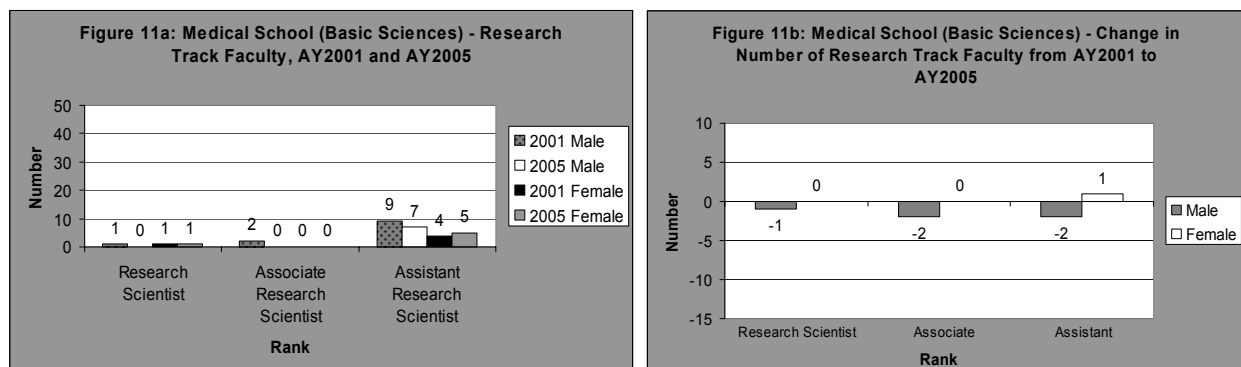
In AY2005, 17% [13% of FTE] of the research track faculty in the LSA Division of Natural Sciences were women (N = 5; see Figure 10a and Table 1), and 4 out of 5 of these women were at the lowest rank—that of assistant research scientist. Similar to the pattern observed for CoE, the male faculty (N = 25) were distributed across the ranks, with the highest concentration at the assistant rank. In comparison to AY2001, the percentage of women on the research track decreased from 20% [17% of FTE] (N = 6) in AY2001 to 17% [13% of FTE] (N = 5) in AY2005.



The college has gained 1 male faculty and lost 1 female faculty since AY2001 (see Figure 10b).

MEDICAL SCHOOL (Basic Sciences)

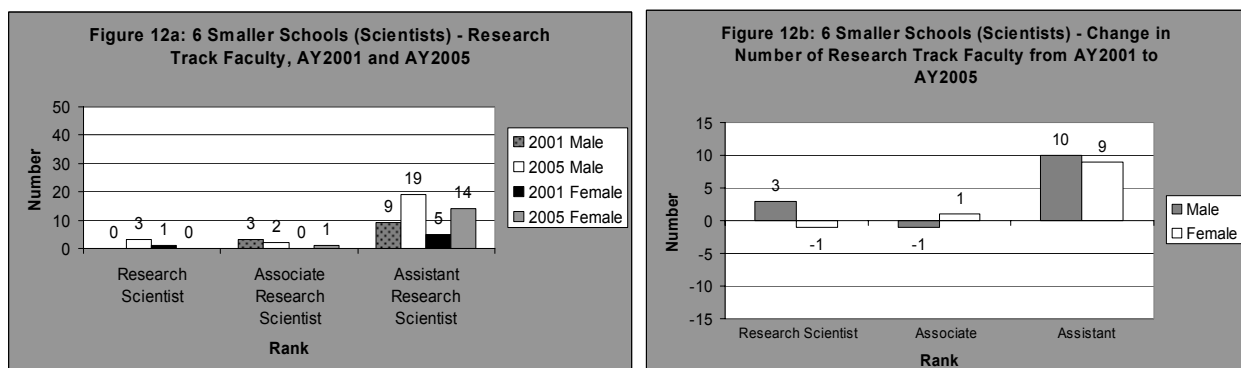
46% [43% of FTE] of the research track faculty in the Medical School's basic science departments were women in AY2005 (N = 6; see Figure 11a and Table 1); this reflects an increase from AY2001 when 29% [24% of FTE] (N = 5) of the research track faculty in the basic science departments were women. As observed in the other Colleges, the distribution of research scientists in the Medical School was bottom-heavy, with the greatest proportion of faculty at the lowest rank, assistant research scientist, for both men and women.



Since AY2001 MED has experienced a net decrease of 5 men and a net increase of 1 woman on the research track (see Figure 11b).

SIX SMALLER SCHOOLS (Science Faculty)

Women research scientists comprised 38% of the research track faculty in the six smaller Schools in AY2005 (N = 15; see Figure 12a and Table 1), whereas women comprised only 33% [29% of FTE] (N = 6) of the research track faculty in AY2001. In AY2005, all but one of the female research track faculty held the rank of assistant research scientist. While the majority of male research track faculty also held the rank of assistant research scientist, there were several holding the higher ranks of associate and research scientist.



In the past four years (i.e., since AY2001), the six smaller Schools have experienced a net gain of 12 male and 9 female faculty (see Figure 12b).

SUMMARY OF RESEARCH TRACK FACULTY

Overall, the proportion of women scientists on the research track in AY2005 did not change much from AY2001, with the notable exception of gains at the assistant research scientist rank. In CoE women comprised only 7% of the research faculty, which is even lower than the proportion of women on the tenure track (11%); in LSA women comprised 17% [13% of FTE] of the research faculty, which is comparable to the proportion of women on the tenure track (15%). In MED and the six smaller Schools, women are better represented, comprising 46% [43% of FTE] and 38%, respectively, of the research track, as compared to 29% [32% of FTE] and 26%, respectively, on the tenure track.

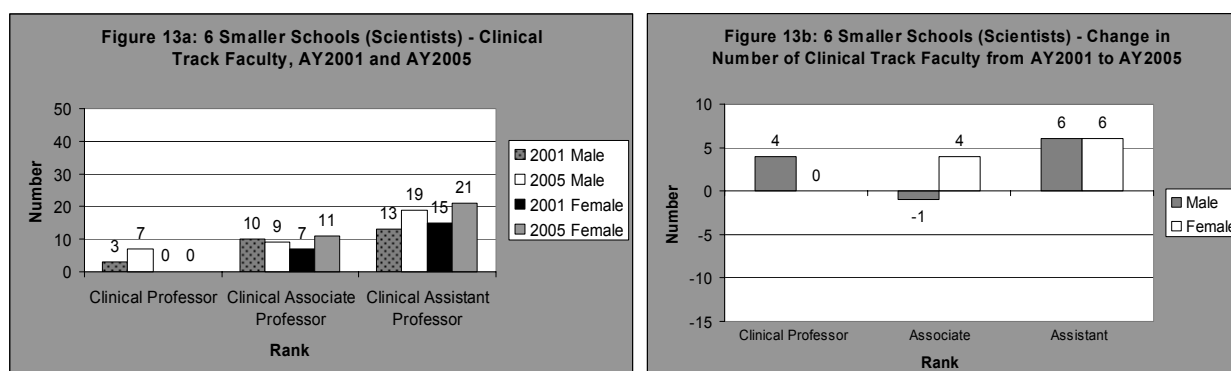
The distribution of faculty across the ranks (for both men and women) remained similar to that observed in previous years—the majority of faculty were at the lowest rank, rather than at the highest rank. This pattern is opposite to that observed for male tenure track faculty. Also in contrast to the tenure track, the number of faculty on the research track has been decreasing over the last few years.

D. CLINICAL TRACK FACULTY

Here we report on the Colleges and Schools that have faculty on the clinical instructional track. In AY2005, MED (basic science departments) had one faculty member on this track; only the six smaller Schools had a group of faculty members on this track.

SIX SMALLER SCHOOLS (Science Faculty)

In AY2005, there were 32 female clinical track faculty, representing 48% of the clinical track faculty (see Figure 13a and Table 1) in the six smaller Schools; this reflects an increase from AY2001, when women comprised 46% (N = 22) of the clinical track faculty. Similar to the research track faculty, the clinical track science faculty members, both men and women, were concentrated at the lowest rank of clinical assistant professor (60%) and had the smallest proportion of faculty at the highest rank of clinical professor (10%).



Relative to AY2001, the clinical track in these schools experienced overall growth—a net gain of 9 male faculty members and a net gain of 10 female faculty members (see Figure 13b).

E. ADDITIONAL APPOINTMENTS AND HONORS

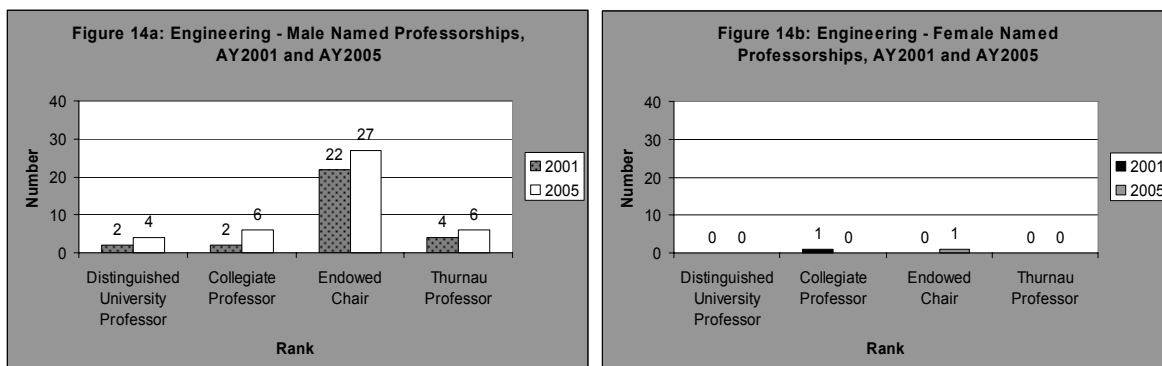
In this section we discuss additional appointments of interest held by instructional track faculty members. These appointments fall under two broad categories: named professorships and administrative service in leadership positions. Under named professorships, we considered the following four categories of honor (see Tables 9a-c): Distinguished University Professor (to recognize exceptional scholarly achievement, national and international reputation, and superior teaching skills; a lifetime award), Collegiate Professor (for outstanding scholarship, teaching, and service), Endowed Chairs, and Thurnau Professor (for excellence in teaching). Since these appointments are generally limited to professors, we only considered faculty at this highest rank.

For administrative service, we considered membership on tenure and promotion committees (see Tables 10a-c) as well as administrative appointments (see Tables 11a-c). These appointments were largely held by professors, but also by associate professors, so we considered both associate professors and professors who held these positions. We included faculty who served on either college or department level tenure and promotion committees. For administrative positions, we included those who held these positions at the university, college, and/or department levels.

For each type of appointment we assessed the change (or the lack thereof) in the number of women holding these positions from AY2001 to AY2005, and whether or not the rate of appointment was the same for men and women. For this last question, given the very small numbers (in some cases) of both women professors and available administrative appointments, we only considered categories in which the expected rate of appointment for women was equal to or greater than one woman.¹³

NAMED PROFESSORSHIPS COLLEGE OF ENGINEERING

Compared to AY2001, the number of male faculty with named professorships increased in all four categories: an increase of 2 Distinguished University Professors, 4 Collegiate Professors, 5 Endowed Chairs, and 2 Thurnau Professors. The number of female professors holding a named professorship remained unchanged from AY2001; see Figures 14a and 14b. In the category in which there is the largest number of positions, Endowed Chairs, the rate of appointment for men was 16% (27 out of 166). One woman held this honor in AY2005 (see Table 9a), which is the number we would expect to have if women held these titles at the same rate as men (which would represent 14% of women full professors).

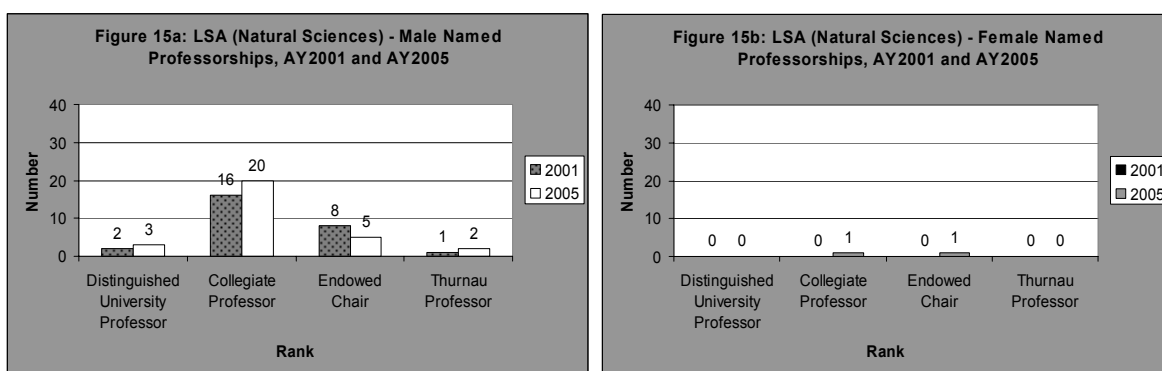


¹³ Expected rates can be calculated for each level/category by taking the rates at which male faculty are awarded these positions.

COLLEGE OF LSA (Natural Sciences)

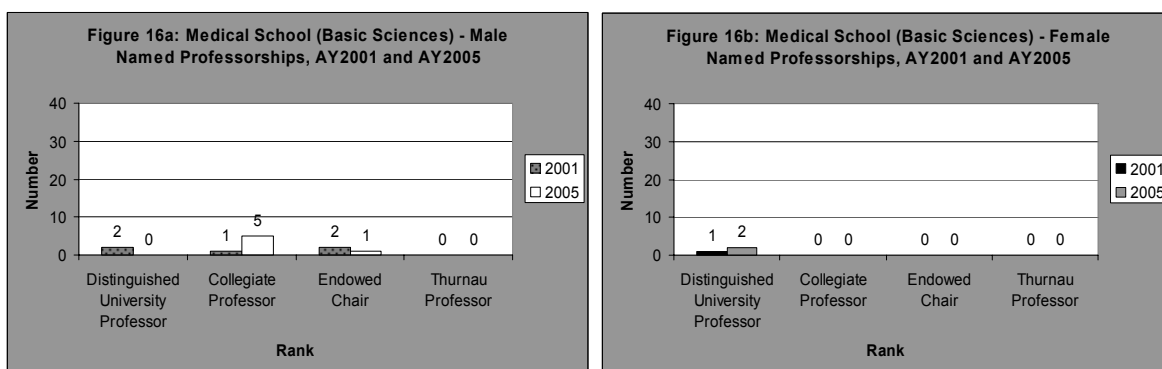
In relation to AY2001, LSA reported the following changes in named professorships: a net increase of 1 male Distinguished University Professor, 4 male and 1 female Collegiate Professors, 1 female Endowed Chair, 1 male Thurnau Professor, and a net decrease of 3 male Endowed Chairs (see Figures 15a and 15b).

In LSA, the largest number of appointments is to Collegiate Professorships. Approximately 13% of all male professors (20 out of 155) held a Collegiate Professorship. The one female professor who held this title represents approximately 7% of all female professors. Thus, if women held these titles at the same rate as men, we would expect to have 2 female Collegiate Professorships (which would represent 13% of female full professors); see Table 9b.



MEDICAL SCHOOL (Basic Sciences)

Compared to CoE and LSA (Natural Sciences), MED had a much smaller number of faculty who held named professorships. As a result, we are unable to look at gender differences for any particular category of professorship. Overall, however, the rate of appointment to any of the four named professorships was comparable for men (12% of male full professors) and women (13% of female full professors) (see Figures 16a and 16b; Table 9c).



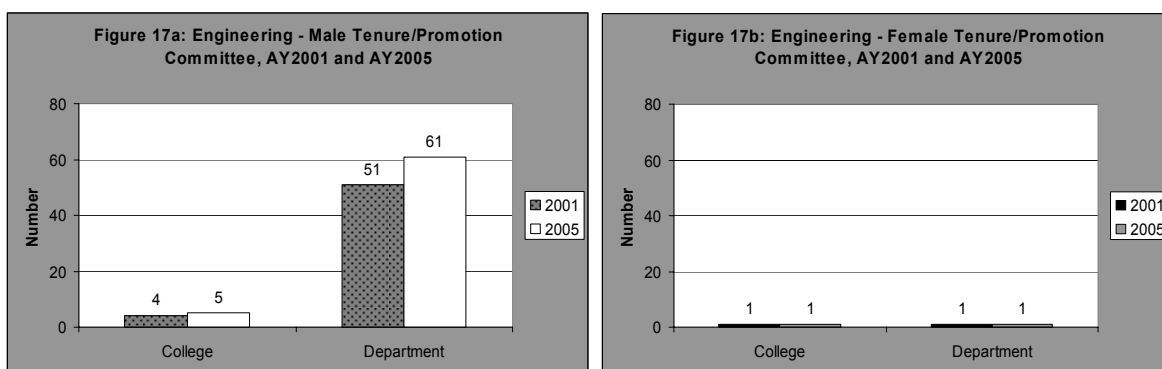
SUMMARY FOR NAMED PROFESSORSHIPS. The number of female faculty holding named professorships from AY2001 to AY2005 remained unchanged in CoE, increased by two in LSA, and increased by one in MED. For male faculty, CoE saw 13 new male named professors, LSA gained 3, and MED gained 1. The differences between new appointments of female and male faculty, while striking, must be considered in the context of the fact that women represent only 4%, 9%, and 23% [26% of FTE] of the full professor population in CoE, LSA, and MED, respectively. The expected numbers of new female named professorships are so small that it is difficult to determine if women are

being appointed at rates similar to that of men, although we do report instances in which it is clear that women are not being appointed at similar rates.

ADMINISTRATIVE SERVICE: TENURE/PROMOTION COMMITTEES COLLEGE OF ENGINEERING

Overall the number of men serving on all tenure/promotion committees increased by 11 from AY2001 to AY2005 (see Figure 17a). The number of women serving on these committees remained unchanged from AY2001 to AY2005 (see Figure 17b). The percentage of college-level committee members who were women decreased from 20% (N = 1) in AY2001 to 17% (N = 1) in AY2005; at the department-level, the percentage of committee members who were women remained unchanged from 2% (N = 1) in AY2001 to 2% (N = 1) in AY2005.

At the department-level in AY2005, 28% (N = 61) of male associate and full professors served on tenure/promotion committees (see Table 10a). The one female professor who served on a department-level tenure/promotion committee represents 4% of all female associate and full professors. Thus, if women held these titles at the same rate as men, we would expect to have 7 women associate or full professors serving on these committees. At the college-level in AY2005, 2% (N = 5) of male associate and full professors and 4% (N = 1) of women associate and full professors served on a tenure/promotion committee. Female associate and full professors, therefore, served on college-level tenure/promotion committees at a slightly higher rate than male associate and full professors.



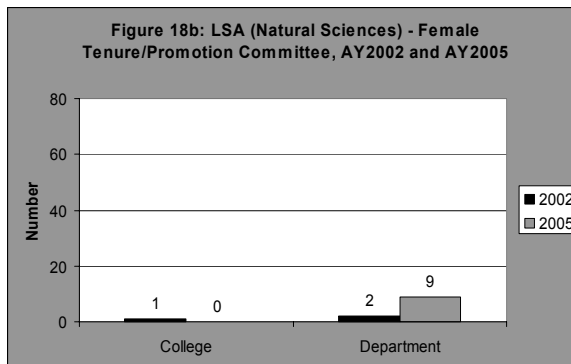
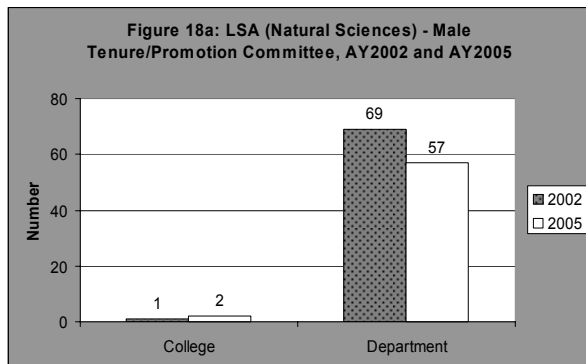
COLLEGE OF LSA (Natural Sciences)

The number of men serving on all tenure/promotion committees in the College of LSA decreased by 11 from AY2002¹⁴ to AY2005, and the number of women increased by 6 during the same period (see Figures 18a and 18b on pg. III-19, respectively). The percentage of college-level committee members who were women decreased from 50% (N = 1) in AY2002 to 0% in AY2005; at the department-level, the percentage of committee members who were women increased from 3% (N = 2) in AY2002 to 14% (N = 9) in AY2005.

The proportion of women (N = 9) serving on department-level tenure/promotion committees in AY2005 was 36% (see Table 10b). This is greater than the 31% (N = 57) of male associate and full professors serving on such committees; therefore, female associate and full professors served on department-level tenure/promotion committees at a slightly higher rate than male associate and full professors in AY2005. However, it is also important to recognize that only 14% (N = 9) of department-level committee members were women. At the college-level, two men (1% of male associate and full

¹⁴ Comparable data were not available for AY2001, due to a change in LSA's reporting procedure.

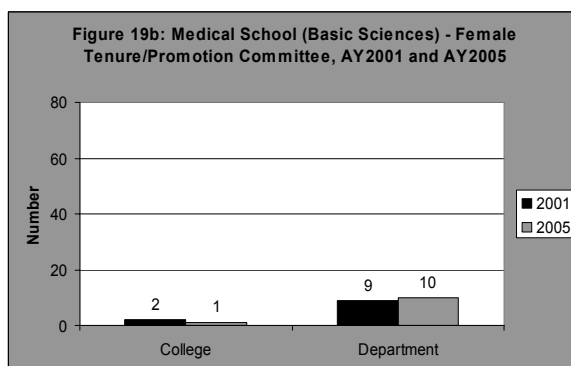
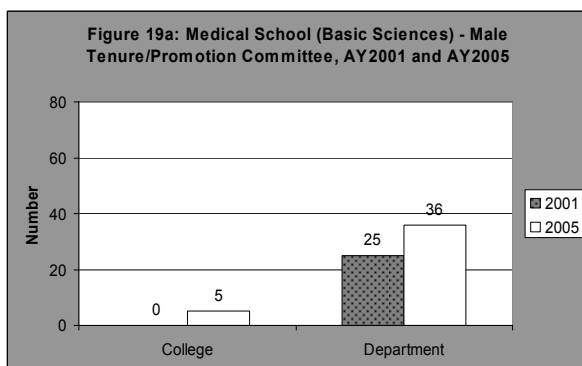
professors) from the natural sciences departments served on this committee; no women served in AY2005.



MEDICAL SCHOOL (Basic Sciences)

In relation to AY2001, there was an overall increase of 16 male professors serving on all tenure/promotion committees (college and department-level combined; Figure 19a). The number of women serving on all tenure/promotion committees remained unchanged (see Figure 19b). The percentage of college-level committee members from basic science departments who were women decreased from 100% (N = 2) in AY2001 to 17% (N = 1) in AY2005; moreover, at the department-level, the percentage of committee members who were women decreased slightly from 26% (N = 9) to 22% (N = 10), due to an increase in the number of male professors serving on the department-level committees.

Overall, in AY2005, 58% (N = 36) of male associate and full professors served on department-level tenure/promotion committees, which is higher than the 42% (N = 10) of women associate and full professors who served on these committees. If women held department-level appointments at the same rate as men, it is expected that 14 women would hold such appointments (58% of female associate and full professors). At the college level, 8% (N = 5) of male associate and full professors and 4% (N = 1) of women associate and full professors served on college-level tenure/promotion committees; see Table 10c. If women held these appointments at the same rate as men, it is expected that 2 women would serve on college-level tenure/promotion committees.

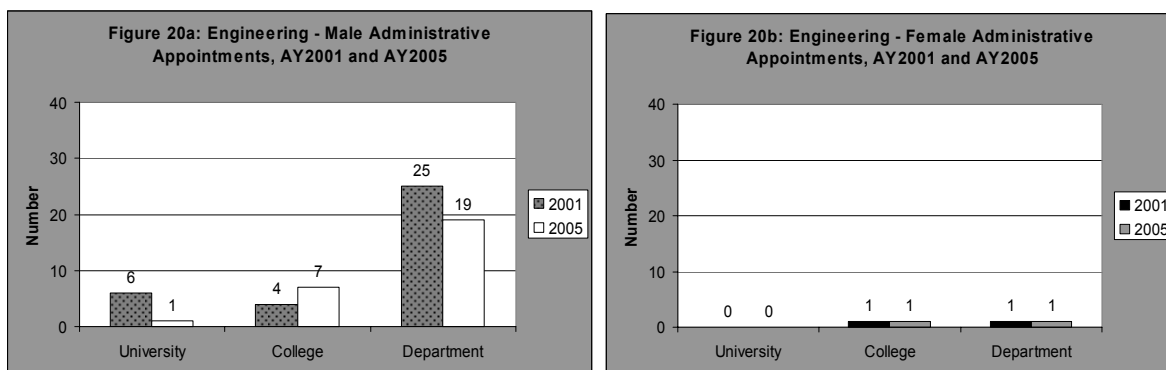


SUMMARY FOR TENURE/PROMOTION COMMITTEES. Given the small number of women at the senior ranks, it is difficult to determine if women are being appointed at rates similar to that of men. At the college-level, female associate and full professors held administrative positions at a greater rate than male associate and full professors in CoE; however, women remained underrepresented in

LSA and MED. At the department-level, women were underrepresented in CoE and MED, but held appointments at a rate comparable to that of men in LSA. In regard to tenure/promotion committees in AY2005, the percentages of committee members who were women reveal that female faculty were underrepresented on college and department-level tenure/promotion committees in each of the three College/Schools.

ADMINISTRATIVE SERVICE: ADMINISTRATIVE POSITIONS COLLEGE OF ENGINEERING

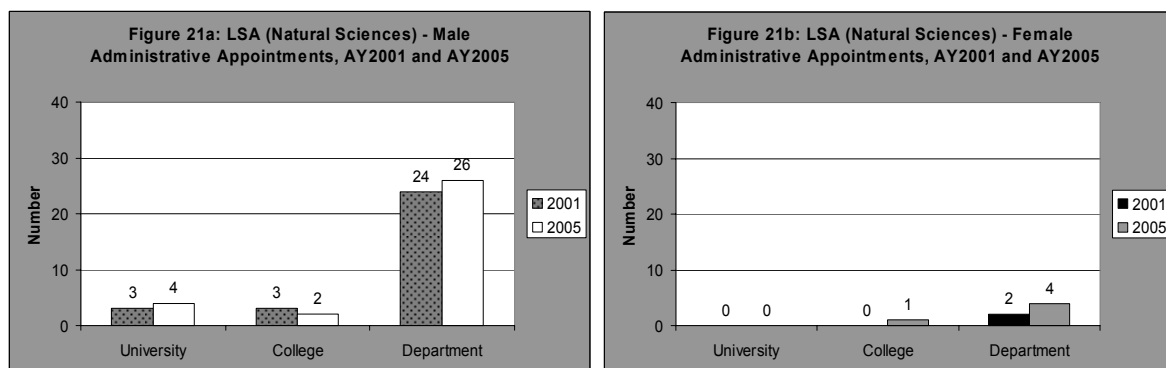
In CoE the total number of male faculty with administrative appointments dropped in AY2005: eight fewer men held administrative positions in AY2005 than AY2001 (see Figures 20a and 20b). The total number of female faculty with administrative positions was unchanged from AY2001 to AY2005.



In AY2005, less than 1% ($N = 1$) of male associate and full professors and no female associate or full professors held university-level appointments. In addition, 3% ($N = 7$) of male associate and full professors held college-level administrative appointments and a comparable 4% ($N = 1$) of female associate and full professors held appointments at the college-level. At the department-level, while 9% ($N = 19$) of male associate and full professors held administrative appointments, only one woman held an administrative position (Table 11a). If women held positions at the same rate as men, it is expected that approximately two women (8% of female associate and full professors) would hold department-level administrative appointments.

COLLEGE OF LSA (Natural Sciences)

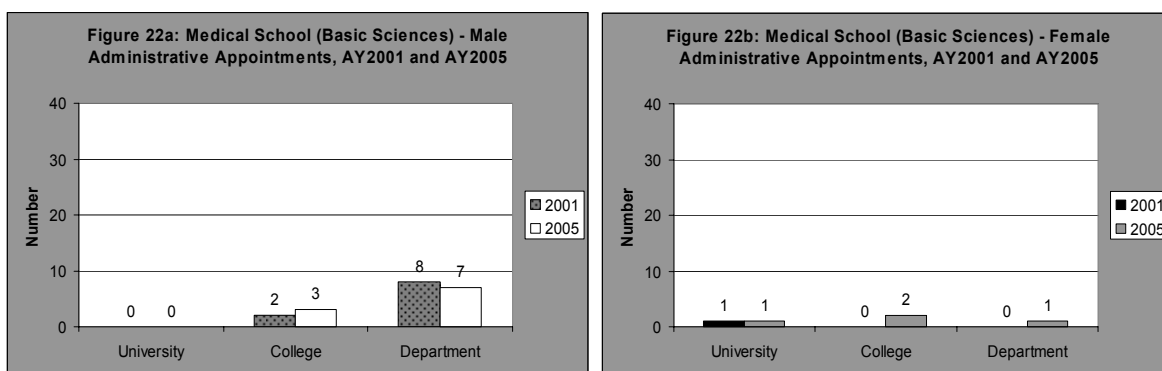
In LSA, there were two additional men and three additional women holding administrative positions (university, college, and department levels) in AY2005 than AY2001 (see Figures 21a and 21b).



At the university level, 2% (N = 4) of male associate and full professors held administrative appointments in AY2005; however, no women held administrative appointments at this level (no would one be expected given the low percentage of men in such appointments). While only 1% (N = 2) of male associate and full professors held college-level appointments, 4% (N = 1) of women associate and full professors held appointments at this level. In AY2005, four women held department-level administrative positions (16% of female associate and full professors). This is slightly higher than the rate at which male faculty held department-level administrative positions (14%; N = 26); see Table 11b.

MEDICAL SCHOOL (Basic Sciences)

In AY2005, three new female professors held administrative appointment (Figure 22b); the number of male faculty holding administrative appointments remained unchanged from AY2001 to AY2005.



In AY2005, 4% (N = 1) of female associate and full professors in the basic science departments held university-level administrative appointments; no male associate and full professors in the basic science departments held such appointments. At the college-level, 5% (N = 3) of male and 8% (N = 2) of female associate and full professors held college-level administrative positions. Women, therefore, held university and college-level appointments at a comparable or slightly higher rate than male associate and full professors. Lastly, at the department-level, while 11% (N = 7) of male associate and full professors held administrative appointments, only 4% (N = 1) female associate and full professors served in AY2005. If women held appointments at the same rate as men, at least two women (8% of female associate and full professors) would hold department-level administrative appointments.

SUMMARY FOR ADMINISTRATIVE POSITIONS. The findings here are similar to those observed for membership on tenure and promotion committees: given the small number of faculty appointed to university and college-level administrative positions as well as the small number of women at the senior ranks, it is very difficult to determine if women and men were appointed to these positions at about the same rates. In the case of department-level administrative positions, women were not represented at the same rates as men in CoE and MED. That is, women faculty were less likely to hold department-level administrative positions than were men faculty. This is particularly important as the largest numbers of positions in these colleges are at this level. In LSA, female associate and full professors held administrative positions at a rate comparable to the rate at which male faculty held department-level administrative positions.

**SUMMARY FOR NAMED PROFESSORSHIPS & ADMINISTRATIVE SERVICE:
ALL SCHOOLS/COLLEGES**

The discussion of equitable representation of women in these additional appointments is complicated by the low rates of appointment (for both men and women) to these positions, and further, by the low numbers of female faculty eligible (i.e., associate professors and/or full professors) to hold such positions. Though the findings must be considered within this context, it is nonetheless important to note any discernable gender disparities.

F. OTHER INDICATORS

Here we discuss additional indicators that were collected for AY2005. In the case of three variables: years in rank, years at the University, and salary, we collected data for all three tracks: instructional, research, and clinical. For the fourth variable—startup packages—we only collected data for instructional track faculty from the three large Colleges/Schools (Engineering, LSA, and the Medical School).

YEARS IN RANK & YEARS AT U-M

The raw numbers are reported in Tables 5 and 6, respectively, and have been broken down by School/College, rank, and gender. These data are used for salary equity analyses.

SALARY

Table 7 reports raw average salary by rank and gender for each school. The salary ratios (see Chart 23a) may be interpreted as the amount the average female faculty member earns for every dollar the average male faculty member earns. Because neither of these approaches includes any statistical controls we cannot draw any conclusions from these data.

Therefore, we continue to work on constructing an effective strategy for systematically assessing salary equity statistically—principally through developing a regression model that provides the necessary controls. Building on regression analyses done university-wide in 2001, last year we conducted analyses using a modified model with AY2003 salary focusing on one College. The results of these analyses were reported in last year's report. We continued to refine this model and reported on subsequent analyses with this revised model using AY2004 salary for three College/Schools; results from these analyses were reported in our March 2005 quarterly report.

Chart 23a: Salary Ratios for Instructional (Tenure) Track Faculty for AY2001 and AY2005

	ENG		LSA		MED	
	2001	2005	2001	2005	2001	2005
Professor	0.93	1.00	0.83	1.01	0.93	1.03
Associate	0.94	1.00	1.00	0.96	1.00	0.95
Assistant	1.00	1.01	1.00	0.99	0.94	1.02

Note: College of Engineering (ENG), College of LSA (LSA) and Medical School (MED)

In addition, Provost Paul N. Courant has agreed to charge a university committee with conducting a university-wide salary equity study every five years. The last university-wide salary study was done in 2001 assessing 1999 salary data.

STARTUP PACKAGES

Startup packages for new incoming instructional track faculty for the three large School/Colleges have been compiled, but for reasons of confidentiality are not included in this report. These numbers, like those for salary, are raw numbers and do not take into account the field or type of research for individual new faculty. Therefore no conclusions can be drawn about gender. We continue to aggregate these data in the hope that eventually we will have sufficient data within similar or related disciplines to draw conclusions about gender.

SPACE

We will conduct an assessment of space allocation for faculty, by department, across the three large Schools with science and engineering faculty during the final year of the grant, as recommended in the Toolkit for Reporting (*Progress Toward NSF ADVANCE: Institutional Transformation Goals*). The

assessment will be appended to the December 2006 year-end report to the National Science Foundation.

G. EVALUATION OF PROGRAMMING

EVALUATION OF PROGRAMMING

A variety of evaluation efforts were undertaken during this period, including an assessment of the following UM ADVANCE-supported initiatives:

- CRLT Players performance(s) of:
 - *The Faculty Meeting* for Rob Tomsho (*Wall Street Journal*), Joe Serwach (University of Michigan News Service), and selected faculty and staff;
 - *Faculty Advising Faculty* for the School of Dentistry; and
 - *Tenure: The Fence* for the College of LSA chairs and directors, the Academic Program Group (APG), College of LSA divisional committee members, and the College of Engineering department chairs;
- STRIDE Committee presentations to the Departments of Aerospace Engineering, Naval Architecture & Marine Engineering, and Human Genetics;
- STRIDE Committee Faculty Recruitment Workshops;
- ADVANCE Leaders in Science Seminar Series (ALISSS)—funded by a Departmental Transformation Grant;
- *Leading Excellence* workshop facilitated by Dr. Diana Kardia for senior faculty;
- Elizabeth C. Crosby Research Award program;
- Friends and Allies of STRIDE Toward Equity in Recruiting (FASTER) workshop;
- FASAP panel discussion, “Leading Successful Work Groups”;
- Network of Women Scientists and Engineers events survey;
- Summer Institute 2005, a three-day workshop for institutions interested in developing an interactive theatre program on their campuses (*Setting the Stage for Change: Using Theatre to Improve Institutional Climate*); and
- Invited speakers, including Dr. Jocelyn Bell Burnell and Dr. Kimberlee Shauman.

The evaluation team also produced a report on the findings of statistical analyses of AY2004 salaries of science and engineering instructional tenure-track faculty members from three schools at the University. These analyses largely followed the methodology of a University-wide salary study, released in 2001, and subsequent analyses by the UM ADVANCE Project staff in 2003 and 2004. The report was appended to our last quarterly report in March 2005.

In addition, the Network of Women Scientists and Engineers (all women instructional tenure track faculty) were sent an on-line survey about UM ADVANCE Network activities. The survey was undertaken to learn which events Network members attended and whether or not their expectations were met; moreover, the survey asked respondents to indicate what types of events they would like to see continued and/or introduced as new Network activities. Sixty-four women completed the survey during the short time it was posted. While this is only an 18% response rate, the number is consistent with the number of women who generally attend Network events. A report was appended to the June 2005 interim report.

Also, in February 2005 UM ADVANCE sent an on-line survey to the Network of Women Scientists and Engineers (all instructional track women scientists and engineers) to assess their current experiences of the climate and to learn if they perceive any changes in the climate since the ADVANCE baseline survey was completed in fall 2001. To enable these comparisons, survey

questions were limited to specific climate questions asked in the 2001 survey as well as a job satisfaction rating. Eighty-four women (42% response rate) completed the survey during the short time it was posted. Overall, we found that women rated the environment as more positive and less sexist than they had in 2001. As further evidence of an improved climate, new women faculty described the environment as more positive than continuing faculty. The report was appended to our last quarterly report in September 2005.

The evaluation team also produced two posters for the NSF ADVANCE PI meeting in Arlington, Virginia, on May 19 – 20, 2005 and another poster for the National Academies Convocation (December 9, 2005). These posters focused on the UM ADVANCE Project's initiatives aimed at improving the recruitment of women scientists and engineers as well as approaches to representing data for use by University administrators.

Copies of the Dr. Jocelyn Bell Burnell assessment and the Workshop on the Work-Family Conflict for Graduate Students and Postdoctoral Fellows evaluation report are appended to this report (Appendix K and L, respectively).

The UM ADVANCE evaluation team also plans to complete a broad-based evaluation of CRLT Players activities, using data from multiple surveys completed by audience members at several CRLT Players performances. Also, a copy of the STRIDE Faculty Recruitment Workshop evaluation report will be appended to our March 2006 quarterly report.

EVALUATION OF FACULTY GRANT OPPORTUNITIES

Elizabeth C. Crosby Research Award: The summer 2002, spring 2003, and spring 2004 recipients were asked to complete a brief survey via e-mail regarding the usefulness of the Crosby research funds approximately one year after receipt of their awards. Twenty-seven out of 30 first, second, and third round recipients responded to the e-mail survey, which is a 90% response rate. The survey was conducted on-line and asked the recipients to respond to three open-ended questions:

- What did the funding allow you to do (i.e., a brief description of the research project and activities/expenses that were supported)?
- How, if at all, has the funding been useful in supporting your career and/or the careers of other women scientists and engineers (e.g., colleagues, post docs, graduate students)?
- Are there any products that have resulted from this award (e.g., publications, conference presentations, patents, applications for extramural funding) or are in progress?

In response to the first open-ended question (*What did the funding allow you to do?*), most of the summer 2002, spring 2003, and spring 2004 recipients indicated that they used a majority of their Crosby funding to provide full or partial support for faculty summer salary, postdoctoral fellows, graduate research assistants, and/or undergraduate research assistants, ranging from 57% in spring 2003 to 67% in summer 2002 and spring 2004. A maximum of two recipients during each of the first three rounds applied a majority of their funding to purchase equipment and supplies (15% of summer 2002, spring 2003, and spring 2004 recipients), to buy out teaching time and/or offset costs of sabbatical leave (15%), to fund field research (7%), and to organize a speaker series featuring prominent women scientists and engineers (4%).

Responding to the second open-ended question (*How, if at all, has the funding been useful in supporting your career and/or the careers of other women scientists and engineers?*), the summer 2002, spring 2003, and spring 2004 recipients reported that the funding: (1) encouraged collaborations with fellow women scientists and engineers as well as women graduate and undergraduate students at the University of Michigan and elsewhere; (2) improved their chances of attaining tenure or promotion by increasing the amount of time the recipients devoted to research-related tasks (via salary support, conference travel funds and teaching relief); (3) supported work that facilitated the completion of pending publications and proposals submitted to funding agencies; (4) afforded recipients opportunities to direct graduate research and to mentor graduate and undergraduate women; and (5) engendered opportunities to increase the visibility of the individual recipient as well as the contributions of women scientists and engineers.

Recipients were then asked to indicate whether or not any products had resulted from the Crosby funding or are in progress. The recipients from the first three rounds (i.e., summer 2002, spring 2003, and spring 2004) of Elizabeth C. Crosby competition reported a total of 4 approved applications for extramural funding by NSF and NIH (3% of total products reported) and 19 pending applications for extramural funding (13%). Recipients indicated their intention to submit these applications to NSF (7), NIH (5) as well as one application to each of the following agencies: Department of Energy, EPA, NASA, NSA, Office of the Vice President for Research Great Lakes Initiative, Office of Naval Research, and Sea Grant. The recipients also reported 20 abstracts, articles, and manuscripts accepted for publication (13%); 22 invitations to deliver a talk/participate in a seminar (15%); 29 abstracts, articles, and manuscripts in preparation (19%); and 56 conference papers and presentations (37%).

The summer 2002 and spring 2003 applicants for Crosby funding mostly sought support for routine research-related needs, including salary, equipment/supplies, teaching relief, and field research. Beginning with the spring 2004 round of competition, however, the requests for funding broadened to include support for family life demands that tend to affect women more than men, to interfere with research-related activities, and to be overlooked as legitimate, career-related needs by regular funding sources. Eight out of 28 recipients (29%) since spring 2004 received Crosby research funding to address family-related needs and/or support a research career that was strained by family life demands, including 3 recipients in spring 2004 (30% of recipients), 3 in fall 2004 (33%), and 2 in spring 2005 (22%).

The full report was appended to the June 2005 interim report.

ADDITIONAL EVALUATION EFFORTS

Exit Interviews. CEW staff has also initiated exit interviews with all science and engineering tenure track faculty who have left the University (except those who retired) since the UM ADVANCE project began. An initial summary will be submitted as part of our next quarterly report.

Data Collection for the 2006 annual report. We will continue data collection on the indicators for AY2006.

H. INSTITUTIONAL TRANSFORMATION INDICATORS

Table 1: Instructional, Research, and Clinical Track Faculty by Gender 2004 - 2005^a

	FULL PROFESSOR								ASSOCIATE PROFESSOR								ASSISTANT PROFESSOR								TOTAL							
	males				females				males				females				males				females				males				females			
	N	% N	FTE	% FTE	N	% N	FTE	% FTE	N	% N	FTE	% FTE	N	% N	FTE	% FTE	N	% N	FTE	% FTE	N	% N	FTE	% FTE	N	% N	FTE	% FTE	N	% N	FTE	% FTE
ENGINEERING ^b	166	96%	144.99	96%	7	4%	5.50	4%	55	75%	52.90	76%	18	25%	16.35	24%	53	84%	49.50	84%	10	16%	9.10	16%	274	89%	247.39	89%	35	11%	30.95	11%
LSA (Natural Sciences) ^c	155	91%	137.49	92%	15	9%	12.75	8%	29	74%	27.00	75%	10	26%	9.00	25%	43	74%	38.30	73%	15	26%	14.50	27%	227	85%	202.79	85%	40	15%	36.25	15%
MEDICINE (Basic Sciences) ^d	51	77%	38.10	74%	15	23%	13.20	26%	11	55%	8.80	55%	9	45%	7.13	45%	21	68%	17.77	65%	10	32%	9.67	35%	83	71%	64.67	68%	34	29%	30.00	32%
SIX SMALLER SCHOOLS ^e	78	84%	68.95	83%	15	16%	14.04	17%	33	69%	29.75	68%	15	31%	14.05	32%	23	58%	21.95	59%	17	43%	15.25	41%	134	74%	120.65	74%	47	26%	43.34	26%

	RESEARCH SCIENTIST								ASSOC RESEARCH SCIENTIST								ASST RESEARCH SCIENTIST								TOTAL							
	males				females				males				females				males				females				males				females			
	N	% N	FTE	% FTE	N	% N	FTE	% FTE	N	% N	FTE	% FTE	N	% N	FTE	% FTE	N	% N	FTE	% FTE	N	% N	FTE	% FTE	N	% N	FTE	% FTE	N	% N	FTE	% FTE
ENGINEERING	12	100%	8.20	100%	0	0%	0.00	0%	13	100%	10.75	100%	0	0%	0.00	0%	27	87%	23.95	89%	4	13%	2.90	11%	52	93%	42.90	94%	4	7%	2.90	6%
LSA (Natural Sciences)	3	75%	3.00	86%	1	25%	0.50	14%	7	100%	5.45	100%	0	0%	0.00	0%	15	79%	13.35	82%	4	21%	2.90	18%	25	83%	21.80	87%	5	17%	3.40	13%
MEDICINE (Basic Sciences)	0	0%	0.00	0%	1	100%	1.00	100%									7	58%	6.95	62%	5	42%	4.30	38%	7	54%	6.95	57%	6	46%	5.30	43%
SIX SMALLER SCHOOLS	3	100%	2.02	100%	0	0%	0.00	0%	2	67%	2.00	73%	1	33%	0.75	27%	19	58%	17.17	60%	14	42%	11.25	40%	24	62%	21.19	64%	15	38%	12.00	36%

	CLINICAL PROFESSOR								CLINICAL ASSOC PROFESSOR								CLINICAL ASST PROFESSOR								TOTAL							
	males				females				males				females				males				females				males				females			
	N	% N	FTE	% FTE	N	% N	FTE	% FTE	N	% N	FTE	% FTE	N	% N	FTE	% FTE	N	% N	FTE	% FTE	N	% N	FTE	% FTE	N	% N	FTE	% FTE	N	% N	FTE	% FTE
SIX SMALLER SCHOOLS	7	100%	6.30	100%	0	0%	0.00	0%	9	45%	9.00	49%	11	55%	9.21	51%	19	48%	17.90	47%	21	53%	19.90	53%	35	52%	33.20	53%	32	48%	29.11	47%

^a Ns do not include faculty with only dry appointments in the department; "% N" based on number of appointments within rank; "% FTE" based on FTE within rank

^b Faculty with joint appointments (i.e., greater than 0% time equivalence) are counted in each unit of appointment. In AY2005, 7 faculty members (6 men and 1 woman) had joint appointments across departments within the College of Engineering; the 7 faculty members were counted in both departments in which they had budgeted appointments. With the exception of one male research professor, these faculty members were on the instructional (tenure) track. Therefore, the data contained in the table slightly overestimate the total number of male faculty members with budgeted appointments in CoE. In addition, 9 men and 1 woman on the instructional (tenure) track had joint appointments including a unit outside of CoE.

^c In AY2005, no faculty members in the natural science departments had joint appointments (budgeted) in more than one natural science department within the College of LSA; 5 male instructional (tenure) track faculty members had joint appointments including a unit outside of LSA. No female faculty members had joint appointments including a unit outside of LSA.

^d No faculty members in the basic science departments had joint appointments (budgeted) in more than one basic science department within the Medical School in AY2005; 2 men and 1 woman on the instructional (tenure) track had joint appointments including a unit outside of MED.

^e In AY2005, 3 male and 3 female faculty members had joint appointments within one of the six smaller schools. In addition, 6 male instructional (tenure) track faculty members had joint appointments (budgeted) including a unit outside of the six smaller schools. No female faculty members had joint appointments including a unit outside of the six smaller schools.

Table 2: Hires to the Instructional (Tenure) Track (between 3/1/2004 and 3/1/2005)

	FULL PROFESSOR		ASSOC. PROFESSOR		ASST. PROFESSOR		TOTAL	
	males	females	males	females	males	females	males	females
TOTAL ENGINEERING	2	0	0	1	7	2	9	3
Percent of Hires	100%	0%	0%	100%	78%	22%	75%	25%
TOTAL LSA (Natural Sciences)	3	0	1	0	5	3	9	3
Percent of Hires	100%	0%	100%	0%	63%	37%	75%	25%
TOTAL MEDICINE (Basic Sciences)	1	0	0	0	5	4	6	4
Percent of Hires	100%	0%	--	--	56%	44%	60%	40%
TOTAL SIX SMALLER SCHOOLS (Scientists)	2	0	0	1	1	1	3	2
Percent of Hires	100%	0%	0%	100%	50%	50%	60%	40%

Table 3: Retirements and Terminations from the Instructional (Tenure) Track (between 3/1/2004 and 3/1/2005)

	FULL PROFESSOR		ASSOC. PROFESSOR		ASST. PROFESSOR		TOTAL	
	males	females	males	females	males	females	males	females
TOTAL ENGINEERING	16	1	3	0	2	0	21	1
Percent of Terminations	94%	6%	100%	0%	100%	0%	95%	5%
TOTAL LSA (Natural Sciences)	9	0	0	0	2	0	11	0
Percent of Terminations	100%	0%	--	--	100%	0%	100%	0%
TOTAL MEDICINE (Basic Sciences)	5	0	0	1	0	0	5	1
Percent of Terminations	100%	0%	0%	100%	--	--	83%	17%
TOTAL SIX SMALLER SCHOOLS (Scientists)	10	0	0	0	0	1	10	1
Percent of Terminations	100%	0%	--	--	0%	100%	91%	9%

Table 4: Promotions effective AY2005 (Reviewed in AY2004)

	Asst --> Associate		Associate --> Full	
	males	females	males	females
TOTAL ENGINEERING APPROVED	3	1	8	0
Promotions Denied	0	0	0	0
TOTAL LSA (Natural Sciences) APPROVED	5	2	6	1
Promotions Denied	1	0	0	0
TOTAL MEDICINE (Basic Sciences) APPROVED	1	0	2	1
Promotions Denied	0	0	0	0
TOTAL SIX SMALLER SCHOOLS (Scientists) APPROVED	1	0	7	2
Promotions Denied	0	0	0	0

Table 5: Average Time (in Years) in Rank 2004 - 2005

	PROFESSOR		ASSOC PROF		ASST PROF		RESEARCH SCI		ASSOC RES SCI		ASST RES SCI		CLINIC PROF		CLINIC ASSOC P		CLINIC ASST P	
	males	females	males	females	males	females	males	females	males	females	males	females	males	females	males	females	males	females
ENGINEERING	12.11	6.16	6.66	3.63	2.90	3.90	8.17		3.85		2.59	3.37						
LSA (Natural Sciences)	14.40	4.50	4.62	5.50	2.89	2.87	7.16	19.50	2.53		3.43	2.62						
MEDICINE (Basic Sciences)	13.96	9.35	6.03	4.50	2.22	2.43		7.50			1.64	4.91						2.63
SIX SMALLER SCHOOLS	10.45	7.36	7.18	6.21	3.25	7.55	8.72		1.45	1.42	3.42	2.03	4.56		4.19	3.97	3.61	3.39

*includes all at FTE > 0%

Table 6: Average Time (in Years) at UM 2004 - 2005

	PROFESSOR		ASSOC PROF		ASST PROF		RESEARCH SCI		ASSOC RES SCI		ASST RES SCI		CLINIC PROF		CLINIC ASSOC P		CLINIC ASST P	
	males	females	males	females	males	females	males	females	males	females	males	females	males	females	males	females	males	females
ENGINEERING	20.83	10.73	10.82	6.84	3.01	4.30	18.76		11.54		6.79	11.58						
LSA (Natural Sciences)	22.41	12.09	8.76	10.88	3.07	3.29	24.51	29.00	11.82		8.24	5.74						
MEDICINE (Basic Sciences)	23.36	22.79	12.29	11.78	2.73	2.76		29.50			12.49	9.85						7.00
SIX SMALLER SCHOOLS	20.47	21.54	16.39	12.04	4.20	8.44	22.90		7.01	1.42	8.95	6.33	20.50		13.00	15.18	5.44	7.99

*includes all at FTE > 0%

Table 7: Mean Salary FTE* by Rank and Gender 2004 - 2005

	PROFESSOR		ASSOC PROF		ASST PROF		RESEARCH SCI		ASSOC RES SCI		ASST RES SCI		CLINIC PROF		CLINIC ASSOC P		CLINIC ASST P	
	males	females	males	females	males	females	males	females	males	females	males	females	males	females	males	females	males	females
ENGINEERING	\$131,717	\$124,996	\$96,968	\$95,702	\$80,119	\$78,751	\$100,065		\$73,259		\$61,001	\$60,039						
LSA (Natural Sciences)	\$106,659	\$106,371	\$75,113	\$74,393	\$67,410	\$67,573	\$60,586	\$63,330	\$48,799		\$44,082	\$35,016						
MEDICINE (Basic Sciences)	\$113,614	\$112,268	\$84,868	\$84,330	\$71,634	\$70,364		\$88,984			\$52,385	\$51,699						\$60,170
SIX SMALLER SCHOOLS	\$123,293	\$111,852	\$89,971	\$84,479	\$69,099	\$64,815	\$54,468		\$50,727	\$79,998	\$55,206	\$54,598	\$114,107		\$83,897	\$80,945	\$71,665	\$67,705

*Salary FTE based on 9-month academic year; salaries paid on 12 month year were divided by 11 and multiplied by 9.

Recruitment/Hire Data for the College of Engineering, College of LSA, and the Medical School, AY2001 – AY2005¹⁵

Table 1d: Summary for the College of Engineering, College of LSA (Division of Natural Sciences), and Medical School (Basic Science Departments)

	Males			Females			All Offers			Accepted Offers			% Offers Accepted	
	Accepted	Declined	Total	Accepted	Declined	Total	Total	% Female		Total	% Female		% Male	% Female
2000 - 2001	41	36	77	6	8	14	91	15%		47	13%		53%	43%
2001 - 2002	22	26	48	4	10	14	62	23%		26	15%		46%	29%
2002 - 2003	32	17	49	19	11	30	79	38%		51	37%		65%	63%
2003 - 2004	19	10	29	12	8	20	49	41%		31	39%		66%	60%
2004 - 2005	37	21	58	15	7	22	80	28%		52	29%		64%	68%

¹⁵ These data reflect the outcomes (accepted or declined) of tenure-track offers made between September 1 and August 31.

Named Professorships 2004-2005

Table 9a: ENGINEERING

	Males	% of male Profs*	% of all positions	Females	% of female Profs*	% of all positions
Distinguished University Professor	4	2.4%	100.0%			
Collegiate	6	3.6%	100.0%			
Endowed	27	16.3%	96.4%	1	14.3%	3.6%
Thurnau (for teaching)	6	3.6%	100.0%			
TOTAL	43	25.9%	97.7%	1	14.3%	2.3%

Table 9b: LSA (Natural Sciences)

	Males	% of male Profs*	% of all positions	Females	% of female Profs*	% of all positions
Distinguished University Professor	3	1.9%	100.0%			
Collegiate	20	12.9%	95.2%	1	6.7%	4.8%
Endowed	5	3.2%	83.3%	1	6.7%	16.7%
Thurnau (for teaching)	2	1.3%	100.0%			
TOTAL	30	19.4%	93.8%	2	13.3%	6.3%

Table 9c: MEDICAL SCHOOL (Basic Sciences)

	Males	% of male Profs*	% of all positions	Females	% of female Profs*	% of all positions
Distinguished University Professor				2	13.3%	100.0%
Collegiate	5	9.8%	100.0%			
Endowed	1	2.0%	100.0%			
Thurnau (for teaching)						
TOTAL	6	11.8%	75.0%	2	13.3%	25.0%

*Calculated as a proportion of full professors (with greater than 0 FTE) within gender
Some Professors may hold more than one title, and thus are counted once in each category.

Tenure/Promotion Committees 2004-2005

Table 10a: ENGINEERING

	Males	% of male Assoc/Profs*	% of all positions	Females	% of female Assoc/Profs*	% of all positions
College	5	2.3%	83.3%	1	4.0%	16.7%
Department	61	27.6%	98.4%	1	4.0%	1.6%
TOTAL	66	29.9%	97.1%	2	8.0%	2.9%

Table 10b: LSA (Natural Sciences)

	Males	% of male Assoc/Profs*	% of all positions	Females	% of female Assoc/Profs*	% of all positions
College	2	1.1%	100.0%			
Department	57	31.0%	86.4%	9	36.0%	13.6%
TOTAL	59	32.1%	86.8%	9	36.0%	13.2%

Table 10c: MEDICAL SCHOOL (Basic Sciences)

	Males	% of male Assoc/Profs*	% of all positions	Females	% of female Assoc/Profs*	% of all positions
College	5	8.1%	83.3%	1	4.2%	16.7%
Department	36	58.1%	78.3%	10	41.7%	21.7%
TOTAL	41	66.1%	78.8%	11	45.8%	21.2%

*Calculated as a proportion of full and associate professors (greater than 0 FTE) within gender

Some Assoc/Profs serve on both college and department committees, and thus are counted once in each category.

Administrative Positions 2004-2005

Table 11a: ENGINEERING

	Males	% of male Assoc/Profs*	% of all positions	Females	% of female Assoc/Profs*	% of all positions
University	1	0.5%	100.0%			
College	7	3.2%	87.5%	1	4.0%	12.5%
Department	19	8.6%	95.0%	1	4.0%	5.0%
TOTAL	27	12.2%	93.1%	2	8.0%	6.9%

Table 11b: LSA (Natural Sciences)

	Males	% of male Assoc/Profs*	% of all positions	Females	% of female Assoc/Profs*	% of all positions
University	4	2.2%	100.0%			
College	2	1.1%	66.7%	1	4.0%	33.3%
Department	26	14.1%	86.7%	4	16.0%	13.3%
TOTAL	32	17.4%	86.5%	5	20.0%	13.5%

Table 11c: MEDICAL SCHOOL (Basic Sciences)

	Males	% of male Assoc/Profs*	% of all positions	Females	% of female Assoc/Profs*	% of all positions
University				1	4.2%	100.0%
College	3	4.8%	60.0%	2	8.3%	40.0%
Department	7	11.3%	87.5%	1	4.2%	12.5%
TOTAL	10	16.1%	71.4%	4	16.7%	28.6%

*Calculated as a proportion of full and associate professors (greater than 0 FTE) within gender

Appendix A:

Setting the Stage for Change: Using Theatre to Improve Institutional Climate

Summer Institute 2005
*A Collaboration Between the University of Michigan's ADVANCE Program
and the CRLT Theatre Program
Funded by a generous grant from the National Science Foundation*

Wednesday, June 15 - Friday, June 17, 2005
University of Michigan
Ann Arbor

Wednesday, June 15 – *Fourth Floor of the Rackham School of Graduate Studies*

- 3:00 pm **Welcome and Introductions** – *East Conference Room*
Jeffrey Steiger, Abby Stewart, Connie Cook, Devon Dupay, Cynthia Hudgins
- 4:20 pm **Break**
- 4:30 pm **Performance by the CRLT Players:** *"The Faculty Meeting"* – *Rackham Amphitheatre*
- 5:30 pm **Welcome Reception** – *East Conference Room and Terrace*
- 6:00 pm **Dinner** – *Assembly Hall*
- 6:40 pm **Program:** What does your campus hope to gain from this Institute?
- 7:00 pm **Performances by the CRLT Players**
 - *"6 Minutes"*
 - *"Conflict in the Classroom"*
- 8:00 pm **Adjournment**

Thursday, June 16 – *Fourth Floor of the Rackham School of Graduate Studies*

- 8:30 am **Breakfast and Announcements** – *West Conference Room*
- 9:00 am **Using Interactive Theatre in Institutional Transformation Efforts** – *West Conference Room*
Jeffrey Steiger, Abby Stewart
- 10:00 am **Break**
- 10:10 am **Actor Development: Engaging Actors on a Personal and Performative Level** – *East Conference Room*
Jeffrey Steiger
- 11:45 am **Lunch** – *Assembly Hall*
- 12:30 pm **Sketch Facilitation** – *Assembly Hall*
Jeffrey Steiger

- 2:15 pm **Simultaneous Sessions**
- Role-Play: Teaching Actors About Faculty Life – *Assembly Hall*
Jeffrey Steiger
 - Institutionalizing a Theatre Program (or If You Build It, They Will Come) – *West Conference Room*
Connie Cook
- 3:30 pm **Break**
- 3:45 pm **Transcription: Creating a Script** – *Assembly Hall*
Jeffrey Steiger
- 4:50 pm **Break**
- 5:00 pm **Preview: Using Feedback to Refine a Script** – *Rackham Amphitheatre*
– "Tenure" sketch performed by the CRLT Players, plus feedback
- 6:00 pm **Dinner** – *Zanzibar (216 South State Street)*

Friday, June 17 – *Palmer Commons (not Rackham School of Graduate Studies))*

- 8:30 am **Breakfast and Announcements** – *CRLT Seminar Room (1071 Palmer Commons)*
- 9:00 am **"Tenure" Presentation** with the CRLT Players
- 10:00 am **Goals, Protocols, and Issues Involved in Evaluation**
Abby Stewart, Connie Cook, Matt Kaplan
- 11:00 am **Break**
- 11:10 am **Performance by the CRLT Players:** *"Gender in the Classroom"*
- 12:00 pm **Lunch: Discussion/Wrap-Up/Logistics/Evaluation** – *Great Lakes South Room, Fourth floor, Palmer Commons*
Jeffrey Steiger, Devon Dupay, Abby Stewart, Connie Cook, Matt Kaplan, Cynthia Hudgins
- 1:30 pm **Adjournment**

**Setting the Stage for Change:
Using Theatre to Improve Institutional Climate**

**Summer Institute 2005
Participant Directory**

Adelman	Rebecca Brown	Founder/Co-Director, The Interactive Theatre Project	rebecca.brown@colorado.edu	University of Colorado at Boulder
Allen	Doree	Director, Oral Communications Program, CTL	doree.allen@stanford.edu	Stanford University
Black	Robbin	Lecturer, Theatre Arts Department	robbinb@hass.usu.edu	Utah State University
Bo-Linn	Cheelan	Head, Instructional Development, Center for Teaching Excellence	cbolinn@uiuc.edu	University of Illinois at Urbana-Champaign
Burgoyne	Suzanne	Professor of Theatre	burgoynes@missouri.edu	University of Missouri-Columbia
Clerici-Arias	Marcelo	Associate Director for Social Sciences and Technology, CTL	marcelo@stanford.edu	Stanford University
Cook	Constance	Director, Center for Research on Learning and Teaching (CRLT), Associate Professor of Education	cecook@umich.edu	University of Michigan
Coss	Noralis Rodriguez	Administrative Coordinator, ADVANCE IT Program	n_rodriguez@webmail.uprh.edu	University of Puerto Rico at Humacao
Dupay	Devon	Assistant Director, CRLT Theatre Program	dseybert@umich.edu	University of Michigan
Evans	Lise	MFA Acting Student	evans.707@osu.edu	Ohio State University
Frick	Patti	Vice President for Academic Affairs and Academic Dean	pfrick@otterbein.edu	Otterbein College
Gackstetter	Dennise	Temporary Instructor, Arts Department ADVANCE Liaison	denniseg@cc.usu.edu	Utah State University
Glickman	Adina	Assistant Director for Academic Support	adina.glickman@stanford.edu	Stanford University
Godwin	Laura	Assistant Professor of Theatre	lgodwin@uiuc.edu	New Mexico State University
Hayes	Valerie	Director, Office for Equal Opportunity Programs Special Advisor to the Provost	valerie.hayes@yale.edu	Yale University

Hudgins	Cynthia	Program Manager, ADVANCE Project	hudgins@umich.edu	University of Michigan
Irizarry	Ivette	Student Ombudsman Equal Job Opportunities Officer	i_irizarry@cuhad.upr.clu.edu	University of Puerto Rico at Humacao
Kaplan	Matthew	Associate Director, CRLT	mlkaplan@umich.edu	University of Michigan
Kirk Lucas	Christina Valerie Kaneko	Professor of Theatre Assistant Professor of Theatre	ckirk@otterbein.edu lucas.219@osu.edu	Otterbein College Ohio State University
Mazure	Carolyn	Professor of Psychiatry Associate Dean of the Yale School of Medicine Faculty Affairs	carolyn.mazure@yale.edu	Yale University
McCully	Susan	Assistant Professor of Theatre Member of the Women's Studies Program	mccully@umbc.edu	University of Maryland, Baltimore County
McGee	Shanna Beth	Faculty Diversity Officer Associate Professor of Theatre	bethmcgee@case.edu	Case Western Reserve University
Montagna	Stephen	Media Specialist, UW Center for Women's Health Research Webmaster, WISELI	sdmontagna@facstaff.wisc.edu	University of Wisconsin-Madison
Morrisette	J.W.	Assistant Program Coordinator, Inner Voices Social Issues Theatre	jwmorris@uiuc.edu	University of Illinois at Urbana-Champaign
Norman	Trenton	Assistant Director, Housing Administration	trenton.norman@colorado.edu	University of Colorado at Boulder
Ortquist-Ahrens	Leslie	Director, Center for Teaching and Learning (CTL)	lortquist-ahrens@otterbein.edu	Otterbein College
Pang	Cecilia	Assistant Professor Head of BFA Performance Department for Theatre & Dance	cecilia.pang@colorado.edu	University of Colorado at Boulder
Rando	William	Dean's Advisor on Teaching and Learning Director, McDougal Graduate Teaching Center	william.rando@yale.edu	Yale University
Raymond	Pamela	Interim-PI, ADVANCE Project Professor of Cell & Developmental Biology	praymond@umich.edu	University of Michigan
Robinson	Phyllis	ADVANCE Faculty Associate Associate Professor of Biological Sciences	probinso@umbc.edu	University of Maryland, Baltimore County

Salkind	Wendy	Chair and Associate Professor of the Department of Theatre	salkind@umbc.edu	University of Maryland, Baltimore County
Sidbury	Carmen	Director of Diversity, College of Engineering	sidbury@enr.washington.edu	University of Washington
Silva	Dario	Director, Employee Assistance Program	dasilva@nmsu.edu	New Mexico State University
Steiger Stewart	Jeffrey Abigail	Director, CRLT Theatre Program PI, ADVANCE Project Professor of Psychology Professor of Women's Studies	pixi@umich.edu abbystew@umich.edu	University of Michigan University of Michigan
Swift	Judith	Interim Vice Provost for Academic Affairs	jswift@uri.edu	University of Rhode Island
Watkins	Beth	Associate Dean for Faculty	bwatkins@allegheny.edu	Allegheny College
Yen	Joyce	Program/Research Manager, ADVANCE Center for Institutional Change	joyceyen@u.washington.edu	University of Washington
Zimmerman	J. Lynn	Lead Co-PI ADVANCE Vice Provost for Academic Initiatives Professor of Biological Sciences	zimmerma@umbc.edu	University of Maryland, Baltimore County

Appendix B: The University Record Online Nine Receive Crosby Research Awards Published January 24, 2005

Nine receive Crosby research awards

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Nine receive Crosby research awards

ADVANCE Project

The National Science Foundation (NSF)-funded ADVANCE program, in cooperation with the offices of the president and provost, has made nine Elizabeth Caroline Crosby Research Awards to advance the careers of women in science and engineering at U-M.

The awards totaling \$100,600 were announced in December by Abigail Stewart, principal investigator of the NSF ADVANCE grant.

Proposals were judged on two criteria: the quality and significance of the scholarly activity itself and, equally important, its value in enhancing women's participation and advancement in science and engineering at the University. A panel of senior scientists and engineers selected the winners.

"The selection committee had very hard decisions to make. There were many outstanding proposals and they were only able to support a small proportion of those who applied," Stewart says. "They aimed to provide support to projects that were particularly distinguished and at the same time had the clearest claim to 'making a difference' to women scientists' career trajectory."

The winners are: **Kathleen L. Collins**, Department of Internal Medicine, Department of Microbiology and Immunology, HIV immune evasion; **Kristina Hakansson**, Chemistry Department, Tandem high-resolution mass spectrometry for nucleic acid structural characterization; **Smadar Karni**, Department of Mathematics, Computational methods for compressible gas dynamics; **Susan Murray**, Department of Biostatistics, Quality-of-life-adjusted analysis of correlated landmark event times; **Mary E. Putman**, Department of Astronomy, The Milky Way's eating habits; **Gabrielle Rudenko**, Department of Pharmacology, Life Sciences Institute, Biochemical, biophysical and structural studies of neurexins and DeltaFosB; **Debra A. Thompson**, Department of Ophthalmology and Visual Sciences, Department of Biological Chemistry, Phagocytic signaling pathways in the retina; **Katsuyo Thornton**, Department of Materials Science and Engineering, The instabilities of steps on semiconductor surfaces; and **Priscilla Tucker**, Department of Ecology and Evolutionary Biology, A genome-wide assessment of reproductive isolation in a house mouse hybrid zone.

Crosby award recipients collaborate on research with national and international colleagues in their fields; present papers and plenary addresses at national and international conferences; develop pilot research evidence to support applications for external funding; and mentor and introduce students—including women—to scientific and engineering fields of study.

The awards also provide support for family life demands that affect women more than men and can interfere with research-related activities. These include pregnancy and childcare, as well as other kinds of caregiving.

http://www.umich.edu/~urecord/0405/Jan24_05/12.shtml

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For more information, go to <http://www.umich.edu/~advproj/grants.html>.

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Appendix C: The University Record Online Regents to hear about women in science and engineering, Feb. 17 Published February 18, 2005

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News Briefs

Regents to hear about women in science and engineering Feb. 17

The Board of Regents will begin its monthly meeting at 1:30 p.m. Feb. 17 with a panel discussion entitled, "Women in Science and Engineering at U-M," which will focus on the findings of the ADVANCE Project. The panel will feature Abigail Stewart, who is the Agnes Inglis Collegiate Professor of Psychology and Women's Studies and director of the ADVANCE Project; Pamela Raymond, senior counselor to the provost and professor of cell and developmental biology; Melvin Hochster, the Jack E. McLaughlin Distinguished University Professor of Mathematics; Terrence McDonald, LSA dean; and Anthony England, associate dean for academic affairs, College of Engineering. The event will take place in the Rackham East Conference Room.

The regular meeting begins at 2:30 p.m. in Rackham Assembly Hall. Public comments will follow at 3:30 p.m.

Individuals with disabilities who wish to attend the meeting and need assistance should contact the Office of the Vice President and Secretary of the University in advance at (734) 764-3883.

English classes available through Family Housing

The Family Housing Language Program is offering English classes for families of international faculty, staff and students during the 2005 winter term.

Registration currently is underway for children, teens and adults.

Native speakers of English also are needed as volunteer conversation and classroom partners.

For more information, call (734) 647-4945 or send an e-mail to familyhousing@umich.edu.

Record takes a winter break Feb. 28

The University Record will not publish an issue Feb. 28 due to the annual winter break. The Record will resume publication March 7. The deadline for submissions for both the Feb. 21 and March 7 issues is 5 p.m. the Tuesday prior to publication.

Take a life sciences survey

The Life Sciences and Society Program (LSSP)—formerly known as LSVSP—is creating a curriculum guide that will list University courses with content covering the life sciences and their societal implications. The goal of the curriculum guide is to enhance the efficiency of advising and course selection for students interested in the intersection of

http://www.umich.edu/~urecord/0405/Feb14_05/briefs.shtml

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these fields.

LSSP is urging faculty members to take a short survey to help identify courses that incorporate the ethical, legal, social and cultural dimensions of the life sciences for inclusion in the guides. To take the survey, go to <http://www.epidkardia.sph.umich.edu/lss/curriculumSurvey>.

Spring Commencement speaker entries due March 10

The deadline for seniors to submit Spring Commencement speeches for consideration is 5 p.m. March 10. The ceremony will be 9:15 a.m. April 30 in Michigan Stadium. The competition is open to students who will receive a bachelor's degree during winter or summer term 2005. Submissions must include of a typed draft of the speech—five minutes or less in length—as well as an audiocassette or CD with the voice of the author delivering the speech. Students also are asked to submit a curriculum vitae or resume and include an e-mail address and local phone number where they can be reached. Entries should be submitted to Student Speaker Entries, 2074 Fleming Administration Building, Ann Arbor, MI, 48109-1340. For more information, contact Julie Ashley at (734) 647-6974 or ashleyj@umich.edu.

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Appendix D: The University Record Online

Panel: U-M ADVANCE makes strides, gains recognition

Published February 28, 2005

Panel: U-M ADVANCE makes strides, gains recognition

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Panel: U-M ADVANCE makes strides, gains recognition

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By Mary Owen

The University's ADVANCE project—aimed at closing the gender gap in science and technology—is being recognized as a model that works. But leaders of the effort aren't resting on their success and say much more needs to be done.

The University has boosted the number of women faculty in science and engineering with strategies being implemented campus-wide, the panel said. The efforts are receiving national attention, especially in light of heightened discussion of the topic in higher education, said members of the project during a Feb. 17 panel discussion.

Nearly three years after the National Science Foundation (NSF) awarded the project a \$3.75 million grant to eliminate gender disparity in those fields, the University has seen hiring change significantly. In 2004, new hires for positions in science and engineering were 39 percent women, compared to 2001 when only 13 percent of openings were filled by women. In addition, eight women have been made department chairs since the start of the project.

Abigail Stewart, professor of psychology and women's studies and ADVANCE project director, said the University routinely is consulted on its model for tackling a gender challenge that has daunted science and engineering departments nationwide.

The model, that NSF often encourages other institutions to use, pairs faculty in the science and engineering fields with social science colleagues who provide empirical data to convey the reality of gender bias.

But challenges still exist. Stewart presented data showing that nationally, despite a significant number of women graduating with degrees in the natural sciences and engineering, they still represent a small portion of faculty members in those fields.

In the Medical School and colleges of LSA and engineering, women accounted for about 20 percent of assistant professors in 2000-01 before the project began. In that same period, women's numbers decreased among associate and full professors.

ADVANCE participants who made up the panel were Stewart; Pamela Raymond, professor of cell and developmental biology and senior counselor to the provost; Melvin Hochster, the Jack E. McLaughlin Distinguished University Professor of Mathematics; Terrence McDonald, dean of LSA; and Anthony England, associate dean of academic affairs and professor in engineering.

The Board of Regents, which met immediately after the discussion, and others attended the program.

http://www.umich.edu/~urecord/0405/Feb21_05/07.shtml

7/28/2005

The ADVANCE project has changed the campus' attitude toward gender schemas, England said. Some ADVANCE activities include giving women faculty opportunities for mentoring, networking and career development.

"When I first participated in this activity I was confident, but I heard from some of my colleagues that they were indifferent to the problem," England said. "In fact, there was even skepticism that there was a problem. What I find now is that they recognize that the problem is real and we are now talking about what we can do to change things."

Raymond said recruitment and retention are keys to increasing the number of women faculty.

"We need to recruit more talented women to our science fields and once we get them here we need to create a work environment that encourages career development by providing leadership opportunities in addition to a vigorous research environment," said Raymond, who also is a professor of cell and developmental biology.

A component of ADVANCE's efforts is the work of the Science and Technology Recruiting to Improve Diversity and Excellence (STRIDE) committee, a group of senior science and engineering faculty. They have spearheaded U-M efforts with recruitment, including workshops for 60 search committee chairs.

McDonald said having a diverse pool of applicants is the first step to finding qualified women. He outlined LSA programs aimed at improving recruitment practices, climate and mentoring, and emphasized that the kind of cultural change being attempted in the program is difficult and slow.

Hochster noted various studies that showed people often make decisions in hiring based on gender, many times subconsciously.

"People don't approach things from zero," Hochster said. "We are all part of the problem, but it's not just in academics. It's everywhere. Just knowing about unconscious bias helps us change things."

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Appendix E: The University Record Online

Coleman: Affirmative action synonymous with progress

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Coleman: Affirmative action synonymous with progress

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Coleman: Affirmative action synonymous with progress

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[Study: Ballot proposition bad for women in Michigan>](#)

By Mary Owen

President Mary Sue Coleman said affirmative action not only is needed to promote women and minorities, but to ensure Michigan and the country can compete in a global market.

"I realize that we are facing great challenges as a nation. We are facing global competition," Coleman told a crowd March 11 at U-M-Dearborn campus. "We have to look for talent everywhere. Women don't go into science unless they receive encouragement and that has to start in high school and grade school or they will not be able to catch up."



(Photo by Paul Jaronski, U-M Photo Services)

Coleman and several prominent women leaders in Michigan spoke during an event sponsored by the Michigan Women's Summit 2005: Challenges to Equity, the kick-off of a statewide public education campaign on the benefits of affirmative action and outreach programs for women.

Michigan State University President Lou Anna K. Simon, Western Michigan University President Judith I. Bailey and Lansing Community College President Paula Cunningham also participated in the panel discussion via satellite.

The group addressed the negative effects of a proposed amendment to the state Constitution seeking to end affirmative and its impact on higher education.

In her remarks, Coleman countered the myth that affirmative action jeopardizes quality.

"We don't give up one inch of quality," she said.

"I don't view that [affirmative action] as preferential treatment. It's simply removing the barriers to allow you to perform, and it pays off for everyone."

Coleman warned that passage of the amendment could undermine efforts statewide to promote women.

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7/22/2005

"My role here is to let everyone know about the unintentional consequences (of the amendment) and to let everyone know of the benefits that have accrued from affirmative action," Coleman said.

She held up the University's ADVANCE project, saying that since 2001 the hiring of tenure-track women in science and engineering at U-M has increased from 20 to almost 40 percent.

"We got the best women," Coleman said. "We've made a lot of progress but we have a lot to do."

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Appendix F: The Michigan Daily Michigan Civil Rights Initiative's passage may harm women-oriented faculty programs Published March 24, 2005

The Michigan Daily -- 114 Years of Editorial Freedom - MCRI's passage may harm women-oriented fa... Page 1 of 2







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News

MCRI's passage may harm women-oriented faculty programs

University staff are concerned that initiative would dissolve efforts to increase women in science fields

By Anne Joling, Daily Staff Reporter
March 24, 2005

The ADVANCE project — a highly successful five-year program to increase the recruitment and retention of women faculty in engineering and science at the University — could be eliminated if the Michigan Civil Rights Initiative is passed, according to University officials.

While University President Mary Sue Coleman has endorsed the belief that gender-specific programs and benefits will be hurt by MCRI, the exact impact of MCRI on the University is still unknown. Supporters of the ADVANCE project said they are concerned that if MCRI passes on the 2006 ballot, the program could be in jeopardy.

Because the initiative seeks to, "Prohibit the University of Michigan and other state universities, the state, and all other state entities from discriminating or granting preferential treatment based on race, sex, color, ethnicity, or national origin," it is likely it will affect gender-based programs.

"We cannot tell how the courts will interpret the language if it passes," University spokeswoman Julie Peterson said. "But any programs that offer assistance to women can be affected, so it could have an impact on programs like ADVANCE and programs that provide outreach and assistance to women."

Chetly Zarko, Director of Media Relations for MCRI, said he thinks Peterson is exaggerating the potential effects of the initiative.

"When (Peterson) says any program that offers assistance to women can be affected, that's an exaggeration," Zarko said. Only programs that apply to public hiring, public education and public contracting and those that give preference, not merely assistance, are affected."

According to the information presented by ADVANCE at the February University Board of Regents meeting, the program, which has been funded by the National Science Foundation, has been extremely successful since its implementation. When the program began in 2001, six women were hired in science and engineering for that year, which was 13 percent of all openings in those departments. In 2004, that percentage tripled to 39 percent, as 12 women were hired for the science and engineering departments.

Additionally, the number of women department chairs in engineering and science has increased from one in 2001 to eight in 2005.

Martha Pollack, an electrical engineering and computer science professor and a member of STRIDE — a subcommittee of the ADVANCE project — said she thinks the program has been very beneficial to women faculty at the University.

"Personally, I think that STRIDE has made an enormous difference in the climate of the

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University of Michigan and the lives of women professionals in engineering and science," Pollack said. "I think there is evidence in both the rates of the hiring of women and the attitudes you see when you speak with other women faculty."

The University has also expressed concerns about a variety of different programs it fears might be affected by MCRI including the Women in Science and Engineering program and the Center for the Education of Women.

"A lot of times people just think about the admissions impact of MCRI," Peterson said. "But there could be an impact on other programs, and it could affect women just as much as minorities."

MCRI's passage may harm women-oriented faculty programs

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Appendix G: The Michigan Daily Panel discusses women in science fields Published April 19, 2005

The National Science Foundation's ADVANCE program at the University works to promote women in faculty positions in science and engineering. The program has committees and advisors who work to make the academic environment friendly for women.

Chemistry Prof. Mark Banaszak Holl said the program has been beneficial for his department. "We can identify (women) as great candidates, but we can't make them come. We've been able to get them here, and these resources have helped," he said.

Another factor Summers cited was the innate preference differences between men and women, who may have more interest in having a family. The professors all spoke against this notion, saying both men and women take time off of their careers following the birth of a child in their families. McKay said two men in his department have taken advantage of this option.

"I don't see why I can't have a husband (and this job)," Bertacco said. "Why would a man be able to work 50 hours a week and a woman couldn't? Only because your grandmother didn't."

Eccles's study found that the controlling factors in the low numbers of women in science and engineering are a result of a lack of confidence at a young age, brought about by both parents and teachers. "Parents are more likely to attribute their daughter's math achievement to hard work rather than talent," she said. "When you tell a girl that she's doing it because she's working hard, she doesn't draw the same confidence."

The study also discussed the influence of the classroom setting on young women, as physical science and engineering classes tend to focus on competition with other students over overall improvement.

Holl said it is important for all instructors to look into this type of research. "We try to provide enough differences in the learning approaches that are offered in the class to appeal to all the different learning types," he said.

Joe Serwach, a University spokesperson, said the presence of women in these fields has been important in scientific study at the University. "If any of these women had not gone into science, all of these things that they discovered would not have been known. The University is trying to improve the climate so that we can have a more diverse workforce and a more diverse student body," Serwach said.

McKay stressed the importance of not alienating women in these fields because of both the need for diversity and simply raw numbers.

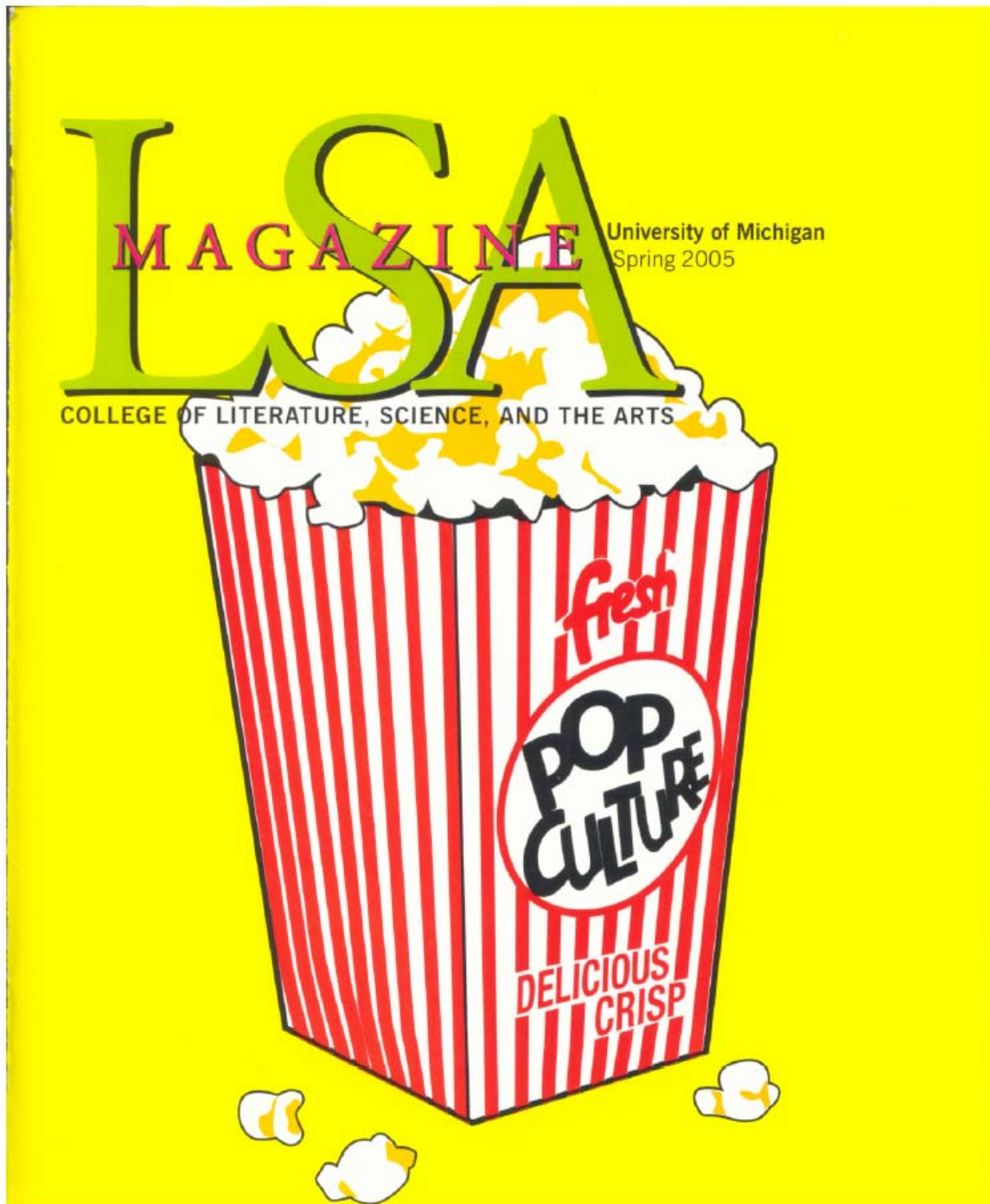
"Being a leader in science and technology in the U.S. is essential — we need more than our fair share of smart people. We need everyone who is qualified to be working on it," he said.

Engineering sophomore Elizabeth Perez decided to organize the event, she said, when Summers's comments put a damper on her motivation. She said she has seen the stereotypical attitudes that her male peers hold while working on group projects.

"(They say), 'You do the write-up, we'll crunch the numbers.' You wonder, is it my abilities that are flawed?" she said.

"It's really uplifting to hear that the Michigan faculty don't have the opinions that women don't have the abilities to participate in these fields," Perez added.

Appendix H: LSA Magazine
Women Faculty ADVANCE at UM
Published Spring 2005



Postdoctoral fellows and graduate students surround Chemistry Professor Rowena Matthews, third from left.



Women Faculty ADVANCE at UM

"A woman scientist wants to be recruited as a scientist, just like a man does," says Abigail Stewart, a UM professor of Psychology and Women's Studies. She is also a principal investigator for the UM ADVANCE project that, as one of 18 ADVANCE projects nationwide, seeks to improve the campus environment for women faculty in science and engineering, thus increasing recruitment, retention, and promotion of tenure-track women faculty.

So far, so good.

The number of successful offers made to female science and engineering professors at UM has doubled since 2001, according to a recent ADVANCE report.

While in 2001 about 20 percent of successful job offers went to women, nearly 40 percent of successful job offers went to females in 2003–2004. The three participating UM schools and colleges—Engineering, the Medical School, and LSA—successfully recruited women in 17 of 25 science and engineering departments in the past two years. Additionally, of 82 new tenure-track science and engineering faculty, 31 are women.

"There are several reasons for the successful recruitment of women," says Stewart. "Search committees made a concerted effort to recruit female candidates, distributed recruitment strategies, and highlighted the impact of the project on their website. Their efforts have been a key factor in the success of the project."

rankings (the second-highest ranking for public universities), but it ranks 31 in percent of alumni giving, with 26 percent alumni participation. The top three universities in terms of alumni giving are Princeton (61%), Notre Dame (48%), and Harvard (48%).

As you can see, we have an opportunity to make a collective difference and create an ongoing culture of giving. Since our office decided on this goal, we have walked the talk. As a holiday project, the office collected funds and contributed to assist families at the Ronald McDonald House over the holiday season. Another team put together a package for a terminally ill boy whose wish was to go to the Rose Bowl. This team collected T-shirts, jackets, and even a suitcase for the boy and his family. They purchased items and sought donations from local merchants, and capped their effort by donating tickets for the game to the Make-A-Wish Foundation. Every person in the office has made a contribution to the Michigan Difference Campaign—100 percent participation from a group with very few UM alumni. This team is committed to creating a culture of giving!

I recently heard from a friend who is a UM alumna and had not been in our database. I put her in. She mentioned getting lots of mail from UM, something she probably has in common with all of you reading this magazine. In this very issue is an envelope that you can return with a gift to LSA. You can designate your support to students, faculty, or programs, or you can make a gift to your home department. Please take a minute to reflect on the value of your degree and the value of your experience at UM, and then join my daughter, my staff, and 14 percent of your fellow alumni by helping us expand the culture of giving at UM.

Peggy Burns is Assistant Dean for LSA Advancement.



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Women Faculty ADVANCE at UM

Women Faculty ADVANCE at UM

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"There are several reasons for the increase in successful recruitment of women," says Stewart. "Search committees made aggressive outreach to female candidates, distributed a handbook on recruitment strategies, and posted these strategies on their website. Their goal was to increase awareness of the impact of unintentional bias on hiring."

Content Author(s): Lara Ziellin

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Appendix I: LSI Insights

An Opportunity for the LSI: Creating an Inclusive Culture of Scientific Inquiry

LSI Insights

An Opportunity for the LSI: Creating an Inclusive Culture of Scientific Inquiry

From my vantage point as director of the NSF-supported UM ADVANCE Institutional Transformation project, the Life Sciences Institute offers a remarkable opportunity to build a successfully inclusive scientific work environment from the beginning. Many studies have shown that academic work environments—not just those in the sciences—often do not achieve this outcome. In many women scientists have felt their work was not valued equally with that of their male colleagues, that they were not given the same informational resources and network opportunities as their fellows, and that they were viewed as less than equal participants in the scientific enterprise.

There have, though, been some spectacular exceptions. There are examples of organized science communities in which women have thrived, as well as examples of individual male leaders of scientific efforts who valued women colleagues and students highly and promoted their work.

For example, Richard Courant is singled out by Margaret Murray in her study of women mathematicians in the postwar US. She says that he “was drawn to bright, talented young women and established a reputation for encouraging them to pursue careers in mathematics. All three Ph.D.s awarded to women at NYU during the 1940s were directed by Courant; and ...his influence was felt by nearly all the women who studied at NYU during those years...” (Murray, 2000, p. 29). Why did these women thrive? Apart from Courant’s positive attitude toward their talent, “The atmosphere at NYU [in this period] has been described as intellectually lively, friendly, warm and familial.” This kind of community—along with active and supportive mentoring—seems to have allowed women to thrive.

There was more to it than that, though. On a visit to Ann Arbor last year, one of Courant’s protégés, Cathleen Morawetz (later director of the Courant Institute herself), described Courant’s flexibility—in the absence of official family-friendly policies—about her work and study arrangements as she incorporated new children into her family. This flexibility in work arrangements was and remains crucial—and perhaps not only to women’s success.

Freeman Dyson, in the New York Review of Books, described “the culture of the Cavendish” laboratory in Cambridge under Ernest Rutherford’s leadership. A noted mentor of great physicists of the twentieth century, “Rutherford took fatherly care of his students and imposed strict limits on their hours of work. Every evening at six o’clock the laboratory was closed and all work had to stop. Four times each year, the laboratory was closed for two weeks of vacation. Rutherford believed that scientists were more creative if they spent evenings relaxing with their families and enjoying frequent holidays.” (Dyson, 2005). This kind of environment—one that encourages scientists to have relationships and interests outside of the laboratory—is a far cry from the 24/7 demand for laboratory “face” time that is failing to attract and retain young men and women in science.



Great work organizations provide environments in which people feel their work is important, that it is valued for the “right” reasons, and in which there is room for their personal idiosyncrasies. Some women scientists, like some men, are so passionate about their work that they make little time for anything but work in their lives. Others renew their scientific energy and creativity in relationships and avocations. There must be room for many different personal and family styles, and relationships to the work of doing science, if both women and men are to flourish in their careers. A model work environment for doing science offers intellectual excitement, investment in and encouragement of talent, a sense of mission and value, flexibility, and collegiality on an equal basis to men and women scientists. I hope LSI supports this culture!

Dyson, Freeman J. (2005, Feb. 24). “Seeing the unseen.” The New York Review of Books, v. 52 (3). It is also at www.nybooks.com/articles/17752

Murray, Margaret. (2000). Women becoming mathematicians: Creating a professional identity in post-world war II America. Cambridge, MA: MIT Press.

— Abigail J. Stewart

Appendix J: List of Degrees Considered Science Degrees

List of Degrees of Faculty Included/Excluded as Scientists for the 6 Smaller Schools.

The following tables list all fields of degrees of instructional (tenure), research and clinical track faculty with budgeted appointments in these schools. Faculty holding degrees listed in the “Include” column were deemed scientists; those holding degrees in the “exclude” column were deemed non-scientists for our purposes (and not included in any tables or figures). Those holding degrees in the “individualized” column were looked at on an individual level: their current field of research, as reflected by recent publications and website descriptions, determined their status as scientists or nonscientists.

School of Dentistry:

Include	Exclude	Individualized
Anatomy Biochemistry Bioengineering & Biomedical Engineering Biology Biometrics And Biostatistics Chemical Engineering Dental Hygiene Dental Specialties Dentistry Dds Or Dmd Degree Genetics Materials Engineering Medicine Md Degree Microbiology Neurosciences Pathology Physical Sciences Physiology	Anthropology Business Administration Education Medical Record Librarianship Psychology	Public Health

School of Information:

Include	Exclude	Individualized
Computer & Information Science Computer And Data Processing Elect & Communication Eng	Economics Business Administration & Law Business Management Communications History Library Science Philosophy Political Science & Government Psychology Social Sciences	Information Sciences & Systems

Division of Kinesiology:

Include	Exclude	Individualized
Bioengrg & Biomedical Eng Engineering Neurosciences Physiology	Business Administration Economics Education Experimental Psychology	Physical Education

Stats, Math & Theory	Marketing And Purchasing	
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School of Natural Resources:

Include	Exclude	Individualized
Agriculture & Natural Resource Biology Biometrics And Biostatistics Chemical Engineering Ecology Environmental Science Forestry Marine Biology Natural Resources Oceanography Plant Physiology Zoology	Agricultural Economics Anthropology Business Management City, Community & Regional Planning Economics Educational Psychology Fine Arts Fish, Game & Wildlife Management Geography International Business Landscape Architecture Law Political Science & Government Public Administration & Management Sociology	

College of Pharmacy:

Include	Exclude	Individualized
Biochemistry Biophysics Cell Biology Chemistry Pharmaceutical Chemistry Pharmacy Physical Chemistry Physical Therapy	Education	Health Serv & Paramedical Tech

School of Public Health:

Include	Exclude	Individualized
Analytical Chemistry Atmospheric Sci & Meteorology Biochemistry Biological Sciences Biometrics And Biostatistics Cell Biology Chemistry Civil & Construction Engineering Dentistry Dds Or Dmd Degree Ecology Foods, Nutrition And Dietetics Genetics Geochemistry Medical Specialties Medicine Md Degree Microbiology Molecular Biology Nutrition	Anthropology Business Administration Clinical Psychology Developmental Psychology Economics Educational Psychology Geography Health Education Hospital & Health Care Admin Law Political Science & Government Psychology Social Psychology Sociology Urban Studies	Environmental Health Health Professions Public Health

Physics Physiology Stats, Math & Theory Toxicology		
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Appendix K: Dr. Jocelyn Bell Burnell Visit to the University Evaluation Report

NSF ADVANCE at the University of Michigan
Visit by Dr. Jocelyn Bell Burnell • September 19 – 21, 2005

Dr. Jocelyn Bell Burnell, a distinguished physicist/astronomer from the University of Oxford, visited campus September 19 – 21, 2005, co-hosted by the Departments of Astronomy and Physics as well as UM ADVANCE and Women in Science and Engineering (WISE). She gave a colloquium in Physics (*What Astronomy has done for Einstein*) as a kickoff to their theme semester, and another colloquium in Astronomy (*Pulsar precession and pulsar evolution: two problems*). She also met with numerous groups, including: physics graduate students (Grad Phi), UM ADVANCE Network of Women Scientists and Engineers, WISE graduate students, Society of Physics students, Society for Women in Physics, and selected faculty and administrators.

The UM ADVANCE Project sent an on-line survey to faculty and students in the Departments of Astronomy and Physics on Wednesday, September 28, 2005. Forty-three respondents completed the survey, including sixteen female and twenty-three male respondents (37% and 53% of respondents, respectively). Four respondents (9%) did not report their gender. Twenty-three respondents self-identified as graduate students (53%), seventeen as faculty (40%), two as research scientists (5%), and one as an emeritus physics professor (2%). The UM ADVANCE Project did not receive a list of attendees for any of the events during Dr. Bell Burnell's visit. It is not possible, therefore, to calculate a response rate. See Appendix A for a copy of the survey.

Survey Responses: Close-ended Questions

Respondents were first asked to indicate which event(s) they attended during Dr. Bell Burnell's visit to the University of Michigan, including colloquia in the Departments of Astronomy and Physics as well as breakfast or lunch meetings with Dr. Bell Burnell (see Table 1). Respondents were then asked to respond to two additional

close-ended questions: how beneficial was it to invite Dr. Bell Burnell to campus; and how would you rate the quality of the event(s) that you attended? Twenty-nine of the respondents (67%) indicated that it was very beneficial to invite Dr. Bell Burnell to campus; of the remaining responses, eleven respondents selected somewhat beneficial

Table 1: Dr. Jocelyn Bell Burnell's Visit to the University of Michigan		
	Response	
	Total	Percent
Lunch with Physics graduate students	6	14.3%
Dinner with Network of Women Scientists and Engineers	2	4.8%
Lunch with Women in Science and Engineering graduate students	2	4.8%
Astronomy reception and colloquium	22	52.4%
Breakfast with Society of Physics students	0	0.0%
Lunch with Society for Women in Physics (SWIP)	3	7.1%
Physics reception and lecture	32	76.2%
Dinner with Department of Physics	14	33.3%
Met privately with Dr. Bell Burnell	9	21.4%

(26%) and two were neutral (5%). One respondent did not answer this question. In response to the second close-ended question, forty respondents rated the quality of the event(s) that they attended as excellent or good (70% and 23% of respondents, respectively). Two respondents (5%) were neutral, and one respondent did not answer this question. Comparisons of mean responses between male and female respondents as well as faculty members (including research scientists and emeritus physics professor) and graduate students for both close-ended questions reveal no statistically significant differences.

Survey Responses: Open-ended Questions

The respondents were then asked to respond to two open-ended questions: what they liked most and what they liked least about the event(s) they attended during Dr. Bell Burnell's visit. With respect to what they liked most about the event(s) they attended, one-half of respondents (23) indicated that they appreciated the opportunity to hear Dr. Bell Burnell – described by respondents as articulate, enthusiastic, and approachable – speak on scientific and personal topics. One respondent wrote, "Dr. Bell Burnell gave an eloquent, informative and ultimately satisfying presentation, with a perfect combination of scientific, cultural and historical elements." Another wrote, "Her talk was clear and accessible to undergraduates through faculty, without glossing over the challenging nature of the research problem." Ten respondents reported that they enjoyed spending time with Dr. Bell Burnell in an intimate and relaxed setting, such as an organized lunch meeting or private meeting. Five respondents appreciated Dr. Bell Burnell's willingness to interact with female graduate students and postdoctoral fellows. A respondent wrote, "It was particularly gratifying to watch the interaction of our young students (especially female students) with such an inspirational pioneer in our field." Another respondent

appreciated that “a prominent woman scientist was held in the limelight as deserved.” Eleven respondents (26%) did not answer this question.

In terms of what they liked least about the event(s) they attended, three respondents would have appreciated a more technical colloquium, including an “opportunity to learn in detail about the speaker’s own early work in the field, and its ramifications.” Respondents also commented on the lack of adequate seating during one of the colloquia (2), of coordination in assigning hosts to Dr. Bell Burnell (1), and of publicity regarding the location of the reception following the Physics colloquium (1). Two respondents wished she could have stayed for a longer visit, possibly as a visiting professor. One respondent did not like Dr. Bell Burnell’s “portrayal of scientists as jingoistic bigots during the first [World War]...or the way she brushed over the issues of scientific integrity at the end of her lecture.” Seven respondents (16%) reported that they disliked nothing about the event(s) they attended, and twenty-six survey respondents (60%) did not answer this question.

When prompted for additional comments about Dr. Bell Burnell’s visit, three respondents reported that Dr. Bell Burnell was an excellent speaker who delivered a “memorable and interesting talk.” A respondent indicated that s/he was “impressed by her graciousness and curiosity.” Two respondents were disappointed that the astronomy graduate students were not invited to the lunch with the physics graduate students. One respondent recommended that the University invite Dr. Bell Burnell back (a visiting appointment?), and another commented that the University should invite other speakers of Dr. Bell Burnell’s caliber. Yet another respondent felt that Dr. Bell Burnell should have received the Nobel Prize for her discovery of pulsars. S/he wrote, “[Dr. Bell Burnell] was apparently treated badly by her Professor, who did receive the Nobel Prize. In my opinion, her Professor would have treated a male student equally badly; it seems an ethics problem, not a male-female problem. ...The VIP treatment that she received during her visit, perhaps helped to compensate her loss to some degree.” Lastly, one respondent suggested that the survey could only serve as “self-serving justification” for spending money on the UM ADVANCE Project. Thirty-four respondents (79%) did not answer this question.

Appendix A

1. Please indicate which of the event(s) you attended; check all that apply.
 - ☐ Lunch with Physics graduate students
 - ☐ Dinner with UM ADVANCE Network of Women Scientists and Engineers
 - ☐ Lunch with Women in Science and Engineering (WISE) graduate students
 - ☐ Astronomy reception and colloquium
 - ☐ Breakfast with Society of Physics students
 - ☐ Lunch with Society for Women in Physics (SWIP)
 - ☐ Physics reception and lecture
 - ☐ Dinner with Department of Physics
 - ☐ Met privately with Dr. Bell Burnell

2. Overall, how beneficial was it to invite Dr. Jocelyn Bell Burnell to campus?
 - ☐ Not at all beneficial
 - ☐ Not very beneficial
 - ☐ Neutral
 - ☐ Somewhat beneficial
 - ☐ Very beneficial

3. Overall, how would you rate the quality of the event(s) that you attended?
 - ☐ Poor
 - ☐ Fair
 - ☐ Average
 - ☐ Good
 - ☐ Excellent

4. Tell us what you liked most about the event(s) that you attended:

5. Tell us what you liked least about the event(s) that you attended:

6. Do you have any additional comments?

7. I am a(n):
 - ☐ Faculty member
 - ☐ Postdoctoral fellow
 - ☐ Graduate student
 - ☐ Other (please specify)

8. Please indicate your gender:
 - ☐ Female
 - ☐ Male

Thank you for taking the time to complete this survey!

Appendix L: Workshop on the Work-Family Conflict for Graduate Students and Postdoctoral Fellows Evaluation Report

NSF ADVANCE at the University of Michigan
Visit by Dr. Kimberlee Shauman • Friday, November 4, 2005

Dr. Kimberlee Shauman, a noted sociologist from the University of California, Davis, visited the University of Michigan November 4, 2005. During her one-day visit, Dr. Shauman presented a workshop on the work-family conflict for graduate students and postdoctoral fellows, moderated a panel discussion hosted by the Institute for Research on Women and Gender (“Fitting the Pieces Together: Exploring Work/Life Possibilities”), and delivered a public lecture (“Sex differences in the utilization of educational capital: How do science and engineering compare to other fields?”). See Appendix A for copies of event announcements.

The UM ADVANCE Project sent an on-line survey to the graduate students and postdoctoral fellows who attended the workshop on work-family conflict; UM ADVANCE did not evaluate the panel discussion or public lecture. Eighteen respondents completed the on-line survey, including twelve graduate students (67% of respondents) and six postdoctoral fellows (33% of respondents), which is an 86% response rate. All workshop attendees (and, therefore, survey respondents) were women. See Appendix B for a copy of the survey.

Survey Responses: Close-Ended Questions

Respondents were first asked to indicate their level of agreement with four statements concerning the workshop on the work-family conflict: the workshop was a useful experience; the time allotted for this workshop was sufficient; the speaker was knowledgeable and communicated clearly; and the topic is very relevant to me. Fifteen respondents (83%) either agreed or strongly agreed that the workshop was a useful experience; the remaining three respondents (17%) were neutral. Similarly, sixteen respondents (89%) either agreed or strongly agreed that the time allotted for the workshop was sufficient. One respondent (5%) was neutral and another (5%) disagreed with this statement. All respondents felt the speaker was knowledgeable and communicated clearly (50% strongly agreed and 50% agreed with this statement). Lastly, sixteen out of seventeen respondents (94%) indicated that the workshop was a useful experience; the remaining respondent (6%) was neutral. One respondent did not indicate her level of agreement with the final statement. Comparison of mean responses between graduate students and postdoctoral fellows showed very little difference; t-tests revealed only one statistically significant¹⁶ difference: graduate students indicated a higher level of agreement with the third statement (The speaker was knowledgeable and communicated clearly.) than did the postdoctoral fellows (mean = 4.67 and 4.17, respectively).

Survey Responses: Open-Ended Questions

The respondents were then asked to respond to two open-ended questions: what was most and least effective about the workshop. In terms of what was most effective about the workshop, over half of the respondents who answered this question (63%; n = 10) identified the interaction between Dr. Shauman and the attendees during the discussion section of the workshop as the most effective aspect of the workshop, including one respondent who described the workshop as “a forum in which so many individuals with the same experience/goal came together and shared.” Five respondents (31%) appreciated the opportunity to listen to Dr. Shauman discuss her

¹⁶ * p ≤ .05

research, particularly the presentation of national trends in gender bias in the sciences. Three respondents (19%) reported that the structure of the workshop (i.e., balance between lecture and discussion) was effective. Respondents also commented that the topic was relevant, the speaker's "knowledge and passion for the subject was clear," and the workshop served as a reminder that many women in academia are encountering the work-family conflict, with one respondent per comment. Two respondents (11%) did not answer this question.

In regard to what was least effective about the workshop, a majority of the respondents who answered this question (67%, $n = 8$) indicated that Dr. Shauman spent too much time discussing statistics (or, as one respondent wrote, "...building the case for why the work-family conflict may affect women more than men.") and not enough time presenting strategies for how best to deal with the work-family conflict and/or encouraging discussion among workshop attendees. One respondent commented that Dr. Shauman did not address "the issue of women's preference for childrearing, or the dilemma of managing competing preferences (e.g., wanting to stay at home with child and work simultaneously)." Another respondent felt that Dr. Shauman's presentation hinged on the assumption that she (the respondent) wants a career and that "careers [are] somehow superior to non-careers"; moreover, the respondent wrote, "If women want to work, they should be able to. But do we really want to discourage women from focusing on raising the next generation as though it was less valuable than a few publications?" One respondent reported that she was not sure how Dr. Shauman's advice would apply in reality. Lastly, a respondent felt that Dr. Shauman "portrayed an unrealistic attitude regarding the current ways a woman can balance the work-family conflict, [particularly] regarding tenure and having a pause in the tenure track." The respondent, for example, did not agree with Dr. Shauman's assertion that stopping the tenure clock is "perfectly okay without consequences," at least not at a Research I institution. Six respondents (33%) did not answer this question.

When prompted for additional comments about the workshop, one respondent was discouraged that all workshop participants were women and encouraged UM ADVANCE to reach out to male academics. She wrote, "I think that addressing this issue solely with women is a mistake. Women academics are marrying male academics, they both have work and families, and if both would acknowledge a conflict then it would be less of a conflict for both." Another respondent felt that Dr. Shauman did not fully acknowledge how the work-family conflict also impacts women whose partners are willing to stay home and fulfill the traditional parenting roles. She commented, "[Having a partner who is willing to stay at home] doesn't make me any less torn when my 2-year old is crying for mommy as I walk out the door, or any less apprehensive about what the reaction will be when I tell my advisor that I am pregnant." Yet another respondent found the workshop encouraging in the sense that she is more "determined to make it and help change the system." One respondent was pleased that the "University as a whole is starting to become aware of some of the problems that women face in the academic environment." Two respondents commented that the food was delicious, while another reported that there was too much food. Another respondent recommended that UM ADVANCE organize a series focusing on the work-family conflict, with breakout sessions for small group discussion. Finally, four respondents indicated that the workshop was a valuable and enjoyable experience. Ten respondents (56%) did not answer this question.

Appendix A

A Workshop on Work-Family Conflict for Graduate Students and Post-Doctoral Fellows



Kimberlee Shauman

Associate Professor of Sociology at the
University of California, Davis

Friday, November 4, 2005
Continental Breakfast at 8:30AM
9:00 – 11:00 AM
Palmer Commons – Great Lakes North

Why do work and family conflict for women and what can women do about it? This workshop will provide:

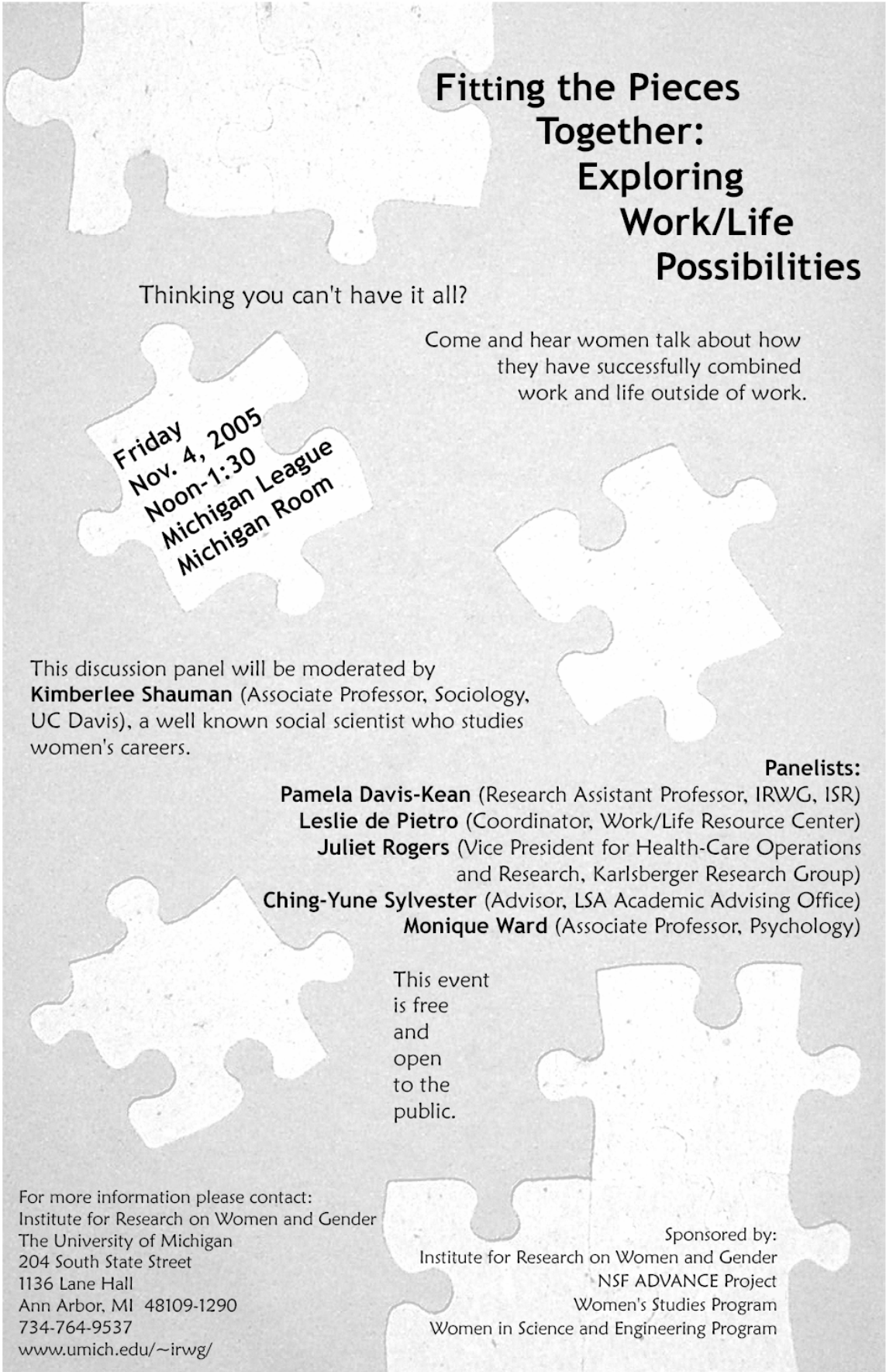
- A brief introduction to the social research on the various dimensions of the work-family conflict and how the effects of the conflict manifest for those in the science career trajectory.
- A facilitated discussion of personal experiences with the work-family conflict.
- A discussion of practical strategies for managing the work-family conflict focusing on interpersonal decision making, strategic career-building, the utilization of institutional resources, and advocating for institutional change.

Dr. Shauman's main areas of interest are social stratification, family and kinship, demography, sociology of education, and quantitative methodology. Her research focuses on gender differences in career development and outcomes with particular attention to the causal effects of family characteristics. She has recently published a book, *Women in Science: Career Processes and Outcomes* (co-authored with UM Professor Yu Xie), that examines the underrepresentation of women in science from a life course perspective. She is currently studying the sex differences in the career causes and consequences of family migration and gender differences in the leadership of academic departments at research universities in the U.S.

Dr. Shauman received her Ph.D., M.A., and B.A., all in Sociology, from the University of Michigan.

Please register with the ADVANCE Project by emailing
hudgins@umich.edu. Space is limited and participation will be on a first
come, first served basis.

For more information, call (734) 647-9359.



Fitting the Pieces Together: Exploring Work/Life Possibilities

Thinking you can't have it all?

Come and hear women talk about how
they have successfully combined
work and life outside of work.

Friday
Nov. 4, 2005
Noon-1:30
Michigan League
Michigan Room

This discussion panel will be moderated by
Kimberlee Shauman (Associate Professor, Sociology,
UC Davis), a well known social scientist who studies
women's careers.

Panelists:

Pamela Davis-Kean (Research Assistant Professor, IRWG, ISR)
Leslie de Pietro (Coordinator, Work/Life Resource Center)
Juliet Rogers (Vice President for Health-Care Operations
and Research, Karlsberger Research Group)
Ching-Yune Sylvester (Advisor, LSA Academic Advising Office)
Monique Ward (Associate Professor, Psychology)

This event
is free
and
open
to the
public.

For more information please contact:
Institute for Research on Women and Gender
The University of Michigan
204 South State Street
1136 Lane Hall
Ann Arbor, MI 48109-1290
734-764-9537
www.umich.edu/~irwg/

Sponsored by:
Institute for Research on Women and Gender
NSF ADVANCE Project
Women's Studies Program
Women in Science and Engineering Program

"Sex differences in the utilization of educational capital: How do science and engineering compare to other fields?"



Kimberlee Shauman

Associate Professor of Sociology at the
University of California, Davis

Friday, November 4, 2005

3:00 – 4:00 PM

Palmer Commons – Great Lakes Central

Dr. Shauman's main areas of interest are social stratification, family and kinship, demography, sociology of education, and quantitative methodology. Her research focuses on gender differences in career development and outcomes with particular attention to the causal effects of family characteristics. She has recently published a book, *Women in Science: Career Processes and Outcomes* (co-authored with UM Professor Yu Xie), that examines the underrepresentation of women in science from a life course perspective. She is currently studying the sex differences in the career causes and consequences of family migration and gender differences in the leadership of academic departments at research universities in the U.S. (with Deb Niemeier).

Using nationally representative data for individuals who earned their undergraduate, graduate, or professional degrees between 1980 and 1993, Dr. Shauman's lecture examines if sex differences in the labor force utilization of educational credentials vary across fields. This lecture also addresses possible economic benefits to the utilization of educational credentials, if these benefits vary by field, and if they accrue equally to men and women within fields.

Dr. Shauman received her Ph.D., M.A., and B.A., all in Sociology, from the University of Michigan.

For more information, call (734) 647-9359.

Appendix B

1. Please indicate your level of agreement with each of the following statements concerning the workshop that you attended. Select one for each.

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
This workshop was a useful experience.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The time allotted for this workshop was sufficient.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The speaker was knowledgeable and communicated clearly.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The topic is very relevant to me.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

2. Overall, what was most effective about the workshop?

3. Overall, what was least effective about the workshop?

4. Do you have any additional comments?

5. I am a(n):

- ☐ Postdoctoral fellow
- ☐ Graduate student
- ☐ Other (please specify)

Thank you for taking the time to complete this survey!