



CENTER FOR WOMEN'S HEALTH RESEARCH

University of Wisconsin-Madison

Biennial Report for Fiscal Years 2013-2014

Our Mission is to improve the health of all women through leadership in research, education, clinical care, community partnership and advocacy.

Our Vision is to be one of the pre-eminent academic women's health centers in the country by training a diverse cadre of future academic leaders knowledgeable in health issues that impact women, promoting a multidisciplinary agenda in women's health research—including the study of sex and gender differences—and working toward increasing the participation and advancement of women in academic leadership.

Today, the Center for Women's Health Research (CWHR) continues its mission of advancing women's health and leadership, with an emphasis on the advancement of diversity and equity among current and future academic leaders in the biomedical and behavioral fields of science, technology, engineering, mathematics and medicine.

Training & Career Development Programs

During the 2013-2014 fiscal years, the CWHR continues to coordinate two training programs.

PREDOCTORAL PROGRAM

TRAINING, EDUCATION, AND MENTORING IN SCIENCE (TEAM-SCIENCE)

INITIATIVE FOR MAXIMIZING STUDENT DEVELOPMENT

NIH/NIGMS R25 GM083252

PI: Molly Carnes, MD, MS

Co-I's: Angela Byars-Winston, PhD; Ian Bird, PhD; Douglass Henderson, PhD.

The TEAM-Science Program was established in **2008** by the CWHR to increase the number of historically underrepresented racial/ethnic minority (URM) students who enter into and successfully complete PhD programs in biomedical and behavioral research at UW-Madison. In **2012**, the TEAM-Science Program grant renewal includes students with mobility disabilities (SWMD).

The TEAM-Science Program was designed using theoretically-informed, empirically-supported concepts drawn from social cognitive career theory (SCCT). The program provides a structured path through which URM graduate students and graduate SWMD, in collaboration with their Research Advisors and Career Coaches, can transform their predoctoral academic activities into purposeful preparation for a research career in the fields of science, technology, engineering and mathematics.

To DATE: TEAM-Science has supported 32 students. Ten students have completed their PhD; 7 have dissertation status; 3 have transitioned to other research training mechanisms, and 12 students remain in the program. Taken together, TEAM-Science students published 31 peer reviewed papers in fiscal years 2013-2014.

Drs. Carnes, Byars-Winston, and Henderson presented their experience with TEAM-Science and related work to the National Human Genome Research Institute Research Training Advisory Committee Meeting with DAP and T32 Grantees Tenth Annual Meeting in Madison, WI.



Drs. Molly Carnes and Angela Byars-Winston (front center) surrounded by TEAM-Science Scholars.

Dr. Bird is promoting use of the TEAM-Science Individualized Career Development Plan as the IDP to be used across three large biological sciences graduate training programs: Endocrinology Reproductive Physiology, Molecular Pharmacology, and Environmental Toxicology. Dr. Carnes presented to the students and program directors of these programs to discuss implementation.

Dr. Byars-Winston's role on the project has evolved and as a result we have recruited Dr. Christine Pribbenow as evaluator of the TEAM-Science Program. Dr. Pribbenow is an experienced evaluator with specific expertise in evaluating educational programs aimed at increasing student and faculty diversity.

POSTDOCTORAL PROGRAM

ADVANCED FELLOWSHIP IN WOMEN'S HEALTH (AFWH)

Program Director: Molly Carnes, MD, MS

This fellowship program, one of eight supported by the Department of Veterans Affairs, is affiliated with the Veteran's Administration Women's Health Clinic and the UW Center for Women's Health Research.

The goal of this 2-year, full-time fellowship is to train future leaders in academic health sciences who will be engaged in research, teaching, and program development that will improve the health of women.

In July 2012, the program expanded to include PhD's in associated clinical health and nursing professions.

In December 2012, Dr. Carnes and Dr. Christine Kolehmainen submitted a proposal to the Veterans Health Administration to become the national Hub site for all 8 of the Advanced Fellowship Programs in Women's Health.



Women's Health Fellows after presenting their research at the 2014 Annual Advisory Committee meeting, (left to right): Nicole Pulia, Kristin Berg, Belinda Gutiérrez, Sandy Schumacher, Meghan Brennan and Tonya Roberts. (not pictured: Andrew Katz)

To DATE:

Seven fellows (2 internists, 1 nurse practitioner, 1 nursing clinical scientist, 1 speech language pathologist, and 2 counseling psychologists) are currently in training.

Twenty-one AFWH fellows have completed training. Sixteen internists (7 generalists, 4 geriatrics, 2 infectious disease specialists, 1 endocrinologist, and 1 gastroenterologist); 3 psychiatrists and 3 obstetrician/gynecologists.

ADVANCED FELLOWSHIP IN WOMEN'S HEALTH HUB SITE

Program Director: Christine Kolehmainen, MD, MS

Senior Advisor: Molly Carnes, MD, MS



In 2013, the Madison VA Advanced Fellowship in Women's Health (AFWH) site became the national HUB. The HUB is responsible for coordinating activities and developing a community of practice for the eight fellowship programs around the United States.

The overarching goal of this new HUB is to: centralize redundant functions in recruitment and tracking, develop common core competencies for fellows in different disciplines and career paths, derive consensus on evaluation metrics and standards for trainee and program success, and establish a community of practice among all sites.

HUB Education Committee (left to right) back row: Anne Stahr, Christine Kolehmainen, Gail Hunt, Christine Pribbenow; front row: Becky Schroeder, Molly Carnes. (not pictured: Sharon Topp)

Current Research

TRANSFORMATIVE RESEARCH AWARD

NIH/NIGMS T-R01GM111002

PI: Molly Carnes, MD, MS

9/27/2013-present

Co-PI's: Patricia Devine, PhD; Cecilia Ford, PhD

The overall goal of this Transformative-R01 project is to explore the peer review of R01 applications.

The potential impact of this work is twofold; this research will 1) discover whether certain forms of cognitive bias are or are not consequential in R01 peer review and 2) describe and label real-time grant reviewer interactional patterns. Taken together, the results of this research could set the stage for transformation in peer review throughout NIH.

WHAT MATTERS IN MENTORING? TESTING AND MEASURING A MENTOR TRAINING INTERVENTION

NIH/NIGMS R01GM094573

PI: Angela Byars-Winston, PhD

9/15/2010-present

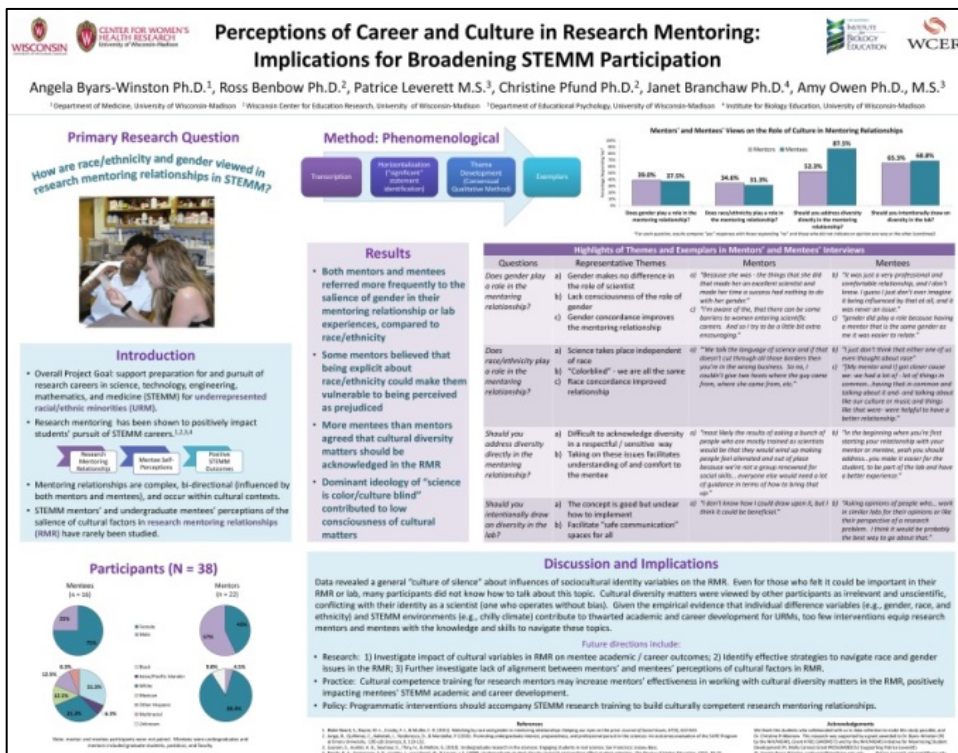
Co-I: Christine Pfund, PhD

A mentored research experience is a common strategy used to increase undergraduate student interest, motivation and preparedness for biology research careers.

Despite numerous formal and informal research mentoring initiatives, little is known about specific factors in mentoring that account for positive outcomes across diverse student populations. Further, mentors seldom receive training on the mentoring process and therefore may be ill-equipped to assume mentoring roles and functions.

Lastly, mentoring interventions often lack an explicit theoretical base and do not capitalize on the literature in teaching and learning or the psychology of career development.

Our primary goal is to develop, implement, and evaluate effectiveness of research mentor training interventions in order to advance undergraduates' science pursuits, especially individuals from underrepresented minority groups.



Specifically, we are working to:

- Identify causal mechanisms of research mentoring relationship;
- Advance psychometrically sound measures of research mentoring relationships;
- Employ quasi-experimental research design to compare trained and untrained mentors;
- Test a theoretically-based research mentor training intervention.

Completed Research Funding

VIRTUAL GAMES FOR STEM FACULTY TO BREAK THE BIAS HABIT

NIH/NIGMS DP4GM096822

PI: Molly Carnes, MD, MS

9/30/2010-8/31/2013

Fair Play (formerly Pathfinder) is an educational game being developed for faculty to experience the impact of implicit bias (i.e., unconscious assumptions that arise from group stereotypes) and engage in evidence-based strategies to reduce the consequences of implicit bias in academic settings. The game was developed by the CWHR in coordination with the Learning Games Network.

October 2012: Fair Play wins the People's Choice award in the game exhibition at the Meaningful Play conference in East Lansing, Michigan.

ANDREW D. KATZ, PHD

Dr. Katz is a Counseling Psychologist. His research focus is the implementation of prejudice measures intending to bridge the gaps between Multicultural Counseling Competence, prejudice theory in social psychology, and the evidence based movement.

CHRISTINE J. KOLEHMAINEN, MD, MS

Dr. Kolehmainen is a General Internist. Her research interest is in the field of graduate medical education and the experience of gender and leadership in cardiopulmonary resuscitation events. During her fellowship, she completed her Master's degree in Educational Leadership and Policy Analysis at UW-Madison.

NICOLE M. PULIA, PHD, CCC-SLP

Dr. Pulia is a Speech-Language Pathologist. Her research is focused on swallowing, swallowing physiology, saliva production in patients with xerostomia, and those that have received chemoradiation treatment for head and neck cancer.

TONYA J. ROBERTS, PHD, RN

Dr. Roberts is a Clinician Scientist whose research is focused on the relationships between person-centered care delivery and psychosocial well-being.

SANDRA R. SCHUMACHER, WHNP, PHD, RN

Dr. Schumacher is a Women's Health Nurse Practitioner. Her research focus is on the impact of combat on women Veterans' obstetrical outcomes and infant-parent bonding.

TEAM-SCIENCE PREDOCTORAL SCHOLARS FY2013-2014

BRYAN AMPEY, Endocrinology and Reproductive Physiology

Research Interests: Shear stress regulation of endothelial cell gap junctions and the role of Cx43 in endothelial cell function.

MARIAJOSE BEDOYA, Medical Physics

Research Interests: Thermal therapy and radiation combination.

THEO BRADEN, Counseling Psychology

Research Interests: Gender roles of African American men and women, and traditional gender roles as it relates to psychosocial stress.

JAMES GARCIA, Endocrinology and Reproductive Physiology

Research Interests: The role of the hypothalamus in precocious puberty in female rhesus monkeys.

PORSHA HOWELL, Nutritional Sciences

Research Interests: The impact of caloric restriction, (a dietary intervention shown to extend the lifespan in multiple species) and aging on white adipose tissue metabolism and structure.

FATOU JALLOW, Endocrinology and Reproductive Physiology

Research Interests: Hormonal crosstalk in mammary tumor proliferation.

MARISSA KRAYNAK, Endocrinology and Reproductive Physiology

Research Interests: The effects of estrogen receptor alpha, and its effects in metabolic processes and behavior in relation to Polycystic Ovary Syndrome.

PATRICE LEVERETT, Education Psychology

Research Interests: Establishing valid and culturally responsive interventions for students of all ages.

TOLU OYESANYA, Nursing

Research Interests: Traumatic Brain Injury in adult women including variables such as hope and depression, and how they relate to adherence to rehabilitation.

DENNIS PAIZ-RAMIREZ, Curriculum and Instruction

Research Interests: How new technology is incorporated into the classroom and the effect they have on learning.

ADRIANA RODRIGUEZ, Endocrinology and Reproductive Physiology

Research Interests: The establishment of the fetal-umbilical-yolk sac arterial connection.

CLEM SAMSON-SAMUEL, Curriculum and Instruction

Research Interests: How corporate video game design can be utilized for medical and social games.

ERIKA STARKS, Neuroscience

Research Interest: The functional and anatomical brain alterations that accompany corrective electric tongue stimulation in patients with balance disorders.

YACOB TEDLA, Epidemiology

Research Interests: Associations of cardiovascular patients' motivation, psychological needs, and adherence in cardiac-rehabilitation programs.

ROSALINA VILLALON LANDEROS, Endocrinology and Reproductive Physiology

Research Interests: Fertility treatments, in-vitro fertilization and embryonic development.

TEAM-SCIENCE SCHOLARS WHO HAVE ACHIEVED THEIR PHD

2012	PATRIC HERNANDEZ	NEUROSCIENCE
	ANNA KAATZ	CLINICAL INVESTIGATION
2013	BELINDA GUTIÉRREZ	COUNSELING PSYCHOLOGY
	ATHENA HEREDIA	MEDICAL PHYSICS
	S. OMAR JOBE	ENDOCRINOLOGY AND REPRODUCTIVE PHYSIOLOGY
2014	MAGGIE MENGESHA	COUNSELING PSYCHOLOGY
	BONNIE PARIS	INDUSTRIAL AND SYSTEMS ENGINEERING
	ERNISE WILLIAMS	NURSING

PUBLICATIONS

Center faculty, staff and trainees published **235 manuscripts** in peer-reviewed academic journals during the 2013 and 2014 fiscal years and have published **746 manuscripts** since 1999. Numerous manuscripts are in press and scheduled to be in print before the end of 2014.

AWARDS, ACHIEVEMENTS, AND SELECTED PUBLICATIONS

MOLLY CARNES, MD, MS

Continues to Chair the Department of Medicine's Mentoring Oversight Committee.

Co-Chaired NIH Conference on Research on Causal Factors and Interventions that Promote and Support the Careers of Women in Biomedical and Behavioral Science and Engineering. Bethesda, MD. (11/2012)

Continuing member of the NIH Advisory Council for the National Institute of General Medical Sciences. (NIGMS)

Represented the National Advisory General Medical Sciences Council (NAGMS) at the Scientific Workforce Analysis and Modeling Program Bi-annual Meeting at Ohio State University. (2013)

Invited panelist and session leader, "[Promoting Gender Equity in Academic STEM](#)" at the The BIG Learning Event, *Powerful Conversations for the Future*, at UW-Madison. (6/2013)

Invited speaker, "Overcoming Implicit Bias: Good Intentions are Not Enough" at the NIGMS TWD Director's Meeting in Chicago, IL. (6/2013)

Received the NIH Director's Transformative Research Award. (T-R01, 9/2013)

Presented at UW-Madison Grand Rounds, "[Why are John and David More Likely to Become Department Chair than Jane or Jamal?](#)" (10/2013)

Invited as visiting AOA Professor to Harvard Medical School to present, "Why are John and David More Likely to Become Department Chair than Jane or Jamal?" and held discussions with key stakeholders/HMS leaders on research/evidence for best search practices to search committee chairs and a task force on faculty recruitment. (10/2013)

Invited by the President of Yale University as part of a team of experts at the Diversity Summit to advise Yale on diversity issues. (2/2014)

Invited to The Vancouver Institute to present, "Why are John and David More Likely to Become Department Chair than Jane or Jamal?" Vancouver, British Columbia. (3/2014)

Received the first annual Linda Joy Pollin Women's Heart Health Leadership Award from the Cedars-Sinai Heart Institute at Cedars-Sinai Medical Center. (4/2014)

PUBLICATIONS SINCE LAST REPORT

- 1) Isaac C*, Kaatz A*, Lee B, **Carnes M.** [An educational intervention designed to increase women's leadership self-efficacy.](#) CBE-Life Sciences Education 2012(Fall)11(3):307-322.
- 2) Isaac C, Byars-Winston A, McSorley R, Schultz A, Kaatz A, **Carnes ML.** [A qualitative study of work-life choices in academic internal medicine.](#) Adv Health Sci Educ Theory Pract. 2014 Mar;19(1):29-41. doi: 10.1007/s10459-013-9457-5. Epub 2013 Apr 20.
- 3) Fine E, Wendt A, **Carnes M.** Gendered expectations: are we unintentionally undermining our efforts to diversify STEM fields? Crossroads. Summer 2014 Vol. 20 No. 4: 46-51.

ANGELA BYARS-WINSTON, PHD

Awarded tenure in 2012.

Received the Centennial Scholars Program, Faculty Award, School of Medicine & Public Health, University of Wisconsin. (2012-2014)

Interviewed on Milwaukee Public Radio: [Five Reasons Why We Need to Attract More Minorities, Women to STEM Fields.](#) (12/2012)

Presented "Managing Cultural Diversity in Research Teams" at California Polytechnic University, Pomona, CA. (1/2013)

Presented "Applications of Psychological Research to the Science of Broadening Participation Research: The Case of STEM" to the Psychology Department of Morgan State University, Baltimore, MD. (2/2013)

Consultant, Evaluator and Research Plan Developer on Defining STEM Research Areas in International Research Participation. NSF. Michael Stubblefield, PI, Southern University, Baton Rouge, LA. (2/2013-12/2013)

Presented at UW-Madison Medical Grand Rounds, "[What Makes Mentoring Work?](#)" (3/2014)

Co-Investigator of NIH P20 award, "Strengthening Mentorship for a Diversified Biomedical Research Workforce". (9/2013)

Invited speaker at the National Human Genome Research Institute/NIH Grantee Meeting to discuss her research on effective mentoring relationships. Madison, WI. (10/2013)

Invited as Keynote speaker to UW-Whitewater for the African American Heritage Lecture Series on. (2/2014)

PUBLICATIONS SINCE LAST REPORT

- 1) Graham MJ, Frederick J, **Byars-Winston A**, Hunter AB, Handelsman J. [Science education. Increasing persistence of college students in STEM.](#) Science. 2013 Sep 27;341(6153):1455-6. doi: 10.1126/science.1240487.
- 2) Isaac C, **Byars-Winston A**, McSorley R, Schultz A, Kaatz A, Carnes ML. [A qualitative study of work-life choices in academic internal medicine.](#) Adv Health Sci Educ Theory Pract. 2014 Mar;19(1):29-41. doi: 10.1007/s10459-013-9457-5. Epub 2013 Apr 20.
- 3) **Byars-Winston A**. Connecting the disconnects: Considerations for advancing racial/ethnic and gender diversity in STEM. *Career Development and Adult Planning*. 2013;29:53-63

CECILIA FORD, PHD

Joined CWHR as a Co-I of the NIH Director's Transformative Research Award (T-R01). Her specific aim in this grant is to examine how interactional patterns among study section members promote receptivity and resistance to discussion topics and associated grant applicants. (2013)

PUBLICATIONS SINCE LAST REPORT

- 1) **Ford CE**, Stickle T. [Securing reciprocity in workplace meetings: Multimodal practices.](#) Discourse Stud. 2012 Feb;14(1):11-30.

ANNA KAATZ, PHD (FORMER TEAM-SCIENCE)

Completed her Postdoc and is an Assistant Scientist at the CWHR.

Dr. Kaatz's research encompasses the quantitative text analysis across all aims of the in the NIH Director's Transformative Research Award (T-R01).

PUBLICATIONS SINCE LAST REPORT

- 1) **Kaatz A**, Vogelmann PN, Carnes M. [Are men more likely than women to commit scientific misconduct? Maybe, maybe not.](#) MBio. 2013 Mar 26;4(2). pii: e00156-13. doi: 10.1128/mBio.00156-13.
- 2) Chapman EN, **Kaatz A**, Carnes M. [Physicians and implicit bias: how doctors may unwittingly perpetuate health care disparities.](#) J Gen Intern Med. 2013 Nov;28(11):1504-10. doi: 10.1007/s11606-013-2441-1. Epub 2013 Apr 11. Review.
- 3) **Kaatz A**, Carnes M. [Stuck in the out-group: Jennifer can't grow up, Jane's invisible, and Janet's over the hill.](#) J Womens Health (Larchmt). 2014 Jun;23(6):481-4. doi: 10.1089/jwh.2014.4766. Epub 2014 May 20.

JOSHUA RACLAW, PHD

Joined CWHR as a Postdoctoral Researcher. Together with Cecilia Ford, PhD, their research is focused on examining different aspects of linguistic and embodied practice in scientific peer review meetings as part the larger NIH Director's Transformative R01 award. (2014)

Featured guest on Wisconsin Public Radio: [A Look At The "Ban Bossy" Campaign and Can Banning the Word 'Bossy' Empower Girls?](#) (The Joy Cardin Show, 3/2014)

NICOLE PULIA, PHD (AFWH FELLOW)

Awarded the 2014 New Investigator Award by the Dysphagia Research Society (DRS) based on her postdoctoral work and for her project entitled, "Effects of Isometric Progressive Oropharyngeal (I-PRO) Therapy on Dysphagia."

CHRISTINE KOLEHMAINEN, MD, MS (AFWH FELLOW)

Received the VA Director's Innovation Award for work on Fibromyalgia Coordinated Care Committee. (2012)

Completed her Masters of Science in Educational Leadership and Policy Analysis. (2013)

Appointed as Program Director for the VA Advanced Fellowship in Women's Health Hub site. (2013)

Received the Mack Lipkin, Sr. Associate Member Award for her presentation "Gender and Leadership in Cardiopulmonary Resuscitation" at the 36th Annual Meeting for the Society of General Internal Medicine. (4/2013)

PUBLICATIONS SINCE LAST REPORT

- 1) **Kolehmainen CJ, Brennan M, Filut A, Isaac C, Carnes M.** Gender and Leadership in Cardiopulmonary Resuscitation. J Gen Intern Med, 2013;28(1):Suppl 1:S81.
- 2) **Kolehmainen C, Brennan M, Filut A, Isaac C, Carnes M.** [Afraid of Being "Witchy With a 'B'": A Qualitative Study of How Gender Influences Residents' Experiences Leading Cardiopulmonary Resuscitation.](#) Acad Med. 2014 Jun 20. [Epub ahead of print]

PATRICK T. BROWN (FORMER TEAM-SCIENCE)

Inducted to the [Edward Alexander Bouchet Graduate Honor Society](#) in 2012. The Edward Alexander Bouchet Graduate Honor Society commemorates the first African American to earn a doctorate degree from an American university (Physics, Yale University, 1876).

ERNISE WILLIAMS (FORMER TEAM-SCIENCE)

2013. Semi-Finalist. U.S. Office of Personnel Management-Presidential Management Fellowship

2014. Finalist. U.S. Office of Personnel Management-Presidential Management Fellowship

MEGHAN BRENNAN, MD, MS (AFWH FELLOW)

Received the VA Director's Innovation Award for work on Fibromyalgia Coordinated Care Committee. (2012)

Completed her Masters of Science in Epidemiology. (2013)

Winner of the Wisconsin ACP Residential Clinical Vignette and Research poster competition. (2013)

Lipkin Member Award, given to the top abstract submitted by a fellow to the 36th Annual Society of General Internal Medicine Meeting. (2013)

PUBLICATIONS SINCE LAST REPORT

- 1) Barocas J, **Brennan M**, Crnich C, Hess T, Sethi A, Sosman JM. Self-Audit Increases Clinician-Driven Universal HIV Screening Among Internal Medicine Residents. J Gen Intern Med, 2013;28(1)Suppl 1:S178.

FUNDING STATUS

Award Number	Agency Name	Title	PI	Project Dates	Annual Direct Costs	Project Type
R25 GM083252	DHHS, PHS, National Institutes of Health	Training and Education to Advance Minority Scholars in Science (TEAM-Science)	Carnes	4/1/2009- 3/31/2017	\$601,847	Research Education
R01 GM111002	DHHS, PHS, National Institutes of Health	Exploring the Science of Scientific Review	Carnes, Devine, Ford	9/27/2013- 6/30/2018	\$531,651	Research
HRD- 0902067	National Science Foundation	Wisconsin Alliance For Minority Participation (LSAMP)	Provost (Man- dated PI)	8/1/2009- 7/31/2015	\$314,796	Scholarships, Fellowships, etc.
	VA, William S Middleton VAMC	Carnes--VA Service Agreements for Baier, Carnes, Pribbenow, Stahr, and Topp	Carnes	10/1/2012- 9/30/2014	\$415,706	Scholarships, Fellowships, etc.
R01 GM094573	DHHS, PHS, National Institutes of Health	What Matters in Mentoring: Testing and Measuring a Mentor Training Intervention	Byars- Winston	9/15/2010- 8/31/2018	\$237,500	Research
DP4 GM096822 (ARRA)	DHHS, PHS, National Institutes of Health	Virtual Games for STEMM Faculty to Break the Bias Habit	Carnes	9/30/2010- 8/31/2013	\$1,317,560 (Total for all 3 years)	Research
20010727	UWF--University of Wisconsin Foundation	Jean Manchester Biddick-Bascom	Carnes	2/8/1999- 12/31/9999	\$12,500	Professorship
	VA, William S Middleton VAMC	House—VA Service Agreement	Carnes	7/1/2013- 9/30/2013	\$10,000	Scholarships, Fellowships, etc.
R01 GM088477	DHHS, PHS, National Institutes of Health	Advancement of Women in STEMM: A Multilevel Research and Action Project (WISELI)	Carnes	9/20/2009- 8/31/2013	\$203,371	Research

OTHER FINANCIAL SUPPORT

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CWHR FACULTY, STAFF AND STUDENTS

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