



DREXEL UNIVERSITY
COLLEGE OF MEDICINE

INSTITUTE FOR WOMEN'S HEALTH AND LEADERSHIP

INSTITUTE FOR WOMEN'S HEALTH AND LEADERSHIP®

PRESENTS



The 2009

HELEN I. MOOREHEAD-LAURENCIN, MD

SEX AND GENDER RESEARCH FORUM

ABSTRACT BOOK

WOMEN'S HEALTH IN THE POST REPRODUCTIVE YEARS

CME Credit available

Tuesday, February 3, 2009
Queen Lane Medical Campus
2900 Queen Lane, Philadelphia, PA.

www.drexelmed.edu/iwhl

2009 Helen I. Moorehead-Laurencin, M.D. Sex and Gender Research Forum

TARGET AUDIENCE

All Faculty, Residents, Students and Staff at Drexel University College of Medicine, Drexel University and Academic Campuses.

EDUCATIONAL OBJECTIVES

After attending this program, you will be able to:

1. Name several health concerns connected to menopause;
2. Identify challenges associated with aging, especially as they relate to sex and gender differences;
3. Better recognize when gender identity plays a role in health issues;
4. Debate the effect of hormone replacement in the prevention of dementia.

ACCREDITATION STATEMENT

The Drexel University College of Medicine is accredited by the Accreditation Council for Continuing Medical Education to provide continuing medical education for physicians. **AMA:** The Drexel University College of Medicine designates this educational activity for a maximum of 4.5 *AMA PRA Category 1 credit(s)*TM. Physicians should only claim credit commensurate with the extent of their participation in the activity. **AOA:** This program is eligible for 4.5 credit(s) in Category 2A of the American Osteopathic Association.

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It is the policy of Drexel University College of Medicine to ensure balance, independence, objectivity, and scientific rigor in all its sponsored educational programs. Speakers at continuing medical education activities are required to disclose to the audience their financial relationships with the manufacturer(s) of any commercial products, goods or services related to the subject matter of the program topic. Any conflicts of interest must be resolved prior to the presentation and announced to the audience. The intent of this disclosure is to allow participants to form their own judgments about the educational content of this activity and determine whether the speaker's commercial interests influenced the presentation. In addition, speakers are required to openly disclose any off-label, experimental, or investigational use of drugs or devices discussed in their presentation.

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*Julie Yeh, M.D., M.P.H.

Katherine Sherif, M.D.

*Sandra Urdaneta-Hartmann, M.D., Ph.D.

Kristene E. Whitmore, M.D.

*Melinda Johnson

Kristine Yaffe, M.D.

*Shani Risien-Harvey

*Lynn Yeakel, M.S.M.

***Planning Committee**

The Following Faculty have Commercial Relationships to Disclose

David Tabby, M.D. is on the Advisory board for the following companies: Pfizer, Johnson & Johnson (Ortho), Boehringer Ingelheim, TEVA, Biogen, and Bayer. Research Grant: GlaxoSmithKline, TEVA, Biogen, Bayer. Dr. Tabby will support his presentation and clinical recommendations with the "best available evidence" from the medical literature. Dr. Tabby will refrain from making recommendations regarding products and services.

The Helen I. Moorehead-Laurencin, M.D. Forum is underwritten in part by a generous grant from the Helen I. Moorehead-Laurencin, M.D. Foundation

Welcome to IWHL's 2009 Sex and Gender Research Forum

The annual Helen I. Moorehead-Laurencin, M.D. Sex and Gender Research Forum was launched by the Institute for Women's Health and Leadership® in the early years of the 21st century with the goals of:

- Identifying, encouraging and supporting research into sex and gender differences across Drexel University;
- Providing an opportunity for the exchange of information and connecting researchers for possible collaboration; and
- Laying the foundation for future national leadership by Drexel in this area.

The 2009 Sex and Gender Research Forum, with the theme of "Women's Health in the Post Reproductive Years," includes panel discussions, presentations in basic science, clinical science and social/behavioral science research, a guest speaker and poster presentations. Participants represent Schools and Colleges across Drexel University.

Thank you for joining us!



Lynn H. Yeakel, MSM
Director, Institute for Women's Health and Leadership and
Betty A. Cohen Chair in Women's Health

Core Programs of the College of Medicine's Institute for Women's Health and Leadership:

- The Center for Executive Leadership in Academics (home of the ELAM Program)
- The Legacy Center: Archives and Special Collections
- Woman One Award and Scholarship Fund
- Marion Spencer Fay Award
- Conversations about Women's Health
- Gender and Ethnic Medicine Project (GEM)
- Sex and Gender Research Forum
- Vision 2020: An American Conversation about Women and Leadership

Affiliated Programs: Center for Women's Health; Women's Health Education Program

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Vice Dean for Research

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Joan Weiner, Ph.D.

Professor of Management, LeBow College of Business

Julie Yeh, M.D., M.P.H.

Carol Ammon Scholar, IWHL, and Assistant Professor, Family Medicine

Michael Yudell, Ph.D.

Assistant Professor, Community Health and Prevention, School of Public Health

Women's Health in the Post Reproductive Years

February 3, 2009 at Queen Lane (SAC)

- 11:30 a.m. to 12:00 noon **Registration and Poster set-up**
Queen Lane Student Activity Center
- 12:00 p.m. to 12:15 p.m. **Welcoming Remarks**
Lynn H. Yeakel, M.S.M. - Director and Betty A. Cohen Chair in Women's Health
Institute for Women's Health and Leadership
Samuel Laurencin, M.D. Ph.D. Candidate
Drexel University College of Medicine
- 12:15 p.m. to 1:15 p.m.
(Pizza Lunch Provided) **What Can We Blame on Menopause?**
Panelists
Owen Montgomery, M.D. - Chair, Obstetrics and Gynecology
Barbara Schindler, M.D. - Vice Dean, Educational and Academic Affairs and Professor of Psychiatry
David Tabby, M.D. - Associate Professor, Neurology
Katherine Sherif, M.D. - Chief and Clinical Director, Medicine-Center for Women's Health
Moderator: Lynn H. Yeakel, M.S.M.
- 1:15 p.m. to 1:30 p.m. **Sex and Gender Research at Drexel**
Kenny J. Simansky, Ph.D. - Vice Dean for Research
Drexel University College of Medicine
- 1:30 p.m. to 2:00 p.m. **Social/Behavioral Research Presentation**
Memory Change in the Post-Reproductive Woman
Mary V. Spiers, Ph.D - Associate Professor, Psychology
- 2:15 p.m. to 3:15 p.m. **Aging is not for Sissies; the Challenges**
Panelists
Anthony P. Curatola, Ph.D. - Joseph F. Ford Professor, LeBow College of Business
Mary Ann Kuzma, M.D. - Associate Professor, Medicine
Elizabeth Gonzalez, Ph.D., APRN, BC - Associate Professor, College of Nursing and Health Professions
Moderator: Lynn H. Yeakel, M.S.M.
- 3:15 p.m. to 3:45 p.m. **Basic Science Research Presentation**
Aging and Influenza: Are Women More Resistant?
Donna Murasko, Ph.D. - Dean, College of Arts and Sciences; Professor, Bioscience
- 3:45 p.m. to 4:15 p.m. **Clinical Science Research Presentation**
Links between Urinary Dysfunction and Female Sexual Dysfunction
Kristene Whitmore, M.D. - Professor, Obstetrics and Gynecology
- 4:25 p.m. to 4:30 p.m. **Introduction of Guest Speaker**
Cato Laurencin, M.D., Ph.D. - Vice President for Health Affairs and Dean
School of Medicine, University of Connecticut Health Center
- 4:30 p.m. to 5:30 p.m. **Hormone Therapy for Prevention of Dementia: Fact or Fantasy?**
Kristine Yaffe, M.D. - Professor in Residence Department of Psychiatry, Neurology and Epidemiology University
of California, San Francisco
-
- 5:30 p.m. to 7:00 p.m. **Poster Presentations and Awards Reception**

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Our Honoree: Helen I. Moorehead-Laurencin, M.D.

North Philadelphia's remembered neighborhood physician, mother and humanist



Dr. Helen Isabella Moorehead-Laurencin practiced medicine from offices on the ground floor of her North Philadelphia row home for almost forty-five years. She served as the strength of her community, helping five generations of individuals around her.

After graduating from Girls High at age 15 with a straight A average, Helen I. Moorehead went on to graduate from Cheyney University at age 19 with a Bachelor of Science degree in Education. She had a deep longing to help people by practicing medicine and attended the University of Pennsylvania and Meharry Medical College where she was one of the few women to receive a medical degree at that time.

Dr. Moorehead-Laurencin led an extremely busy and rewarding life. In addition to running her practice, serving on the staff of Nazareth Hospital and the Medical College of Pennsylvania Hospital, and serving as a medical consultant for the Philadelphia Board of Education, she served as an advisor to City Hall in the area of community health as a member of the Mayor's Health Commission in the 1980s. Dr. Moorehead-Laurencin saw her dreams come true when all three of her children graduated from Ivy League universities and became medical doctors.

Patients, friends and medical colleagues of Dr. Moorehead-Laurencin felt that she was North Philadelphia's "matriarch." She was a treasured resource, who guided and supported those in her community to take extra steps toward success. What made her life so remarkable was the unremarkable way she lived it. "She exemplified the best of what altruism and a thrill for knowledge and science can accomplish. She didn't simply practice medicine, she lived it," said son, Dr. Cato Laurencin.

References: Philadelphia Inquirer (April 8, 1994) and the Philadelphia Tribune (April 8, 1994)

Keynote Speaker

Hormone Therapy for Prevention of Dementia: Fact or Fantasy?



Kristine Yaffe, M.D.

Professor in Residence Department of Psychiatry, Neurology and Epidemiology University of California, San Francisco

Kristine Yaffe, M.D. is Professor in the Departments of Psychiatry, Neurology and Epidemiology at the University of California, San Francisco (UCSF). She is also Chief of Geriatric Psychiatry and Director of the Memory Disorders Clinic at the San Francisco VA Medical Center. In both her research and clinical work, she has directed her efforts toward improving the care of patients with cognitive disorders and other geriatric neuropsychiatric conditions.

Dr. Yaffe's research focuses on the predictors and outcomes of cognitive decline and dementia in older adults. She is interested in identifying novel strategies to prevent cognitive decline, in particular, how estrogen and other hormones influence cognitive function. Dr. Yaffe also investigates strategies for preventing cognitive impairment such as physical and intellectual activity, evaluating cardiovascular disease risk factors and depression. Another more recent focus of her work is conceptualization and characterization of "Healthy Brain Aging." Her work has been published in numerous prestigious journals including the *Lancet*, *JAMA*, and *The New England Journal of Medicine*. She is currently funded by the NIH, DOD, State of California Public Health Department, the Alzheimers Association and other foundations.

Dr. Yaffe received her medical degree from the University of Pennsylvania. She completed residency training in both Neurology and Psychiatry at the University of California, San Francisco. She then completed a combined fellowship in Clinical Epidemiology and Research Methods and Geriatric Psychiatry, also at the University of California, San Francisco.

Drexel Speaker - Social/Behavioral Research
Memory Change in the Post-Reproductive Woman



Mary V. Spiers, Ph.D.

Associate Professor, Psychology

Mary V. Spiers, Ph.D. is Associate Professor of Psychology in the Department of Psychology at Drexel University and a licensed Clinical Psychologist specializing in Neuropsychology. Dr. Spiers' research and clinical expertise are in two areas. One is in neuropsychological assessment with a focus on everyday problems of memory. She has developed tests to assess memory and cognitive problems in daily medication taking. Recently, she focused on the development of ecologically valid spatial memory tests within a virtual reality (VR) environment. Dr. Spiers' second major area of research focus relates to cognitive performance and strategy differences related to sex and gender. She leads the Women's Cognitive Health Research Group at Drexel University, which aims is to investigate variation in brain functioning through the influence of sex and gender, the menstrual cycle, genetics/handedness, experience and culture. She regularly teaches *Women's Health Psychology* and *Neuropsychology* within the College of Arts and Sciences.

Drexel Speaker - Basic Science Research *Aging and Influenza: Are Women More Resistant?*



Donna Murasko, Ph.D.

Dean, College of Arts and Sciences
Professor, Bioscience

Donna M. Murasko, Ph.D. received her B.A. from Douglass College of Rutgers University and Ph.D. in Microbiology from the Hershey Medical Center of Penn State University. After postdoctoral training at Fox Chase Cancer Center and The Jackson Laboratory, Bar Harbor, Maine, she joined the faculty of The Medical College of Pennsylvania (MCP) as an Assistant Professor. She was promoted to Associate Professor, then Professor, and served as Chair of the Department of Microbiology and Immunology of MCP Hahnemann University for 10 years.

In 2002, Dr. Murasko assumed the role of Vice Provost of Drexel University with major responsibilities for academic and faculty affairs. A major accomplishment in this role was the preparation of the Substantive Change Document to the Middle State Commission on Higher Education that resulted in its approval of the merger of Drexel University and MCP Hahnemann University. At that time, she joined the faculty of the Department of Biosciences and Biotechnology as Professor. In September 2002, Dr. Murasko was appointed Interim Dean of the College of Arts and Sciences and was appointed Dean in July 2003.

Dr. Murasko's research has been continually funded by the NIH since 1978 and focuses on the changes in immune response that occur with increasing age and the impact of these changes on viral infections. She has published more than 100 peer reviewed papers, in addition to numerous book chapters and review articles. Currently, she is the Principal Investigator of one NIH RO1 grant. In addition, she has served on numerous review committees for CDC, AFAR, and NIH, including Chair of the NIA Gerontology and Geriatrics Review Committee. Her research expertise has been recognized by membership on three NIH Task Forces on aging and immunology, and on the editorial boards of *Journal of Gerontology: Biological Sciences*, *Clinical Immunology and Immunopathology*, and *Clinical and Diagnostic Immunology*. She has been a member of the Advisory Committee of the National Space Biomedical Research Institute and the American Foundation for Aging Research.

Dr. Murasko has chaired the Preclinical Education committee and serves on task forces on Medical Student Advisory and Curriculum Review. She was a member of the task force that developed the new Drexel College of Law and chaired the search committee for the foundation faculty of the College. She currently chairs a Task Force reviewing the flexibility of the undergraduate curriculum of the University. Her commitment to education was recognized by a Lindback Award for Teaching. Her involvement in other aspects of the University includes: Chair of the Appointments and Promotions Committee, the task force on Diversity Committee, and the animal facility committee. She had been elected by the faculty to the Board of Trustees and as President of the University Faculty. She served as the faculty representative to the Merger Transition Team that incorporated MCP-Hahnemann into Drexel University.

Drexel Speaker - Clinical Science Research
***Links between Urinary Dysfunction and Female Sexual
Dysfunction***



Kristene Whitmore, M.D.

Professor, Obstetrics and Gynecology

Kristene E. Whitmore M.D. is medical director of the Pelvic and Sexual Health Institute in Philadelphia, PA. She is Chair of Urology and Female Pelvic Medicine and Reconstructive Surgery as well as professor of Urology and Obstetrics and Gynecology at Drexel University College of Medicine.

Dr. Whitmore is the founder/director of the Pelvic and Sexual Health Institute of Philadelphia where she functions as the lead clinician/researcher and medical educator. She has trained over 90 residents and fellows in female urology and pelvic floor reconstruction and has 9,500 interstitial cystitis patients.

Dr. Whitmore has clinical research interests in urinary incontinence, voiding dysfunction, Interstitial Cystitis, female sexual dysfunction and pelvic floor disorders. She has published extensively in peer-reviewed journals including the *Journal of Urology*, *Urology*, *American Journal of Obstetrics and Gynecology*, *Clinical Obstetrics and Gynecology* and *International Journal of Urogynecology*. Dr. Whitmore is the author of *Overcoming Bladder Disorders: Compassionate, Authoritative Medical and Self-Help Solutions for Incontinence, Cystitis, Interstitial Cystitis* – and has been a contributor in the lay press including *Prevention Magazine*, *Cosmo*, *Ladies Home Journal*, *US News & World Report* and others. She is a frequent guest on national television and has been featured on “Good Morning America” and “This Morning.”

Dr. Whitmore serves on the advisory boards of the National Association for Continence, the Simon Foundation, the Interstitial Cystitis Association, and the Women’s Health Foundation. She also serves on the government relations committee of the American Urogynecologic Society. Dr. Whitmore earned her medical degree from Hahnemann University and completed her urology residency at U.C.L.A. She is board certified by the American Board of Urology.

Drexel Speakers, Panelists and Moderator



Lynn H. Yeakel, M.S.M.

Director, IWHL and Betty A. Cohen Chair in Women's Health, Drexel University College of Medicine

Since Lynn Yeakel's appointment as its Director in August 2002, the Institute for Women's Health and Leadership® has grown in size and stature at Drexel. The College of Medicine's Strategic Plan for 2007-2012 includes as one of its five strategic priorities "Excellence in Women's Health and Leadership" and a new building on the Queen Lane Campus will house the Institute and its core programs. In addition to helping raise funds for the new building, Yeakel has raised nearly \$1.5 million for medical scholarships for minority women through the WOMAN ONE program which she created in 2003. Yeakel's unusual career includes sixteen years of leadership as a founder, Board Chair and President/CEO of Women's Way in Philadelphia, and a high profile campaign for the United States Senate in 1992. In 1994 she received a White House appointment as Mid-Atlantic Regional Director for the U.S. Department of Health and Human Services where she served until 2000. Lynn Yeakel is the recipient of numerous honors and awards for leadership and is active on a variety of community boards. In her Drexel role, she is chairing Vision 2020: An American Conversation about Women and Leadership at the National Constitution Center in October 2010 to launch a decade of national dialogue and action leading to the centennial of women's suffrage in 2020.



Cato T. Laurencin, M.D., Ph.D. Vice President for Health Affairs, Dean, School of Medicine Albert and Wilda Van Dusen Chair in Academic Medicine, Distinguished Professor of Orthopedic Surgery, Chemical, Materials and Biomolecular Engineering The University of Connecticut

Dr. Laurencin is a nationally prominent orthopedic surgeon, biomedical engineer, and administrator. Before coming to UConn, Dr. Laurencin was the Lillian T. Pratt Distinguished Professor and Chairman of Orthopedic Surgery at the University of Virginia and was designated a University Professor by the President of UVa. Dr. Laurencin earned his undergraduate degree in chemical engineering from Princeton University and his medical degree from Harvard Medical School, where he was a Magna Cum Laude graduate. During medical school, he also earned his Ph.D. in biochemical engineering/biotechnology from the Massachusetts Institute of Technology. Dr. Laurencin has been named to America's Top Doctors and America's Top Surgeons, and is a Fellow of the American Surgical Association, the American College of Surgeons, and the American Academy of Orthopedic surgeons. Most recently he was honored by Black Enterprise Magazine in its America's Leading Doctor's edition. Dr. Laurencin's research involves tissue engineering, biomaterials science, and nanotechnology and he is an International Fellow in Biomaterials Science and Engineering and a Fellow of the American Institute for Medical and Biological Engineering. His work was recently honored by Scientific American Magazine as one of the 50 greatest achievements in science this past year. Dr. Laurencin sits on the National Science Foundation's Advisory Committee for Engineering (ADCOM), and has served both on the National Science Board of the FDA, and the National Advisory Council for Arthritis, Musculoskeletal and Skin Diseases at N.I.H. Dr. Laurencin is an elected member of the Institute of Medicine of the National Academy of Sciences.



Owen Montgomery, M.D.

Chair and Associate Professor, Obstetrics and Gynecology, Drexel University College of Medicine

Dr. Montgomery, a specialist in Pelvic Floor Surgery, accepted the role of Chairman in March of 2006 after serving as Interim-Chair the previous year. Additionally, Dr. Montgomery is the Chair of the Drexel University Physicians Executive Committee. In November, Dr. Montgomery was appointed Chair of District III for the American College of Obstetricians and Gynecologists. A graduate of Yale University, Dr. Montgomery received his medical degree from Hahnemann University, completed his residency at Jefferson Medical College. Dr. Montgomery is board certified in Obstetrics and Gynecology and continues to voluntarily recertify yearly. He is a member as well as a past president of the Obstetrical Society of Philadelphia, a member of the North American Menopause Society and represents ACOG on behalf of the Physicians Electronic Health consortium.

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Barbara Schindler, M.D.

Vice Dean for Educational and Academic Affairs, and Professor of Psychiatry and Pediatrics, and Director, Caring Together Program

Dr. Schindler served as Acting Chair of the Department of Psychiatry from 1993-95. She has over 150 publications, abstracts and presentations in consultation-liaison psychiatry, psychosomatic medicine, substance abuse in women and medical education. She is currently collaborating on a multi-centered study of the effects of financial stress on the physical and mental health of academic health center faculty. Dr. Schindler has earned Fellowship status in the American Psychiatric Association and the Academy of Psychosomatic Medicine and is a past-president of the Philadelphia Psychiatric Society. She serves on the Council of the Academy of Psychosomatic Medicine and the Philadelphia Psychiatric Society. She is a member of Alpha Omega Alpha and The recipient of the Commonwealth Board Award and the *WMC/MCP Alumnae Association Service Award*.



David Tabby, D.O.

Associate Professor, Neurology

In addition to seeing general Neurological patients, Dr. Tabby has special interest in Multiple Sclerosis and headache. He has ongoing clinical trials in both of these areas, including patent foramen ovale and migraine and neutralizing antibodies in MS. He is the director of the Neurology clerkship for fourth year Drexel University College of Medicine students and preceptor for the residents' weekly continuity clinic.



Katherine Sherif, MD

Chief and Clinical Director

Dr. Katherine Sherif is Associate Professor of Medicine and Director, Drexel Center for Women's Health. Her clinical interests include the effect of omega-3 fatty acids in health and disease, polycystic ovary syndrome and insulin resistance. In 2000, she established the Program for Polycystic Ovary Syndrome which is now a national referral center. Dr. Sherif co-authored the 2007 American Heart Association "Guidelines for Cardiovascular Disease Prevention in Women" and the 2007 American College of Physicians' "Screening Mammography for Women 40-49 Years of Age: A Clinical Guideline." Dr. Sherif also published a textbook of women's health in 2008 and is at work on a text on hormone replacement therapy.



Kenny Simansky, Ph.D.

Vice Dean for Research, and Professor, Department of Pharmacology and Physiology, Drexel University College of Medicine

Dr. Simansky, a Ph.D. in Psychology (Biopsychology), was appointed Assistant Professor in Pharmacology at the Medical College of Pennsylvania (MCP) in 1982 and earned tenure and promotion to Professor at MCP and its successor institutions. He has established and directed numerous courses in the graduate programs in Pharmacology and in Neuroscience. Dr. Simansky has served in numerous leadership positions, such as Director of the Ph.D. Program in Pharmacology, founding Director of the Neuroscience Program at MCP, Director of the Neuroscience Program at the MCP Hahnemann School of Medicine and DUCOM, and Associate Dean for Biomedical Graduate Studies. His research funded by NIH since 1985, focuses on the neurochemical mechanisms in the brain that regulate eating and which are involved in addictive processes. Dr. Simansky served as a member of peer review panels in Integrative Neuroscience, including three years as chair, and has also served in many capacities in the external scientific community as reviewer for foundations and journals and as a member of the Board of Directors and President of the international Society for the Study of Ingestive Behavior.



Anthony P. Curatola, PhD
Joseph F. Ford Professor of Accounting

Anthony "Tony" P. Curatola joined Drexel University in 1989 by accepting the appointment to the Joseph F. Ford Professor of Accounting Chair. He has graduate degrees from Drexel, the Wharton School, and Texas A&M University. Tony's area of research interest is the taxation of employee benefits. He has been called on to provide information to the House Judiciary Committee concerning the source tax law, is a regular contributor to journals in his field, and author's several interactive education courses on retirement taxation. Tony's findings have appeared in media such as Forbes, Washington Post, and Wall Street Journal to name a few. He is the Tax Column Editor for *Strategic Finance*. Tony serves on the editorial boards of MicroMash Publishing, Wolters Kluwer Publishing, and several academic journals. He serves as a Director on the Foundation of Academic Research of the IMA and was awarded the R. Lee Brummet Award in Academic Excellence from the IMA.



Mary Ann Kuzma, M.D. Associate Professor, Department of Medicine, Clerkship Director of Internal Medicine Drexel University College of Medicine

Dr. Kuzma maintains interest in caring for the senior population. Her research has appeared in numerous publications, including the journal of *Geriatric Psychiatry and Neurology*, *American Journal of Medicine* and *Chest*. Dr. Kuzma was most recently noted for her involvement in a unique study that used iPods to teach medical students about normal and abnormal heart murmurs. A graduate of University of Pennsylvania School of Medicine, Dr. Kuzma completed her residency and became the chief medical resident at Graduate Hospital. Dr. Kuzma is a member of multiple medical societies and committees. She is a Councilor for the Clerkship Directors in Internal Medicine, a national organization for student education. Dr. Kuzma is a Senior Patient Note Rater for the National Board of Medical Education Step 2 Clinical Skills Licensing Exam. In addition, she is a volunteer physician for the Salvation Army Rehabilitation Center Medical Clinic in Roxborough. Elizabeth W. Gonzalez, Ph.D., RN, CS Associate Professor, College of Nurses and Health Professions Dr Gonzalez is certified as a clinical specialist in Adult Psychiatric and Mental Health Nursing by the American Nurses Credentialing Center and maintains a private practice. A frequent participant in scientific fora, her research contributions have been in depression among the elderly, minority health issues and cross-cultural research among family caregivers of relatives with Alzheimer's disease. Currently she is the principal investigator on an intervention study to enhancing resourceful skills in family caregivers of persons with dementia, funded by the National Institute of Nursing Research



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Basic Science Poster Presentations

Neurobiology and Anatomy

BS-1 Microtubule Severing, Transport and Sliding During Neuronal Migration a Role in Etiology of Autism

Author: Aditi Falnikar*, Drexel University College of Medicine, Neurobiology and Anatomy

Advisor: Peter W. Baas, Ph.D. Drexel University College of Medicine, Neurobiology and Anatomy

Autism Spectrum Disorders are caused, at least in part, by abnormal neuronal migration during embryonic brain development. This results in abnormal arrangement of neurons leading to behavioral symptoms like severe deficits in social and communication skills. CDC statistics indicate autism prevalence is high - one out of 150 newborns, and even higher amongst male babies. This has made males the primary subject of autism research. However recent reports indicate that a new focus on females is critically important for two reasons. First, there are differences in brain development of normal male and female embryos. Second, owing to different behavioral symptoms in male and female autistic babies, female subjects may not always be properly diagnosed for autism. We propose to investigate the fine cellular details leading to abnormal neuronal migration, with emphasis on microtubules. This is because microtubules are the principal force-generating cytoskeletal elements during neuronal migration. Further, mutations in Reelin – protein involved in microtubule regulation, have been implicated in autism. The prevailing model of neuronal migration suggests that a migrating neuron possesses microtubules with minus ends bound to the centrosome. We hypothesized that majority of the microtubules in a migrating neuron are not bound to the centrosome. Our experiments, performed on cultured migratory neurons, support our hypothesis. We intend to perform the next set of experiments using *in-utero* manipulation of male and female mouse embryos to test whether different patterns of mis-regulated neuronal migration result in differences in behavioral symptoms that are observed in male and female autistic subjects.

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Aditi Falnikar is the first recipient of the **Doris Willig, M.D. Award, established by Dr. Willig's family to memorialize their mother — a 1936 graduate of Woman's Medical College of Pennsylvania — and her interest in childhood development and the mental health of girls.*

Materials Science and Engineering

BS-2 New Methodological Approaches to the Study of Bone Quality Changes In Osteoporosis: A Comparison Between MicroCT Trabecular Analysis And Characterization With 2 Point Statistics

Presenting Author: Stephen Niezgoda, Ph.D., B.S., College of Engineering, Materials Science and Engineering

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Osteoporosis affects millions of Americans, the majority of whom are female. There is a need to find improved methods of detecting risk of fracture in those affected by the disease. Here we assess the potential of advanced microstructural characterization techniques for improved discrimination between normal and diseased bone samples.

Distal portions of fresh-frozen sheep radii (n OVX= 7, control=9) were imaged with a Skyscan 1172 MicroCT (34.5 μ m voxel size). A 150 X 150 voxel region of interest was selected from the medial epiphysis of each sample, and standard micro CT based histomorphometrics were calculated. Then, advanced characterization of higher order spatial correlations in the bone samples was performed using 2-point correlations. Fisher linear-discriminant analysis was performed on the statistical data for rapid quantitative comparisons between the samples. The effective elastic mechanical properties of each sample were modeled by new advanced homogenization and localization relationships calibrated to finite element simulation.

Using the microCT analysis, the OVX group tended to have lower bone volume and more trabecular surface area than the controls, but overlap was extensive and the trend was not statistically significant. Groups were also not separable based on 2-point correlations, however the method was successful in grouping the samples based on effective elastic modulus, and retrieving samples with similar stiffness. New groupings and characterizations are being explored based on likelihood of fracture (as determined by localization models). Our results thus far suggest that our characterization approach may enhance our ability to discriminate groups of samples relative to traditional metric approaches.

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Microbiology and Immunology

BS-3 HIV-1 Gene Expression in Human Monocytic Cells Is Induced By The Failed Microbicide Carrageenan through Stimulation of Toll-Like Receptor 4 (TLR4)

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Microbicides are intended for use by women in order to reduce or eliminate the risk of human immunodeficiency virus type 1 (HIV-1) sexual transmission. Carrageenan is a polyanionic compound that was among the first agents to undergo clinical evaluations as a microbicide. Unfortunately, despite the potent in vitro antiviral activity of carrageenan and the documented in vivo safety of Carraguard (the topical vaginal formulation containing the active ingredient carrageenan), Phase III clinical trials of Carraguard concluded that it was ineffective in preventing HIV-1 transmission. These results have prompted investigations into the mechanisms that underlie the failure of carrageenan. Previous studies of carrageenan as a food additive demonstrated its ability to act as an agonist for toll-like receptor 4 (TLR4), a pattern recognition receptor involved in initiating innate immune responses during pathogen invasion. Based on these observations, we hypothesized that the anti-HIV-1 activity of carrageenan may be offset by its capacity for increasing HIV-1 gene expression through stimulation of TLR4. In experiments in which human monocytic U-937 cells were transiently transfected with an HIV-1 long terminal repeat (LTR) reporter vector, carrageenan induced LTR activity to a level similar to that of LPS, which is a natural ligand of TLR4. These results suggest that the presence of carrageenan may facilitate HIV-1 infection of uninfected cells or increase the magnitude of viral replication in cells already infected with HIV-1. Experiments are now underway to fully characterize carrageenan as a TLR4 agonist in the context of HIV-1 infection and the clinical failure of Carraguard.

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BS-4 Repeated Topical Applications of Nonoxynol-9 (N-9) Do Not Result In Cumulative Damage to the Murine Cervicovaginal Epithelium

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Co-Authors: Brian Wigdahl, Ph.D., Drexel University College of Medicine, Microbiology and Immunology

Tina Kish-Catalone, Ph.D., DeSales University, Department of Natural Sciences

The disappointing clinical failures of four topical vaginal microbicides have provided new insights into factors that impact microbicide safety and efficacy. Specifically, the greater risk for HIV-1 acquisition in association with multiple uses of an N-9-containing product has highlighted the importance of application frequency as a variable during pre-clinical microbicide development, particularly in animal model studies. To evaluate an association between application frequency and N-9 safety, a mouse model of cervicovaginal microbicide safety was used. This model system, which is used to assess changes in epithelial integrity and immune cell recruitment following exposure to microbicidal agents, was shown to be predictive of clinical toxicity following a single N-9 exposure and concentration-dependent toxicity of the microbicide Savvy (C31G), which was recently removed from clinical trials. In multiple exposure experiments using this model, the initial application of N-9 (aqueous, 1%) caused considerable damage to the cervical epithelium (as previously published). Subsequent daily exposures were characterized by diminished cervical toxicity relative to the initial exposure and an increase in the exposure duration required to elicit similar levels of epithelial damage. However, *in vitro* cytotoxicity experiments, which were conducted to explore potential parallels between *in vitro* and *in vivo* assays of microbicide safety, conversely demonstrated that HeLa cells became increasingly sensitive to the presence of N-9 after multiple exposures. These multiple exposure studies are now being expanded to include more acute exposure frequencies and assessments of immune cell recruitment as a measure of local inflammation subsequent to repeated exposures to topical agents.

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BS-5 In Vitro Enhancement Of HIV-1 Infection By Select Polyanionic Compounds Suggests A Possible Explanation For Their Clinical Failures as Microbicides

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Increasing efforts are being directed toward the development of topical vaginal products, called microbicides, which will be used to reduce or eliminate the risk of human immunodeficiency virus type 1 (HIV-1) sexual transmission. Polyanionic compounds, which interact non-specifically with HIV-1 gp120 to block infection, were among the first agents evaluated clinically for their potential as microbicide agents. Unfortunately, Phase III clinical trials involving polyanion-containing formulations (Carraguard and UsherCell) demonstrated that these products were ineffective and may have, in some instances, increased the risk of HIV-1 infection. These findings precipitated reassessments of the in vitro activities of these agents to determine if variables that can affect agent safety and efficacy had been overlooked during pre-clinical testing. One such variable is product retention and loss following topical application in the female reproductive tract. By mimicking product loss in vitro, we showed that several polyanionic compounds, including those involved in clinical trial failures, caused enhancement of HIV-1 infection following compound removal, despite their potent antiviral activity when introduced simultaneously with the viral challenge. The presence and magnitude of this effect was compound-specific, dependent on the interval between compound removal and virus challenge, and dependent on HIV-1 co-receptor usage. Compounds that enhanced HIV-1 infection in this assay increased levels of HIV-1 infection up to 10-fold. More detailed studies are now underway to determine the mechanism responsible for this enhancement effect, and to determine the contributions of this effect to the clinical failures of these agents.

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Radiology

BS-6 Interventional Radiology for Obstetric Interventions

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We will review interventional radiology procedures utilized for obstetric patients. Cases include: embolotherapy and arterial balloon occlusion for post-partum hemorrhage, IVC filter placement, and pulmonary embolus thrombolysis. Post-partum hemorrhage occurs in about 4% of deliveries. Embolotherapy is effective for most cases of post-partum related bleeding. Embolization does not appear to affect fertility. The major causes of postpartum hemorrhage include uterine atony, genital tract trauma, retained placental tissue, and low placental implantation. For abnormal placentation, the standard operation at the time of delivery is cesarean hysterectomy. Preoperative placement of occlusion balloons placed in the proximal internal iliac or uterine arteries can prevent major blood loss during surgery. Deep venous thrombosis incidence in antepartum patients is 1 in 2000. IVC filter placement is indicated in patients with documented iliac or femoropopliteal thrombosis, patients with a contraindication to anticoagulants, and patients who fail anticoagulation. Heparin may be used until the onset of labor. Coumadin is contraindicated in pregnancy. The option of a retrievable IVC filter may be appropriate in the setting of pregnancy, due to the transient nature of thromboembolic risk factors related to physiological changes of pregnancy. Pulmonary embolism incidence during pregnancy is 1 in 2500. The maternal mortality is less than 1% if treated early and greater than 80% if left untreated. Catheter-directed mechanical fragmentation and local thrombolytic infusion therapy is a treatment option for pulmonary embolism in women with hemodynamic decompensation in pregnancy. Advantages are rapid clot lysis with consequent return of normal hemodynamics.

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Radiation Oncology

BS-7 Modeling L-Selectin Mediated Attachment Strength during Embryo Implantation

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Failure of attachment of the embryo to the uterine endometrial lining is a major cause of infertility and reduced success of IVF. Initial blastocyst attachment is provided by the L-selectin adhesion system expressed on the blastocyst (L-selectin), and the uterine endometrial lining (L-selectin ligands). Interaction of these molecules allows engagement of integrins for stronger secondary attachment. The goal of this study is to model L-selectin mediated attachment strength by an in vitro model using trophoblast cell lines and uterine epithelial cells. We investigated the effect of the hormonal microenvironment on expression of L-selectin on trophoblasts (Jeg-3) and its ligands on the Ishikawa human uterine epithelial cell line and found both to be expressed and hormonally modulated. L-selectin expression and shedding was upregulated in Jeg-3 in response to treatment with dexamethasone. Random fluid flow also upregulated L-selectin expression. Expression of L-selectin ligands was confirmed on human endometrial biopsy samples retrieved during the luteal phase. Binding strength between L-selectin and Ishikawa cells was quantified to be in the range of 0.5 dynes/cm² using a parallel plate flow chamber customized with a quartz crystal microbalance (QCM) sensor. Integrin-mediated secondary attachment strength of Ishikawa cells to different substrates was quantified using a spinning disc apparatus at 157 dynes/cm². Currently, we are developing a 3D model consisting of 3D trophoblast cultures (trophospheres) in combination with 3D cultures of human endometrial epithelial cells (hEECs). We have established 3D trophosphere cultures with the Jeg-3 cell line. In summary, this work may contribute to advancing treatment of infertility.

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Surgery

BS-8 Megalin Is Expressed In Gallbladder Epithelium: A Potential Contributory Factor to Gender Differences in Gallstone Formation

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Gallstone disease is one of the most common and costly digestive diseases affecting 10-15% of the US population. Gender difference exists in gallstone pathogenesis having 2-3 times more common in women than in men. Female sex hormones have been implicated as contributory factors to the promotion of gallstones by increasing cholesterol saturation and decreasing gallbladder motility. Cholesterol saturation is influenced both by hepatic cholesterol secretion and gallbladder cholesterol absorption. Although increased hepatic secretion of cholesterol has been established in women, the role of gallbladder cholesterol absorption and the exact process involved are poorly understood. Megalin (Meg), a member of the Lith family mediates endocytosis of cholesterol-binding ligands, water, and protein-bound sex hormones. Recent studies show that Meg is differentially expressed in acalculus and calculus human gallbladders suggesting a protective role of Meg proteins against stone formation. However, the role of Meg in gender differences in gallstone formation is unclear. The aim of our study is to examine if Meg is differentially expressed in prairie dog gallbladders. Gallbladders were harvested from both male female prairie dogs and total RNA extracted, reverse transcribed, and amplified by PCR using Meg specific primers. The PCR product was purified and sequenced. Ethidium bromide staining revealed approximately 444 bp cDNA. Nucleotide analysis showed ? 82% homologous to human, rat and mouse Meg. The deduced amino acid sequence was ? 90% homologous to rat, mouse and human. Megalin is expressed in prairie dog gallbladder epithelium and may play a role in gender differences in gallstone formation.

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Clinical Science Poster Presentations

Medicine

CS-1 Prevalence and Characteristics of Coronary Artery Ectasia Seen In South Asian Women Presenting For Coronary Angiography

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Coronary ectasia is an uncommon cause of cardiovascular symptoms. In most recent studies a prevalence of 1.2-4.9% has been shown in various populations. We aim to determine the prevalence of ectasia in a population of South Asian women presenting for angiography at the Doctors Hospital Medical Center, Lahore, Punjab. Methods: We selected females amongst 4,962 consecutive patients undergoing angiography in a 2.5 year period, (n=1,258). Ectasia was defined as a coronary segment 1.5 times the diameter of a normal adjacent coronary segment; this did not include segments with post-stenotic dilatation. Results: In our population, 91 patients showed ectatic vessels (7.23%) with isolated ectasia seen in 45 (49.5%). 910 patients showed isolated atherosclerosis (72.3%). No increased risk of ectasia was seen in patients with atherosclerosis in our population (OR=0.29, 95% CI 1.88 to 0.444, p = 0.0001). Mean age of all females with ectasia (mean age 54.1, n = 91) was lower than in females with atherosclerosis (mean age 56.9, n = 910; p <0.0095). For patients with ectasies alone, the mean age (50.8, n=45) was lower than patients exhibiting both ectasia and atherosclerosis (mean age 57.4, n=46; p<0.001). Also, we found patients with isolated atherosclerosis to have a higher age (mean age 56.9, n=910) than patients with isolated ectasia (mean age 50.8, n=45; p<0.0001). Conclusions: Ectasia was seen in a significantly high percentage of these women (7.23%), higher than previously reported. Isolated ectasia is associated significantly with younger age compared to atherosclerosis in this population of women.

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CS-2 Gender Differences in the Prevalence of Coronary Artery Ectasia in South Asians Presenting for Coronary Angiography

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Coronary ectasia is a known manifestation of atherosclerosis. Its role in patient morbidity and mortality has not been fully elucidated. In most recent studies a prevalence of 1.2-4.9% has been shown in various populations. We studied the prevalence of ectasia in a population of South Asians presenting for angiography at the Doctors Hospital Medical Center, Lahore, Pakistan. Methods: We included 4,962 consecutive patients undergoing angiography over 2.5 years. Ectasia was defined as a coronary segment 1.5 times the diameter of the normal adjacent segment. This did not include segments with post-stenotic dilatation. Results: In this population, 489 patients showed ectatic vessels (10.4% of total). Women had a lower incidence of ectasia (7.23%; $p < 0.0001$) compared to men (11.5%). Women were less likely to present with ectasia (OR=1.681, CI 1.32-2.31, $p < 0.0001$). For all women with ectasia the mean age (54.1 years, $n = 91$) was higher compared to men (mean age 52.9, $n = 398$; $p < 0.0013$). Furthermore women with isolated ectasia presented at a much older age (50.8, $n=45$) compared to men (47.8 years, $n=95$, $p < 0.001$). Finally men with isolated atherosclerosis presented at a younger age (54.7 years, $n = 2830$) compared to females (56.9, $n=910$; $p < 0.0001$). Conclusions: Ectasia was seen in a significantly higher percentage of men (11.5%) than in females. Women were less likely to have ectasia, and presented at a younger age than men, even though presentation age for atherosclerosis for females was higher. Further explanation of these differences and the role of preventative therapy should be explored.

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Nursing and Health Professions

CS-3 DRNP Scholarly Achievement: Innovations in Women's Health Research

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Drexel University's College of Nursing and Health Professions (CHNP), offering the first and only Clinical Research Doctor of Nursing Practice (DrNP) degree in the nation, encourages Advanced Practice Nurses (APNs) to rigorously identify and explore nursing practice issues and utilize research and leadership skills to advocate for improvements to benefit the population and the nursing profession. The DrNP candidate possesses keen skills in evaluation, translation, and dissemination of evidence based practice. This poster will describe how the DrNP program attracted four nurses who, though specializing in women health care from diverse paths, are unified in their academic pursuit to improve the health care of women through innovatively designed research projects. Encompassing a broad range of topics which focus on women's healthcare issues including acculturation, physical and mental health, health beliefs and preventative practices, and complimentary and alternative medicine (CAM), four current research investigations will be presented: 1) Approximately 20 million Americans are currently infected with one or more strains of low risk and/or high risk Human Papillomavirus (HPV), the proven etiology of cervical cancer. The objective of this particular study is to evaluate and compare the knowledge, health beliefs, and preventative practices regarding cervical cancer and HPV in women of two high risk age groups: women age 19 – 26 and women age 40-70. These findings of this study may be vital to a more comprehensive understanding of the health care needs of high risk women in order to appropriately direct educational resources and to save the lives of women from cervical cancer, a preventable disease. 2). A second project described investigates the experiences of women with Stage I and II breast cancer who use Mindfulness Based Stress Reduction (MBSR) as complementary care in breast cancer recovery. This experiential exploration will attempt to understand if breast cancer survivors can benefit from this CAM technique to cope with their diagnosis. 3). Since literature suggests that participation in mammography screening may be of major importance for decreasing the morbidity and mortality related to breast cancer, the third study presented examines the influencing and intervening factors for African American women who have access to mammography services but choose not to use them. 4). Lastly, Interstitial Cystitis (IC) is a chronic painful disorder of the bladder of unknown etiology and with no known

cure that affects 1.2 million women in United States. However there is a gap in literature regarding sleep issues in IC patients and how sleep affects the symptoms of IC. This study proposes to describe the frequency of disrupted sleep in women diagnosed with IC, evaluate the relationship of disrupted sleep to specific IC symptoms, and to test the central hypothesis that overall sleep quality is related to intensity or severity of IC symptoms. The goal of this project is to provide a scientific base for evaluation and treatment of sleep difficulties in this population. These four presented studies demonstrate the depth and breadth of research into sex and gender issues stimulated by the DrNP Program at Drexel University, as well as the commitment of Drexel CHNP to women's health care.

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Obstetrics and Gynecology

CS-4 Interventional Radiology and Its Application in Women's Health

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Interventional radiology (IR) for gynecologic diseases encompasses a wide variety of radiologic procedures that provide no operative therapeutic benefits to women. This alternative to conventional surgery by using digital technology to make repairs in the body by making small incisions, may offer women the same benefits of surgery without an operation. Interventional radiology may be useful in both young and old and in pregnant and non pregnant women. The main benefits of interventional radiology are to result in fewer traumas to the body, require fewer anesthetics, and shorten hospital stays and recovery as well as reducing post operative pain. Purpose: To review the efficacy of interventional radiology in women's health

Materials and Methods: Case series of women surgically treated by various interventional radiologic procedures by interventional radiologists in an academic teaching institution.

Results: In up to seven cases of varying medical conditions, the outcomes of all these procedures were all successful. No complications in these techniques occurred in our patient group. Conclusion: As continued studies involving interventional radiology in women's health are published, the techniques will continue to be reinforced. These procedures are increasingly popular and continue to provide a nonsurgical alternative to women worldwide.

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CS-5 A Case Report Of Use Of Ketamine Spray for the Treatment Of Unprovoked Generalized Vulvodynia (UGVD)

Presenting Author: Susan Kellogg-Spadt, Ph.D., CRNP, Drexel University College of Medicine, Obstetrics and Gynecology

Co Authors: Amy Rejba, MSN, CRNP, Drexel University College of Medicine, Pelvic and Sexual Health Institute

Kristene Whitmore, M.D., Drexel University College of Medicine, Pelvic and Sexual Health Institute, Obstetrics and Gynecology

Introduction: Unprovoked generalized vulvodynia (UGVD) is often considered to be a more debilitating condition than provoked vulvodynia because of the chronic, unrelenting and generalized distribution of the pain. Literature review suggests that topical ketamine cream has been used with success in other patient populations with chronic burning pain in the extremities. Aim: This is a case series of patients with UGVD in which topical ketamine/bupivacaine spray was used to treat distinct complaints of chronic, generalized genital pain. Methods: Three patients diagnosed with UGVD were treated with ketamine 10%/bupivacaine 0.5% in a spray formulation. Patients used the spray 1-2 times per day; using 2 spray pumps/application to the external vulva and introitus. Outcome Measures: Prior to treatment patients rated their daily and sexual activity pain levels on VAS of 1-10. They also completed a self-rating global assessment regarding their perceived improvement in their condition. Results: After 4 weeks of treatment, each patient recorded changes in their daily activity pain scores by a mean of 2 points on a 10 point scale (Patient 1: score 7-5; Patient 2: score 5-3 ; Patient 3: score 6-4). Two patients were sexually active during treatment, and changes in their sexual activity pain score also decreased by a mean of 2 points (Patient 1: score 10-7; Patient 3: score 10-9). On the self-rating global assessment, 1 patient reported slight improvement, and 2 patients reported moderate improvement. Conclusions: Topical ketamine/bupivacaine spray may be a useful adjuvant therapy in the treatment of UGVD. More extensive research is warranted.

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CS-6 Vaginal Diazepam Suppository Use in the Treatment of High Tone Pelvic Floor Dysfunction: A Case Series

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High tone pelvic floor dysfunction (HTPFD) is characterized by hypertonus of the levator ani complex, and pain upon attempted squeeze or palpation of the pelvic floor musculature. HTPFD is frequently comorbid with hypersensitivity disorders of the bladder, bowel, and vulva, as well as female and male sexual pain conditions. Physical therapy has shown to be useful for the condition in limited controlled trials. Clinically accepted adjuvant, off-label, pharmacologic therapies for this condition include: orally administered skeletal muscle relaxants, benzodiazepines, and analgesics. Of particular interest is the benzodiazepine drug class, which is known for rapid antispasmodic activity for muscular hypertonus and secondary analgesic effects. Diverse effects from the systemic administration of oral benzodiazepines often include sedation and loss of mental clarity. These can be primary reasons for discontinuation of the therapy.

Aim: To evaluate the effectiveness of an intravaginal benzodiazepine for patients with pelvic floor hypertonus and sexual pain. **Methods:** Patients with diagnosed pelvic floor muscle hypertonus and sexual pain were treated with intravaginal, compounded diazepam suppositories (5 or 10 mg), 1-3 times per week for at least 5 weeks. **Results/Outcome Measures:** Pre- and post-perineometry scores of levator resting tone and squeeze strength showed marked improvement. VAS sexual pain scores decreased by a mean of 4.5/10 points. Patient's subjective reports verified improvement in sexual functioning as well as excellent toleration of the regimen in terms of side effects. **Conclusion:** Further research to better define the treatment effect is needed based on the results suggested by its use in these patients.

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Pharmacology and Physiology

CS-7 Development of Quantitative Sensory Testing As a Tool to Assess Vulvar Sensory Processing

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Vulvodynia is defined as vulvar pain in the absence of any gross anatomical findings. Prevalence rates of vulvodynia range from 10-16 % of the population, however little is known regarding the etiology of this disorder. Our objective is to develop quantitative sensory testing (QST) as a method of measuring vestibular sensory thresholds. Development of this technique will provide a means to detect changes in sensory processing in patients with vulvodynia, and assist in gauging severity of disease. Methods: Following a history, physical and cotton swab test of the vestibule, subjects undergo QST of the right and left vulva. Sensory detection and pain thresholds to mechanical and thermal stimuli are measured utilizing an algometer and a Medoc Thermosensory Analyzer II system respectively. Results: Our measurements of vestibular sensory thresholds of control subjects have yielded values similar to those reported in the literature. Our initial studies indicate that the left vulva has lower sensory detection thresholds and higher pain thresholds compared to the right vulva. Pressure, heat and cold pain thresholds were lower in vulvodynia patients. Conclusion: We have successfully utilized QST to assess vestibular sensory function. There appears to be a regional difference in sensation within the vestibule as our studies have indicated a greater sensitivity of the right compared to the left vulva. Vulvodynia is associated with a lowered pain threshold to pressure, heat and cold stimuli. Further studies are required to delineate the involvement of afferent nerve fiber subtypes in the chronic pain of vulvodynia.

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Psychology

CS-8 Infertility-Related Stress, Social Support, and Self-Efficacy In Managing Treatment: Research In Progress

Presenting Author: Alexandra Nelson, B.A., College of Arts and Sciences, Psychology

Co-Author: Pamela Geller, Ph.D., Drexel University, Psychology

Infertility, the inability to become pregnant after one year of regular intercourse without contraception, affects 7.4% of married women of reproductive age. Approximately 12% of women aged 15-44 have ever had an infertility-related medical appointment, and approximately half of couples with primary infertility have sought fertility treatment services. Utilization of Assisted Reproductive Technologies (ART), including in vitro fertilization, quadrupled between 1990 and 2001, with approximately 180,000 women of reproductive age receiving ART in 2002. ART treatments cost \$8,000-\$11,000 per cycle. ART cycles have a fairly low success rate, with 34% of cycles resulting in pregnancy and 28% resulting in live birth, as 16% of ART pregnancies terminate in miscarriage. Undertaking ART treatment is stressful, particularly for women, who report greater infertility-related stress than men. Approximately half of women terminate treatment within 3 cycles regardless of expense or prognosis, and among the most commonly cited reasons for attrition are psychological burden and difficulty coping with treatment. Infertility-related stress is negatively correlated with infertility self-efficacy, which describes ability to cope with and manage the demands of fertility treatment. Satisfaction with social support has been found to offset infertility-related stress, while poor communication, social stigma, and negative social interactions are positively associated with infertility-related stress. Therefore, social support may moderate the relationship between infertility-related stress and infertility self-efficacy. The current study assesses the relationships among infertility-related stress, perceived social support, and infertility self-efficacy. Research methodology and initial data from a sample of women receiving IVF treatment in several Philadelphia-area clinics will be presented.

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Social/Behavioral Science Posters

Office of Government and Community Relations

S/BS-1 Reaching 18-24 Year Old Men with Tobacco Programming through Job-Readiness Programs

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Our staff has been providing gender-specific tobacco cessation programs for seven years with funding from the Philadelphia Dept. of Public Health as part of the network of *SmokeFree Philly* programs being conducted across Philadelphia. Program analyses revealed that only 0.8% of the 1800 attendees were 18-24 years of age (Branch Associates, 2006). The literature confirms that while young adults have higher rates of smoking than do older adults, their quitting rates are lower and rarely does this age group utilize traditional cessation methods. Young men, in particular those not in traditional college settings or job settings, are even less likely to access these programs. Now in its second year, Drexel's Young Men's Tobacco Project, funded by the American Legacy Foundation, has been reaching this population through partnerships with community organizations providing job-readiness, GED and life skills programs. By integrating our tobacco reduction program into the existing curricula of these partner organizations, many of the access barriers have been reduced. The intervention consists of six small group sessions held at lunchtime (with food provided), utilizing best practices in tobacco cessation with emphasis on stress management and improved decision-making. All sessions are recorded and will be analyzed by our evaluation partners in the School of Public Health. A total of 6 interventions were held at 5 sites, with an additional intervention at a drug-rehabilitation center. Both qualitative and quantitative methods will be utilized to analyze data on the description of participants, description of contexts for intervention, intervention implementation, investigation of YMTP on tobacco use, investigation of variability in effects by participant characteristics and group processes, and investigation of variability in effects across contexts. Data will be gathered from baseline tobacco surveys and stress scales, post-test tobacco surveys and stress scales, transcripts from the audio-recordings of all sessions, post-session debriefings of staff, session logs, participant logs, exit interview of site directors and personnel, and program process analysis by program staff. A preliminary qualitative analysis shows an increase in awareness and willingness to reduce tobacco consumption.

A preliminary quantitative data analysis from the first two interventions shows a slight reduction in number of cigarettes smoked (37.5%). Although there is no quantitative decrease in stress, which may reflect cultural competency of our standardized stress scale, there is ample evidence from the qualitative analysis that the program provides a non-judgmental space for these young men to share their experiences openly and without hesitation, and that some participants are taking what they learn about tobacco and stress management and incorporating it in their lives outside the program.

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Otolaryngology-Head and Neck Surgery

S/BS-2 Barriers To Academic And Personal Success: Overcoming Racial and Gender Issues with the Allegheny Women's Biotechnology Workforce Collaborative (AWBWC)

Presenting Author: Michelle Zuckerman-Parker, Ed.D, Allegheny Singer Research Institute Center for Genomic Sciences

Co-Authors: Debra Caplan, M.S., Allegheny General Hospital Executive Office

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The Allegheny Women's Biotechnology Workforce Collaborative (AWBWC) is a research-based educational intervention utilizing a learning community model for minority and disadvantaged populations. This successful model was developed for disadvantaged women pursuing an associate's degree in biotechnology. The AWBWC bridges academic gaps while providing support services and career mentoring using state of the art laboratory facilities. Statistically significant lower attrition and higher GPA than their peers demonstrates success for a demographic living 60% below the poverty level.

Success is attributed to the "life lines" provided by the social worker and the emotional and academic support of the learning community. Historically, this population has failed academically but yearns for a second chance. Additionally, they are intrigued with technology and want to learn how to use it. This initiative has a direct bearing on the neomillennial learning styles (Dede, 2005) of students from primary to higher education classrooms. The research and evaluation plan includes collecting qualitative and quantitative data with a multi-cohort, multi-method approach. This mixed methodological research design provides a rich data set for data triangulation and examination of multiple program components. Quantitative data includes pre and post surveys, curriculum content assessments, GPA, and attrition. Forecasted expectations are that increased access to support will increase participant motivation, technical skills sets, and content knowledge based on the opportunity to create authentic products of their understanding while working with professional mentors. The nature of the population and the focus of the program will provide more information in relation to learning theory and program "success."

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Psychology

S/BS-3 an Examination of the Association of Breastfeeding Self-Efficacy, Breastfeeding Duration, and Postpartum Depressive Symptoms in New Mothers

Presenting Author: Kathleen O'Malley, B.A., Drexel University, College of Arts and Sciences, Psychology (Graduate Student)

Advisor: Pamela Geller, Ph.D., Drexel University, College of Arts and Sciences, Psychology

Depression is twice as common among women as men, with onset often occurring during the childbearing years. Recently, the postpartum period has been examined as high-risk time for the onset of depressive disorders due to hormone fluctuations as well as shifting roles women experience after delivery. Research has begun to focus on breastfeeding as a natural intervention that may play a role in limiting PPD symptoms. Breastfeeding is beneficial to the mother, baby, and environment. Current rates of initiation are at an all-time high, but rates of duration have continued to remain the same, with cessation of breastfeeding occurring before the recommended 6 months (US DHHS, 2008). PPD has been found to have a significant negative impact on breastfeeding duration (Henderson & Evans, 2003). In order for health professionals to extend breastfeeding duration to 6 months, a factor that contributes to early cessation of breastfeeding needs to be targeted. One such factor is breastfeeding confidence. Breastfeeding self-efficacy is a significant predictor of breastfeeding duration and level, with those reporting higher self-efficacy scores having a longer duration of breastfeeding (Blyth, 2002). The aim of this study is to identify the association between breastfeeding self-efficacy, breastfeeding duration, and postpartum depressive symptoms in new mothers. The goal is to provide information to potentially form interventions for women who are at risk for early cessation of breastfeeding by potentially incorporating self-efficacy enhancing strategies that women can use postpartum in order to breastfeed exclusively for a longer duration of time, regardless of PPD symptom status.

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S/BS-4 Intimate Partner Violence during Pregnancy

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Intimate Partner Violence (IPV) is characterized by physical, sexual or psychological abuse that occurs within the context of an intimate relationship. IPV is a pervasive experience which affects as many as 1.5 million women each year, and approximately 4-8% of pregnant women experience violence during their pregnancies. IPV can result in serious physical and mental health consequences for the woman, ranging from severe physical injury to psychological issues such as posttraumatic stress disorder, depression and anxiety. Also, IPV has been shown to be associated with a decrease in positive health practices, most notably a decrease in HIV risk reduction behavior. This presents a significant public health concern. In addition, women experiencing IPV tend to report both lower satisfaction and less perceived power in their intimate relationships, and both of these variables are also associated with a decrease in HIV risk reduction behavior and an increase in psychological symptomatology. It is important to study IPV during pregnancy as women interact with the healthcare system more frequently while pregnant and in the months following delivery, so more opportunities exist to provide support to women experiencing IPV. This poster will provide a summary of what is known in the research literature, and it will also provide direction and suggestions for future research. The poster will elaborate on why it is important to better understand how violence affects both a woman's psychological well-being and her behaviors during her pregnancy, as well as her decision to remain in or withdraw from an abusive relationship.

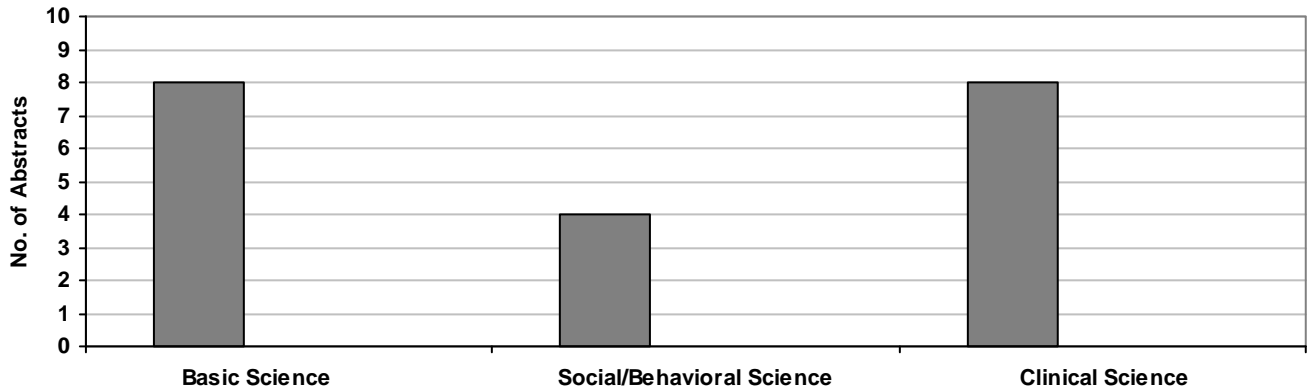
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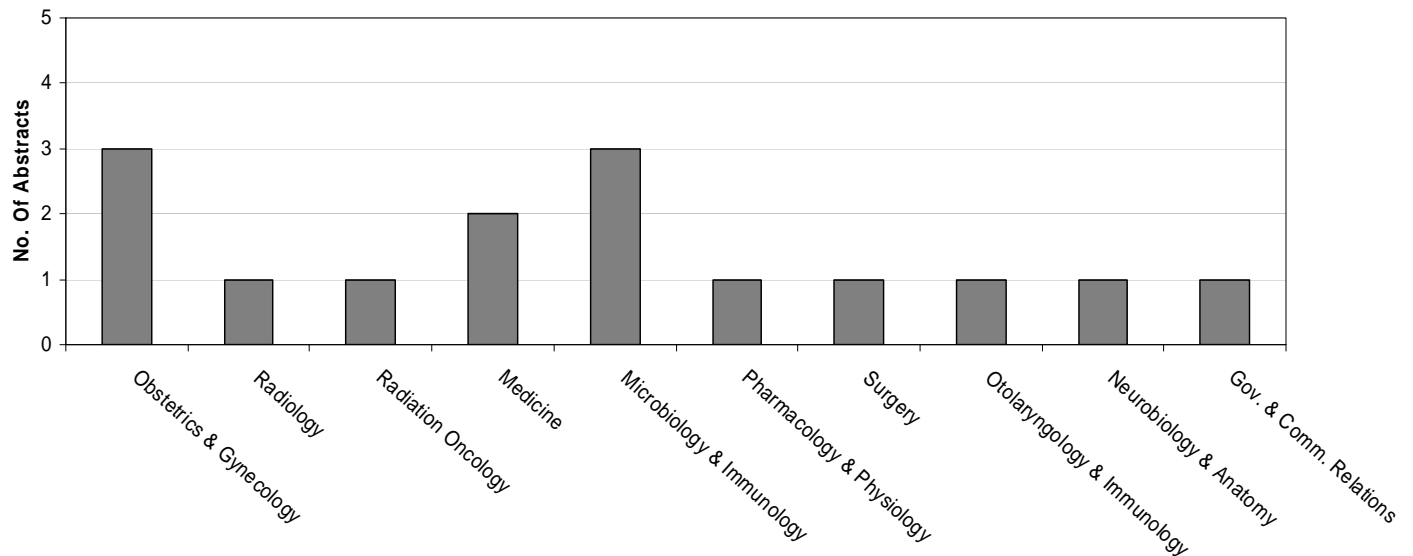
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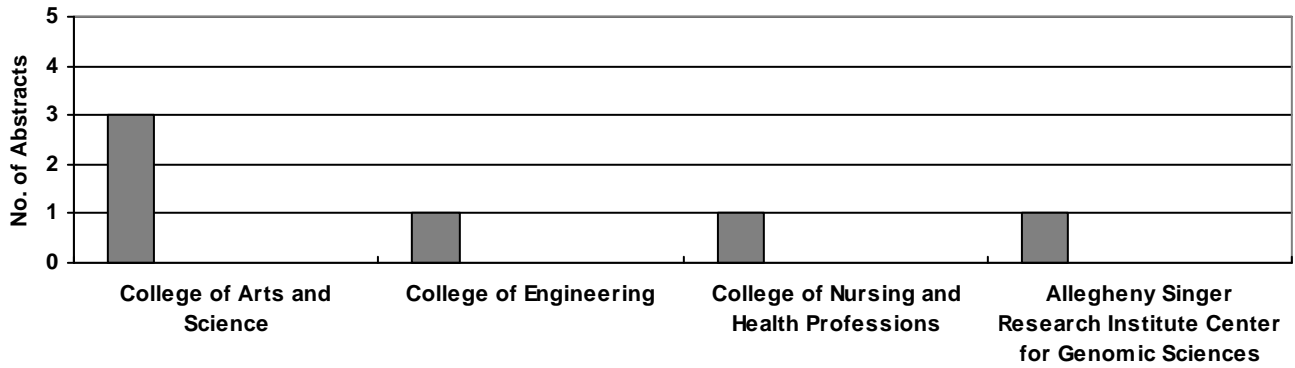
Submitted Abstracts by Research Area (Total = 20)



Submitted Abstracts by DUCOM Department (Total = 15)



Submitted Abstracts by Other Drexel University Colleges and Affiliated Campuses (Total = 6)



Notes

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