

Women's Health Symposium



2025 Women's Health Symposium Agenda

*Scientific Meeting on All Aspects of Women's Health
and the Influence of Sex as a Biological Variable on Health Conditions*

Friday, February 21, 2025 | Trent Semans Great Hall | Duke University

- 8:00** **Welcome & Introductions**
- 8:10** **Featured Speaker**
Sharonne Hayes, MD, Mayo Clinic
Vive la Différence: Sex-Based Cardiovascular Research Saves Lives
- 8:40** **BIRCWH Scholar Presentations**
- 9:15** **Break & Posters** (odd numbered posters)
- 9:45** **Interactive Session**
Navigating the "bumps" along your research path
facilitated by Sharonne Hayes MD and Cynthia Kuhn, PhD
- 10:30** **Alumni Introductions**
- 10:35** **BIRCWH Scholar Presentations**
- 11:25** **Break & Posters** (even numbered posters)
11:30 group photo (BIRCWH scholars, alumni, mentors, advisors)
- 11:55** **Featured Speaker**
Cynthia Kuhn, PhD, Duke University School of Medicine
Sex Differences in Health: How to Stumble Down a Rabbit Hole
- 12:25** **Closing Remarks**
Informal networking with boxed lunches

Women's Health Symposium



Scientific Meeting on All Aspects of Women's Health and the Influence of Sex as a Biological Variable on Health Conditions

Friday, Feb. 21, 2025 • 8 a.m.-12:30 p.m. • Trent Semans Center Great Hall

ÓÜÏÔY PÁÙ&@ |æÁÚ!^•^} cæá } •

- “ **Jennifer Plichta, MD, MS**
Associate Professor of Surgery, Associate Professor in Population Health Sciences, Duke University School of Medicine
Standardizing prognostic estimates for patients with recurrent breast cancer
- “ **Charity Watkins, PhD**
Assistant Professor, Department of Social Work, North Carolina Central University
Pulling up a seat to the table: Exploring and expanding the role of social workers in maternal healthcare
- “ **Binita Chakraborty, PhD**
Research Scientist, Department of Pharmacology and Cancer Biology, Duke University School of Medicine
Sex hormone estrogens regulate cancer cell efferocytosis to promote an immune-suppressive tumor microenvironment
- “ **Audrey Blewer, PhD, MPH**
Assistant Professor of Family Medicine and Community Health, Duke University School of Medicine
Sex disparities in receipt of bystander-initiated cardiopulmonary resuscitation and associated time measures
- “ **Tarannum Jaleel, MD, MHSc**
Assistant Professor, Department of Dermatology, Duke University School of Medicine
Role of sex hormones in skin inflammation

Women's Health Symposium

Poster Sessions

9:15 am-9:45 am & 11:25 am-11:55 am
Trent Semans Center Great Hall

Odd numbered posters are presented during the first session: 9:15 – 9:45 am

Even numbered posters are presented during the second session: 11:25 – 11:55 am

Name	Poster Title	Poster Number
Adillon, Louise	Characterizing Sexual Health Concerns Among Female Adolescent and Young Adult Cancer Survivors	31
Aitelli, Audrey	Exosomes for Atrophy: Acellular Regenerative Biologic for Estrogen-Deprivation Vaginal Atrophy in a Porcine Model	21
Avila, Bianca	Irritability: An Underrecognized Mood State in the Perinatal Period	10
Brantner, Carly	The Menstrual Cycle as an Indicator for Health: Estimating Variability of Menstrual Cycle Length in Active Women	27
Dou, Diana	"Lnc"ing XIST to Female Sex-Biased Autoimmunity	23
Fatima, Hiba	What is the Content of the Information, Support, and Resources Related to Breastfeeding Provided to Black Birthing Parents in the Inpatient Setting?	11
Freedly, Katie	Impact of Coronavirus Disease-2019 on Influenza and Tdap Vaccination Rates in Pregnant Patients	25
Giordano, Hayley	Improving Postpartum Care for Maternal and Infant Health: Analyzing Interprofessional Communication in Inpatient Settings	14
Green, Michael	Diagnostic Assessments for Patients Presenting with Abnormal Uterine Bleeding	30
Happel, Julia	Effects of PFBS on Mitochondrial Function in Human Trophoblasts	8
Hasan, Sarah	Using Standardized Content Analysis and Student Health Websites as Models to Improve Information Access at North Carolina Universities	18
Hepler, Bonnie	While You were Sleeping: Exploring Maternal Infant Sleep during 24 Hours Before Hospital Discharge	12
Jones, Angela	Biological Sex Affects Functional Variation Across the Genome to Alter Risk of Human Disease	1
Josefson, Chloe	Developmental Effects of Maternal Chronic Stress During Lactation	15
Kmitch, Laura	Assessing Contraceptive Use in Virginia Using AI-Payer Claims Data	19
Kancharla, Navya	Characterizing Sexual Health Concerns Among Female Adolescent and Young Adult Cancer Survivors	31

Name	Poster Title	Poster Number
Krueger, Danya	Perceived Racial Discrimination in Postpartum Care: A Confirmatory Factor Analysis of the Discrimination in Medical Settings Scale	13
La, Priscilla	Association of Sex with Mortality in Patients with Gram-Negative Bacterial Bloodstream Infections	24
Lewter, Kandi	What is Obstetrics and Gynecology?	20
Maddock, Katie	Characterizing Sexual Health Concerns Among Female Adolescent and Young Adult Cancer Survivors	31
Marbrey, Margeaux	Flavored E-Cigarettes Reduce Embryo to Placenta Weight Ratios and Elicit Differential Gene Expression of Growth, Invasion, and Antioxidant Response Pathways	5
Modlin, Emmie	Assessment of Iron Deficiency in Female Athletes	28
Orsolini, Morgan	Low-level Volatile Organic Compounds Disrupt Embryo Morphokinetics and Development in Murine Preimplantation Embryos	4
Reddy, Manasvi	Reproductive Health Services in Health Education: A Review of North Carolina University Websites	16
Rent, Sharla	Perinatal Palliative Care in Tanzania	9
San Roman, Adrianna	Molecular Mechanisms of Sex Differences in Human Biology	2
Saxena, Anushri	Neighborhood Characteristics of Crisis Pregnancy Centers in North Carolina	17
Schechter, Julia	Thinking Differently about Different Thinkers: Designing Patient-Centered Outcomes Research	29
Shan, Zoe	Transducing Force into Procoagulation: PIEZO1-TMEM16F Functional Coupling in Blood Lining Cells	6
Sims, Catherine	The Clinical Utility of Serum BAFF Levels in Pregnant Patients with SLE	7
Sinha, Annika	The Association Between Nocturia and Major Cardiovascular Events	22
Stalls, Juliann	Development of a Behavioral Intervention to Improve Fertility-Related Information Needs and Distress Among Female Adult Survivors of Childhood Cancer	32
Sutton, Kent	Septic Abortion Complicated by Native Tricuspid Valve Streptococcus Agalactiae Endocarditis in a 22-year-old Female	26
Udayashankar, Harita	Sex Differences in Genetic Expression of Specific Brain Proteins in Fetuses	3
Wilson, Andrea	The Role of N-terminal Cleavage of Trop2 in Tumor Progression and Therapeutic Resistance in Triple Negative Breast Cancer	33

Odd numbered posters are presented during the first session: 9:15 – 9:45 am

Even numbered posters are presented during the second session: 11:25 – 11:55 am

- 1 Biological Sex Affects Functional Variation Across the Genome to Alter Risk of Human Disease**
Jones, Angela
Molecular Genetics and Microbiology, Duke University
This work is about uncovering mechanisms of sex-biased gene expression and connecting genomic risk to disease to individual variants that impact sex-biased gene expression.
- 2 Molecular Mechanisms of Sex Differences in Human Biology**
San Roman, Adrianna
Molecular Genetics and Microbiology, Duke University
The difference in sex chromosomes between typical females (XX) and males (XY) is the largest source of genetic diversity in the human population. The overall goal of my new lab's research program is to define fundamental molecular mechanisms by which variation in sex chromosome copy number impacts human biology.
- 3 Sex Differences in Genetic Expression of Specific Brain Proteins in Fetuses**
Udayashankar, Harita
Obstetrics and Gynecology/Reproductive Sciences, Duke University
Studying potential sex differences in the genetic expression of specific proteins in the brain that may be implicated in disease using human fetal brain tissue (aged 94-109 days).
- 4 Low-level Volatile Organic Compounds Disrupt Embryo Morphokinetics and Development in Murine Preimplantation Embryos**
Orsolini, Morgan
OBGYN and Perinatal Psychiatry, Duke University
Looking at the effect of indoor laboratory air quality on the clinical outcomes of in vitro embryo development and IVF. Specifically, the effect of prominent laboratory volatile organic compounds (VOCs) are examined at low, clinically relevant levels.

- 5 Flavored E-Cigarettes Reduce Embryo to Placenta Weight Ratios and Elicit Differential Gene Expression of Growth, Invasion, and Antioxidant Response Pathways**
Marbrey, Margeaux
Obstetrics & Gynecology: Division of Reproductive Sciences, Duke University
Around 15% of pregnant women use electronic cigarettes as a perceived safer alternative to traditional cigarettes, but the safety of electronic cigarettes is not well understood. Our studies specifically examine how electronic cigarettes can impact the development of the placenta and activation of cell signaling pathways at mid-gestation, providing important understanding to the public health regarding the safety of these devices.
- 6 Transducing Force into Procoagulation: PIEZO1-TMEM16F Functional Coupling in Blood Lining Cells**
Shan, Zoe
Biochemistry, Duke University
This research investigates the functional coupling of mechanosensitive calcium-permeable channel, PIEZO1, and TMEM16F, a calcium-activated lipid scramblase and ion channel, in placental trophoblasts and endothelial cells, driving phosphatidylserine exposure and hypercoagulability. It highlights potential therapeutic strategies using PIEZO1 inhibitor and TMEM16F inhibitor to reduce coagulation, offering insights into managing pregnancy-related thrombosis.
- 7 The Clinical Utility of Serum BAFF Levels in Pregnant Patients with SLE**
Sims, Catherine
Rheumatology, Duke University
Translational research: involves utilizing serum biomarkers to stratify women with SLE who may be higher risk for pregnancy complications (preeclampsia, preterm delivery)
- 8 Effects of PFBS on Mitochondrial Function in Human Trophoblasts**
Happel, Julia
Division of Reproductive Sciences, Duke University
This project investigates the underlying mechanisms by which PFBS disrupts placental development and function by examining the effects of PFBS exposure on mitochondrial function in human placental stem cells.
- 9 Perinatal Palliative Care in Tanzania**
Rent, Sharla
Pediatrics/Neonatology, Duke University
Mixed methods study looking at perinatal palliative care, maternal psychosocial support needs, and areas for care growth in Tanzania.
- 10 Irritability: An Underrecognized Mood State in the Perinatal Period**
Avila, Bianca
Psychiatry, UNC Chapel Hill
Irritability is underrecognized and rarely assessed despite being a common experience in the perinatal period. This poster will present preliminary data to describe participants experience of irritability in our sample.

11 What is the Content of the Information, Support, and Resources Related to Breastfeeding Provided to Black Birthing Parents in the Inpatient Setting?

Fatima, Hiba

Maternal and Child Health, UNC Gillings School of Public Health, UNC Chapel Hill

This poster will illustrate the information, support, and resources related to breastfeeding received by Black birthing parents while they are in the inpatient setting, including labor and delivery along with the postnatal unit, after childbirth and leading up to being discharged. Additionally, the content of the information exchange (e.g. breastfeeding initiation/duration, resources to enhance breastfeeding experience, peer support, community resources, pumping practices, strategies to bond with infant during feeding, etc.) will also be mapped

12 While You were Sleeping: Exploring Maternal Infant Sleep during the Last 24 Hours Before Hospital Discharge

Hepler, Bonnie

School of Nursing, Duke University

This study used naturalistic videos to explore maternal sleep during the final 24 hours of postpartum hospitalization. We identified the quantity of maternal sleep, sleep patterns and antecedents of maternal wakings to inform practices that could promote sleep and recovery postpartum during postpartum hospitalizations.

13 Perceived Racial Discrimination in Postpartum Care: A Confirmatory Factor Analysis of the Discrimination in Medical Settings Scale

Krueger, Danya

School of Social Work, UNC Chapel Hill

Anti-racist, person-centered, equitable maternal health care, with a focus on psychometric tools measuring perceived racial/ethnic discrimination in postpartum care. Our work evaluated the 7-item Discrimination in Medical Settings (DMS) scale deployed in a postpartum setting.

14 Improving Postpartum Care for Maternal and Infant Health: Analyzing Interprofessional Communication in Inpatient Settings

Giordano, Hayley

School of Medicine, UNC Chapel Hill

Inpatient postpartum care is vital for the health and well-being of mothers and newborns, involving a range of clinical, educational, and emotional support activities. This study analyzes interprofessional communication and team interactions in postpartum rooms to identify opportunities for improving workflows and enhancing maternal and infant outcomes.

15 Developmental Effects of Maternal Chronic Stress During Lactation

Josefson, Chloe

Biological & Biomedical Sciences, NC Central University

Lactation coincides with a critical window of early life development during which the neonatal phenotype remains malleable, allowing for considerable maternal regulation of offspring development beyond gestation. Here, we looked at offspring growth, development, and phenotype following maternal exposure to a chronic stressor during lactation

- 16 Reproductive Health Services in Higher Education: A Review of North Carolina University Websites**
Reddy, Manasvi
Obstetrics and Gynecology, Duke University
We conducted a standardized content analysis to explore reproductive health services listed on North Carolina 4- year Universities' websites. Out of the 55 institutions analyzed, 11 had no information on primary care services, 14 student health websites had no information on any predefined reproductive health terms, and only 3 listed abortion in any context. These data highlight the lack of access to information on reproductive health care services across NC universities.
- 17 Neighborhood Characteristics of Crisis Pregnancy Centers in North Carolina**
Saxena, Anushri
Duke University
This research is related to reproductive health and autonomy. It is an analysis of the average poverty level, education level, racial composition, and percent of single parents in North Carolina census tracts that contain crisis pregnancy centers, or anti-abortion fake clinics.
- 18 Using Standardized Content Analysis and Student Health Websites as Models to Improve Information Access at North Carolina Universities**
Hasan, Sarah
Bass Connections, Duke University
We conducted a standardized content analysis to explore reproductive health services listed on student health websites of North Carolina Universities. When analyzing the 55 institutions, we found that websites widely varied in ease of navigation, wording of services, and detail provided regarding reproductive health services. Here we use some of these websites as models to influence universities to improve student health websites and increase information access for North Carolina college student.
- 19 Assessing Contraceptive Use in Virginia Using AI-Payer Claims Data**
Kmitch, Laura
Population Health Sciences, Duke University
Contraceptive use.
- 20 What is Obstetrics and Gynecology?**
Lewter, Kandi
Early Childhood Education, NC Central University
Giving students of lower education status, a chance to learn and have hands on experience!
- 21 Exosomes for Atrophy: Acellular Regenerative Biologic for Estrogen-Deprivation Vaginal Atrophy in a Porcine Model**
Aitelli, Audrey
School of Medicine, Duke University
Our objective is to evaluate the efficacy of a regenerative biologic, exosomes, in a porcine model for possible translation as a clinical treatment for vaginal atrophy.

- 22 The Association between Nocturia and Major Cardiovascular Events**
Sinha, Annika
Urogynecology, Duke University
Cardiology, Lower Urinary Tract Symptoms, Nocturia
- 23 "Lnc"ing XIST to Female Sex-Biased Autoimmunity**
Dou, Diana
Integrative Immunobiology, Duke University
Contribution of Xist, the long noncoding RNA required for X-inactivation in XX individuals, to the female preponderance for developing autoimmunity. Keywords: noncoding genomic regulation, Xist, lncRNA, autoantigens, autoimmunity, SLE, SSc.
- 24 Association of Sex with Mortality in Patients with Gram-Negative Bacterial Bloodstream Infections**
La, Priscilla
Infectious Diseases, Duke University
Infectious diseases
- 25 Impact of Coronavirus Disease-2019 on Influenza and Tdap Vaccination Rates in Pregnant Patients**
Freedy, Katie
School of Medicine, Duke University
In this study, we sought to describe impact of the COVID-19 pandemic on influenza and Tdap vaccination rates in pregnant patients. We found that rates of influenza, Tdap, and dual vaccination in pregnancy dropped significantly during the COVID-19 pandemic.
- 26 Septic Abortion Complicated by Native Tricuspid Valve Streptococcus Agalactiae Endocarditis in a 22-year-old Female**
Sutton, Kent
Medicine and Pediatrics, Duke University
Case Report / Clinical Vignette / Peripartum Cardiology / Infectious Disease
- 27 The Menstrual Cycle as an Indicator for Health: Estimating Variability of Menstrual Cycle Length in Active Women**
Brantner, Carly
Department of Biostatistics & Bioinformatics; DCRI, Duke University
The goal of this work is to estimate the within- and between-individual variability of menstrual cycle lengths in physically active women. I will outline the planned study that will use self-reported app data of cycle lengths to estimate variation, identify and impute missing cycles, and explore how cycle length variability depends upon individual-level characteristics.
- 28 Assessment of Iron Deficiency in Female Athletes**
Modlin, Emmie
Biological and Biomedical Sciences, NC Central University
Assessing current literature on iron deficiency in female athletes. Focus on understanding the role of iron in the body with special considerations for exercise, energy availability, and menstrual status on deficiency.

- 29 Thinking Differently about Different Thinkers: Designing Patient-Centered Outcomes Research (PCOR) for Girls and Women with ADHD**
Schechter, Julia
Psychiatry & Behavioral Sciences, Duke University
To meet the needs of girls and women with ADHD—and mitigate the significant risk factors they face when undiagnosed and/or untreated— patient-centered outcomes research (PCOR) is needed to understand the lived experiences of this population. This community-driven project resulted in the largest patient-informed research agenda focused specifically on ADHD girls/women to-date, and identified the top priority for future research as the intersection of hormones and ADHD symptoms.
- 30 Diagnostic Assessments for Patients Presenting with Abnormal Uterine Bleeding**
Green, Michael
Obstetrics & Gynecology: Division of Reproductive Sciences, Duke University
Using electronic health record data from Duke, UNC, and the Virginia All-Payor Claims Database we identify patients seeking treatment for abnormal uterine bleeding and present descriptive statistics related to who receives recommended diagnostic tests such as a complete blood count and a transvaginal ultrasound.
- 31 Characterizing Sexual Health Concerns Among Female Adolescent and Young Adult Cancer Survivors**
Adillon, Louise; Kancharla, Navya; Maddock, Katie
Psychiatry and Behavioral Sciences, Duke University
Our poster will present self-reported data from a sample of female adolescent and young adult (15-35 years old) cancer survivors on sexual health concerns and experiences of sexual interest, satisfaction, and function.
- 32 Development of a Behavioral Intervention to Improve Fertility-Related Information Needs and Distress Among Female Adult Survivors of Childhood Cancer**
Stalls, Juliann
Psychiatry and Behavioral Sciences, Duke University
My poster will present qualitative and quantitative data used to inform the development of AYA SPARK, a behavioral intervention that aims to improve fertility-related information needs and fertility-related distress among female adult survivors of childhood cancer.
- 33 The Role of N-terminal Cleavage of Trop2 in Tumor Progression and Therapeutic Resistance in Triple Negative Breast Cancer**
Wilson, Andrea
Pathology, Duke University
Triple negative breast cancer (TNBC) is the most aggressive subtype of breast cancer, with limited therapeutics, but recent advancements have been made by the introduction of Trop2-targeting therapies, like Sacituzumab govitecan (SG). However, how posttranslational modifications, like N-terminal cleavage of Trop2 contributes to tumor progression and therapeutic resistance has not been previous examined.

Women's Health Symposium



Scientific Meeting on All Aspects of Women's Health and the Influence of Sex as a Biological Variable on Health Conditions

Friday, Feb. 21, 2025 • 8 a.m.-12:30 p.m. • Trent Semans Center Great Hall

D`YUgY`Wēa d`YhY`h Y`Yj Ui Ujcb

https://duke.qualtrics.com/jfe/form/SV_7WjHJmqHyRKqC5U?Q_CHL=qr

