**Cardiovascular Institute**

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| **Faculty** | **Title** | **Research Focus** |
| **Anesthesiology, Perioperative & Pain Medicine** |
|  | Sean Mackey | Professor | Sex/gender differences for the effect of opioids on baseline brain structure |
| **Biochemistry** |
|  | Pehr Harbury | Associate Professor | Defining the molecular pathways responsible for female-biased airway disregulation in chronic asthma |
| **Bioengineering** |
|  | Russ Altman | Professor | Examination of sex-differential effects in normal tissue and drug response expression data*PI 2018 WHSDM seed grant:* Developing a robust baseline gene expression dataset for menstrual cycle variability in blood |
|  | Jennifer Cochran | Professor | Engineered a protein that interferes with breast and ovarian cancer signaling |
|  | Alison Marsden | Associate Professor | Fetal/developmental congenital heart disease |
|  | Stephen Quake | Professor | Non-invasive diagnosis of fetal aneuploidy in maternal blood; Single cell RNA-seq to examine changes in the human endometrium throughout the menstrual cycle |
| **Cardiothoracic Surgery** |
|  | Leah Backhus | Associate Professor | Exploration of hormonal status and hormone replacement therapy on the development and outcomes of lung cancer in women |
|  | Michael Fischbein | Associate Professor | *PI 2019 WHSDM seed grant:* Impact of sex hormones on thoracic aortic aneurysm formation of Marfan syndrome |
|  | Ngan Huang | Assistant Professor | Effects of sex hormones on endothelial cell phenotype and dysfunction towards developing new approaches to angiogenesis in cardiovascular tissues |
|  | Joseph Woo | Professor | *Co-I 2018 WHSDM seed grant:* Sex-dependent contribution of endothelial progenitor cells to fibrosis in calcific aortic valve disease |
| **Chemical & Systems Biology** |
|  | Daria Mochly-Rosen | Professor | Reducing reactive aldehyde levels to treat endometriosis-associated pain |
|  | Mary Teruel | Assistant Professor | Molecular mechanisms underlying insulin resistance, diabetes, and obesity |
| **Dermatology** |
|  | Kevin Wang | Assistant Professor | Sex differences in melanoma survival*PI 2015 WHSDM seed grant:* Integrated proteomic and transcriptomic analysis of X and Y sperm |
| **Genetics** |
|  | Anne Brunet | Professor | Aging in males and females |
|  | Carlos Bustamante | Professor | Y chromosome evolution; Population genetics |
|  | Billy Li | Associate Professor | RNA editing sex specific |
|  | Mike Snyder | Professor | Male & female metabolomic, methyome, proteome, genome*Co-I 2018 WHSDM seed grant:* Modeling endothelial dysfunction in preeclampsia using patient-specific iPSCs; *Co-I 2014 seed grant:* Sex differences in adipocyte responses to experimentally-induced weight gain |
|  | Doug Vollrath | Associate Professor | Retinal biology |
| **Health Research and Policy** |
|  | Mark Hlatky | Professor | Women's cardiovascular health*Co-I 2018 WHSDM seed grant:* Plasma proteomic and metabolomic biomarkers associated with breastfeeding and maternal cardiovascular health: a pilot study; *Co-I 2017 seed grant:* The impact of eye disease and visual function on women’s health: defining a Women’s Health Initiative (WHI) population for study |
|  | Julia Simard | Assistant Professor | Maternal and fetal outcomes in systemic lupus pregnancy*PI 2019 WHSDM seed grant:* Modeling structural causes of sex differences |
| **Medicine** |
|  | Themistocles (Tim) Assimes | Associate Professor | *PI 2018 WHSDM seed grant:* Plasma proteomic and metabolomic biomarkers associated with breastfeeding and maternal cardiovascular health: a pilot study*Co-I 2018 WHSDM seed grant:* X-ploring the sex specific genetic architecture of late-onset Alzheimer’s disease |
|  | William Fearon | Professor | *PI 2015 WHSDM seed grant:* Sex differences in ventricular adaptation and recovery in patients with aortic stenosis undergoing transcatheter aortic valve replacement |
|  | Christopher Gardner | Professor | Weight loss diets in women |
|  | Joshua Knowles | Assistant Professor | *Co-I 2017 WHSDM seed grant:* Sex differences in insulin resistance: probing the contribution of hormones to the endothelial dysfunction using stem cell-derived endothelial cell |
|  | Patricia Nguyen | Assistant Professor | *PI 2015 WHSDM seed grant:* Global gene expression profiling of the effects of estrogen and testosterone on human cardiomyoctes derived from induced pluripotent stem cells;*Co-I 2017 WHSDM seed grant:* Sex differences in insulin resistance: probing the contribution of hormones to the endothelial dysfunction using stem cell-derived endothelial cell |
|  | Marco Perez | Associate Professor | Studies of atrial fibrillation in Women's Health Initiative |
|  | Nazish Sayed | Instructor | *PI 2018 WHSDM seed grant:* Modeling endothelial dysfunction in preeclampsia using patient-specific iPSCs |
|  | Marcia Stefanick | Professor | Sex and gender differences in medicine; Women’s health across the lifespan |
|  | Jennifer A. Tremmel | Assistant Professor | *Co-I 2015 WHSDM seed grant:* Sex differences in stroke prevention therapy in atrial fibrillation |
|  | Philip Tsao | Professor | *PI 2019 WHSDM seed grant:* Sex differences in e-cigarette-induced aortic aneurysm *PI 2016 WHSDM seed grant:* Sex differences in macrophage activation: role of miR-204 |
|  | Minang (Mintu) Turakhia | Associate Professor | *PI 2015 WHSDM seed grant:* Sex differences in stroke prevention therapy in atrial fibrillation |
|  | PJ Utz | Professor | *PI 2017 WHSDM seed grant:* Profiling sex differences in the healthy human immune system through transcriptomics |
|  | Joseph C. Wu | Professor | *PI 2018 WHSDM seed grant:* Sex-dependent contribution of endothelial progenitor cells to fibrosis in calcific aortic valve disease*Co-I 2019 WHSDM seed grant:* Impact of sex hormones on thoracic aortic aneurysm formation of Marfan syndrome; *Co-I 2018 seed grant:* Modeling endothelial dysfunction in preeclampsia using patient-specific iPSCs; *Co-I 2015 seed grant:* Sex differences in ventricular adaptation and recovery in patients with aortic stenosis undergoing transcatheter aortic valve replacement; *Co-I 2015 seed grant:* Global gene expression profiling of the effects of estrogen and testosterone on human cardiomyoctes derived from induced pluripotent stem cells |
|  | Sean M. Wu | Associate Professor | Estrogen and viral cardiomyopathy |
|  | Phillip C. Yang | Associate Professor | Male vs. female human fetal amniotic mesenchymal stem cells: immunoprivilege, cardiac differentiation, and regenerative capability  |
| **Microbiology & Immunology** |
|  | Mark Davis | Professor | Systems analysis of sex differences reveals an immunosuppressive role for testosterone in the response to influenza vaccination |
|  | Holden Maecker | Professor | Sex differences in the human immune monitoring center |
| **Obstetrics & Gynecology** |
|  | Vittorio Sebastiano | Assistant Professor | Stem Cell Biology, Early Human Development Fate Determination, iPSC derivations translational opportunities*PI 2018 WHSDM seed grant:* Uncovering potential sex differences in male and female human primordial germ cells |
| **Pathology** |
|  | Stephen Montgomery | Associate Professor | *Co-I 2017 WHSDM seed grant:* Sex differences in the neural correlates of ADHD: the role of the X-chromosome |
|  | Marius Wernig | Professor | Breast cancer - stem cells and reprogramming into the neural lineage  |
| **Pediatrics** |
|  | Paul H. Wise | Professor | Interaction of genetics and the environment as these factors influence child and maternal health |
| **Surgery** |
|  | Geoffrey Gurtner | Professor | Breast reconstruction surgery |
|  | Michael Longaker | Professor | Cellular and molecular biology of extracellular matrix with specific applications to the differences between fetal and post-natal wound healing |
|  | Ronald L. Dalman | Professor | *Co-I 2019 WHSDM seed grant:* Sex differences in E-cigarette-induced aortic aneurysm |
|  | Nicholas Leeper | Associate Professor | Sex differences in macrophage activation: Role of miR-204 |