Objective of FOA to focus on integrative sex and gender considerations

For ORWH to issue a FOA to fund investigator-initiated, interdisciplinary research awards that focus exclusively on the application of consideration of sex and gender and their interaction on health and disease
Landmark developments pave the way for next steps

- 2015 - Workshop - *Improving the Health of Women in the United States* ([https://doi.org/10.17226/23441](https://doi.org/10.17226/23441))
- 2016 – SABV Policy went into effect (NOT-OD-15-102) part of the initiative to enhance Rigor and Reproducibility (NOT-OD-15-103)
- 2016 - 21st Century Cures Act
- 2018-2023 –Trans NIH Strategic Plan for Women’s Health Research
- Increased recognition and data on the importance of sex and gender and their interaction in health and disease
Building on current ORWH programs to advance the integration of sex and gender considerations.
Early ORWH-led research grant FOA to advance novel science sets the stage

ORWH R21 (PAS-10-226)
Advancing Novel Science in Women’s Health Research (ANSWHR)

Well received by 24 ICs
FY11-FY14
88 Awards
Total Direct Cost > $11M

ANSWHR EXAMPLES:

<table>
<thead>
<tr>
<th>Grant Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AI101275-01</td>
<td>Mechanisms underlying sex differences in the pathogenesis of inflammatory bowel disease</td>
</tr>
<tr>
<td>AI096058-02</td>
<td>The gender specific prevalence of multiple strain genital HSV-2 infection</td>
</tr>
<tr>
<td>AR061690-02</td>
<td>Sex-specific movement differences in young adults with and without hip pain</td>
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<tr>
<td>GM107882-02</td>
<td>Macrophage Phenotype as a Determinant of Outcome in Pelvic Organ Prolapse Repair</td>
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<tr>
<td>HD069962-01</td>
<td>Tailored Outcomes for Female Urinary Incontinence</td>
</tr>
<tr>
<td>HL093631-01A1</td>
<td>Sex Differences in Molecular Heterogeneity of Cardiac Repolarization</td>
</tr>
<tr>
<td>HL109527-01</td>
<td>Cardiovascular Disease Biomarkers and Mediation of Hormone Therapy Effects</td>
</tr>
<tr>
<td>MH098006-02</td>
<td>Sex Specific Neuroanatomical Markers of Vulnerability in Animal Model Of PTSD</td>
</tr>
</tbody>
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Sex interacts with gender to influence health and disease


Sex and Gender influences in many clinical entities.

- Cardiology
- Rheumatology
- Immunology
- Neurology
- Oncology
- Endocrinology
- Hematology

*Bayer, E.A. and Hobert, O.; “Past experience shapes sexually dimorphic neuronal wiring through monoaminergic signaling”, August 27, 2018, Nature; DOI: 10.1038/s41586-018-0452-0*
Examples of broad areas for sex & gender integration in the context of disease-specific hypotheses

• Discover basic biological differences, structural and functional, between females and males.
• Investigate the influence of sex and gender and their interactions on disease prevention, presentation, management, and outcomes.
• Identify the immediate, mid-, and long-term effects of exposures on health and disease outcomes.
• Promote research that explores the influence of sex and gender on the connection between the mind and body and its impact on health and disease.
• Expand research on female-specific conditions and diseases, including reproductive stages, and maternal and gynecologic health.
Discussion & Comments

Concept:
ORWH FOA to fund investigator-initiated, interdisciplinary research awards that focus exclusively on the application of consideration of sex and gender and their interaction on health and disease
We seek your input and comments!

Thank you!