

**Johns Hopkins Specialized Center of Research Excellence in Sex Differences and
The Foundation for Gender-Specific Medicine
Request for Applications (RFA) for Seed Grants
for Research on Sex/Gender Differences in Immunology**

Eligible: Johns Hopkins University Junior Faculty from any Johns Hopkins School (Instructor or Assistant Professor or Assistant Scientist Level)

Budget: Up to \$50,000 in direct costs. Faculty support up to 10%.

Grant Period: 12 months

Application deadline: March 18, 2019 at 11:59 PM

Apply online at: <https://ictrweb.johnshopkins.edu/ictr/?applyWHRG>

I. PROGRAM DESCRIPTION

SEED GRANTS for biological/medical/epidemiological/health services/health sciences research on sex and gender differences aim to promote basic, translational, clinical, population health and social science research on sex and gender differences in the immune system and its function and to facilitate the research careers of junior faculty on these topics across Johns Hopkins University.

The Johns Hopkins Specialized Center for Research Excellence (SCORE) in Sex and Age Differences in Immunity to Influenza (SADII) in collaboration with the Foundation for Gender-Specific Medicine plans to fund 2-3 seed grants of \$50,000 each to enable junior faculty to collect pilot data, conduct feasibility studies, conduct health sciences research and/or demonstrate interdisciplinary collaborations that would enhance applications for federal funding. Areas of research must broadly involve the immune system and could include, but are not limited to, aging, allergy, asthma, cancer, inflammatory diseases of diverse tissues and health conditions, autoimmunity, intersectionality, infectious diseases, pregnancy, and vaccinology. These can be studies involving basic biomedical research, clinical research, epidemiological analyses (including secondary data analyses), health services or social sciences research.

Recipients of the SADII SCORE seed awards will be required to present their SADII SCORE funded research at the annual Johns Hopkins Center for Women's Health, Sex, and Gender Research symposium. Efforts will be made to ensure diversity in the recipients of seed awards, with consideration of supporting women, underrepresented minorities, and individuals with less traditional career paths.

ELIGIBILITY

The primary aims of this program are to stimulate research in sex/gender differences and to foster interdisciplinary research collaborations:

- Principal Investigator (PI) must be an Instructor or Assistant Scientist/Assistant Professor (no more than 6 years post training) from any Johns Hopkins School.
- Collaborations involving collaborations between two or more schools will be favored.
- Eligible submissions cannot exceed 12 months from the project start date. If awarded, the start date of the 12 month grant will be provided in the award notification letter.
- All proposals that involve human participants must be approved by or under review of an IRB to receive funding. Investigators should be aware of the impact of these and other necessary administrative or regulatory reviews on project timeline and feasibility.

II. POTENTIAL RESEARCH TOPICS

Appropriate topics/studies include, but are not limited to, those listed below:

- Analyses of immune cells from males and females for cellular responses;
- Evaluation of the genetic contributions to sex differences in immune function;
- Analyses of the hormonal contributions to sex differences in immune responses;
- The impact of pregnancy on immune responses, susceptibility, and outcomes from infectious, autoimmune, or inflammatory diseases;
- Studies of sex differences in immune function using a systems biology approaches (e.g. "omics");
- Studies considering the cause of sex differences in cancer diagnosis and/or treatment that have immunological dependent measures (e.g., efficacy of immunotherapies);
- Studies that add sex parameters to experiments using animal models, *in vitro* approaches, or computational models of infectious or inflammatory diseases;
- Studies of sex differences in embryonic and early development, and in epigenetic changes and processes related to immune function;

- Studies of sex-specific biomarkers for disease risk, prognosis, or benefit of treatment in relation to infectious, autoimmune, or inflammatory diseases;
- Studies that add data collection or new analyses to clinical trials or cohort studies to examine the role of sex differences in infectious, autoimmune or inflammatory diseases, or examine the role of inflammation/the immune system in other diseases or conditions (e.g. sex differences in the role of inflammation in cardiovascular disease);
- Studies of sex differences in response to preventive or therapeutic interventions for diseases involving inflammation and/or the immune system, or in inflammatory/immune system responses within other diseases or conditions (e.g. sex-differential response to therapy in diabetes treatments related to inflammatory markers); or
- Studies that evaluate the interplay between gender (social construct) and sex (biological construct) in the context of diverse diseases associated with the immune system (e.g. autoimmune conditions); or
- Studies that evaluate the intersection between gender and other social stratifiers (e.g. age, race, disability, professional cadre) in the context of diverse diseases associated with the immune system and how this leads to different experiences of vulnerability and marginalization; or
- Studies that apply a “gender lens” to explore differences in the prevention and control of diverse diseases associated with the immune system, including exposures (e.g. to pathogens), vulnerability to illness, response to illness, and/or treatment received.

III. FUNDING AMOUNTS AND REQUIREMENTS

We will award 2 Seed grants for \$50,000 (total amount) each. Requests must be no more than \$50,000 in total costs. Requests exceeding \$50,000 will not be reviewed. Funds may be used for salary support (up to 10% of the NIH salary cap) as well as for support for undergraduate or graduate students.

Funds may also be used for travel essential to the conduct of research, but not for travel to established meetings or conferences.

Awards will be funded for 12 months.

An end of the year progress report will be submitted to the SADII SCORE and the Foundation for Gender-Specific Medicine.

Awardees will be required to present their research at the Johns Hopkins Center for Women’s Health, Sex and Gender Research Annual Symposium in the Spring 2020.

IV. APPLICATION PROCESS

Applications are due on Monday, March 18, 2019 by 11:59 pm EST

Grants must be submitted through the ICTR Connection Request form, available at <https://ictrweb.johnshopkins.edu/ictr/?applyWHRG>
A JHED-ID is required to submit an application.

V. INSTRUCTIONS FOR COMPLETING THE APPLICATION

Presentation and Formatting:

The research plan must be no longer than three single-spaced pages (including figures) in a font no smaller than 11 points, with margins of at least 0.5 inches on all sides. The name of the PI should appear in the top right-hand corner of each page. Page numbers should appear on the bottom right-hand corner of each page.

Materials required to be submitted via the online application include:

- Project Title
- Summary/Abstract: Briefly describe the project focus, its significance, expected outcomes, your partnerships, proposed next steps. (up to 500 words)
- A biographical sketch (NIH-format) for the PI.
<http://grants.nih.gov/grants/funding/424>
- A brief identification and biographical description and role of all study team personnel
- Letters of Support (LOS), if applicable (up to 5 total pages).
- A comprehensive, itemized 12 month budget. Budgets must be submitted utilizing the NIH PHS 398 form - <https://grants.nih.gov/grants/funding/phs398/fp4.pdf>
- Budget Justification. Include an explanation of any other funding sources that will be used to cover costs, as well as those not covered by the seed grant.
- Research plan (3-page limit, content and format described below in “Research Plan Requirements”)
- Reference list of up to 30 references – not included in the 3-page limit.

The Research Plan must include the following components:

- **Background (including Preliminary Results, if available), and Significance:** Significance of gaining insight into sex differences and/or the role of gender on the biology of the research focus, and/or on women's health, related to the immune system/inflammation.
- **Specific Aims:** Establish the overall purpose of the study and define the specific study objectives.
- **Research Design:** Method description should be sufficiently detailed to convince reviewers of feasibility and validity. Details should focus on the novel aspects of the project rather than published or standard techniques. Statistical approaches to data analysis should be outlined where applicable.

The following section needs to be included in the Research Plan document but is not included in the 3-page limit:

- **12 month Project Timeline:** This summary may be presented as a chart, a paragraph, or incorporated throughout the experimental design. Milestones should highlight specific goals to be attained and, when appropriate, hypotheses to be tested.

VI. REVIEW CRITERIA

Applications will be evaluated and scored using the following criteria:

1. Scientific Approach: Rigor and technical merit
2. Investigator Collaboration: Quality and feasibility of academic partner involvement and mentorship
3. Significance: Impact on health knowledge, practice, outcome or policy
4. Sustainability: Likelihood that the project will promote continued collaboration and external funding.
5. Feasibility of project completion within a 12-month period
6. Budget: Cost effectiveness and availability of support/matching funds

VII. FUNDING DECISIONS

Based on review committee scoring, funding decisions will be finalized in May 2019. All applicants will be notified of the review committee's funding decision. **The start and end date of the 12-month grant will be included in the notification of the funding decision.**

VIII. RFA TIMELINE

RFA Release:	January 2019
Proposal Deadline:	March 18, 2019
Funding Decisions:	May, 2019
Presentation:	TBD, Spring 2020

IX. CONTACTS

Questions about the Seed grant Application should be directed to Dr. Sabra Klein at the School of Public Health (sklein2@jhu.edu) or Dr. Wendy Bennett at the School of Medicine (wendy.bennett@jhmi.edu) for the SADII SCORE at Johns Hopkins.