

# NIH R15 ACADEMIC RESEARCH ENHANCEMENT AWARD (AREA)

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## AWARD OVERVIEW AND RECENT AWARDEES

**Application Deadline:** Standard dates apply, by 5:00 PM local time of applicant organization. October 25, 2018 (Cycle III) is the next one.

**Project Start Date:** July 1, 2019

**Budget:** Application budgets are limited to less than \$300,000 in total direct costs (indirect costs are not included in this limit).

**R15 Budget History:** In FY 2017, awards for R15 activity codes ranged from \$81,706 to \$501,000 in total with an average award at approximately \$419k for the project period. Below are four funded R15 projects awarded in FY 2017.

Title	Institution/Awardee	FY 2017 Award Amount
THE EVOLUTION AND GENETICS OF A COMPLEX FUNGAL VIRULENCE TRAIT	COLLEGE OF WILLIAM & MARY	\$307,000
TAXILIN ALPHA REGULATES DNA-MEDIATED AND INTERFERON-DEPENDENT INNATE IMMUNITY	OKLAHOMA STATE UNIVERSITY STILLWATER	\$431,815
DYNAMICS OF THE ACTIVITY OF ANTIMICROBIAL PEPTIDES AT THE POPULATION AND THE SINGLE-CELL LEVELS	CALIFORNIA STATE UNIVERSITY NORTHRIDGE	\$435,000
BEHAVIORAL AND PHYSIOLOGICAL RESPONSES TO ORAL FEEDING IN INFANTS WITH COMPLEX CONGENITAL HEART DISEASE	OHIO STATE UNIVERSITY	\$489,807

**Project Period:** The total project period is up to 3 years.

**Summary:** The purpose of the Academic Research Enhancement Award (AREA) program is to stimulate research in educational institutions that provide baccalaureate or advanced degrees for a significant number of the Nation's research scientists, but that have not been major

recipients of NIH support. AREA grants create opportunities for scientists and institutions otherwise unlikely to participate extensively in NIH research programs to contribute to the Nation's biomedical and behavioral research effort. AREA grants are intended to support small-scale research projects proposed by faculty members of eligible, domestic institutions, to expose undergraduate (preferred) and/or graduate students to meritorious research projects, and to strengthen the research environment of the applicant institution. [PA-18-504](#) only accepts applications that do not propose clinical trials. Several ICs accept applications that propose low risk clinical trials (those that do not require FDA oversight, do not intend to formally establish efficacy, and have low risks to potentially cause physical or psychological harm) under [PA-18-343](#).

## PROPOSAL DEVELOPMENT

**Application Instructions:** It is critical that applicants follow the Research (R) Instructions in the [SF424 \(R&R\) Application Guide](#) except where instructed to do otherwise (in the PAR or in a Notice from the [NIH Guide for Grants and Contracts](#)). Conformance to all requirements (both in the Application Guide and the FOA) is required and strictly enforced. Applicants must read and follow all application instructions in the Application Guide as well as any program-specific instructions noted in Section IV of the [PAR](#). When the program-specific instructions deviate from those in the Application Guide, follow the program-specific instructions. **Applications that do not comply with these instructions may be delayed or not accepted for review.**

### Proposal Formatting:

**Font size:** Must be 11 points or larger. Smaller text in figures, graphs, diagrams and charts is acceptable, if it is legible when the page is viewed at 100%.

**Font type:** Recommended styles include Arial, Helvetica, Palatino Linotype, Georgia.

**Text color:** No restriction. Though not required, black or other high-contrast text colors are recommended since they print well and are legible to the largest audience.

**Type density:** Must be no more than 15 characters per linear inch (including characters and spaces).

**Line spacing:** Must be no more than six lines per vertical inch.

**Header/footer:** Clear of any information, including page numbers.

**Margins:** At least one-half inch margins.

### Condensed Proposal Checklist:

Component	Complete
SF 424 R&R Form	
PHS 398 Cover Page Supplement	
R&R Other Project Information (as applicable)	
<i>Project Abstract/Summary</i>	
<i>Project Narrative</i>	
<i>Bibliography and References Cited</i>	
<i>Facilities and Other Resources</i>	

<i>Equipment</i>	
<b>Project/Performance Site Locations</b>	
<b>R&amp;R Senior/Key Personnel Profile</b>	
<i>Biographical Sketches for all Key Personnel</i>	
<b>R&amp;R Budget</b>	
<i>Budget Justification</i>	
<b>R&amp;R Subaward Budget</b>	
<b>PHS 398 Research Plan</b>	
<i>Specific Aims</i>	
<i>Research Strategy – 12 pages</i>	
<i>Multiple PD/PI Leadership Plan (If applicable)</i>	
<i>Consortium Contractual Arrangements (if applicable)</i>	
<i>Letters of Support</i>	
<i>Resource Sharing Plan</i>	
<i>Appendix</i>	
<b>PHS Human Subjects and Clinical Trials Information</b>	
<i>Human Subjects Section 3 Protection and Monitoring Plans</i>	
<i>Human Subjects Section 5 Other Clinical Trial-related Attachments</i>	
<b>Delayed Onset Study</b>	
<i>Justifications Attachment</i>	
<b>PHS Assignment Request Form</b>	

**Full Checklist:** The following checklist describes required components of the application. The SF 424 (R&R) Application should be used unless [PA-18-504](#) or [PA-18-343](#) is referenced with changes to the standard specifications.

<b>PROPOSAL SECTION</b>	<b>NOTES</b>
<b>SF 424 (R&amp;R) Form</b>	Download the application package from either ASSIST or Grants.gov and complete all sections of the SF 424 Application for Federal Assistance. It is used in all grant applications and collects information including the type of submission, applicant information, type of applicant, and proposed project dates.
<b>PHS 398 Cover Page Supplement</b>	The form is used for all grant applications (except fellowships) and collects information on human subjects, vertebrate animals, program income, human embryonic stem cells, inventions and patents, and changes of investigator/change of institution.
<b>Project / Performance Site Locations</b>	Since it is expected that the majority of the research will be directed by the PD(s)/PI(s) at the grantee institution, the primary performance site should be at the applicant institution/applicant component.
<b>R&amp;R Other Project Information</b>	This form is used for all grant applications and includes questions on the use of human subjects, vertebrate animals, and environmental impact. This form also has fields <b>to upload an abstract, project narrative, references, information on facilities, and equipment lists.</b>
<i>Project Abstract/Summary</i>	Not to exceed more than 30 lines of text – single-spaced using approved font. Should be informative to the scientifically literate reader.

<i>Project Narrative</i>	Three sentences. See SF424 R&R Instruction Guide. Using no more than two or three sentences, describe the relevance of this research to public health. In this section, use plain language that can be understood by a general, lay audience.
<i>Bibliography and References Cited</i>	The “Bibliography & References Cited” attachment should include any references cited in R.400 - PHS 398 Research Plan Form and in the R.500 - PHS Human Subjects and Clinical Trials Information form. When citing articles that fall under the Public Access Policy, were authored or co-authored by the applicant, and arose from NIH support, provide the NIH Manuscript Submission reference number (e.g. NIHMS97531) or the PubMed Central (PMC) reference number (e.g. PMCID234567) for each article. If the PMCID is not yet available because the Journal submits articles directly to PMC on behalf of their authors, then indicate <i>PMC Journal – In Process</i> . The NIH maintains a list of such journals. Citations that are not covered by the Public Access Policy, but are publicly available in a free, online format may include URLs or PubMed ID (PMID) number along with the reference. The references should be limited to relevant and current literature. While there is not a page limitation, it is important to be concise and to select only those literature references pertinent to the proposed research.
<i>Facilities and Other Resources</i>	<p>Describe how the scientific environment in which the research will be done contributes to the probability of success (e.g., institutional support, physical resources, and intellectual rapport). In describing the scientific environment in which the work will be done, discuss ways in which the proposed studies will benefit from unique features of the scientific environment or from unique subject populations or how studies will employ useful collaborative arrangements. If there are multiple performance sites, describe the resources available at each site.</p> <p>In addition, the following information is <u>required</u> for the R15 mechanism: (1) A profile of the students of the applicant institution/academic component and any information or estimate of the number who have obtained a baccalaureate degree and gone on to obtain an academic or professional doctoral degree in the health-related sciences during the last five years. (2) A description of the special characteristics of the institution/academic component that make it appropriate for an AREA grant, where the goals of the AREA program are to: (a) provide support for meritorious research; (b) strengthen the research environment of schools that have not been major recipients of NIH support; and (c) expose available undergraduate and/or graduate students in such environments to research. (3) Description of the likely impact of an AREA grant on the PD(s)/PI(s). (4) Description of the likely impact of an AREA grant on the research environment of the institution/academic component. (5) Although it is expected that the majority of the research will be directed by the PD(s)/PI(s) and conducted at the grantee institution, limited use of special facilities or equipment at another institution is permitted. For any proposed research sites other than the applicant institution, provide a brief description of the resources and access students will need and have to these resources. (6) If relevant, a statement of institutional support for the proposed research project (e.g., equipment, supplies, laboratory space, release time, matching funds, etc.).</p>
<i>Equipment (Optional)</i>	List major items of equipment already available for this project and, if appropriate, identify the equipment's location and pertinent capabilities.
<b>R&amp;R Senior/Key Personnel Profile</b>	All instructions in the SF 424 R&R Application Guide apply and must be followed. Be sure that each listed PD/PI, Co-PI, and Senior and Key Personnel member has registered with eRA Commons <u>at least</u> 2 weeks before the submission deadline.

<p><b>Biographical Sketches</b></p>	<p>Not to exceed 5 pages. Required for each PI, Co-PI and Senior/Key Personnel member and Other Significant Contributor.</p> <p>The PD(s)/PI(s) should include a summary of his or her previous and/or current experience supervising undergraduate and/or graduate students in research in the Personal Statement. The PD(s)/PI(s) should indicate which peer-reviewed publications or other research products involved undergraduate and/or graduate students under his or her supervision.</p> <p>Utilize <a href="#">SciENCv</a> to create your biosketch if you do not have one. Instructions for the preparation of your biosketch may be found <a href="#">here</a>. A blank biosketch template may be found <a href="#">here</a>.</p> <p>A sample biosketch may be viewed <a href="#">here</a>.</p>
<p><b>R&amp;R Budget Form</b></p>	<p>The total budget for all years of the proposed project must be requested in Budget Period 1. Do not complete Budget Periods 2 or 3 (not required and will not be accepted with the application). Applicants submitting an application with direct costs of ≤\$250,000 (total for all years, excluding consortium F&amp;A costs) must use the Modular Budget. Applicants submitting an application with direct costs of \$250,001-\$300,000 (total for all years, excluding consortium F&amp;A costs) must use the R&amp;R Budget.</p> <p>Detailed instructions in the <a href="#">PAR</a> Section IV and SF424 (R&amp;R) Application Guide must be followed.</p>
<p><b>R&amp;R Budget Justification</b></p>	<p>Use the Budget Justification to provide the additional information requested in each budget category identified above and any other information the applicant wishes to submit to support the budget request.</p> <p>If your application includes a sub-award/consortium budget, a separate Budget Justification must be submitted.</p> <p><i>Personnel Justification:</i> Since the primary objective of the AREA program is to expose students to meritorious research, PD(s)/PI(s) must include undergraduate students (preferably, if available from any academic company in the proposed research. Indicate aspects of the proposed research in which students will participate. If participating students have not yet been individually identified, the number and academic level of those to be involved should be provided. If there are any Collaborators or Consultants for the project, provide their names, organizational affiliations, and the services they will perform.</p>
<p><b>R&amp;R Subaward Budget</b></p>	<p>All instructions in the SF424 R&amp;R Application Guide apply and must be followed.</p>
<p><b>PHS 398 Research Plan Form</b></p>	<p>This form includes fields to upload several attachments, including the Specific Aims and Research Strategy. The Research Plan should include sufficient information needed for the evaluation of the project, independent of any other document (e.g. a previous application). Be specific and informative, and avoid redundancies. Follow all instructions provided in the <a href="#">PAR</a> for detailed information and the SF424 R&amp;R Application Guide.</p>
<p><b>1. Specific Aims</b></p>	<p>Not to exceed 1 page. State concisely the goals of the proposed research and summarize the expected outcome(s), including the impact that the results of the proposed research will have on the research field(s) involved. List succinctly the specific objective of the research proposed.</p>

<p><b>2. Research Strategy</b></p>	<p><u>12 pages</u>. Must include 3 sections (Significance, Innovation, and Approach) and address <a href="#">Scientific Premise</a>, <a href="#">Scientific Rigor</a>, and <a href="#">Biological Variables</a>.</p> <p>All instructions in the SF424 (R&amp;R) Application Guide must be followed, with the following additional instructions:</p> <p>Describe how undergraduate and/or graduate students will be exposed to and supervised conducting hands-on research. Describe how students will participate in research activities such as planning, execution and/or analysis of research. Formal training plans (e.g., non-research activities, didactic training, seminars) <u>should not</u> be provided. A sound rationale should be offered as to why the approach and the research team, including undergraduate and/or graduate students, are appropriate to accomplish the specific aims and to make an important scientific contribution.</p>
<p><b>Progress Report Publication List</b></p>	<p>Only required if the type of application is a renewal. See SF424 R&amp;R Application Guide for format.</p>
<p><b>Multiple PD/PI Leadership Plan (If applicable)</b></p>	<p>Any applicant who designates multiple PD/PIs must include a Multiple PD/PI Leadership Plan. All such individuals must be assigned the PD/PI role on Senior/Key Profile (Expanded) Form, even those at organizations other than the applicant organization. This policy does not apply for traditional Co-Is/Co-PIs. Do not submit a Multiple PD/PI Leadership Plan if not submitting a multiple PD/PI application.</p>
<p><b>Consortium Contractual Arrangements (if applicable)</b></p>	<p>Explain the programmatic, fiscal, and administrative arrangements to be made between the applicant organization and the consortium organization(s). If consortium/contractual activities represent a significant portion of the overall project, explain why the applicant organization, rather than the ultimate performer of the activities, should be the grantee.</p>
<p><b>Letters of Support</b></p>	<p>Attach a single PDF file of all letters of support. Letters should stipulate expectations for co-authorship and whether resources promised in the letter are freely available to other investigators in the scientific community or will be provided to the particular investigator(s) only. For consultants, letters should include rate/charge for consulting services and level of effort/number of hours per budget period anticipated. Letters ensuring access to core facilities and resources should stipulate whether access will be provided as a fee-for-service. Letters are not required for personnel (such as research assistants) not contributing in a substantive, measurable way to the scientific development or execution of the project.</p>
<p><b>Resource Sharing Plan</b></p>	<p>Individuals are required to comply with the instructions for the Resource Sharing Plans as provided in the SF424 (R&amp;R) Application Guide.</p>
<p><b>Authentication of Key Biological and/or Chemical Resources</b></p>	<p>Briefly describe methods to ensure the identity and validity of key biological and/or chemical resources used in the proposed studies. Maximum of 1 page is suggested.</p>
<p><b>Appendix</b></p>	<p>Only limited Appendix materials are allowed. A maximum of 10 PDF attachments is allowed. Follow all instructions for the Appendix as described in the SF424 (R&amp;R) Application Guide.</p>

<b>PHS Human Subjects and Clinical Trials Information</b>	<p>Applicants must complete the human subjects questions on the <u>G.220 - R&amp;R Other Project Information Form</u> prior to completing this form. When involving NIH-defined human subjects research, clinical research, and/or clinical trials follow all instructions for the PHS Human Subjects and Clinical Trials Information form in the SF424 (R&amp;R) Application Guide. For a summary of completing the PHS Human Subjects and Clinical Trials Information form, see this <a href="#">video</a>.</p> <p>If you answered “Yes” to the question “Are Human Subjects Involved?” on the R&amp;R Other Project Information form, you must include at least one human subjects study record using the Study Record: PHS Human Subjects and Clinical Trials Information form <u>or</u> a Delayed Onset Study record.</p> <ol style="list-style-type: none"><li>(1) Study Record(s)</li><li>(2) Delayed Onset Study</li></ol>
<b>Study Record(s)</b>	Add a study record for <u>each</u> proposed study involving human subjects.
<b>Delayed Onset Study</b>	<u>OR</u> Complete Delayed Onset Study form; all instructions in the SF 424 (R&R) Application Guide must be followed.
<b>PHS Assignment Request Form (optional)</b>	This form may be used to communicate specific application assignment and review requests to the NIH.