Intramural Research Support Program

HOW TO AND WHAT TO EXPECT

JANE F. RECKELHOFF, PHD
What to expect today?

• How to complete the IRSP application
• Review process
• Tips
• Deadlines for 2016
Process to obtain funding

• Preliminary data?
• Write application
• Peer review, score and critique
• Research Council recommends funding level
• Notification of award or rejection
Online Application

WWW.UMC.EDU/RESEARCH/SPONSORED_PROGRAMS/INTRAMURAL_RESEARCH_SUPPORT_PROGRAM.ASPX
Applicant Information

- Faculty with Assistant Professor or above appointments are eligible
- Early Stage Investigator
  - Within 10 years of terminal degree and/or residency
  - Has not been awarded a substantial, competing research grant
- Receive a -0.5 point adjustment during initial review rankings and final review rankings
Previous IRSP Funding and Project Information

- Those who currently hold an IRSP are eligible to apply as long as the new application is a significant departure from their current IRSP funding.
- If a follow up, summary “pink” sheets must be attached.
- Four cycles per year – 2 Basic Science and 2 Clinical/Population Science.
- Project periods of 12 months.
- Request up to $30,000.
Project Information, cont.

- Resubmissions are allowable
- All attachments must be in PDF format
- Page limits listed throughout application and in detailed instructions
- If research involves any of the compliance areas, protocols must be submitted prior to the application deadline.
- Vertebrate Animals and Protection of Human Subjects and Planned Enrollment Table attachments are required if the proposed research using animals and/or human subjects
### Funding Plans and Other Information and Forms

- Extramural funding plans is a crucial attachment for reviewers. Be as detailed as possible!
- Support of your chair in the form of protected time is expected and increases the favorability of your application
- NIH Form C Biosketch is required
- Letters of support from all co-PIs, co-investigators and consultants are required

<table>
<thead>
<tr>
<th>Funding Plans</th>
<th>Other Information and Forms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Have any previous attempts been made to obtain funding for this project?</td>
<td>Effort Allocation</td>
</tr>
<tr>
<td>* must provide value</td>
<td>Please list any co-PIs, co-investigators and/or consultants and their roles on this project.</td>
</tr>
<tr>
<td>Yes</td>
<td>* must provide value</td>
</tr>
<tr>
<td>No</td>
<td>NIH Form C Biosketch is required</td>
</tr>
<tr>
<td></td>
<td>Letters of support from all co-PIs, co-investigators and consultants are required</td>
</tr>
</tbody>
</table>

Applicants must describe, in detail, the expected results of the project and how it will lead to securing extramural research funding. Applicants are encouraged to include possible specific aims for a future extramural application and to describe how the current project will support the development of such an application.
**Other Information and Forms, cont.**

- Budget must be on PHS398, pg. 4 only
  - No faculty salary support
  - No travel
  - No F&A/indirect costs

- Budget justification must be detailed

- UMMC Transmittal must be signed by you as PI and your chair. Division Chairs and Deans might also need to sign depending on your department/school.
Forms and Templates
Vertebrate Animals

Must address the following criteria:

1. Description of procedures
2. Justification
3. Minimization of Pain and Distress
4. Euthanasia

**VAS Checklist**

Performance Sites

The required criteria must be addressed for all performance sites.

- If the applicant's institution is not where animal work will be performed, are all collaborative performance sites identified?
- If more than one performance site is planned, are descriptions of animal use addressing the required criteria provided for each site?

1. Description of Procedures

Describe the animals and their proposed use. Address the following for all species to be used:

- Species
- Strains
- Ages
- Sex
- Total number of animals by species to be used
- Concise, complete description of proposed procedures (i.e., sufficient information for evaluation)
- Source, only if dogs or cats are proposed

2. Justifications

Provide justifications for:

- Choice of species
- Why research goals cannot be accomplished using an alternative model (e.g., computational, human, Invertebrate, In vitro)

3. Minimization of Pain and Distress

Describe interventions to minimize discomfort, distress, pain and injury. Examples of the kinds of items that may be appropriate to include are:

- Circumstances relevant to the proposed work, when animals may experience discomfort, distress, pain or injury.
- Procedures to alleviate discomfort, distress, pain or injury.
- Identify (by name or class) any tranquilizers, analgesics, anesthetics and other treatments (e.g., antibiotics) and describe their use.
- Provisions for palliative care or housing that may be necessary after experimental procedures.
- Plans for post-surgical care, if survival surgeries are proposed.
- Indicators for humane experimental endpoints.

4. Euthanasia

State if the method of euthanasia is consistent with AVMA guidelines. If the method does not follow the AVMA guidelines:

- Describe the method of euthanasia
- Provide a scientific justification
Human Subjects Documentation

Protection of Human Subjects attachment must address the following criteria:

- Human Subjects Involvement, Characteristics and Design
- Sources of Materials
- Potential Risks
- Recruitment and Informed Consent
- Protections Against Risk
- Potential Benefits of the Proposed Research to Human Subjects and Others
- Importance of the Knowledge to be Gained

Instructions start on Pg. 13 of the DHHS PHS Supplemental Grant Application Instructions
Planned Enrollment Table

- Report information as number of participants
- Hispanic/Latino is an ethnic category, not a racial category. Subjects should identify with both ethnicity and race.
Biosketch

- NIH General Biographical Sketch Format Page – Forms Version C must be used.
- 5 page limit per biosketch
- Biosketches must be included for all co-PIs, co-investigators and consultants

### BIOGRAPHICAL SKETCH

Provide the following information for the Sponsor, program and other significant contributors, following the format for each person. Do not include more than 5 pages.

#### NAME

#### EPA COMMONS USER NAME (credential, e.g., agency login):

#### POSITION TITLE

#### EDUCATION/TRAINING (begin with baccalaureate or other initial professional education, such as nursing; include postdoctoral training and residency if applicable. Add details needed as necessary)

<table>
<thead>
<tr>
<th>INSTITUTION AND LOCATION</th>
<th>DEGREE (if applicable)</th>
<th>Completion Date (YYYY)</th>
<th>FIELD OF STUDY</th>
</tr>
</thead>
</table>

#### NOTE: The Biographical Sketch may not exceed five pages. Follow the formats and instructions below.

#### A. Personal Statement

Briefly describe why you are well-suited for your role(s) in the project described in this application. The relevant factors may include aspects of your training, previous experimental work on the specific topic or related topics, your technical expertise, your collaborative or scientific environment, and your past performance in this or related fields (you may mention specific contributions to science that are not included in Section C). Also, you may identify up to four peer-reviewed publications that specifically highlight your experience and qualifications for this project. If you wish to explain impediments to your past productivity, you may include a description of factors such as family care responsibilities, illness, disability, and active duty military service.

#### B. Positions and Honors

List in chronological order previous positions, concluding with the present position. List any honors. Include present membership on any Federal Government public advisory committee.

#### C. Contribution to Science

Briefly describe up to five of your most significant contributions to science. For each contribution, indicate the historical background that framed the scientific problem, the central finding(s), the influence of the finding(s) on the progress of science or the application of these finding(s) to health or technology, and your specific role in the described work. For each of these contributions, reference up to four peer-reviewed publications or other non-publication research products (can include audio or video products, patients, data and research materials, databases, educational aids or curricula, instruments or equipment, models, protocols, and software or networks) that are relevant to the described contribution. The description of each contribution should be no longer than one-half page including figures and citations. Also provide a URL to a full list of your published work as found in a publicly available digital database such as Scifinder or My Bibliography, which are maintained by the US National Library of Medicine.
Other Support

- Includes all financial resources, whether Federal, non-Federal, commercial or institutional, available in direct support of an individual's research endeavors

<table>
<thead>
<tr>
<th>NAME OF INDIVIDUAL</th>
<th>Project Number (Principal Investigator)</th>
<th>Dates of Approved/Proposed Project</th>
<th>Annual Direct Costs</th>
<th>Person Months (Calendar/Academic Year)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>NIN/NHLBI</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Chloride and Sodium Transport in Airway Epithelial Cells</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>5 R01 HL 00000-07 (Baker)</td>
<td>4/1/1994 – 3/31/2002</td>
<td>$122,717</td>
<td>1.20 calendar</td>
</tr>
<tr>
<td></td>
<td>NIN/NHLBI</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Ion Transport in Lungs</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>R000 (Anderson)</td>
<td>9/1/1996 – 8/31/2002</td>
<td>$43,123</td>
<td>1.20 calendar</td>
</tr>
<tr>
<td></td>
<td>Cystic Fibrosis Foundation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Gene Transfer of CFTR to the Airway Epithelium</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>PENDING DGB 950000 (Anderson)</td>
<td>12/01/2002 – 11/30/2004</td>
<td>$82,163</td>
<td>2.40 calendar</td>
</tr>
<tr>
<td></td>
<td>National Science Foundation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Liposome Membrane Composition and Function</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>The major goals of this project are to identify and isolate airway epithelium progenitor cells and express human CFTR in airway epithelial cells.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>The major goals of this project are to define biochemical properties of liposome membrane components and maximize liposome uptake into cells.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Budget

- Staff salary support is allowable.
- Email sponsoredprograms@umc.edu for assistance with salary information.
- Equipment is defined as an item of property with an acquisition cost of $5,000 or more.
- Travel is not allowable.
- If including patient care costs, email sponsoredprograms@umc.edu for assistance with the Charge Billing Form.
- Subcontracts to other institutions are allowable.
Budget Justification

All requested budget categories must be properly justified.
Facilities and Resources

Facilities and Resources Template for NIH Applications

Identify the facilities to be used at each performance site listed and, as appropriate, indicate the capabilities, relative proximity and extent of availability to the project. There is no page limit for this section.

Laboratory

Use this section to describe your lab space in extensive detail. Details include square footage, specific techniques, disciplines or research focus the lab is equipped for, location and accessibility to colleagues, patients, core facilities, etc.

Example: The PI has [number] square feet of independent lab space that is completely equipped for [specific techniques, disciplines, research focus]. This equipment includes [specify equipment]. The lab is housed in the [building, hospital, wing] which is located on [UMMC’s Main Campus, the Jackson Medical Mall], thereby providing easy access to colleagues, patients, core facilities, etc.

Clinical

Use this space to describe UMMC’s clinical environment, including specific hospitals, clinics, and centers that are available for your research project.

- Examples: The main UMMC campus includes four hospitals and is the only level one trauma center in the state. The UMMC Cancer Institute is housed at the Jackson Medical Mall, located a few miles off campus, and is the only hospital in the state that can offer some cancer treatments including bone marrow or stem cell transplants, liver transplants and radiation oncology to pediatric patients. The [specific equipment that is utilized in the grant] is located at [location] in the [Department].

Animal

Use this space to describe in general and specific terms the animal research space available at UMMC and the space you will use specifically for your project. Include information about the veterinary care available and information about our Institutional Animal Care and Use Committee.

Examples: The UMMC Laboratory Animal Facilities operates and maintains 44,000 square feet of AAALAC-accredited animal housing and support space. Primary facilities are located on the basement level of the Arthur C. Guyton Laboratory Research Complex and the 9th floor of the David S. Parkade Building. Included in these environments are animal housing areas, animal husbandry support spaces and veterinary medical support facilities. Other specialized environments are the transgenic mouse facility in the James D. Hardy Clinical Sciences Building and the Aquatic Animal Quarters that houses channel cats.

This project will utilize [type of animal] which will be housed in [specific space]. [Insert more details about specific services/equipment offered by LAAC.]

Computer

Use this space to describe the type of technology you will have access to for your project. This includes your office computer, any research-specific computer and any technology that is available at UMMC.

Examples: The PI has [describe computer] available for this project along with [any project-specific software/hardware]. In addition, the PI has [number of computers and other computing equipment] in his personal office.

Office

Use this space to describe your assigned office space and the departmental resources available to you (Copy machines, storage space, printers, etc.)

Examples: The PI has office space [insert square footage] adjacent to his laboratory.

Other

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 subject populations or will employ useful collaborative arrangements. You’ll also use this space to describe any resources and facilities for other performance sites.
UMMC Transmittal

- Must be signed by PI and Department Chair
- Division Chair and/or Dean may need to sign depending on department/school of PI

### TRANSMITTAL FORM

<table>
<thead>
<tr>
<th>Principal Investigator</th>
<th>Proposal Title</th>
<th>Sponsor</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Department**
- Choose One

**Proposal Type**
- Competing Continuation

**Activity Type**
- Choose One

**Award Type**
- Choose One

**BUDGET**

<table>
<thead>
<tr>
<th>Initial Period</th>
<th>Total Period</th>
</tr>
</thead>
<tbody>
<tr>
<td>$0.00</td>
<td>$0.00</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ASURRANCES STATUS</th>
<th>PROTOCOL NUMBER</th>
<th>ASSURANCES STATUS</th>
<th>PROTOCOL NUMBER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Animal Useage</td>
<td></td>
<td>Pathogenic Microorganisms</td>
<td>Choose One</td>
</tr>
<tr>
<td>Human Subjects</td>
<td>Choose One</td>
<td>Radioactive Materials</td>
<td>Choose One</td>
</tr>
<tr>
<td>Human/Other</td>
<td>Choose One</td>
<td>Laser</td>
<td>Choose One</td>
</tr>
<tr>
<td>Primate Tissues.</td>
<td>Choose One</td>
<td></td>
<td>Choose One</td>
</tr>
<tr>
<td>Blood or cells.</td>
<td>Choose One</td>
<td></td>
<td>Choose One</td>
</tr>
<tr>
<td>Recombinant DNA</td>
<td>Choose One</td>
<td>Fluorescency/CT</td>
<td>Choose One</td>
</tr>
</tbody>
</table>

1) Does this proposal include subcontracts?
- Yes
- No

2) Does this proposal require matching funds?
- Yes
- No

3) Is any voluntary cost-sharing proposed?
- Yes
- No

If Yes to questions 2 or 3, enter amount proposed.

---

**Keywords**
- Aging/Alzheimer’s
- Audiology/Otolaryngology
- Behavioral Disorders
- Bioinformatics/Statistics
- Cancer
- Cardiovascular
- Children’s Health
- Dermatology
- Developmental Disorders
- Diabetes

PI assumes that the information in the application is true, complete and accurate to the best of their knowledge. It acknowledges that any false, misleading, or fraudulent statements or claims may subject the PI to criminal, civil or administrative penalties, accepts responsibility for the scientific conduct of the project, and agrees to provide progress reports required by the sponsoring agency. Those signing below assure they will abide by the rules and regulations of the federal government, sponsor, and UMMC.

**Principal Investigator (Contact)**

**Go-Principal Investigator**

**Division Chair**

**Division Chair**

**Department Chair**

**Department Chair**

**Dean**

**Dean**

*Division Chair signatures are only required by the Department of Medicine*

**Dean signatures are only required for the School of Dentistry, School of Nursing and School of Health Related Professions**

Send completed and signed transmittal form, along with your complete application or draft contract and detailed budget, to sponsoredprograms@umc.edu at least 5 business days prior to the sponsor’s deadline.

Continue to page 2
Peer Review

Committee of scientists from UMMC to review application. Normally includes current and past study section members, current and past funded investigators

• Three reviewers per application (Primary, Secondary, Reader)
• Scientific Merit: how well the research plan was written
• Will the experiments answer the questions
• Qualifications of the applicant: training, publication record, awards
• Research environment and strength of research team
• Will address any budgetary or compliance issues
IRSP Review Categories

The IRSP program uses the same review categories as NIH

- Overall Impact
- Significance
- Investigator(s)
- Innovation
- Approach
- Environment
## IRSP Scoring

<table>
<thead>
<tr>
<th>IMPACT</th>
<th>SCORE</th>
<th>ADDITIONAL GUIDANCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>1 – Exceptional</td>
<td>Exceptionally strong, essentially no weaknesses</td>
</tr>
<tr>
<td></td>
<td>2 – Outstanding</td>
<td>Extremely strong, negligible weaknesses</td>
</tr>
<tr>
<td></td>
<td>3 – Excellent</td>
<td>Very strong, some minor weaknesses</td>
</tr>
<tr>
<td>Medium</td>
<td>4 – Very Good</td>
<td>Strong but numerous minor weaknesses</td>
</tr>
<tr>
<td></td>
<td>5 – Good</td>
<td>Strong but at least one moderate weakness</td>
</tr>
<tr>
<td></td>
<td>6 – Satisfactory</td>
<td>Some strengths, some moderate weaknesses</td>
</tr>
<tr>
<td>Low</td>
<td>7 – Fair</td>
<td>Some strengths, at least one major weakness</td>
</tr>
<tr>
<td></td>
<td>8 – Marginal</td>
<td>A few strengths, a few major weaknesses</td>
</tr>
<tr>
<td></td>
<td>9 – Poor</td>
<td>Very few strengths, numerous major weaknesses</td>
</tr>
</tbody>
</table>
Join us for the next study section

• Contact Margie West (mwest@umc.edu) in the Office of Sponsored Programs to sit in on the next IRSP study section
• Will help you see how a study section works and what experienced reviewers concentrate on
• Will help you improve your grant writing skills
Specific Aims

In one page, tell the reviewer:

- what is known
- what new information you have ("preliminary data")
- your hypothesis (**extremely important**)
- how you will test the hypothesis
- why this work is important
- why they should be excited about this idea
Research Strategy

• SIGNIFICANCE
  • Why this research is important to finding a cure for a disease, understanding basic mechanisms, etc.

• INNOVATION
  • What is novel about your idea
  • Should be in bullet format
  • Make it easy for them to copy it into their review sheets

• APPROACH
  • Includes all preliminary data: shows support for the hypothesis, feasibility of performing the study
  • Experimental protocols – exactly how you will do everything, “methods,” doses of drugs, why those doses were chosen, etc.
  • “Expected results, alternative experiments and limitations” What will I do if this doesn’t work the way I think it will?
Grantwriting

• Be as specific as possible
• Avoid “filler” words (e.g., “It has been previously shown,...”)
• Keep it simple – don’t use your full vocabulary
• Avoid non-standard abbreviations
• Make the lives of the reviewers easy!
• Use high quality graphics that are easy to read when printed
Grantwriting, cont.

• Seek advice from UMMC colleagues and/or external experts. Have them look over your grant and provide feedback

• Have a positive attitude! Grants are an opportunity for you to organize your thoughts and ideas in a logical fashion. For longer funding periods, it can be a blueprint for your lab over the next 3-5 years.

• Do not be discouraged by rejection! Be persistent. Respond to criticism in a positive manner. Resubmit.
Upcoming Deadlines

Clinical/Population Science Cycles
• January 15, 2016
• July 15, 2016

Basic Science Cycles
• April 15, 2016
• October 14, 2016
Questions?