



## REQUEST FOR APPLICATIONS

(Revised - 8-31-2012)

# Junior Faculty Research Scholar Awards

Pre-Application Workshop: September 20, 2012 Application Receipt Date: Noon, January 8, 2013

A. <u>Background:</u> The Junior Faculty Research Scholar (JFRS) award(s) that will be funded under this RFA will support the development of mentored research studies by junior faculty members to help ensure continued and expanded research progress at Penn State Hershey in the future. Individual JFRS awards will be named to honor the contributions of senior investigators at Penn State Hershey who have advanced the frontiers of knowledge both through their own research and through the junior investigators they have mentored. The Dean, College of Medicine in consultation with the Vice Dean for Research and Graduate Studies and members of the faculty, will designate the Principal Investigator of each JFRS award as the 2013-14 (name of honored investigator) Research Scholar. It is anticipated that these Junior Faculty Research Scholar Awards will be supported by funds that the University will receive from the Commonwealth Universal Research Enrichment (CURE) Program of the Pennsylvania Department of Health.

#### **B.** Eligibility Criteria:

- 1. **JFRS applications may focus in any area of basic, clinical or translational research** within the mission of the Penn State College of Medicine;
- 2. The Principal Investigator (PI) of a JFRS application must have his or her primary academic appointment in the College of Medicine at the rank of Assistant Professor. In addition to the basic science faculty, virtually all physicians employed by The Milton S. Hershey Medical Center have a primary academic appointment in the College of Medicine;
- 3. The PI must not have served previously as the PI of a) a K01, K08, K23, K99/R00 or similar research career development award; or b) an R01 or R37 grant or other peer-reviewed, externally-funded research grant of equivalent size, duration, and competitive success rate such as the Impact and Innovator Awards funded by the Department of Defense. However, investigators who have served as PI of either an R03 or R21 grant award are eligible to submit an application to this program if they meet the other eligibility criteria in this RFA. PIs of previously funded JFRSA are not eligible to submit an application;
  - 4. The PI must commit a minimum of 30% effort to research including at least 10% effort to this project;
- 5. All potential JFRS applicants are invited and encouraged to attend a Pre-Application Workshop on September 20, 2012 from 12:15-1:15 pm in Room C4702, the Physiology Conference Room.
  - 6. PIs who are eligible for this program may submit one application in response to this RFA; and
- 7. Pls of JFRS awards may be eligible to apply for and receive other competitive institutional research grants provided there is no scientific overlap between the projects.

#### C. Program Guidelines:

1. Each PI must identify a Research Mentor Team of 3 or more experienced investigators to provide advice and assistance in developing and executing both a Research Proposal and a Research Career Development Plan;

- 2. JFRS applications may request up to \$100,000 direct costs per year for up to 2 years to support new research projects at the Penn State College of Medicine/Milton S. Hershey Medical Center;
- 3. Grant funds may be used to support the salary and fringe benefits of the PI (up to 10% effort) and research staff (in proportion to effort dedicated), student stipends, supplies, equipment, travel, publication costs, and expenses related to the use of human subjects;
- 4. If the PI proposes to devote more than 10% effort to the project, other funding is required to support the additional salary and fringe benefits;
- 5. Other funding is required to support the contributions of any collaborators from other colleges or campuses; and
- 6. PIs of all funded awards will be expected to: a) present an interim progress report to the Scientific Review Committee approximately 1 year after the JFRS award is activated; and b) submit several detailed progress reports and related information to comply with requirements of the Pennsylvania Department of Health (see examples of the PADOH Annual Report and Final Report guidelines at

http://www.pennstatehershey.org/web/researchdevelopment/home/forms)

- **D.** <u>Institutional Priorities:</u> Priority will be given to scientifically meritorious applications from candidates with outstanding potential to successfully address important problems in biomedical/health research in their chosen field. It is anticipated that successful projects will result in one or more peer-reviewed publications and provide the preliminary data needed to obtain competitive extramural research funding.
- **E. Review Process:** JFRS applications will undergo an initial merit review by the College of Medicine Scientific Review Committee (SRC). Reviewers will evaluate:
- 1. the scientific and technical merit of the Research Plan using the NIH review criteria and scoring metric which may be accessed at: (<a href="http://www.pennstatehershey.org/web/researchdevelopment/home/internal/reviewcriteria">http://www.pennstatehershey.org/web/researchdevelopment/home/internal/reviewcriteria</a>). In brief, the SRC will evaluate the significance of the proposed research project, the adequacy of the PI's training and prior research experience, the extent to which the proposal is innovative and will move the field forward, the adequacy of the proposed approach and the likelihood that it will be successful, the nature and adequacy of the research environment, the publications anticipated by the PI and extramural funding opportunities that might be leveraged by this project, as well as any additional criteria that are relevant to the application. In addition, the SRC will be asked to identify changes in study design and methodology that would strengthen each proposal and these recommendations will be returned to the applicant with the reviewers' critiques at the conclusion of the review process;
- 2. the extent to which **the proposed Research Career Development Plan** will enhance the PI's potential as an independent and productive investigator;
- 3. the qualifications and commitment of **the Research Mentor Team and its proposed role** in providing guidance and advice to the PI; and
  - 4. **the commitment of the department** to the further development of the PI's research career.
- **F.** Awards: The recommendations of the Scientific Review Committee will be forwarded to the Vice Dean for Research and Graduate Studies who will recommend to the Dean the application(s) to be funded and the senior investigators for whom the award(s) will be named. Contingent on the receipt of meritorious proposals, one or two awards will be announced on or about May 1, 2013. The PI of a JFRSA application recommended for funding will be invited to develop a Pennsylvania Department of Health Certifications Form and Strategic Plan for final approval by the PA Dept of Health prior to the issuance of a JFRSA. Pls of a JFRSA will be required to submit several detailed progress reports and related information to comply with requirements of the Pennsylvania Department of Health (see examples of the PA-DOH Annual Report and Final Report guidelines at

http://www.pennstatehershey.org/web/researchdevelopment/home/forms).

**G.** <u>Pre-Application Workshop:</u> Investigators who are interested in submitting a JFRS application are invited and encouraged to attend a <u>Pre-Application Workshop on September 20, 2012 from 12:15-1:15 pm in Room C4702</u>, the

Physiology Conference Room. At the workshop, the requirements of the RFA and Instructions to Applicants will be reviewed, the expectations of the Scientific Review Committee will be discussed, and there will be an open forum for discussion of related questions.

<u>H. Additional Information:</u> Any questions regarding this RFA should be referred to Research Development (<u>researchdevelopment@hmc.psu.edu</u>; Phone x6949).

# Instructions for Applicants Junior Faculty Research Scholar Awards

### APPLICATIONS MUST USE THE FOLLOWING FORMAT:

- 1. **Page Format** All pages of the application should have 1" margins all around and use Arial, Helvetica, Palatino Linotype or Georgia typeface and a font size of 11 points or larger. Number all pages consecutively beginning with the Face Page.
- **2. Face Page** titled "New" or "Revised" "Junior Faculty Research Scholar Application" and including a descriptive title of the project (not to exceed 81 characters); the name, degree, department, email address, phone number and signature of the Principal Investigator and the name and department of the designated Research Mentors.
- **3.** Table of Contents: Include a Table of Contents with page numbers for each section of the application.
- **4. Introduction for Revised Applications:** Explain how the application has been revised in response to the previous reviews. What additions, deletions, revisions and other responses to reviwers' comments in the previous critiques has the PI made in the revised application? (1 page)
- **5. Abstract:** Briefly summarize the objectives, methods, and health-relatedness of the proposed research project in terms that will be informative to other persons working in the same or related fields and insofar as possible, understandable to a scientifically or technically literate lay reader.
- **6. Specific Aims:** 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 exert on the research field(s) involved, and list succinctly the specific objectives of the proposed research. Specific aims must be no more than 1 page on a separate sheet.
- **7. Research Strategy:** This section should describe the proposed research project and be organized as outlined below. Sections a-c of should not exceed 5 pages single spaced including figures and tables. If the application has multiple Specific Aims, the Significance, Innovation and Approach for each Specific Aim may be addressed either individually or collectively.
  - **a. Significance-** Explain the importance of the problem or critical barrier to progress in the field that the proposed project addresses, how the proposed project will improve scientific knowledge, technical capability, and/or clinical practice in one or more broad fields, and how the concepts, methods, technologies, treatments, services, or preventative interventions will be changed if the proposed aims are achieved.
  - b. Innovation- Explain how the application challenges and seeks to shift current research or clinical practice paradigms. Describe any novel theoretical concepts, approaches or methodologies, instrumentation, or interventions to be developed or used, and any advantage over existing methodologies, instrumentation, or interventions. Explain any refinements, improvements, or new applications of theoretical concepts, approaches or methodologies, instrumentation, or interventions.
  - **c. Approach-** Describe the overall strategy, methodology, and analyses to be used to accomplish the specific aims of the project and how the data will be collected, analyzed, and interpreted. Discuss potential problems, alternative strategies, and benchmarks for success anticipated to

achieve the aims. If the project is in the early stages of development, describe any strategy to establish feasibility, address the management of any high risk aspects of the proposed work, and describe precautions to mitigate any procedures, situations, or materials that may be hazardous to personnel.

- d. Vertebrate Animals- If Vertebrate Animals are involved, address each of the following:
  - (1) Provide a detailed description of the proposed use of the animals including the species, strains, ages, sex, and numbers of animals to be used.
  - (2) Justify the use of animals, the choice of species, and the numbers to be used, with additional rationale if they are in short supply, costly, or to be used in large numbers.
  - (3) Describe arrangements for the veterinary care of the animals involved.
  - (4) Describe the procedures for ensuring that discomfort, distress, pain, and injury will be limited to that which is unavoidable in the conduct of scientifically sound research. Describe the use of analgesic, anesthetic, and tranquilizing drugs and/or comfortable restraining devices, where appropriate, to minimize discomfort, distress, pain, and injury.
  - (5) Describe any method of euthanasia to be used and the reasons for its selection. State whether this method is consistent with the recommendations of the American Veterinary Medical Association (AVMA) Guidelines on Euthanasia. If not, include a scientific justification for not following the recommendations.

Although no specific page limitation applies to this section of the application, generally 1-2 pages should be adequate. If IACUC approval has been obtained, provide the protocol number and date approved.

- e. **Human Subjects** If Human Subjects are involved, address each of the following:
  - (1) Involvement, Characteristics and Design- Describe the proposed involvement of human subjects and justify the characteristics of the subject population, including their anticipated number, age range, and health status if relevant. Describe and justify the sampling plan, the recruitment and retention strategies. and the criteria for inclusion or exclusion of any subpopulation. If relevant, explain the rationale for the involvement of special vulnerable populations, describe procedures for assignment to a study group, describe and justify the selection of an intervention's dose, frequency, and administration, list any collaborating sites where human subjects research will be performed, and explain how data from each site will be obtained, managed, and protected.
  - (2) Sources of Materials- Describe the research material that will be obtained from living individuals in the form of specimens, records, or data. Indicate who will have access to individually identifiable private information about human subjects and provide information about how the specimens, records, and/or data will be collected, managed, and protected as well as whether material or data that include individually identifiable private information will be collected specifically for the proposed project.
  - (3) Potential Risks- Describe any potential risks to subjects (physical, psychological, financial, legal, or other), and assess their likelihood and seriousness to the human subjects. Where appropriate, describe alternative treatments and procedures, including the risks and potential benefits of the alternative treatments and procedures, to participants in the proposed research.

Although no specific page limitation applies to this section of the application, generally 1-2 pages should be adequate. If IRB approval has been obtained, provide the protocol number and date approved.

NOTE: Protocols that involve the use of human subjects must have received IRB approval before they can be submitted to the PA Department of Health for final funding approval. PIs are therefore strongly encouraged to submit their IRB application as quickly as possible to avoid any potential delay if their JFRS application is selected for funding.

- f. Literature Cited- (no page limit)
- **8. Research Project Budget and Justification** Use the budget form on the Research Development Website: <a href="http://www.pennstatehershey.org/web/researchdevelopment/home">http://www.pennstatehershey.org/web/researchdevelopment/home</a>. Use July 1, 2013 as the requested start date of the award and calculate Direct Costs only. Also provide a brief justification for the requested budget items on a separate page. A separate budget and justification should be provided for year 1 and year 2 of the project.
- **9. Research Career Development Plan:** This section should be prepared jointly by the PI and the Mentor. This section should not exceed 4 pages and should be organized as follows:
- **a. Background-** Describe the PI's prior research training, start-up recruitment package, dedicated lab space, other available research resources, research effort commitment, other professional and academic responsibilities, and long term career goals and objectives.
- **b.** Mentoring Plan- Describe how the Research Mentor Team will provide advice and assistance that will help ensure the success of the proposed research project and advance the career progression of the PI.
- **c. Future Research Plans-** Assuming that the proposed studies are successful, describe anticipated plans to apply for external funding including the identity of the most probable sponsor.
- **10. Biographical Sketches** of the PI and the designated Research Mentors. Use the new PHS 398 Biographical Sketch Format H: <a href="http://www.pennstatehershey.org/web/researchdevelopment/home/forms">http://www.pennstatehershey.org/web/researchdevelopment/home/forms</a> . Complete the educational block at the top of the format page, and complete sections A, B, C, and D as follows:
- **A. Personal Statement.** Briefly describe why your experience and qualifications make you particularly well-suited for your role in this project.
- **B. Positions and Honors**. List in chronological order previous positions, concluding with the present position. List any honors.
- **C.** List selected peer-reviewed publications or manuscripts in press in chronological order. Do not include manuscripts submitted or in preparation.
- **D. Research Support.** List all active and pending research projects. Provide project title, sponsor, project period, and funding awarded/requested. <u>Indicate whether each project listed does/does not overlap</u> with this application.
- **11. Attachments:** Attach the information requested below. DO NOT INCLUDE ANY REPRINTS, MANUSCRIPTS, CDs, DVDs, OR OTHER ATTACHMENTS.
- **a. Departmental Commitments-** Attach a letter from the PI's Department Chair to describe the department's commitment to the PI's further development as an independent investigator, document the total percent effort that the PI will commit to research (including at least 10% to this project), and describe any commitment of departmental resources that will contribute to this project.
- **b.** Research Mentor Commitments- Attach a letter(s) signed by each of the designated Research Mentors to document their agreement to provide advice and assistance in the conduct of this research project and in the further development of the PI's career as an independent investigator.
- **c.** Other Commitments- If the research proposed requires the use of facilities or other resources that are under the purview of another investigator(s), include a letter from that individual to document the availability of those resources for use in the proposed research.

**A Proposal Internal Approval Form** will be required at a later date if the application is selected for award.

Application Deadline: On or before Noon, January 8, 2013, applicants should: a) submit four (4) printed copies of the application to Research Development, Room C1630; and b) submit an electronic Adobe version (.PDF) of the application in ONE file to the drop box at <a href="https://rddropbox.hmc.psu.edu/documentdrop.php">https://rddropbox.hmc.psu.edu/documentdrop.php</a>. For *Document Title*, use the following – Last name of the PI\_JFRSA\_Date (e.g. Jones\_JFRSA\_January 2013. You will need to use your **Penn State Access ID** to submit your application.

Please direct any questions regarding these instructions to Research Development at researchdevelopment@hmc.psu.edu or 717-531-6949.