

## Center of Excellence in Apoptosis Research

### Pilot Grants Program Overview

The Center of Excellence in Apoptosis Research is housed within the Pioneer Valley Life Sciences Institute ([www.PVLSI.org](http://www.PVLSI.org)) – a joint venture of Baystate Medical Center and UMass Amherst. CEAR's primary mission is to conduct interdisciplinary research on the signaling pathways that regulate cell death in a tissue-specific manner and to help translate this research into new diagnostic tools and therapeutic interventions. In so doing, CEAR will help address important health concerns as well as contribute to the economic development of the region and Massachusetts.

#### Overview

The CEAR Pilot Grants Program provides funding for high-risk/high-gain interdisciplinary apoptosis-related projects to promote:

- The development of new ideas with the potential to attract significant external support and future commercial development
- An extension of research results with the potential to lead to commercial biomedical applications

UMass Amherst faculty, Baystate clinicians and PVLSI scientists are invited to submit proposals outlining unique interdisciplinary projects that stimulate research at the boundaries between disparate fields in order to develop new insights and applications. In addition to diagnostics or therapeutics directly focused on measuring or controlling apoptosis, biomedical applications in which apoptosis plays a significant role may include emerging technologies such as: biochemical assays, genetic screens, tissue engineering, cell therapy, stem cells, and cell transplantation.

#### Details for the 2009-10 Academic Year

Proposals are due on March 16, 2009.

A maximum project budget of up to \$26,000 is allowed to cover salary, benefits, and consumables.

Awards will be announced in May 2009.

Funded projects may begin as early as July 1, 2009 or as late as October 1, 2009. Funds need to be expended within 12 months of the start date. Unspent funds may be reclaimed by CEAR.

Funding and a start date will not be authorized until appropriate IRB and/or IACUC approvals have been obtained.

Some or all of the following steps may be part of a team's application process:

- Principal investigators from complementary disciplines meet to explore ideas for possible novel collaborations. Once identified, the co-principal investigators write a grant proposal using the format outlined below.
- If the proposed research involves human subjects, the Baystate Institutional Regulatory Board (IRB) and/or the University of Massachusetts Amherst Human Subject Committee must approve appropriate protocols. Grant awards may be approved by the Oversight Committee subject to subsequent IRB approval of protocols.
- If the proposed research involves using animals then the Baystate Institutional Animal Care and Use Committee (IACUC) and/or the University of Massachusetts Amherst Institutional Animal

Care and Use Committee (IACUC) must approve appropriate protocols. Grant awards may be approved by the Oversight Committee subject to subsequent IACUC approval.

- PI's are encouraged to suggest reviewers from Baystate, UMass Amherst, and/or PVLSI.
- Grant awards are made following review and approval by the CEAR Oversight Committee.

For more information or to submit proposals, contact:

Sallie Smith Schneider, Scientist, PVLSI, and Associate Director, CEAR (413.794.0941, Sallie.Schneider@bhs.org)

## Proposal Guidelines

The goal of this program is to enhance collaborative research among life scientists, physical scientists, engineers and clinicians at Baystate Medical Center, the University of Massachusetts Amherst, and the Pioneer Valley Life Sciences Institute. Each proposal should describe an interdisciplinary project with at least two Principal Investigators providing complementary expertise in the fields involved. (Unlike the UMass Amherst-Baystate Medical Center Collaborative Biomedical Research Program grants, there is no requirement that the PIs be from different institutions. Instead, the co-PIs should be from distinct disciplines, although this may involve researchers from clinical and basic departments).

The specific purpose is to provide grants that support high risk/high gain apoptosis-related projects at one of two notorious gaps in funding:

- Ideas for new programs in apoptosis research that require support to generate the pilot data required for external grant applications (e.g., NIH).
- Translational projects designed to move projects from the basic realm towards clinical application. Examples of research programs that will be viewed favorably include:
  - Extensions of *in vitro* results *in vivo* (development or use of animal models)
  - Extension of animal studies into human tissues or cells
  - Inter-institutional (e.g., UMass Amherst researcher and BH clinician) development of basic ideas into clinical application(s)
  - Coupling of apoptosis research with non-life sciences applications, such as: device development, nanotechnology, materials sciences, tissue engineering, and cell transplantation)

If the proposal is funded, it is expected that the Principal Investigators will pursue at least one of the following outcomes during the period of support:

- Significant federal and/or foundation funding
- Industry support
- Patent(s) and commercialization opportunities

The research plan should be well conceived, feasible and related to the likely immediate outcome. It is recommended that the desired outcome be stated in the Background section of the proposal and considered throughout the proposal. A successful proposal will build upon the existing strengths of the

Principal Investigators to help generate data that will help support the hypotheses anticipated for the full research proposal.

These grants will not, as a rule, be awarded for on-going support of current projects. Instead they are targeted for new ideas and opportunities where early investment is likely to facilitate rapid advances.

## **Proposal Content**

All proposal packages must include the following items:

- Cover sheets from all principal investigators with NIH biosketches attached
- The detailed proposal consisting of the Abstract, Research Plan, Budget and Budget Justification.

Incomplete proposals will not be reviewed. Proposals must be single-spaced with 1-inch margins and Arial-11 or Helvetica-11 point font.

## **Cover Sheets**

The standard Pilot Grant Program Cover Sheet is designed to simplify the signature process for collaborators from different departments and institutions by enabling individual Principal Investigators to file separate forms. Each Principal Investigator should submit a separate cover sheet with his/her signature and the signature of the department head. Your team may list up to 4 potential reviewers (UMass Amherst, Baystate, or PVLSI faculty only).

Each Principal Investigator should attach his/her NIH biosketch (4 pages) to the Cover Sheet. NIH biosketch forms can be found at: <http://www.niaid.nih.gov/ncn/grants/cycle/part06.htm#b5>

## **Research Plan (limited to 5 pages)**

### *A. Specific Aims, Hypotheses, Research Questions*

Succinctly state the hypotheses and Specific Aims to be addressed. This section should provide a very clear indication of what will be done in the project and should be reasonable for a one-year pilot study.

### *B. Background and Significance*

The rationale for and importance of the project should be clearly indicated. Relevant preliminary data should be included in this section as well as outcomes such as any agencies; industry partners and initiatives to be targeted for subsequent external grant support and/or possible patent or commercialization opportunities. If available, provide URLs for the targeted initiative(s) and industry partners.

### *C. Experimental Design, Methodology and Expected Results*

A brief description of the design and methods to be employed in the project should be provided. List each member of the research team and indicate his or her specific role. Indicate how the expected results will support/refute the hypothesis/research questions, and how the results will impact the development of external grant applications.

It is critical to address how the collaboration will work. Provide information regarding the interactions between Principal Investigators and a description of the role of the postdoctoral fellow. To a large degree the success of this program depends on an equal partnership between the co-PIs. It is vital that their partnership function at the interface of two disciplines and therefore the direct and committed involvement of each "parent" researcher is required. Describe how the co-PIs will achieve this. Describe the training environment that will be provided; particularly how the fellow's interdisciplinary capabilities will be developed.

Describe the nature of the physical site(s) at which the project will be carried out. Specify the location(s) at UMass Amherst, Baystate, and PVLSI that will be used, as well as any special equipment needed.

#### D. *Timeline*

Provide a detailed timeline for each portion of the project, including organization of the project, data collection and analysis schedules, and submission date for the subsequent full research proposal. Also, please explain which external funding initiatives will be pursued and what strategies (based on the proposed findings) will be used to make subsequent proposals more competitive. (The timeline can be provided in tabular form). It is expected that each pilot project will take no more than 12 months to complete.

#### E. *References*

Citations should be numbered in the body of the proposal and fully cited at the end of the proposal. We expect that this section will be limited to only those references that are necessary to support the rationale for the proposal.

### **Budget and Budget Justification**

No indirect costs will be charged to these awards. List all personnel and indicate % effort and total amount requested (if any) for each person. The budget justification should include details of the roles and responsibilities of each researcher. Use of PVLSI facilities and services (e.g., histology, *in vivo* whole animal imaging) is encouraged. See the current PVLSI Services List for additional information.

The Oversight Committee reserves the right to vary the amount and duration of any grant award.

The grant does NOT support:

- The writing and preparation of manuscripts intended to be used as standard textbooks.
- The preparation of lectures, demonstrations, syllabi or other course-related materials.
- Departmental symposia, seminars, retreats, colloquia, etc.
- Projects whose primary purpose is to support student-initiated projects for graduate students or post-doctorates. However, this does not preclude students from being funded in the proposed budget as research assistants or from allowing students to use the data for a thesis/dissertation.
- The remedy of budgetary deficiency in other research contracts or grants.
- Travel.
- Salaries or other direct remuneration to faculty members of the University of Massachusetts or clinicians from the Baystate Medical Center.
- Reprint costs.
- Publication costs for individuals or department/disciplinary monographs or series.
- Library fees.
- Typing or office expenses related to research (if it is not available through your departmental secretary).

The grant support is limited to:

- A stipend for a graduate student, including graduate health insurance. The graduate student must be in good standing in a University of Massachusetts Amherst graduate program.

- A resident physician or postdoctoral fellow. The resident physician must be in good standing in a residency program at Baystate Medical Center and have adequate protected time for the project.
- Consumables for the project.

### **Submission**

The complete proposal should be converted to a PDF file and sent via email to Sallie Smith Schneider (sallie.schneider@bhs.org) by 5:00pm March 16, 2009.

### **Evaluation Criteria**

The following criteria are used to evaluate proposals:

- Interdisciplinary nature of the proposal and the strength of the collaboration
- Novelty of proposal objectives
- Background information
- Technical approach
- Potential for future outcomes and attracting external support
- Fit with CEAR's research and business agendas

Investigators can apply for a competitive renewal if substantial progress has been made during the funding period and if a compelling justification is made for additional funds.

### **Responsibilities of Grant Recipients**

The CEAR Pilot Grant Program is expected to contribute to its broad research and economic development missions. To support reporting to external funding agencies and internal assessment of the value of the initiative, recipients must:

- Submit an award status report at 6 months.
- Submit a final report to the Director of CEAR within 90 days following completion of the budget period. The report will consist of a short summary of work conducted under the grant and copies of any publications resulting from work performed.
- Inform CEAR of any and all immediate and eventual developments flowing from the pilot grant, such as federal, foundation or industry support, invention disclosures, patents, licenses, industry collaborations, and company creation.
- Participate in the apoptosis research community as an active member of CEAR.
- Present results at a CEAR research symposium.
- Cite CEAR support in any public communications of research results.

**For more information about membership, contact Sallie Smith Schneider, PhD, Scientist, PVLSI and Associate Director of CEAR (413.794.0941, [sallie.schneider@bhs.org](mailto:sallie.schneider@bhs.org)).**