

GC4R Proposal Solicitation

Collaborative Advances in Biomedical Computing (C-ABC)

Program Solicitation

GC4R-2006-01

Request for proposals posted: Tuesday October 3, 2006

Proposal deadline: Thursday December 14, 2006 at 5:00 pm

Target starting date for funding: Spring 2007

Funding for this program is made possible by the John & Ann Doerr Fund for Computational Biomedicine. See <http://gc4r.rice.edu> for additional details.

This document can also be found at <http://gc4r.rice.edu/c-abc>



Gulf Coast Center for Computational Cancer Research
<http://gc4r.rice.edu>

Program Summary

GC4R Seed Grant: Collaborative Advances in Biomedical Computing (C-ABC)

Program Synopsis

The GC4R Seed Grant solicitation provides an opportunity for Rice faculty and researchers to receive funding for new and innovative projects in support of bridging information technology and high performance computing with opportunities in computational biomedicine. The goal is to encourage and support new projects bridging information technology research at Rice and biomedical research in the Texas Medical Center, with a particular emphasis on computational cancer. The program aims to support efforts that:

- explore opportunities at the interface of information technology and biomedicine
- involve ideas and faculty crossing institutions in the Texas Medical Center
- promote Rice and the Gulf Coast Center for Computational Cancer Research
- support community building efforts with a potential high return on investment

Proposals that demonstrate lasting impact, give rise to new collaborations, and demonstrate great potential for external long-term funding opportunities are encouraged.

Contact Information

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Eligibility Information

- **PI eligibility limit:** Regularly appointed full-time tenured or tenure track faculty, faculty fellows, and research professors at Rice are eligible to apply for funding.
- **Inter-institutional Collaboration:** Each proposal must have a named collaborator in the Texas Medical Center.
- **Proposal limit:** Each faculty member can be a PI/Co-PI on one proposal. Applicants do not need to be a member of GC4R.

See "Who May Apply" for additional details.

Deadlines/Proposal Submission

- **Proposal deadline:** Thursday December 14, 2006 at 5 p.m.

Award Information

- **Estimated number of awards:** 2-4, and a small number of planning grants focused on fostering the development of sub-communities leveraging faculty strength at multiple institutions in preparation for future proposals to this program.
- **Anticipated funding amount:** plan to fund up to \$500,000 this year based on availability of funds and qualifying proposals

Program Details

For 40 years, Rice University and the Texas Medical Center have partnered on a wide array of undertakings, including joint degree programs, collaborative research, teaching, and outreach projects. These activities have enabled both Rice and the Texas Medical Center to leverage hard-won achievements in many fields. Rice brings to the partnership complementary strengths in nanotechnology, biotechnology, and information technology as well as assets in management education, social sciences, and the humanities. The medical schools and hospitals of the Texas Medical Center bring to the table extremely rich sources of expertise and scholarship across all biomedicine, in both basic and clinical sciences.



Partnering for Biomedical Research

The productive partnership between Rice University and the Texas Medical Center includes joint cancer research. Through this partnership, it has become apparent that dramatic advances in cancer research, and research in other areas of biomedicine, will depend increasingly on computational approaches. Exploiting this opportunity requires the development of new software that must not only provide new capabilities but must also run efficiently on modern, high-performance computer architectures. Addressing this need will require research into new algorithms and software strategies by computer and computational scientists: without this, the biomedical research community will not have the resources to develop all of the applications needed to achieve the dramatic advances possible through the use of information technologies.

Creation of the Gulf Coast Center for Computational Cancer Research

In response to these application needs, Rice University and the University of Texas M.D. Anderson Cancer Center have formed the Gulf Coast Center for Computational Cancer Research (GC4R), under the direction of Ken Kennedy at Rice and Don Berry at M.D. Anderson. The goal of this center is to foster joint research projects between computer and computational scientists at Rice and cancer researchers at M.D. Anderson.

Within GC4R, while initiating joint research efforts, it has become clear that such efforts are labor intensive. The collaborating researchers must take time away from their mainline research projects to learn about methodologies and strategies from a different discipline. Furthermore, to attract funding from National Institutes of Health (NIH) and other funding agencies, researchers must have more than a good idea; they must have a track record of success in biology or medicine, which typically requires some palpable preliminary research results. In turn, this means that some research must have been actually carried out. In computer science, this preliminary research requires financial support for students and faculty time. Without financial support for new projects, the GC4R will not be able to initiate and nurture the collaborations needed to dramatically advance computational approaches to fighting cancer.

With this program of seed grants from the Doerr Fund, GC4R seeks to encourage the development of both existing areas and emerging activities in information technology and its applications to biomedicine. Proposed projects should engage and help develop relationships with collaborators in the Texas Medical Center. Proposals leveraging information technology and computer science to promote existing collaborations and incubate new collaborations for advancing biomedical computing are strongly encouraged. We seek proposals that demonstrate great potential for establishing long term cross-disciplinary research efforts with great potential for attracting external funding in the future.

Program Description

The primary purpose of this program is to provide *seed* funding for novel and exciting ideas in the early stages of development. We expect successful projects to obtain long-range sustained funding through public and private sources.

Goal

GC4R seeks proposals that fit the broadest possible definition of information technology and have the greatest possibility of placing Rice and its collaborators in the Texas Medical Center in a position for receiving future joint funding from external sources. Proposals that inaugurate new research areas and interdisciplinary collaboration are particularly encouraged. The guiding principle for funding is short-term seed funding (one-two years) for new initiatives that demonstrate a clear potential for impacting Rice's role as a leading institution in bridging information technology and biomedical research. We expect initiatives funded by this program to be used directly or indirectly to obtain additional funding from external sources.

In addition to larger seed grants we may also consider awarding a limited number of small planning grants. These are small one-year requests asking for \$5,000 to support the process of developing inter-institutional communities around areas of perceived faculty strength targeting future GC4R seed grants and ultimately build partnerships that can successfully attract external funding.

Who May Apply

Regularly appointed full-time tenured or tenure track faculty, faculty fellows, and research professors at Rice are eligible to apply for funding. Other members of the Rice academic community who wish to participate are encouraged to apply, but *must* have a faculty sponsor (Co-PI). There is a limit of one proposal per faculty member. However, a faculty member can serve as a sponsor on a second proposal where a non-faculty person is the lead PI. Inter-institutional collaborative proposals are not just encouraged, they are required. In fact successful proposals must involve at least one collaborator from one of the institutions in the Texas Medical Center. Funding of such a collaboration must be provided by the partnering institution in the form of direct or indirect support. Applicants do not need to be members of GC4R.

Proposal Preparation and Guidelines

Regular grants: The proposal body is limited to 8 pages. This does not include budget, bibliography and other supporting material. The proposal should be organized as follows:

- Cover page (web form that you fill in online when submitting the proposal)
 1. Project title
 2. Program (select GC4R 2006)
 3. Start date, end date
 4. List of investigators
 5. Name of partner investigator(s) in TMC
 6. Amount of funding requested
 7. Brief project summary
 8. Attach the main body of your proposal
 9. Attach the budget for your proposal
 10. Letter of commitment from TMC collaborator
- Main body of proposal (**max 8 pages**)
 - Project description and objectives (**max 3 pages**)
 - Project innovation and impact (**max 2 pages**)
 1. Current state of the art
 2. Innovative aspects of the proposal
 3. Interdisciplinary aspects of the proposal
 - Impact and exploitation plan. Describe how the project will benefit Rice and/or the community at the conclusion of the project as well as long term. Discuss and highlight external funding prospects and why the GC4R funding will make such funding more likely to succeed. (**max 2 page**)
 - Project work plan, timetable, and milestones. (**max 1 page**)
- Budget (a simple spreadsheet or table will suffice)
There is no F&A on these grants but you must add fringes and/or tuition remission for any salary requested. For assistance, contact CITI at extension 5823.
- Additional information (there is no page limit)
 - Short (max 2 pages) CV for each PI (required)
 - Bibliography
 - Other relevant information

Planning grants: Short (1-2 pages) proposal outlining the intellectual core and discuss the external funding prospects associated with developing the proposed area (sub-community). Carefully state your long-term goals and potential for external funding List all faculty to be involved in the effort at Rice and the Texas Medical Center institutions.

Deadlines

The deadline for submitting a proposal is Thursday December 14, 2006 at 5:00 p.m.

Only electronically submitted proposals will be accepted. Information on how to submit proposals, a copy of this RFP and other relevant information will be published at <http://gc4r.rice.edu/c-abc>.

Award Information

We anticipate funding proposals totaling \$500,000 for this call. Typical grants will be in the range \$50,000–\$100,000 per year. Project period is for one or two years. Two year grant proposals will be subject to progress review prior to second year funding. We

strongly encourage proposals that use the funding to leverage additional external funding sources. A small number of one-year planning grants (\$5,000) may be awarded.

Proposal Review Information

The Computer and Information Technology Institute will coordinate all proposal reviews for GC4R. Reviewers will consider the following criteria:

- inventiveness/significance of the project proposal
- the significance of the information and technology aspects of the proposal
- qualifications of the investigators
- appropriateness of the budget for the tasks proposed
- impact on research and likelihood for success in securing external funding
- how the proposed research will expand collaboration between researchers at Rice and colleagues in the Texas Medical Center

Reporting, Communications, and Conditions

Pre award:

Each project, prior to the release of funding, is required to provide to GC4R (a) a signed memorandum of understanding (provided by GC4R) of deliverables, (b) a simple web page describing the project, and (c) a revised and updated project description. If necessary, include in your budget the cost for creating the web page.

Post award:

Each project is required to provide two reports (a midterm briefing and final written report with expense statements demonstrating how the funds were leveraged). GC4R is looking at each grant as building a partnership and we strongly encourage investigator(s) to keep GC4R informed about progress and research. The intent is not to manage or interfere with research, but rather to evaluate projects and activities so that we can assist in securing further funding. We may also ask PIs of funded projects to present their work in various forums organized by GC4R, HiPerSoft and CITI when this is appropriate.

Publications and Rights

The researcher(s) are encouraged to publish the results of the research. Publications must acknowledge the funding source (e.g., *this work made possible in part through support from the GC4R Seed Grant: Collaborative Advanced in Biomedical Computing 20xx supported by the John and Ann Doerr Fund for Computational Biomedicine*). Research outcomes are subject to applicable university policies and standard intellectual property rights apply.

Award Administration

The goal is for funded projects to receive funding starting spring 2007. Awards that request cost share matching funds as part of their budget will be funded upon submitting a copy of award letter of such funding. A letter of support will be provided as required for cost share upon request of investigator(s).