

**Los Alamos National Laboratory -
University of California Riverside
Collaborative Program in Pathogen-
Induced Plant Infectious Disease**

**UC Riverside Office of the
Vice Chancellor for Research**

Request for Proposals

Application Deadline:

**Pre-proposals: Friday April 18, 2008
Full Proposals: Friday May 23, 2008**

PATHOGEN-INDUCED PLANT INFECTIOUS DISEASE RESEARCH GRANT PROGRAM

PURPOSE

Funding is available to promote the development of collaborative research and education programs between research teams at the University of California Riverside and Los Alamos National Laboratory in the broad area of pathogen-induced plant diseases that pose great threats to US Agriculture and Bio-Security. This program allows both institutions to take full benefit of overlapping commitments to research and education and build on present areas of excellence in plant diseases. UCR wishes to provide education and research opportunities for promising students and mechanisms for faculty to participate in new and innovative research ideas in this area. The Laboratory wishes to enhance its education and research collaborations with the University of California Riverside in this area of strategic importance to the Biosecurity Program of the Laboratory, and to provide research environments to students pursuing technical careers, possibly at the Laboratory.

The program is designed to familiarize LANL investigators with opportunities on the UC Riverside campus and to familiarize UC Riverside postdocs and students with opportunities at LANL with an eye toward future employment opportunities. It is envisioned that UC Riverside students and postdocs will travel to LANL during the course of the project. A report on technical achievements and student accomplishments will be due at the end of the funding period.

NEED

It is now well recognized that natural, emerging, and engineered plant pathogens present a major challenge to our national security and economy. Emergence of citrus greening in Florida taught us that the possibility of a new and deadly plant disease is all too real. In addition, subsequent to recent hurricanes management of citrus canker has become a formidable task. Finally, in California the emergence of sharpshooter vectors heightened the threats of Pierce's Disease in Grapes and Almond Leaf Scorch Disease. UC Riverside and LANL have a long-term commitment in meeting these challenges by building an integrated plant disease management program by developing capabilities in biology, detection/diagnosis, and therapy of plant diseases. Toward this end, we are requesting UCR/LANL collaborative proposals.

Areas of Interest (but not limited to):

Infection and Plant Innate Immune Response
Evolutionary Biology of Plant Pathogens
Mechanism of Plant-Pathogen and Vector-Pathogen Interactions
Genomics and Bioinformatics of Plant Pathogens
Novel Tools for Pathogen Detection and Pre-symptomatic Diagnosis
Therapy for Rapid Clearance of Plant Pathogens

APPLICANT ELIGIBILITY

The Office of Research invites members of the UCR community in any of the following employment categories to apply for seed funds to support the development of research programs in the broad area of infectious disease with a focus on host-pathogen and vector-pathogen interactions:

- Members of the Academic Senate, including emeriti.
- Appointees in the Agronomist series, including emeriti.
- Appointees at 50 percent or more of full time in the Adjunct Professor series.
- Appointees at 50 percent or more of full time in the Clinical Professor series.
- Appointees at 50 percent or more of full time in the Professional Research series.
- Appointees at 50 percent or more of full time in the Cooperative Extension Specialist series.

The **UCR-LANL Program** is intended to foster the development of collaborative research programs comprised of both UC Riverside and LANL researchers that demonstrate an excellent potential for securing external funding following the completion of this funding from this UCR-LANL program. Dean Don Cooksey (donald.cooksey@ucr.edu) in the College of Natural and Agricultural Sciences at UC Riverside, and Tom Terwilliger (terwilliger@lanl.gov) or Goutam Gupta, (gxg@lanl.gov) in LANL Bio-Security Science Center will play an active role in facilitating UCR/LANL team building for various focused projects in areas of pathogen-induced plant infectious disease.

AMOUNT AND TIME FRAME OF AWARD

Awards up to \$100,000 will be made to foster the development of collaborative research and education programs between research teams at the University of California Riverside and Los Alamos National Laboratory in the broad area of infectious disease with a focus on host-pathogen and vector-pathogen interactions that impact US food and water security. Allowable expenses include the costs for supporting graduate students and post-doctoral fellows, research supplies, teleconference and other costs of ongoing communication between UC Riverside and LANL. Indirect costs for this program have been waived.

Applicants may request support for use in fiscal year 2008-09 (July 1, 2008 through June 30, 2009) with the possibility of an additional one year **only** if required. Principal Investigators are responsible for ensuring that activities conducted under the program are in compliance with all applicable UC and UC Riverside policies and procedures, and also the necessary LANL policies and procedures for all work conducted at LANL.

PRE-PROPOSALS

In order to facilitate review and funding of research applications UC Riverside will begin the process by reviewing brief statements of interest from UCR-LANL investigators/teams of investigators. These pre-proposal statements should be a maximum of 2 pages in length. The statements will be due by **April 18, 2008** and

should include:

- Description of research,
- Relevance to the broad area of plant diseases.
- Relevance to UC Riverside and LANL
- Number of anticipated participating students and post-doctoral fellows.
- Names and institutional affiliation of three potential reviewers with appropriate technical expertise to review this proposal with which you have had no conflict of interest because of any personal or professional relationships within the past five years.

A committee comprised of LANL and UC Riverside research administrators will review these pre-proposal statements of interest and select those to be invited for full proposals. Research teams selected to develop full proposals will be notified on or before **April 25, 2008**.

GENERAL ELIGIBILITY

The Vice Chancellor for Research encourages all eligible University of California, Riverside employees to submit research proposals that build collaborative research and education programs between research teams at the University of California Riverside and Los Alamos National Laboratory in the broad area of infectious disease with a focus on host-pathogen and vector-pathogen interactions that impact US food and water security. The funding level per proposal will be up to \$100,000 total for a period of one year, with the possibility of an additional no-cost extension of one year **only** if required. No Indirect Costs will be charged on these awards.

FULL PROPOSAL APPLICATION INSTRUCTIONS

Applicants should be very specific in demonstrating the relevance of the proposed collaborative program to solving significant questions in the broad area of infectious disease with a focus on host-pathogen and vector-pathogen interactions that impact US food and water security. Proposals will be evaluated for their originality and quality of approach, as well as their potential for future federal funding opportunities.

Applicants invited to submit full proposals should submit these to the Office of the Vice Chancellor for Research by **May 23, 2008**. Proposals should be written to be understood by an interdisciplinary peer review panel of infectious disease scientists in related, but not necessarily identical fields to those proposed in the applications. Proposals not clearly written are less likely to be favorably reviewed. Please avoid unnecessary jargon and acronyms. The panel will recommend a small number of awardees to the UCR Vice Chancellor for Research and LANL leadership who will make the final decision as to which proposals are to be selected for funding.

1. **COVER PAGE.** Applicants must have a cover page that includes required signatures (applicant's signature, department chair's signature, dean's signature). The cover page does not count as part of the four-page application. A **Cover Page Form** is attached.

2. **ABSTRACT.** An abstract of no more than 300 words. The abstract page does not count as part of the ten-page application.
3. **APPLICATION.** Applicants must prepare the proposal using a letter quality printer with a 12-point font on standard 8 ½ by 11 inch paper with all pages numbered. Proposals should include the following information on no more than **ten double-spaced pages.** (Note that additional pages beyond the ten page limit or singly spaced pages will be discarded prior to the review.)

Proposals should include the following:

Introduction & Project Goals

- Describe the project goals and their relevance to the broad area of infectious disease with a focus on host-pathogen and vector-pathogen interactions that impact US food and water security.

Technical Approaches

- Describe how the project goals will be achieved.

Technical Impact and Relevance to LANL

- Explain why this work will advance the field by solving significant questions in the broad area of infectious disease with a focus on host-pathogen and vector-pathogen interactions that impact US food and water security. Indicate what aspects of the project require the unique capabilities of the LANL and UCR PIs? How is the research relevant to the scientific and programmatic goals of the LANL Biosecurity program?

Growth Potential

- Describe how the work might expand to larger research grant opportunities. Explain how the research will impact present or future LANL and UC Riverside programs.

Collaboration and Education

- How does this project advance the education and career paths of students, faculty and/or technical staff involved? Describe in detail the degree and quality of the bilateral (LANL-UC Riverside) cooperation. Describe the qualifications of all researchers and collaborators in the proposal, including research experience and mentor/ teaching experience. For students, will a degree be obtained?

3. **BIOGRAPHY.** The lead Principal Investigators at UC Riverside and LANL should provide a **two-page biography** to support their qualifications in the proposed research program. **Note that if this two-page limit is exceeded, additional pages beyond the top two pages will be discarded prior to the review process.** Biography pages are not counted as part of the four page application. Information to be included:

- a. Education (listing degrees and date awarded, period of any training);
 - b. Professional employment (listing dates and titles);
 - c. Full details of his/her pertinent publications (distinguishing between peer reviewed publications, proceedings, abstracts and other presentation);
 - d. Scholarly products and/or artistic productions.
4. **OTHER GRANT SUPPORT.** Applicants should provide a description of other support (internal and external) for the Principal Investigators work which has been received during the last five years including grant support that is pending. For each award listed, provide the following information:
- a. Funding Agency
 - b. Title of award
 - c. PI and Co-PI as listed in proposal
 - d. Total period of the award
 - e. Total amount of award
 - f. Amount of award for current award year if a multi-year award
 - g. If a multi-year award that had competing renewals, the year this was first funded
5. **BUDGET.** Applicants should complete a budget page (see attached) that itemizes expenses and provides justification for each item as related to the proposed project. (Note that the budget form does not count as part of the four-page maximum.)

REPORTING

At the end of the grant period, PIs agree to submit a brief report that consists of 1-2 pages describing activities, participants, outcomes, grant applications submitted or in process that have resulted in whole or in part from this grant, and ideas for further development (or discontinuation) of the activity. The report should also include a summary of expenditures.

INFORMATION

Further information about the Los Alamos National Laboratory - University of California, Riverside Collaborative Program in Infectious Disease Grant Program described in this announcement may be obtained by contacting Diane Martin at diane.martin@ucr.edu or 2-2465 at the UCR Office of Research, 200 University Office Building.

Pre-Proposals must be delivered to the above address by **4 PM, April 18, 2008**. Under no circumstances will late applications be accepted.

Full Proposals are by invitation ONLY and must be delivered to the above address by **4 PM, May 23, 2008**. Under no circumstances will late applications be accepted.

**University of California Riverside
Office of the Vice Chancellor for Research**

**Los Alamos National Laboratory - University of California,
Riverside Collaborative Program in Infectious Disease**

(up to \$100,000)

Cover Page

(Not counted as part of the 5-page maximum length of application)

Title of Proposal:

Principal Investigator(s): _____

Departments: _____

Telephone # of Lead PIs: _____

Email address of Lead PIs: _____

Total Amount Requested: \$ _____

Are Human Subjects Involved? No ___ Yes ___ IRB# _____ or Status _____

(The UC Riverside Institutional Review Board for the Protection of Human Subjects must approve projects involving human subjects; if approval is pending, no funding will be provided until a protocol number is issued by the committee)

Are Vertebrate Animals Involved? No ___ Yes ___ IACUC# _____ or Status _____ (The UC

Riverside Institutional Animal Care and Use Committee must approve projects involving vertebrate animals; if approval is pending, no funding will be provided until a protocol number is issued by the committee)

Are Ionizing Radiation Yes _____ No _____

or Hazardous Chemicals Involved? Yes _____ No _____

(If yes, the Department of Environmental Health & Safety must approve this project before funding can be provided.)

Signature of UCR Principal Investigator: _____ **Date:** _____

Signature of UCR Department Chair: _____ **Date:** _____

**University of California, Riverside
Office of the Vice Chancellor for Research**

**Los Alamos National Laboratory - University of California,
Riverside Collaborative Program in Infectious Disease**

BUDGET FORM

[Not counted for the 4-Page Maximum Length of Application]

(\$100,000 Total Maximum)

Budget Item	Amount Requested 7/1/08 – 6/30/09	Other Funding available for this project
	\$	
	\$	
	\$	
	\$	
	\$	
	\$	
	\$	
	\$	
PROJECT TOTALS	\$	

Each expense should be itemized in the budget form and each item justified in relation to the description of the project in the application.

BUDGET JUSTIFICATION: