

RELEASE DATE: December 7, 2007

APPLICATION RECEIPT DATE: January 15, 2008; 5:00 P.M.

NIH/NIAID Region V Great Lakes
Regional Center of Excellence for Biodefense and Emerging Infectious Diseases Research
Request for Applications: Postdoctoral Training Program

PURPOSE OF THE RFA

On September 4, 2003, the National Institute of Allergy and Infectious Diseases (NIAID) established eight Regional Centers of Excellence (RCEs), identified by the United States Department of Health and Human Services as an essential component of the government's strategic plan for biodefense research (<http://www.rcebiodefense.org/>). NIAID extended two additional awards, such that now ten RCEs exist, one in each of the ten federally designated regions of the United States. The Region V Great Lakes Regional Center of Excellence for Biodefense and Emerging Infectious Disease Research (GLRCE), established in October 2003, is one of the ten regional centers, led by the University of Chicago (<http://www.rcebiodefense.org/glrcel/>).

The mission of the GLRCE is to develop novel vaccines, therapeutics and diagnostics to combat microbiological agents identified as having the potential to pose a severe threat to public health and safety. Of particular interest are those microbial agents with bioterrorism potential, designated the NIAID Category A, B and C Priority Pathogens. A list of these pathogens can be found at <http://www3.niaid.nih.gov/research/topics/emerging/list.htm>. The GLRCE Postdoctoral Training Program aims to train the next generation of investigators in biodefense and emerging infectious diseases through its support of newly graduated scientists in the development of innovative research programs. Furthermore, the Postdoctoral Training Program provides rigorous training and professional development to enable a successful career in infectious disease research. Topics of interest to the GLRCE include, but are not limited to:

- Pathogen biology, including the identification and characterization of new virulence factors
- Bacterial toxins
- Host Immune response
- Microbial immune evasion and enhancement
- Animal models of infection and immunity
- Target identification and characterization for vaccines, therapeutics
- Novel adjuvants and medical diagnostics;

Special consideration will be given to those proposals which emphasize the discovery and early development of medical products.

PARTICIPATION IN THE GREAT LAKES REGIONAL CENTER OF EXCELLENCE

The GLRCE is a consortium based in the federally-designated "Region V" of the United States. (In all, ten Regions exist, each consisting of a group of contiguous states.) Region V includes six states in the upper Midwest: Illinois, Indiana, Michigan, Minnesota, Ohio and Wisconsin. Presently, twenty-seven institutions in Region V are formally associated with the GLRCE, including the University of Chicago, Northwestern University, Argonne National Laboratory, Battelle Memorial Institute, Illinois Institute of Technology, Illinois Institute of Technology Research Institute, Illinois State University, Loyola University of Chicago, Mayo Clinic, Medical College of Wisconsin, Michigan State University, National

Wildlife Health Center, the Ohio State University, Purdue University, University of Cincinnati, University of Illinois at Chicago, University of Illinois at Urbana-Champaign, University of Indiana, University of Michigan, University of Minnesota at Duluth, University of Minnesota at Minneapolis, University of Notre Dame, University of Toledo, University of Wisconsin at Madison, University of Wisconsin at Milwaukee, Wayne State University, and Wright State University. Twelve of these institutions currently house research programs funded by GLRCE: University of Chicago, Northwestern University, Argonne National Laboratory, Mayo Clinic, Medical College of Wisconsin, Michigan State University, Purdue University, University of Cincinnati, University of Illinois at Urbana-Champaign, University of Michigan, University of Minnesota, and the University of Wisconsin at Madison. For an investigator to be funded by the GLRCE, his/her institution must be a formal member of the consortium.

The Great Lakes Regional Center of Excellence for Biodefense and Emerging Infectious Disease Research endeavors to expand the roster of institutions formally within the consortium, as well as the roster of member institutions funded. The GLRCE encourages institutions within the federally-designated Region V to join the consortium. To become a member of the consortium, an institution must send a formal letter of support to the Principal Investigator of the GLRCE, Olaf Schneewind, MD, PhD. For further information on joining the GLRCE, including a template letter, please contact Catherine Will, GLRCE Grants and Contracts Specialist at cwill@bsd.uchicago.edu or 773-834-9174. Institutions new to the consortium are required to subscribe to the GLRCE Intellectual Property Plan. For a copy of the GLRCE Intellectual Property Plan, please contact Navneet Bhasin, GLRCE Associate Director, at nbhasin@bsd.uchicago.edu.

RESEARCH CURRENTLY SUPPORTED BY THE GLRCE

The Great Lakes Regional Center of Excellence for Biodefense and Emerging Infectious Disease Research currently supports over twenty research projects focused on the molecular analysis and intervention of the following pathogens and toxins:

- *Bacillus anthracis*
- Botulinum neurotoxin
- *Yersinia pestis*
- *Francisella tularensis*
- *Brucella melitensis*
- *Rickettsia rickettsii*
- Ebola virus
- Flaviviruses
- Alphaviruses
- Rift Valley fever virus
- Pox viruses
- *Toxoplasma gondii*

RESOURCES OF THE GLRCE

To facilitate the research and training objectives of GLRCE investigators, the consortium also supports five research resources, including:

- Microbial Informatics Resource Core
- Immunology Core
- *Clostridium botulinum* and Neurotoxin Core
- Small Animal Research Core

- Emergency Response

These resources are available for use by GLRCE researchers to enable access to specialized facilities or services that can accelerate research and development progress. For more information on core services or using the cores, please visit http://www.glrce.org/cores_facilities.php or contact Navneet Bhasin at nbhasin@bsd.uchicago.edu.

In addition to these GLRCE research resources, the NIAID National RCE Biodefense Network supports additional research resources that may be used by any RCE member. These resources include:

- National Screening Laboratory for the Regional Centers of Excellence for Biodefense and Emerging Infectious Disease (NSRB) <http://nsrb.med.harvard.edu>

BSL3 LABORATORY SPACE

The GLRCE is directly associated with the NIAID Howard T. Ricketts Regional Biocontainment Laboratory (“RBL”), under construction at the site of Argonne National laboratory in Argonne, Illinois (about 20 miles southwest of Chicago). This 48,000 square-foot Biosafety Level 3 facility, to be completed in the spring of 2008, will grant preference to GLRCE scientists and clinicians pursuing biodefense and emerging infectious disease research. The Ricketts RBL will also provide laboratory support for regional and/or national public health officials in the event of an intentional release or naturally occurring infectious disease outbreak. In the event of an emergency, the GLRCE will support governmental health officials by offering experts in topics related to biodefense and emerging infectious diseases. For more information on the Ricketts Laboratory, please visit <http://www.htrl.uchicago.edu/>.

RESEARCH PROGRAMS IN THE GLRCE

The GLRCE supports two programs that aim to increase the number of scientists performing basic biodefense research: the Developmental Projects Program and the Career Development Projects Program. The GLRCE employs the Developmental Projects Program to promote cutting-edge research that is likely to yield discoveries that translate into the creation of new vaccines, therapeutics and/or diagnostics to combat the NIAID Category A, B & C Priority Pathogens. The GLRCE Developmental Projects program is open to all faculty level investigators, established and new, in biodefense research. The GLRCE Career Development Program is for new faculty and post-doctoral research associates and is specifically designed to recruit investigators without substantive experience in biodefense research in the field. Please visit the GLRCE website at <http://www.rcebiodfense.org/glrce/> for Development Projects and Career Development Projects funding opportunities for 2008/2009.

THE GLRCE POSTDOCTORAL TRAINING PROGRAM

The goals of the GLRCE Postdoctoral Training Program are to provide rigorous training and professional development to enable a successful career in infectious disease research. To achieve these goals, the GLRCE Postdoctoral Training Program is committed to providing its trainees with education and experience in BSL3 research. This program is intended to support researchers who have 0-2 years postdoctoral training, though awards may also be granted to more senior fellows who are recently changing fields into biodefense research. At this time the GLRCE Postdoctoral Training Program will support projects for one year only. Contingent upon the competitive renewal of the GLRCE, additional funding may be available. Fellowship awardees are required to pursue their research training on a full-time basis, devoting at least 40 hours per week to the training program.

Budget requests may include funding for: salary and fringe, supplies, travel/short-term residence and other expenses. All expenses must be itemized and justified. Salary levels in the GLRCE Postdoctoral Training Program are commensurate with years of experience, as suggested by the NIH National Research Service Award (NRSA) scale <http://grants.nih.gov/grants/guide/notice-files/NOT-OD-07-057.html>. The GLRCE Postdoctoral Training Program will use the NRSA scale for the determination of salary for its trainees.

TRAINING IN RESEARCH AND BIOSAFETY

The GLRCE Postdoctoral Training Program is committed to educating its trainees in areas essential to their careers studying NIAID Category A, B & C Priority Pathogens and Emerging Diseases. Each budget should therefore include:

- Expenses to attend one national scientific meeting where the investigator will present his or her original work, to be completed in each year of support ;
- One time expenses for training in high containment research (biosafety level 3 or 4), to be completed during the first year of support. Please contact GLRCE Associate Director, Navneet Bhasin for information on acceptable training venues.

Successful completion of these educational objectives is a requirement of the GLRCE Postdoctoral Training Program.

Postdoctoral applicants in Region V are encouraged to employ the resources of the GLRCE and NIAID Biodefense Network in developing their applications, including use of the GLRCE Cores and Components.

The GLRCE Postdoctoral Training Program encourages collaborations between established investigators in biodefense/emerging infectious diseases and post-docs without substantive experience in these fields. Each applicant should identify a GLRCE mentor in biodefense or emerging infectious diseases. This individual may be the laboratory head under which the applicant currently trains. Please contact the GLRCE Associate Director for assistance in identifying an appropriate mentor if needed. If the applicant's mentor is not his/her laboratory head, a Curriculum vitae and letter of support from the mentor (in addition to the applicant's laboratory head) should be included in the application. A GLRCE mentor may be particularly valuable for applicants who wish to work on a high-containment project related to work in a lab that does not currently have those capabilities.

By the date of the award, all GLRCE Postdoctoral Trainees and mentors must reside in institutions that formally belong to the GLRCE.

SUBMITTING AN APPLICATION

The initial application (due January 15, 2007 at 5:00p.m.) should utilize the latest PHS 398 **non-modular** application forms. Your proposal must be institutionally endorsed.

- Up to 5 pages of text including specific aims, background and significance, preliminary data, and research plan (sections a-d of PHS 398 forms). Copies of manuscripts in press may be included as appendices and will not count against the page limit.
- Human Subjects, Vertebrate Animals, Literature Cited and Consultants must be included but do not count against the page total. Projects that include research involving human subjects must also

include a NIAID Human Subject Research Concept Sheet. To obtain a copy of the Concept Sheet, please contact Navneet Bhasin at nbhasin@bsd.uchicago.edu;

- Statement of career objectives (one to two pages)
- Biosketch and letters of support from the proposed mentor and the laboratory head as well as any key participants in the project (collaborators, GLRCE cores or components, members of other Centers or members of industry, as applicable).

PHS 398 forms may be found at: <http://grants.nih.gov/grants/funding/phs398/phs398.html>

RECEIPT AND REVIEW SCHEDULE

Mailed applications must be received by 5:00 p.m. on January 15, 2008 (sent to Catherine Will, please see address below). For administrative purposes, please also e-mail the application as a Word file to Catherine Will at cwill@bsd.uchicago.edu. The GLRCE Executive Board will conduct a review session of the applications in the first week of February, 2008 to determine which applications will be recommended to the NIAID for funding through the consortium.

ELIGIBILITY REQUIREMENTS

Citizenship. By the time of award candidates for the GLRCE Postdoctoral Training Program must be citizens or non-citizen nationals of the United States, or must have been lawfully admitted to the United States for Permanent Residence (i.e., possess a currently valid Alien Registration Receipt Card I-551, or other legal verification of such status). Individuals on temporary or student visas are not eligible.

Degree Requirements. Before a GLRCE Postdoctoral Training Program award can be activated, the individual must have received a Ph.D., M.D., or equivalent doctoral degree from an accredited domestic or foreign institution.

Duration of Support. Individuals may receive only one year of GLRCE Postdoctoral Training Program support at the postdoctoral level. An additional year of funding may be requested, contingent upon the competitive renewal of GLRCE.

Mentor(s). Within a GLRCE Postdoctoral Training Program proposal, the applicant must identify an individual (or individuals) who will serve in a mentor capacity and will supervise the research and training experience. The mentor(s) must belong to a GLRCE institution by the date of the award. The applicant's mentor(s) should be an active investigator in the area of the proposed research who will supervise the candidate's research. The mentor must be able to document the availability of research support and facilities for high-quality research training.

Other Support. Postdoctoral Fellowship support from the GLRCE represents a unique funding opportunity and is designed to enable young scientists, who recently completed their graduate studies, launch research projects in biodefense & emerging infectious diseases topics. GLRCE fellowship support is not appropriate for the continued funding of fellows that have previously received NIH, NSF or Foundation support.

REVIEW CRITERIA

Applications will be reviewed for technical and programmatic merit by the GLRCE Executive Board (EB). The EB is comprised of established infectious disease researchers from the GLRCE member institutions, and has the primary responsibility for the review of all science in the consortium.

Applications selected by the EB for funding must also be approved by the NIAID Program Officers prior to an award. The entire review and decision process is expected to take 4-8 weeks.

The criteria for selection used by the EB will comprise four main components.

- Candidate. An assessment of the candidate's previous academic and research performance and the potential to become an important contributor to biodefense or emerging infectious disease research.
- Mentor(s) and Training Environment(s). An assessment of the quality of the training environment(s) and the qualifications of the mentor(s) for the proposed research training experience.
- Research Proposal. The merit of the scientific proposal and its complementarity to existing GLRCE programs.
- Training Potential. An assessment of the value of the proposed training experience as it relates to the candidate's needs in preparation for a career as an independent researcher.

FUNDS AVAILABLE

Five, GLRCE Postdoctoral Training Program applications will be recommended to the NIAID for funding. Awards are granted for a maximum of \$56,500 in direct costs. Awards are granted for one year and may be renewed for an additional year, contingent upon the competitive renewal of the GLRCE. Funding for the awards is contingent on continued funding of the GLRCE and the Postdoctoral Training Program by the NIAID. GLRCE Postdoctoral Training Program Projects are evaluated on a routine basis (see below), and their continued funding is dependent on satisfactory progress as judged by the GLRCE Executive Board. The Executive Board then makes official GLRCE recommendations to the NIAID, whose program officers ultimately approve continued funding.

ADDITIONAL CONDITIONS OF AWARD

As appropriate, applications must include a complete Vertebrate Animals or Human Subjects Research Protection section, as described within the instructions for the NIH PHS 398 grant application forms. In addition, if the proposal involves human subjects, a NIAID Concept sheet must be submitted with the application. To obtain a template Concept sheet, please contact Navneet Bhasin at nbhasin@bsd.uchicago.edu.

Institutional approval for animal and human studies is required before an award is made. All proposed projects will be subject to the GLRCE Intellectual Property Plan. For questions or a copy of the Intellectual Property Plan, please contact Navneet Bhasin at nbhasin@bsd.uchicago.edu.

GLRCE POSTDOCTORAL TRAINING PROGRESS REPORTS

The progress of all Postdoctoral Training Projects will be closely monitored by the GLRCE Executive Board and the NIAID. Quarterly scientific progress and spending reports must be submitted to the Executive Board via Navneet Bhasin, Associate Director of the GLRCE, on March 1, June 1 and September 1. Postdoctoral Training Projects are also expected to submit on December 1 progress reports for inclusion in the GLRCE's consolidated progress report to the NIAID, due January 1. In addition, all GLRCE funded research must present progress at the annual GLRCE meeting, held each year in late fall.

WHERE TO SEND INQUIRIES

Direct questions about review, scientific or research issues to:

Navneet Bhasin, Ph.D.
Associate Director
NIH/NIAID Region V Great Lakes Regional Center of Excellence
for Biodefense and Emerging Infectious Diseases
University of Chicago
920 E. 58th St., Suite 1117
Chicago, IL 60637
773.834.9706
nbhasin@bsd.uchicago.edu

Direct questions about financial or grants management matters, and application submission to:

Catherine Will
Grants and Contracts Specialist
NIH/NIAID Region V Great Lakes Regional Center of Excellence
for Biodefense and Emerging Infectious Diseases
University of Chicago
920 E. 58th St., Suite 1117
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