

**POSTGRADUATE RESEARCH PROGRAM
NATIONAL EXPOSURE RESEARCH LABORATORY
U.S. ENVIRONMENTAL PROTECTION AGENCY
Cincinnati, Ohio**

Microarray Methodology for Waterborne Pathogens

PROJECT # NERL 2004-06

A research project is available through the Postgraduate Research Program at the U.S. Environmental Protection Agency (EPA), National Exposure Research Laboratory (NERL) in Cincinnati, Ohio. Under the guidance of a research mentor, the participant will gain educational benefits in developing a specific, sensitive microarray method for assessing the pathogenicity of waterborne pathogens. That data will be compared to animal models and tissue culture cell lines results from exposures to identical microbial pathogens.

The participant will benefit from the analytical laboratory techniques applied in this project. The research procedure that is to be developed will require work with tissue culture technology and culturing of microbial isolates. Experience will also be gained in microarray technology and working with animals. The participant will be involved in establishing appropriate animal models and tissue cell lines, preparing inocula of microbial pathogens, maintaining controls, and keeping a detailed record of laboratory results.

QUALIFICATIONS: Applicants must have received a bachelor's degree in biology, water resources or a closely related discipline within the three years prior to the desired starting date; or completion of all requirements should be expected prior to the starting date. Excellent oral and written communication skills are essential. Prior experience involving environmental samples and data collection is desirable. U.S. citizenship or lawful permanent resident status is preferred. The program is open to all qualified individuals without regard to race, sex, religion, color, age, physical or mental disability, national origin, or status as a Vietnam era or disabled veteran.

The participant will be selected based on academic records, recommendations, research interests, compatibility of background and interests with research programs and projects at NERL, and the availability of funds, staff, programs, and equipment. The appointment is full-time for one year and may be renewed upon recommendation of NERL and subject to availability of funds. The participant will receive a monthly stipend based on research area and prior experience. The participant must show proof of health and medical insurance.

The Postgraduate Research Program for NERL is administered by the Oak Ridge Institute for Science and Education. ***Please reference Project # NERL 2004-06 when calling or writing for information.*** For additional information and application materials contact: Postgraduate Research Program/NERL, Attn: Betty Bowling, Science and Engineering Education - MS 36, Oak Ridge Institute for Science and Education, P.O. Box 117, Oak Ridge, Tennessee 37831-0117, Phone: (865) 576-8503 FAX: (865) 241-5219, e-mail: bowlingb@ornl.gov.

An application can be found at www.ornl.gov/orise/edu/EPA/app-gugrgpd.pdf