



## UC DAVIS - LLNL POINT-OF-CARE TECHNOLOGIES CENTER

Critical - Emergency - Disaster Care

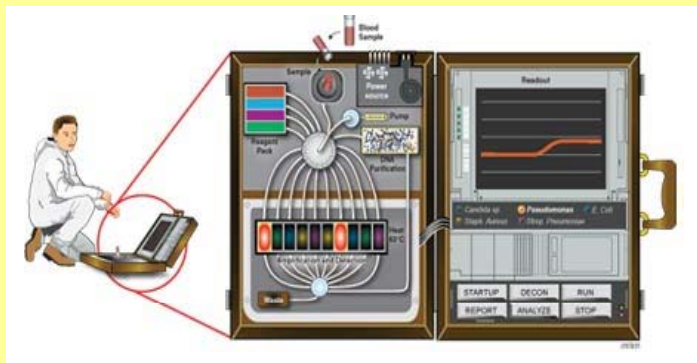


### MISSION STATEMENT

The UC Davis-Lawrence Livermore National Laboratory (LLNL) Point-of-Care Technologies Center develops novel diagnostic devices, testing methods, and interpretive tools that will help eliminate health disparities by making predictive, preemptive, preventive, and personalized care accessible to all communities worldwide.

The Center provides educational activities that advance evidence-based medical practice in critical care, primary outreach, and low resource environments, including global health settings. Ultimately, the Center will improve the accessibility, portability, and field robustness of point-of-need devices for hospitals, rural areas, and disaster response sites.

The Center will develop prototype instruments that simultaneously detect five bacterial and fungal pathogens using loop-mediated isothermal amplification (LAMP) in less than an hour.



The Center is supported by an \$8.5 million award from the National Institute of Biomedical Imaging and Bioengineering (NIBIB), and reflects the partnership of the NIBIB, LLNL, and the Point-of-Care Testing Center for Teaching and Research (POCT-CTR<sup>sm</sup>).

The POCT-CTR<sup>sm</sup> was founded by Dr. Gerald Kost, Director, at the School of Medicine, University of California, Davis, in 1995.

### ORGANIZATION

Center functions are organized into 5 cores: (1) development and clinical testing of prototype pathogen detection devices, (2) exploratory projects, (3) clinical needs assessment and education, (4) training, and (5) administration.

### KEY PERSONNEL

*Center Director, Principal Investigator*  
Gerald J. Kost, MD, PhD, MS, FACB

*Co-Principal Investigators (LLNL)*  
Benjamin Hindson, PhD  
John Dzenitis, PhD

*Center Fellow (Associate Director, POCT-CTR)*  
Richard F. Louie, PhD

*Assistant Director, POCT-CTR*  
Nam K. Tran

*Assistant Manager for Clinical Evaluations, POCT-CTR*  
Nicole L. Gentile

### FUNDING OPPORTUNITIES

The Center invites applications for exploratory projects in the area of new POC technologies that address unmet clinical needs in critical, emergency, and disaster care (the Center theme) with focus on multiplex pathogen detection in human whole blood for use in situations of disaster triaging, decision making, management, and treatment. Our Center will fund two awards in the total (direct cost) amount of approximately \$600,000. Application receipt deadline is July 11, 2008. See Center website for details.

### CONTACT INFORMATION

**Website:** [www.ucdmc.ucdavis.edu/pathology/poctcenter](http://www.ucdmc.ucdavis.edu/pathology/poctcenter)

**Email:** [poctcenter@ucdavis.edu](mailto:poctcenter@ucdavis.edu)

#### Address:

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# THE GRAND POINT OF CARE CHALLENGE

**Goal.** The goal of the **Grand Point of Care Challenge** is to revolutionize the field of disaster medicine by developing suitably robust point-of-care testing (POCT) that will substantially improve public health preparedness worldwide.

**Rationale:** The 2004 tsunami in Southeast Asia and hurricane Katrina in the United States showed that POCT was both needed and feasible in acute disaster response and follow-up recovery. However, POCT devices made for routine use and the consumer market are not



adequate for disaster conditions. We challenge inventors, innovators and industry to produce devices and reagents that will meet the needs of rural emergencies and disaster care in order to improve preparedness in the United States and worldwide, especially rural areas, and low resource countries.

## The Grand Point of Care Challenge

- Healthcare professionals will collaborate to carefully define diagnostic testing needs for DMATs (Disaster Medical Assistance Teams) and other emergency responders.
- Developers will design and manufacture robust devices and reagents that will allow DMATs in the United States and emergency response units in other countries to perform POCT under adverse environmental conditions.
- Inventors and innovators will create highly sensitive molecular diagnostic tests using isothermal methods operating under the most efficient of energy transfer principles to allow highly portable, yet reliable handheld pathogen detection.
- Entrepreneurs will seize these opportunities to market novel devices worldwide and thereby cost-effectively improve global public health.

## PARTNERS

