

## TOPICS AND SPEAKERS

The Future of Biodetection Workshop will include invited speakers in the following areas, as well as extensive discussions covering each topic.

DNA Based Detection Technologies:

*Stephen M. Apatow,*

*Humanitarian University Consortium*

Ligand Based Technologies:

*Brian Kay, University of Illinois, Chicago*

Transduction Systems:

*Larry Sklar, University of New Mexico*

Biodetection Sampling Systems:

*Gary W. Long, Tetracore Inc.*

Spectroscopy Systems:

*Luis Garcia-Rubio, University of South Florida*

Systems Integration:

*David Cullin, ICX Technologies*

These presentations will serve as an opportunity for each speaker to explore the science behind the detection technologies as well as their vision as to how this science could be expanded in the future.

## LOCATION

Nestled against the Sangre de Cristo Mountains in Northern New Mexico, Santa Fe is among the country's top tourist destinations. Fine restaurants, hotels, art galleries and endless outdoor activities are among the attractions.



## REGISTRATION

The Future of Biodetection Workshop will be held on September 26 and 27, 2006 at the La Fonda Hotel in Santa Fe, New Mexico. There is no registration fee and all meals are included except dinner on Wednesday, September 27.

In order to ensure your registration, please contact Quella Rios ([quellar@lanl.gov](mailto:quellar@lanl.gov)) with your name, affiliation, contact information, and any special dietary needs.

If you would like to submit a poster, please send an abstract and poster title to Rebecca McIntosh ([rebeccam@lanl.gov](mailto:rebeccam@lanl.gov)).

## LODGING

A block of rooms have been reserved at the La Fonda hotel for conference participants at the rate of \$94.00 per night. Please contact the La Fonda to secure your room (1-800-523-5002) by **September 5, 2006**.

Santa Fe is located 60 miles north of the Albuquerque International Airport. Rental cars are available in both Albuquerque and Santa Fe, or shuttle service can be arranged through Sandia Shuttle (1-888-775-5696) and Santa Fe Shuttle (1-888-833-2300).

"The Future of Biodetection Systems" workshop is being hosted by the Los Alamos National Laboratory's International Technologies Program Office and the Bioscience Division.

Steering Committee: **José Olivares** – Workshop Chair; **Jennifer Rudnick** – Program Administration; **Rebecca McIntosh** – Communications; **Greg Kaduchack** – Focus Area Lead; **Hong Cai** – Focus Area Lead; **Jennifer Martinez** – Focus Area Lead; **Steve Graves** – Focus Area Lead; **Kristin Omberg** – Focus Area Lead

For more information contact:

*Jose Olivares 505-667-2690 or [olivares@lanl.gov](mailto:olivares@lanl.gov)*



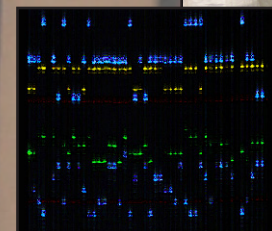
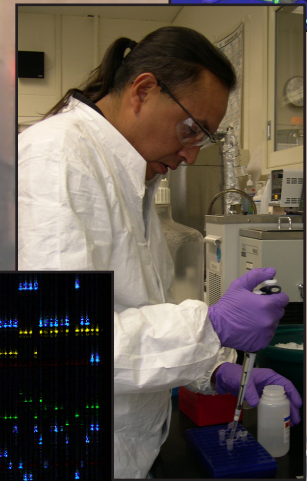
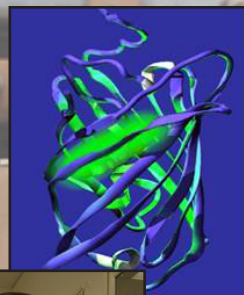
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The World's Greatest Science  
Protecting America

The International Technologies Program Office and the Bioscience Division of the Los Alamos National Laboratory presents the first annual workshop on

# THE FUTURE OF BIODETECTION SYSTEMS

SEPTEMBER 26 & 27  
SANTA FE, NM



# WORKSHOP OBJECTIVES

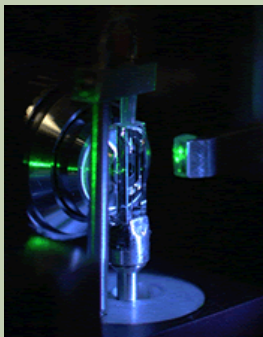
As the emergence of natural disease, the threat of bio-terror and the use of industrial facilities for non-peaceful purposes increases, our ability to monitor these threats is critical. Maintaining public health and national security requires the implementation of the best scientific and technological solutions possible. Key to this objective will be developing strategic investments in biodetection technology development.

The principle objective for this workshop is to develop a vision of the future of biodetection for the national security community by understanding the status of current science and technology in this area and developing an analysis of the gaps that need to be filled through strategic and targeted investments.

## APPROACH

Through a workshop style program that brings together industry, academia, national labs, and federal agency personnel in an interactive process, participants will develop a roadmap for research and development investment in biodetection. These R&D initiatives will address areas of sampling technologies, DNA-based detection technologies, protein-based detection technologies, transducers, spectroscopy-based technologies, and systems integration.

The workshop will incorporate invited



speakers who will initiate the discussion by reviewing the science and technology in each one of the specified areas; providing an understanding of the challenges and gaps; and initiating a vision as to where the technology will be in 5-10 years with appropriate levels of R&D investments.

Workshop participants will then breakout into small groups to further develop these areas and will report back to the main session on their outcomes.

## ROADMAP FOR SUCCESS

The end of each day will conclude with a poster session in which participants are invited to present current research efforts within their laboratories.

Through the numerous opportunities for discussion added to the schedule, as well as the multiple break-out sessions, this workshop will allow participants to thoroughly explore opportunities for growth in the biodetection arena.

## BIODETECTION WORKSHOP AGENDA

### Day 1 - Tuesday, September 26, 2006

- 7:30–8:00 am Registration and Continental Breakfast
- 8:00–8:15 am Welcome and Introductions
- 8:15–8:45 am Mission requirements for Biodetection
- 8:45–9:15 am Challenges in Biodetection
- Biodetection Sampling Systems (Lead: Greg Kaduchack)*
- 9:15–9:55 am Overview of Biodetection Sampling Systems: *Gary W. Long*
- 9:55–10:15 am Break
- Spectroscopy Systems (Lead: José Olivares)*
- 10:15–10:55 am Overview of Spectroscopy Systems: *Luis Garcia-Rubio*
- 10:55–11:15 am Break
- Systems Integration (Lead: Kristin Omberg)*
- 11:15–11:55 am Overview on Systems Integration: *David Cullin*
- 11:55–1:00 pm Lunch
- 1:00–3:00 pm Group Breakouts
- 3:00–3:30 pm Break
- 3:30–5:00 pm Groups Report to Assembly
- 5:00–6:00 pm Poster Session and Reception
- 7:00–9:00 pm Dinner (participants and guests)

### Day 2 - Wednesday, September 27, 2006

- 8:30–9:00 am Continental Breakfast
- 9:00–9:15 am Welcome and announcements
- DNA Based Detection Technologies (Lead: Hong Cai)*
- 9:15–9:55 am Overview of DNA Technologies for Biodetection: *Stephen M. Apatow*
- 9:55–10:15 am Break
- Ligand Based Technologies (Lead: Jennifer Martinez)*
- 10:15–10:55 am Overview on Ligand Based Technologies for Biodetection: *Brian Kay*
- 10:55–11:15 am Break
- Transduction Systems (Lead: Steve Graves)*
- 11:15–11:55 am Overview of Transducers for Biodetection: *Larry Sklar*
- 11:55–1:00 pm Lunch
- 1:00–3:00 pm Group Breakouts
- 3:00–3:30 pm Break
- 3:30–5:00 pm Groups Report to Assembly
- Workshop adjourns