

**Creating Superior Biomedical Technologies:
Research and Commercial Opportunities
DETAILED AGENDA**

9:00 am – 9:30 am

Opening Remarks

Steve Fritz

Director, Technology Transfer
Maryland Technology Development Corporation (TEDCO)

Rick Harris

Vice President of Marketing
Tech Council of Maryland (TCM)

COL James A. Romano, Jr.

Acting Commander
United States Army Medical Research and Materiel Command

9:30 am – 10:15 am

Session I

Presenter: LTC Donald Archibald

Director, Safety, Environment and Integrated Planning.

Title: Creation of the BioDefense Campus at Fort Detrick

- Five Federal Organization working together on research and facilities to support the NIBC
- NIH, DHS, CDC, USDA, Army Medical Command
- Enhancing present capabilities and leveraging knowledge across Agencies
- Construction of secured Biosafety Level (BSL)-2, -3, and -4 laboratory space and facilities
- Near the U.S. Army Medical Research Institute for Infectious Diseases (USAMRIID) facilities.

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Presenter: Paul C. Mele, Ph.D.

Director, Office of Research and Technology Applications

Title: The Fort Detrick Technology Transfer Initiative

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Presenter: Craig D. Lebo, Deputy Director for Business Management, U.S. Army Research Acquisition Activity (USAMRAA)

Title: USAMRAA Programs in Support of Medical Research and Technology Transfer

- What the Army wants in its business partners
- How to do business with the USAMRMC
- Information sources for doing business with USAMRMC

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Presenter: Darryl Reckemeyer

Fort Detrick Business Development Office

Title: Virtual One Stop Shop

10:15 am – 10:30 am **TEDCO Funding Opportunities**

10:30 am – 10:45 am **Success Story**

Biaera Technologies, LLC.

10:45 am – 11:15 am **Break, Networking, Poster Sessions**

11:15 am – 12:15 am **Session II**

Presenter: COL David Vaughn, Director, Research Area Directorate 1 (Military Infectious Diseases Research)

Title: Overview of Infectious Diseases Research

- Preventative Measures
- Therapeutics
- Diagnostic Systems

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Presenter: Edwin V. Oaks, Ph.D. Microbiologist, Dept of Enteric Infections, Walter Reed Army Institute of Research (WRAIR)

Title: Effective Mucosal Immunization using *Shigella* Invasin Complex (Invaplex)

- A mucosal adjuvant to target mammalian host cells
- Stimulates intracellular delivery of biomolecules
- Anthrax, plague, and rickettsial specific immune responses

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Presenter: Huo-Shu Houng, Ph.D. Senior Scientist, Department of Virology, Walter Reed Army Institute of Research, (WRAIR)

Title: Flavivirus diagnostics tests

- Demonstrated highly sensitive and specific diagnostics
- Mature and patent protected technologies
- Flaviviruses infect more than two-thirds world-wide population opening tremendous markets

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Presenter: LTC Harry Slife, Director, Research Area Directorate 4 (Medical Chemical & Biological Defense Research)

Title: Overview of Chemical and Biodefense Research

- CB Vaccine and Pretreatment Research
- CB Drug Development Research
- CB Medical Diagnostics Research

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Presenter: John Lee, Ph.D., Cambridge Systems, Inc/ U.S. Army Medical Research Institute of Infectious Diseases (USAMRIID)

Title: Venezuelan Equine Encephalitis Virus Replicon-Vectored BioDefense Vaccines

- Stimulate protective immunity against several bio-threat agents
- Seeking collaboration on delivery methods (e.g. needle-less) for virus-vectored vaccines

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Presenter: Richard K. Gordon, Ph.D., Department of Membrane Biochemistry, Walter Reed Army Institute of Research, (WRAIR)

Title: High Throughput Whole Blood Assay for Cholinesterases

- Small volume of blood required (finger prick)
 - Screen for OP/pesticide exposure
 - Measure both acetylcholinesterases (RBC-AChE) and plasma (pseudocholinesterase, BChE) with no sample preparation
 - Already used in Phase 1A clinical trials
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Presenter: Kelly Warfield, Ph.D. National Research Council Associate, Division of Virology, U.S. Army Medical Research Institute of Infectious Diseases (USAMRIID)

Title: Virus-like particles (VLP) as vaccines for Ebola and Marburg viruses

- Production of adjuvant-free multivalent Ebola or Marburg VLP based vaccines
 - VLP vaccines induce protective immune responses against multiple biodefense pathogens
 - Primate trials planned for next generation of multiprotective vaccines
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Presenter: Rekha Panchal, SAIC, U.S. Army Medical Research Institute of Infectious Diseases (USAMRIID)

Title: Inhibitors of Anthrax Toxin

- Small molecule inhibitors of anthrax lethal factor
 - New class of compounds that act as broad-spectrum antibiotics
 - Compounds that act on host targets
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Presenter: David C. Edman, Ph.D. Scientific Director, Joint Program Executive Office: Chemical and Biological Medical Systems, (JPEO-CBMS)

Title: Medical Product Development and Chemical Biological Medical Systems

- Chemical and biological defense countermeasures to FDA for licensure or approval for the DOD
- Product management from pre-clinical to licensure
- Team with other DOD research labs and industry

12:15 pm – 1:15 pm

Lunch and Networking

1:15 pm – 2:30 pm

Session III

Presenter: LTC Carl Hover

Deputy Director, Military Operational Medicine Research Program

Title: Overview of Operational Medicine Research

- Environmental Physiology and Metabolic Interventions
 - Biodynamics and Injury Sciences
 - Neurobehavior and Toxicology
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Presenter: Thomas P. Gargan II, Dr.P.H. Research Administration Manager, U.S. Army Center for Environmental Health Research (USACEHR)

Title: Rapid Analysis of Drinking Water for Microbial Contamination, “Coliform Analyzer”

- USACEHR partnered with Pacific Technologies to develop a rapid test for coliform bacteria in water
- Combines membrane filtration with innovative computer/electronics
- Identifies bacteriological water contamination in 8 hours or less
- Seeking a partner/venture capitalist for commercialization

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Presenter: Thomas P. Gargan II, Dr.P.H. Research Administration Manager, U.S. Army Center for Environmental Health Research (USACEHR)

Title: An Environmental Sentinel Biomonitor (ESB) System for Protecting Drinking Water from Toxic Industrial Chemicals

- Rapidly identify toxicity associated with a broad range of chemicals
- A variety of cell-based toxicity sensors are being evaluated
- Interest includes:
 - Developing novel cell-based indicators of toxicity
 - Extending the shelf life of sensor components

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Presenter: COL Robert Vandre, Director, Research Area Directorate 2 (Combat Casualty Care)

Title: Overview of Casualty Care Research

- Early intervention for effective hemorrhage control
- Remote triage and computer-aided diagnosis
- Stabilization during prolonged evacuation
- Wound and fracture care and reconstruction
- Military dental research
- Far-forward care of head wounds.

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Presenter: COL James Atkins, M.D. Resuscitation Program Area Manager, Combat Casualty Care

Title: Brisk Production of Nitric Oxide in Early Hemorrhagic Shock

- Increased nitric oxide results in the formation of S-Nitrosyl compounds with potent vasoactive properties
- Occurs through a novel plasma-based mechanism

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Presenter: Joseph Long, Ph.D. Chief, Department of Trauma and Resuscitation, Walter Reed Army Institute of Research (WRAIR)

Title: Resuscitation of Head-injured, Hemorrhaged Casualty

- Recreated the adverse impact of hemorrhagic shock on brain injury
 - Best resuscitative fluids and strategies for survival of head-injuries
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Presenter: Richard A. Bauman, Ph.D. Department of Polytrauma & Resuscitation, Walter Reed Army Institute of Research (WRAIR)

Title: An Overview of Models of Neurotrauma and the Study of Neuroprotection

- The military study of neurotrauma relies on the use of closed, penetrating, and seizure-induced models of brain injury
- Histopathological, sensory, motor, and memory evaluations are used to quantify the efficacy of neuroprotective therapeutics

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Presenter: William H. Howell, Deputy for Acquisition

Title: Development to Production: U.S. Army Medical Materiel Development Activity (USAMMDA)

- Maturity Definition and Development Planning
- Military Acquisition Process
- FDA Interface
- Commercialization

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Presenter: Conrad Clyburn, Director, Program Integration and Planning

Title: Overview Telemedicine and Advanced Technology Research Center (TATRC)

- Multi-dimensional Telemedicine
- Real-time Medical Situation Awareness
- Effective Employment of Medical Assets and Improved Evacuation and Treatment
- Biotechnology
- Medical Response Education and Training Programs

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Presenter: Jaques Reifman, Ph.D. Senior Research Scientist, Director, Bioinformatics, Telemedicine and Advanced Technology Research Center (TATRC)

Title: PAS: A Web-based System for Mining Physiologic Data

- Visualizing and Mining Time-series Physiologic Data
- Web-based Tool for Management and Analysis of Time-series Data

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Presenter: Tommy Morris, Director, Mobile Computing, Telemedicine and Advanced Technology Research Center (TATRC)

Title: From the Front Lines: Mobile Healthcare Case Study

- BMIST-J: An all-in-one suite of mobile applications
- Access to critical medical information and clinical & decision support tools to accurately create an electronic health record
- Enhancing training and effective decision support
- Maximizing medical data for health surveillance

2:30 pm – 3:00 pm

Poster Sessions and Technology Demonstrations

BE SURE TO FILL-OUT AND RETURN YOUR EVALUATION FORMS @ THE REGISTRATION TABLE. Thank you!