

11th International Sample Prep Technologies Conference 2017

Held at the 3rd Annual Biodefense World Summit 2017

Alexandria, Virginia, USA
26 – 29 June 2017

ISBN: 978-1-5108-5385-0

Printed from e-media with permission by:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571



Some format issues inherent in the e-media version may also appear in this print version.

Copyright© (2017) by Cambridge EnerTech
All rights reserved.

Printed by Curran Associates, Inc. (2018)

For permission requests, please contact Cambridge EnerTech
at the address below.

Cambridge EnerTech
Cambridge Innovation institute
250 First Avenue
Suite 300
Needham, MA 02494
USA

Phone: 781-972-5400
Fax: 781-972-5425

ce@cambridgeenertech.com

Additional copies of this publication are available from:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571 USA
Phone: 845-758-0400
Fax: 845-758-2633
Email: curran@proceedings.com
Web: www.proceedings.com

TABLE OF CONTENTS

Multiplex Detection of Protozoan, Bacterial, and Viral Pathogens in Human Blood Using Laser-Induced Breakdown Spectroscopy	1
<i>C. Fisher</i>	
Sweat: A Novel Biofluid for the Non-Invasive and Continuous Monitoring for Infection and Exposure to Biological Threats	3
<i>B. Katchman</i>	
Rapid Detection of Catalytically Active Anthrax and Botulinum Toxins by Ultrasensitive Cleavage-Based PCR Assay	5
<i>A. Kolesnikov, A. Kozyr, A. Ryabko, I. Shemyakin</i>	
Affordable Smartphone Optosensing Platforms for Point-of-Care Diagnostics	6
<i>L. Li, L. Wang</i>	
Volatile Organic Compounds as Minimally Invasive Signatures of Antibiotic Resistance in Biothreat Pathogens	7
<i>S. Micheva-Viteva</i>	
Paper-Based Nano-Biosensors for Agri-Food and Veterinary Health Applications	8
<i>S. Neethirajan, X. Weng, A. Tah, C. Ormsby</i>	
Unbiased Identification of Biothreat Agents Grown in Blood Culture Flasks by Analyzing the Peptidome	9
<i>E. Berendsen, E. Levin, A. Laaken, I. Voskamp-Visser, N. Sedee, D. Oeveren, R. Braakman</i>	
Field Based Multiplex Detection of Biothreat Agents Using Electrochemical Biochip Technology	11
<i>C. Pohlmann, T. Elssner</i>	
The ViVI Disease Severity Score: Enabling Real-Time Surveillance of Influenza Disease Severity for Multi-Dimensional Mapping	12
<i>B. Rath</i>	
Application of an Innovative, Ultra-Fast Nucleic Acid Extraction System for the Generation of Template Libraries Compatible with Roche 454 NGS Platform	14
<i>P. Reeves, B. Lopez-Quintana, A. Arroyo, A. Madejon, J. Rogers, C. Toro, P. Castan</i>	
Pathogen Detection with Rapid, Portable Plasmonic Devices OnChip	16
<i>L. Sagle, J. He, J. Reifsteck, I. Bruzas, R. Cary</i>	
Presence of Bacillus anthracis in Different Environmental Sources Collected in the City of Rio de Janeiro, Brazil	17
<i>J. Soares</i>	
Nucleic Acid Amplification Reagents for Molecular Diagnostics	19
<i>N. Tanner, Y. Zhang, A. Gray</i>	
Rapid Identification of Verotoxigenic Escherichia coli Using Recombinase Polymerase Amplification	20
<i>M. Thomas, T. Janzen, N. Goji, V. Arling, A. Mathews, B. Blais, D. Ogunremi, K. Amoako</i>	
Targeted Resequencing: A Methodology to Monitor Ebola Genomic Drift	22
<i>I. Tipper, M. Kourot, K. Konduru, G. Kaplan, A. Purkayastha, R. Duncan</i>	
Detection of Amphiphilic Pathogen Biomarkers	23
<i>D. Vu, A. Noormahamed, J. Kubicek-Sutherland, H. Mendez, D. Perkins, H. Mukundan</i>	
Integrated Nano-Technologies	24
<i>N/A</i>	
Rapid, Evidence-Based Pathogen ID and AST Directly from Patient's Urine and Whole Blood in as Short as 2 Hours	46
<i>N/A</i>	
PhaseGate: Nucleic Acid Extravtion without Fluid Transfer	57
<i>D. Kelso</i>	
Seamless Sample-to-Answer Device for Rapid Isolation and Detection of Biomarkers	69
<i>J. Lewis</i>	
Empowering Rapid Diagnostics with Sample Preparation Methodologies	101
<i>A. Sauer-Budge</i>	
Colistin Resistant Bacteria: Fantastic Beasts and Where to Find Them	119
<i>K. Schaecher</i>	
Author Index	