Molecular Diagnostics, Westgard Quality Control Rules, Zika and Other Mosquito-borne Viruses, and Handling Infectious Disease Emergencies Highlight AAB Conference

Molecular diagnostics is the most rapidly growing discipline in today's clinical laboratory industry. To help you stay current with the latest developments, the American Association of Bioanalysts (AAB) has scheduled a day-long series of educational programs at AAB's 2016 Educational Conference covering the basics of molecular biology, molecular diagnostic techniques, setting up a molecular laboratory, and molecular biology case studies, led by **William Bellamy, Ph.D., HCLD/CC(ABB).** Dr. Bellamy is the director of the Molecular Diagnostics Division, Department of Pathology, and Professor of Pathology, University of Arkansas for Medical Sciences.

In **Molecular Biology 101,** Dr. Bellamy will share a broad overview of the clinical molecular testing arena and review basic molecular biology. He will help you understand the roles of molecular diagnostic testing in patient management, basic genetic concepts, including nucleic acid structure and function, and DNA replication and transcription and RNA translation.

During **Molecular Biology Techniques,** Dr. Bellamy will review the methods involved in clinical molecular testing, including nucleic acid extraction; polymerase chain reaction (PCR); DNA sequencing, including next generation sequencing (NGS); and fluorescence in situ hybridization (FISH).

Setting up a Molecular Biology Laboratory will focus on key items to consider when setting up a laboratory for molecular-based testing, including space requirements, the design of a PCR laboratory, decision-making related to test menu and platforms, personnel requirements and regulatory considerations.

Dr. Bellamy will close the day-long molecular biology program with case-based studies to reinforce the principles of molecular testing covered in the previous presentations. The first case will utilize chronic myeloid leukemia as a paradigm for molecular testing, and the second case will demonstrate the utility of next generation sequencing (NGS). This interactive session will encourage audience participation.

Westgard Quality Control Rules

Featured Keynoter Sten Westgard, Westgard QC, will discuss the application of Westgard laboratory quality control rules, followed by a Q&A led by **Kenneth C. Jensen, GS(ABB)/MT(AAB),** KCJ Enterprises, regarding the application of the Westgard rules to the traditional clinical laboratory. During this open forum, Mr. Jensen will share practical answers to questions on utilization, diagnosis of errors, and how to use the Westgard rules to improve clinical results.

Zika and Other Mosquito-borne Viruses

For the first time, an arbovirus (Zika virus) has become established (enzootic) in the Western Hemisphere. **Dr. John Hughes, Ph.D.,** Associate Professor Emeritus, Dept. Molecular Virology, Immunology and Medical Genetics at Ohio State's College of Medicine, will focus on public and personal health issues associated with the Zika virus and other imported viruses, such as Chikungunya and Dengue. Dr. Hughes will discuss the basic virology of the Zika virus, acute clinical features of the disease, disease sequelae, viral vectors and diagnosis.

Handling Infectious Disease Emergencies

Managing and testing infectious diseases and viral pathogens present a variety of challenges for the clinical laboratory. **Charles Gilbert, Ph.D., M.Sc.,** of the Epidemiology & Toxicology Institute, will teach you how to "dress" to prevent infecting yourself. Included will be a "hands on" demonstration of how to don protective garments and how to remove them safely. Practice garments will be provided, and you will be able to determine if you put them on, and take them off, properly.

Dr. Ihsan Azzam, Nevada State Medical Epidemiologists, will discuss "Crisis Standards of Care" (CSC) and why national, state and local community plans are needed in order to be prepared for pervasive or catastrophic disasters. Learn ways to approach healthcare operational challenges during a crisis, and what types of crises or disasters to be prepared for and why.

Patricia A. Armour, MPA, MT(ASCP) of the Southern Nevada Public Health Laboratory will share the details behind a Hepatitis C outbreak in a Nevada endoscopy center. Learn how a real-life infectious disease outbreak is discovered, investigated, and resolved.

The technical program has been approved by the American Board of Bioanalysis (ABB) for up to 1.35 CEUs (13.5 hours).