



# 2024 ASCLS-ND “Spring Symposium”

## From Lab to Life: Enhancing Patient Care

American Society for Clinical Laboratory Science - North Dakota  
Gateway to Science, Bismarck, ND

**April 26, 2024**

| Time / codes  | Program Outline  |
|---|--|
| <p><b>8:00-8:50</b><br/># 165-001-24</p> <p>Intermediate</p> <p>PACE:<br/>_____</p>               | <p style="text-align: center;">Steve Mahlen, PhD, D (ABMM)<br/>Director, Microbiology, Sanford Bismarck</p> <p><b>Title:</b> Emerging Resistant Pathogens (M)<br/><b>Summary:</b> The emergence of Candida auris and carbapenem-resistant organisms (CRO) are a serious medical and public health threat. Identification of C. auris and detection of resistance mechanisms is complex but extremely important. This session will focus on C. auris and CRO identification with some interesting case studies.<br/><b>Objectives:</b></p> <ul style="list-style-type: none"> <li>➤ Discuss the public health threat that C. auris poses and the ways that this organism can be identified.</li> <li>➤ Describe the phenotypic and genotypic methods used to detect carbapenem resistance in Gram-negative bacteria.</li> </ul>   |
| <p><b>9:00-9:50</b><br/>#165-002-24</p> <p>Basic</p> <p>PACE:<br/>_____</p>                       | <p style="text-align: center;">Shelly Heilman, MLS (ASCP),<br/>Health Facilities Surveyor, North Dakota Dept of Health and Human Services, Health Facilities Unit.</p> <p><b>Title:</b> CLIA: Lab Quality Enhances Patient Care (QA)<br/><b>Summary:</b> Provide education and information regarding issues affecting North Dakota CLIA laboratories.<br/><b>Objectives:</b></p> <ul style="list-style-type: none"> <li>➤ Identify the most common CLIA deficiencies in North Dakota.</li> <li>➤ Evaluate CLIA hot topics.</li> </ul>  |
| <p><b>10:00-10:50</b><br/># 165-003-24</p> <p>Basic –<br/>Intermediate</p> <p>PACE:<br/>_____</p> | <p style="text-align: center;">Stacey Alexander MLS(ASCP)<br/>Biothreat Laboratory Director</p> <p><b>Title:</b> Missed or Misidentified Microorganisms: Francisella and Brucella Species (M)<br/><b>Summary:</b> This presentation delves into the challenges surrounding the identification of Francisella and Brucella species, emphasizing the clinical significance of accurate identification. It explores the complexities in identifying these microorganisms. Current diagnostic methods and their limitations are examined, highlighting potential consequences of misidentification. Ultimately, the objective is to raise awareness, evaluate challenges, and promote measurable improvements in the accuracy and efficiency of microorganism identification to positively impact patient outcomes and public health.<br/><b>Objectives:</b></p> <ul style="list-style-type: none"> <li>➤ Describe the clinical significance of Francisella and Brucella species and the potential impact of misidentification on patient outcomes and public health.</li> <li>➤ Identify the limitations of current diagnostic methods for bacterial culture and identification.</li> <li>➤ List strategies to enhance detection and improve identification of Francisella and Brucella species.</li> </ul> |
| <p><b>11:00-11:50</b><br/># 165-004-24</p> <p>Intermediate</p> <p>PACE:<br/>_____</p>             | <p style="text-align: center;">Karen Wyatt MBA, MLS(ASCP)CM<br/>Cellavision, Market Support Manager</p> <p><b>Topic :</b> Digital Cell Imaging with Esoteric Case Studies (H)<br/><b>Summary :</b> This session will demonstrate how automated digital imaging systems can improve turnaround time and improve competency and standardization using artificial neural networks that have been trained with deep learning. It will be filled with case studies to show how such technology can automate the most subjective area of the laboratory, the manual differential bench.<br/><b>Objectives :</b></p> <ul style="list-style-type: none"> <li>➤ Discuss how neural networks standardize subjectivity in neural networks</li> <li>➤ Describe how remote review software can improve turnaround time and pathology reviews</li> <li>➤ Discuss and share some of the most esoteric case studies available</li> </ul>   |
| <p><b>12:00-12:50</b></p>   | <p style="text-align: center;"><b>LUNCH/BUSINESS MEETING</b></p>   |



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| <p><b>1:00-1:50</b><br/># 165-005-24</p> <p>Intermediate</p> <p>PACE:<br/>_____</p>  | <p style="text-align: center;">Casey Nelson, PharmD, BCOP<br/>Clinical Science Liaison</p> <p><b>Title:</b> Utilization of host-immune response to determine bacterial vs viral source of acute infection in pediatric and adult patients (IM)<br/> <b>Summary:</b> Distinguishing between bacterial and viral infections can be challenging, leading to inappropriate use of antibiotics that may contribute to the development of bacterial antibiotic resistance. Humans mount immune responses to bacteria and viruses that are qualitatively and quantitatively different. These differences can be exploited to distinguish between these types of infection, which is important in choosing the correct therapy for the patient. In this session we will review recent advances in the development and validation of host-response biomarkers for the diagnosis of bacterial and viral infections. We will then present several case studies in which a new test measuring serum CRP, IP-10 and TRAIL successfully identifies the bacterial or viral etiology of infection.<br/> <b>Objectives:</b></p> <ul style="list-style-type: none"> <li>➤ Recognize the challenges for laboratories and clinicians in distinguishing between bacterial and viral infections.</li> <li>➤ Discuss the potential impact of host biomarker technology on clinical decision making and antimicrobial stewardship.</li> <li>➤ Describe the utility and potential limitations of host biomarker analysis in the clinical assessment of patients with possible acute infections</li> </ul> |
| <p><b>2:00-2:50</b><br/># 165-006-24</p> <p>Intermediate</p> <p>PACE:<br/>_____</p>  | <p style="text-align: center;">Karen Peterson M.S. MLS(ASCP)CM<br/>Clinical Education Coordinator</p> <p><b>Title:</b> Acute Kidney Injury (C/U)<br/> <b>Summary:</b> Acute Renal Failure has been reclassified to Acute Kidney Injury (AKI). Diagnosis of AKI is based on specific criteria which monitor rapid changes in renal testing results. To troubleshoot results it is important to understand the role of blood pressure in the renal system, kidney function, and renal function tests.<br/> <b>Objectives:</b></p> <ul style="list-style-type: none"> <li>➤ Evaluate the role of blood pressure in renal disease.</li> <li>➤ Identify causes of Pre-Renal, Renal, and Post Renal Acute Kidney Injury</li> <li>➤ Associate laboratory result criteria for an Acute Kidney Injury Diagnosis</li> </ul>  |
| <p><b>3:00-4:50</b><br/>Basic -<br/>Intermediate</p> <p>Part1<br/># 165-007-24<br/>PACE:<br/>_____</p> <p>Part2<br/># 165-008-24<br/>PACE:<br/>_____</p> | <p style="text-align: center;">Jorden Laducer-Dix<br/>Special Population Coordinator</p> <p><b>Title:</b> Understanding Bias Public Health/Health Equity (ME)<br/> <b>Summary:</b> This presentation will provide the knowledge and skills needed to develop new structures, practices, and approaches to improve outcomes and quality of life for North Dakotans, including learning information and insights they need to identify inequities in the workplace. Upon completing this presentation, participants will gain knowledge by understanding Health Equity, Bias, Microaggressions, Racism, Stereotypes and Discrimination.<br/> <b>Objectives:</b></p> <ul style="list-style-type: none"> <li>➤ Define health equity and discuss why it matters</li> <li>➤ List social determinates of health</li> <li>➤ Describe cultural competency</li> <li>➤ Define bias and describe why is matters</li> <li>➤ List key principles of implicit bias.</li> <li>➤ Define microaggressions and stereotypes</li> <li>➤ Identify strategies to deal with implicit bias</li> </ul>   |
| <b>Discipline codes</b>  | Microbiology (M), Quality Assurance (QA), Hematology (H), Immunology (IM), Chemistry (C), Urinalysis (U), Medical Ethics (ME)  |