# FINAL PROGRAM

**National Molecular Microbiology Diagnostic Users Group**
**13th Annual Fall Meeting (NMG)**

**December 2 -3, 2019**

**Auditorium**
**Peter Gilgan Research and Learning Centre**
**686 Bay Street, Toronto ON**
**The Hospital for Sick Children**

**The NMG wishes to thank all of our sponsors for this year's conference:**

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| Abbott Molecular | Abbott Rapid Diagnostics |
| altona Diagnostics | Becton Dickinson |
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| Pro-Lab Diagnostics | Promega Corporation |
| Qiagen | Quidel |
| Roche Diagnostics | Seegene Canada Inc |
| Somagen Diagnostics | Thermo Fisher Scientific |

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| 8:00 – 9:00 am | Breakfast sponsored by **Abbott Molecular** in the Gallery<br>Registration outside the 2nd Floor Gallery |
| 9:00 – 9:10 am | **Welcome and Introduction**<br>**Dr. Aaron Campigotto**<br>NMG Conference Chair<br><br>**Dr. George Zahariadis**<br>NMG President and Chair |
| 9:10 – 10:10 am | **Workshop sponsored by Roche**<br><br>**Sexual Health Today: Critical Implications for the Diagnostic Laboratory** |
| | **Dr. Chris L. McGowin**<br>Scientific Affairs Manager, Roche Diagnostics Corporation |
| | Learning Objectives:<br>1. Define 'Sexual Health" and describe how common and emerging STIs impact the sexual and reproductive health of men and women.<br>2. Explain the modern drivers of the rapidly accelerating epidemic in North America<br>3. Discuss the diagnostic lab's role in comtemporary healthcare delivery for sexual health care. |
| 10:10 – 10:40 | **Workshop sponsored by altona**<br><br>**Adenovirus in Paediatric Hematopoietic Stem Cell Transplant Patients: from Viral Load Monitoring to Global Menace** |
| | **Dr. Ramzi Fattouh**<br>Clinical Microbiologist, St. Michael's Hospital, Unity Health, Toronto ON |
| | Learning Objectives:<br>1. To briefly review adenovirus epidemiology and spectrum of clinical disease<br>2. To discuss the utility of adenovirus screening, viral load monitoring and genotyping in the paediatric HSCT population |

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| | 3. To outline an approach and highlight the advantages and limitations of utilizing DNA sequencing to assess adenovirus relatedness. |
| 10:40 – 11:00 am | Coffee Break sponsored by **altona** in the Gallery<br>Exhibits in the Gallery |
| 11:00 – 12:00 pm | **Workshop sponsored by Hologic** |
| 11:00 – 11:30 am | Part 1:<br>**Enhanced Laboratory Capability with the Hologic Panther-Fusion platform and assays: A Canadian perspective** |
| | **Linda M Mushanski**<br>Virology Section Supervisor, Saskatchewan Health Authority, Regina SK |
| | Learning Objectives:<br>1. Verification and Implementation of the Aptima *Mycoplasma genitalium* assay to enhance diagnostics and surveillance<br>2. InfluenzaA/B/RSV on the Panther-Fusion: Improvements in workflow and testing services for respiratory viruses |
| 11:30 – 12:00 pm | Part 2:<br>**Hologic Aptima HIV/HCV/HBV Quant Viral Load Assays: Diagnostic Utility for Routine and Novel Bio-specimen Testing** |
| | **Christine Mesa**<br>Biologist, National Microbiology Laboratory, Winnipeg, MB |
| | Learning Objectives:<br>1. In-house Verification and Assay Performance<br>2. Comparison with Roche COBAS® AmpliPrep/ COBAS® TaqMan® 48<br>3. Use of Dried Blood Spot (DBS) specimens to Enhance Diagnostic Access for Remote/Underserved Populations<br>4. Validation & Performance of Aptima HIV/HCV/HBV Quant Assays with DBS specimens |

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| 12:00 – 1:00 pm | Lunch sponsored by **Roche** in the Gallery<br>Exhibits in the Gallery |
| 1:00 – 1:30 pm | **Workshop sponsored by Seegene**<br><br>**Seegene's Platform for Automating Multiplexed PCR in Clinical Microbiology Labs** |
| | **Dr. Bob Slinger**<br>Medical Microbiologist, CHEO, Ottawa ON |
| | Learning Objectives:<br><br>1. To review and discuss a clinical specimen evaluation of the Seegene Allplex Viral Meningitis Panels.<br>2. To review and discuss a clinical specimen evaluation of the Seegene Allplex Gastrointestinal Panels.<br>3. Introduce Seegene's Nimbus/Starlet systems for streamlining clinical microbiology workflows. |
| 1:30 – 2:00 pm | **Workshop sponsored by Quidel**<br><br>**Rapid Molecular Testing for Influenza using Solana** |
| | **Dr. Danielle Brabant-Kirwan**<br>Clinical Microbiologist, Health Sciences North, Sudbury ON |
| | Summary:<br>1. Brief overview of rapid Influenza assays<br>2. Decision making process for implementation of Solana Influenza assay<br>3. Outcome measures with utilization of Solana assay during 2018-2019 Influenza season |

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| 2:00 – 2:30 pm | **Workshop sponsored by Seegene**<br><br>**Seegene's STARlet Automated Platform for Protozoa and Helminths** |
| | **Dr. Andrea K. Bogglid**<br>Medical Director, Tropical Disease Unit, University Health Network – TGH, Toronto, ON |
| | Learning Objectives:<br><br>1. Analyze the performance of Seegene's multiplexed PCR platform vs. conventional methods<br>2. Introduce Seegene's STARlet automation for use in multiplex parasite and helminth analysis<br>3. Comment on workflow enhancements and labour savings using molecular methods |
| 2:30 – 3:00 pm | Coffee Break sponsored by **Luminex** in the Gallery<br>Exhibits in the Gallery |
| 3:00 – 4:00 pm | **Role of Research in a Public Health Diagnostics Lab** |
| | **Kanti Pabbaraju**<br>Lab Scientist II, Provincial Laboratory for Public Health, Calgary AB |
| | Summary:<br>This talk will focus on the role of a research department in a public health laboratory and how it can enhance the quality of service provided. It will cover the following tasks performed in research:<br>1. Development and validation of LDTs<br>2. Fulfilling CAP requirements for nucleic acid based LDTs<br>3. Performing esoteric tests in cases with a difficult/uncommon diagnosis |

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| 4:00 – 5:00 pm | **Genomics and the Transformation of the Public Health Laboratory: Impacts and Insights from Enteric Diseases** |
| | **Dr. Celine A. Nadon**<br>Chief, Enteric Diseases, National Microbiology Laboratory, Public Health Agency of Canada, Winnipeg MB |
| | Learning Objectives:<br>1. Understand the basics of genomics and how it differs from its molecular predecessors<br>2. Examine the landscape of food borne disease both in Canada and internationally, and how they intersect with "omics" initiatives.<br>3. Evaluate the effects of genomics on primary functions of public health laboratory including surveillance, outbreak response, and reference tests. |
| 5:00 – 6:00 pm | Executive Advisory Board Meeting |

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| 8:00 – 9:00 am | Breakfast in the Gallery<br>Registration outside the 2nd Floor Gallery |
| 9:00 – 10:00 am | **Clinical Metagenomics: A one-stop-shop for deciphering viral infections and host-pathogen interactions** |
| | **Dr. Timokratis Karamitros**<br>Commissioned Researcher, Hellenic Pasteur Institute, Athens, Greece |
| | Learning Objectives:<br>1. Familiarise with and understand the latest Next-Generation-Sequencing (NGS) technologies and bioinformatics interpretation algorithms.<br>2. Explore quality assurance and standardisation of NGS diagnostics. How to perform well and be cost effective at the same time.<br>3. Understand how NGS can leverage the multilevel exploration of viral infections and epidemics<br>4. Overview current advancements in point-of-care metagenomics applications |
| 10:00 – 11:00 am | **Next-generation Sequencing in an Academic Clinical Microbiology Laboratory: Overcoming barriers through collaboration** |
| | **Dr. Adel Malek**<br>Clinical Microbiologist, University of Rochester Medical Center, New York NY |
| | Learning Objectives:<br>1. Describe broad applications of next-generation sequencing (NGS) in clinical microbiology laboratories<br>2. Highlight bottlenecks associated with routine and widespread implementation.<br>3. Describe a real clinical scenario where NGS helped investigate a protracted outbreak in an ICU<br>4. Discuss how NGS data can be mined to explore beyond epidemiological relationships into subtle aspects of drug resistance and pathoadaptation. |
| 11:00 – 11:30 am | Coffee Break sponsored by **Roche** in the Gallery<br>Exhibits in the Gallery |

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| 11:30 – 12:30 pm | **Results of the 2019 National Challenge Panel for 16SrRNA Gene Sequencing and/or MALDI-TOF** |
| | **Kathryn Bernard**<br>Head, Special Bacteriology, National Microbiology Laboratory, Winnipeg MB |
| | Learning Objectives:<br>1. Present results of participant laboratories for each of the 4 test bacteria and bonus bug, striated down by method; nuances regarding use of both identification methods will be reviewed.<br>2. Discuss progress on implementation of a national MALDI-TOF database. |
| 12:30 – 2:00 pm | Lunch in the Gallery<br>Exhibits in the Gallery |
| 12:30 – 2:00 pm | **NMG AGM**<br>** All registered NMG members are encouraged to attend ** |
| 2:00 – 4:00 pm | **Tell Us About Your Laboratory: A Chance to Describe Testing in Your Laboratory, Trouble-shooting/Interesting Cases** |
| | Learning Objectives:<br>1. To allow laboratories across Canada to showcase new molecular assays/technologies employed in their laboratory and indicate their clinical impact.<br>2. To allow laboratories to share their experiences with molecular assays including trouble-shooting.<br>3. To create an opportunity for sharing of ideas and experience for laboratories across Canada using molecular technologies. |
| 2:00 – 2:20 pm | **Improving Access to Gastroenteritis Diagnosis in Newfoundland and Labrador**<br><br>Presenter: **Rob Needle**<br>Newfoundland and Labrador Provincial Public Health Laboratory, Eastern Health Microbiology Services, St. John's NL |

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| 2:20 – 2:40 pm | **Comparative Evaluation of bioMerieux BioFire FilmArray Gastrointestinal Panel, Luminex xTAG Gastrointestinal Pathogen Panel and Seegene Allplex Gastrointestinal Panel Assays for Detection of Gastrointestinal Pathogens**<br><br>Presenter: **Lorraine Holfeld**<br>Island Health, Victoria BC |
| 2:40 – 3:00 pm | **Verification of Three multiplex Carbapenemase Nucleic Acid Amplification Tests (NAAT)**<br><br>Presenter: **Bryn Hazlett**<br>Univ. Health Network, Mt. Sinai Health System, Toronto ON |
| 3:00 – 3:20 pm | **Troubleshooting an aging endpoint BK virus screening assay leads to a new lab-developed Quantitative BK virus PCR**<br><br>Presenter: **Karel Boissinot**<br>St Michael's Hospital, Unity Health, Toronto ON |
| 3:20 – 3:40 pm | **How to choose laboratory plasticware- by price, looks or special features? Factors affecting experiments with *C. difficile* spores**<br><br>Presenter: **George Broukhanski**<br>Public Health Ontario Laboratories, Toronto ON |
| 3:40 pm | Official Close of Meeting |