



## FINAL PROGRAM

# National Molecular Microbiology Diagnostic Users Group Annual Fall Meeting (NMG)

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

**Monday November 23, 2015**

8:00-9:00 am **Breakfast in the Gallery sponsored by Terrace Catering**

8:00-9:00 am **Registration outside the 2<sup>nd</sup> Floor Gallery**

9:00-9:10 am **Welcome and Introduction**  
Dr. Astrid Petrich, NMG Meeting Chair

9:10-9:40 am **Workshop sponsored by Thermo Fisher Scientific**

**Title:** MicrobeBridge Software - Advancing infectious disease surveillance with the MicrobeNet database

**Speaker:** Jing Zhai, Ph.D.  
Product Manager - Sanger Informatics  
Life Sciences Solutions  
Thermo Fisher Scientific  
San Francisco, CA USA

**Objectives:**

The Applied Biosystems™ MicrobeBridge™ software platform is an advanced software solution that seamlessly connects Sanger sequencing results to the Centers for Disease Control and Prevention (CDC) MicrobeNet™ online virtual reference database using 16S sequencing technology. The software enables researchers to more quickly identify microbial pathogens at the root of global outbreaks using a single database curated by subject matter expert

9:40-10:10 am

**Workshop sponsored by Integrated DNA Technologies**

**Title:** Increased Options for Design and Manufacture of Custom Molecular Diagnostics Assays

**Speaker:** Robert Setter  
Sales Manager, Canada – Integrated DNA Technologies

**Objectives:**

1. Introduce customers to new qPCR tools from IDT for custom probe and primer design
2. Discuss Applications Support and design services
3. Introduce customers to new NGS tools for target capture and targeted resequencing

10:10-11:10 am

**Coffee Break in the Gallery sponsored by **Altona Diagnostics Canada****

10:10-11:10 am

**Exhibits in the Gallery**

- Abbott Molecular
- Accelerate Diagnostics
- ACGT Corporation
- Alere Canada
- Altona Diagnostics Canada
- BD
- bioMérieux Canada, Inc
- Bio Nuclear Diagnostics
- Cedarlane
- Integrated DNA Technologies
- Inter Medico
- Luminex
- Phoenix Airmid Biomedical
- Promega Corp.
- Qiagen
- Quidel Corporation
- Roche Diagnostics
- Seegene Canada
- Somagen Diagnostics Inc
- ThermoFisher Scientific
- Zepion

11:10-11:40 pm

**Workshop sponsored by Qiagen Inc.**

**Title:** The complete transplant solution: Artus CMV viral load and QuantiFERON Immune-based monitoring in Solid Organ Transplantation (SOT)

**Speaker:** Frank Kuhr, Ph.D  
Director Medical Affairs, QIAGEN

**Objectives:**

1. Describe how CMV detection for solid organ transplantation (SOT) management is best done using standardized, commercial assays using international standards as a reference that will promote harmonization of CMV results across institutions and eliminate variability of LDTs.
2. Describe antigen specific and general net immune function cell-mediated immunity assays that can individualize SOT patient management.
3. Describe how cell-mediated immunity assays can help risk stratify SOT patients risk of infection and deliver individual healthcare by using precision diagnostics

11:40-12:10 pm

**Workshop sponsored by Phoenix Airmid Biomedical Inc.**

**Title:** RIDA®GENE: present and future for the detection of gastrointestinal infection

**Speaker:** Lena Kastl, PhD.  
R-Biopharm  
Product Manager for Molecular Diagnostics.

**Objective:**

Highlight and discuss the future of Molecular Gastrointestinal infection testing solutions from R-Biopharm.

12:10-1:15 pm

**Lunch in the Gallery sponsored by [Zeptomatrix](#)**

1:15-2:15 pm

**Workshop sponsored by [altona Diagnostics Canada](#)**

**Title:** EBV and CMV: When common viruses do uncommon things.

**Speaker:** Marek Smieja, MD, MSc, PhD, FRCPC  
Microbiology Discipline Director/Infectious Diseases  
Hamilton Regional Laboratory Medicine Program

**Objectives:**

1. Review EBV and CMV DNA testing
2. Examine diagnosis of atypical illness

**Title:** How do we know that diagnostic tests do what we think they do?

**Speaker:** Dr. Markus Hess  
altona Diagnostics GmbH  
Hamburg, Germany

**Objectives:**

1. Describe how we know that Filovirus and Ebola virus assays are performing as expected.
2. Describe expectations of users, intended use, performance evaluation, verification, validation, and post market surveillance.

2:15-2:45 pm

**Workshop sponsored by BD**

**Title:** BD MAX: A New Approach to Laboratory Diagnosis of Infectious Diarrhea"

**Speaker:** Diane Kawa, PhD  
Scientific Affairs Director, Diagnostic Systems  
BD Life Sciences

**Objectives:**

1. Discuss challenges with current laboratory methods for diagnosis enteric infections.
2. Describe the clinical performance and workflow of BD MAX™ Enteric Bacterial (EBP) and Enteric Parasite Panel (EPP) in diverse settings.
3. Outline key elements for successful implementation of molecular testing for enteric pathogens in the clinical laboratory.

2:45-3:15 pm

**Coffee Break in the Gallery**

2:45-3:15 pm

**Exhibits in the Gallery**

3:15-3:45 pm

**Workshop sponsored by bioMérieux Canada, Inc**

**Title:** FilmArray technology – A New Model for Meningitis

**Speaker:** Christine C. Ginocchio, PhD, MT (ASCP)  
VP, Global Microbiology Affairs, bioMérieux  
VP, Scientific and Medical Affairs, BioFire

**Objectives:**

1. Define the limitations of standard microbiologic and analyte specific testing for meningitis/encephalitis
2. Understand the clinical impact of rapid syndromic testing for the diagnosis of meningitis/encephalitis

3. Explain the testing features, analytical and clinical performance characteristics of the BioFire FilmArray meningitis/encephalitis syndromic panel.

3:45-4:15 pm

**Updates from our Laboratories**

Molecular Bacteriology at CHU Sainte-Justine

Fabien Rallu, Ph.D., Mcb.A.

Montréal Québec

Molecular Testing at Kingston General Hospital

Prameet M. Sheth MSc. PhD. D(ABMM)

Kingston, Ontario

4:15-5:00 pm

**Meet and Greet in the Gallery**

4:15-5:00 pm

**NMG Board Meeting (Event Room 2)**



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

**Tuesday November 24, 2015**

- 8:00-9:00 am **Breakfast in the Gallery sponsored by [Luminex Corp.](#)**
- 8:00-9:00 am **Exhibits in the Gallery**
- 9:00-10:00 am **Regulation of diagnostic test kits and Instrumentation by Health Canada**
- Speaker:** Patrice Sarrazin, PhD  
Senior Scientific Evaluator  
In Vitro Diagnostic Devices  
Device Evaluation Division  
Medical Devices Bureau  
Health Canada
- Objectives:**
1. Have a better comprehension of the regulatory oversight of diagnostic test kits and instrumentations made by Health Canada.
  2. Have a better understanding of Health Canada's pre-market evaluation processes supporting the safety and effectiveness of medical device
- 10:00-10:30 am **What do inspectors look for during accreditation visits in laboratories that perform molecular testing?**
- Speaker:** Astrid Petrich, PhD D(ABMM)  
Clinical Microbiologist  
The Hospital for Sick Children  
Toronto, ON

**Objectives:**

1. Describe standards and guidelines inspectors follow when performing accreditation visits in molecular microbiology laboratories
2. Provide examples of the approach an inspector will take to examine evidence of compliance with guidelines

10:30-11:00 am

**Coffee Break and Exhibits**

11:00-11:45 am

**Challenges to the implementation of next-generation sequencing for hepatitis B genotype and resistance testing**

**Speakers:** Christopher Lowe  
Medical Microbiologist  
Providence Health Care  
Vancouver, BC

Gordon Ritchie  
Clinical Scientist  
Providence Health Care  
Vancouver, BC

**Objectives:**

1. Overview of next-generation sequencing for microbiology/virology.
2. Description of the approach to introducing next-generation sequencing in a clinical microbiology/virology laboratory.
3. Outline clinical and technical challenges to implementing hepatitis B genotyping and resistance testing.

11:45-12:15 pm

**Serotyping and subtyping *Salmonella*: applied microbial genomics**

**Speaker:** Geneviève Labbé, PhD  
National Microbiology Laboratory at Guelph  
Public Health Agency of Canada  
Guelph, ON

**Objectives:**

1. Describe approaches using whole genome sequencing to develop new SNP-based serotyping and subtyping methods for *Salmonella*.
2. Present a new genotyping assay for *Salmonella*: single amplicon, SNP-based identification of over 100 common *Salmonella* serovars.
3. Present a new SNP-based subtyping assay for distinguishing related and unrelated *Salmonella* serovar Enteritidis isolates: improving outbreak detection and source attribution.
4. Discuss next steps for deployment in Public Health laboratories, and incorporation into *in silico* genotyping platforms to analyse WGS data.

12:15-1:30 pm

**Lunch in the Gallery**

- 12:30-1:30 pm **NMG AGM (All participants are invited to attend)**  
Auditorium
- 1:30-2:00 pm **Results of the 2015 National Challenge Panel for 16SrRNA Gene Sequencing and/ or MALDI-TOF**
- Speaker:** Kathryn Bernard  
Head, Special Bacteriology  
National Microbiology Laboratory  
Winnipeg, MB
- Objectives:**
1. Describe need for an external proficiency test for 16S rRNA gene sequencing and MALDI-TOF instrumentation
  2. Describe 4 bacteria selected for the panel associated with different degrees of complexity for accurate identification
  3. Present results of participant laboratories for each of the 4 test bacteria, striated down by method; nuances regarding use of both identification methods will be reviewed.
  4. Discuss next steps for proficiency testing
- 2:00-3:30 pm **Trouble-shooting/Interesting Cases**
- Chair:** Julianne V. Kus, MSc, PhD, FCCM  
Clinical Microbiologist  
Public Health Ontario  
Toronto, ON
1. **Standardizing Viral Load Assays – The challenges of a road less travelled.**  
**Prameet Sheth**, PhD, Clinical Microbiologist, Kingston General Hospital
  2. **Strengthening hepatitis C virus outbreak investigation by next generation sequencing; a phylogenetic anomaly resolved by analysis of intra-host viral quasispecies.**  
**Jamie Borlang**, Ben Liang, Lisa Lin, Carla Osiowy, Anton Andonov  
National Microbiology Laboratory, Public Health Agency of Canada
  3. **WGS in investigation of a measles outbreak.**  
**Samir Patel**, PhD, Clinical Microbiologist, Public Health Ontario
  4. **Title: To PCR or not to PCR? Resolving an isolated Hepatitis B Core antibody test**  
**Agatha Jassem**, PhD, Senior Scientist BCCDC
  - 5.. **The challenge and contribution of molecular sequencing to outbreak investigation: adenovirus on a bone marrow transplant unit.**  
**Ramzi Fattouh**, PhD, Clinical Microbiology Fellow, University of Toronto
- 3:30 pm **Official Close of Meeting**