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# **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 December 3, 2018**

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

8:00-9:00 am **Registration outside the 2nd Floor Gallery**

9:00-9:10 am **Welcome and Introduction**

Dr. George Zahariadis, NMG Meeting Chair

9:10-10:10 am **Workshops sponsored by Hologic**

**Title:** Meeting the Challenges of High Volume Multiplex Molecular Testing: The integration of test design, automation efficiency and workflow versatility

**Part 1:** Evaluation of the Panther-Fusion platform with Open Access channel to integrate IVD and LDT workflows

**Speaker:** **Dr. William M. Rehrauer, PhD**

University of Wisconsin School of Medicine and Public Health, Department of Pathology and Laboratory Medicine

Co-Director of the Translational Laboratory in Pathology (TRIP)

Director of Molecular Diagnostics, University of Wisconsin Hospital and Clinics

**Part 2:** Canadian Public Health Lab Perspective on multiplex respiratory testing and lessons learned on how to manage workflow during influenza season:

**Speaker: Paul N. Levett PhD DSc (D)ABMM FCCM FAAM**

Clinical Microbiologist, BCCDC Public Health Laboratory

10:10-10:40 am **Workshop sponsored by Integrated DNA Technologies**

**Title:** Indexed Adapters for Next Generation Sequencing: How to Choose?

**Speaker: Dr. Adam Chernick, PhD**

Field Applications Manager at IDT

 **Presentation Summary:**

1. To provide an overview of the key elements of indexed adapters and the role that each element plays in next generations sequencing.
2. To discuss the range of adapter formats available from IDT and which applications to which each is best suited.
3. To empower attendees to design and execute their own next generation sequencing work with the best adapters for their needs.

10:40-11:00 am **Coffee Break sponsored by Abbott Molecular in the Gallery**

10:40-11:00 am **Exhibits in the Gallery**

11:00-11:30 am **Workshop sponsored by Roche**

 **Title:** Antibiotic Stewardship

**Speaker: Dr. Steven E. Cagas, PhD**

Scientific Advisor, Roche

**Presentation Outline:**

1. Antibiotic History
2. What does Resistance look like
3. Why does this topic matter
4. Potential Adverse outcomes
5. Antibiotic stewardship in action
6. Future possibilities
7. Summary

11:30-12:00 pm **Workshop sponsored by Microbix**

 **Title:** Emerging Requirements for Quality Control Material

**Speaker: Pavel Zhelev, M.Sc. Biotechnology**

Product Manager Quality Assurance Products

 Microbix

 **Objectives:**

1. Current regulatory landscape controlling the use of QC material
2. Types of QC material and their application in the infectious disease diagnostic lab workflow
3. Overview of the current QC material used for the infectious disease IVD quality management
4. Emerging requirements for infectious disease QC material

12:00-1:00 pm **Lunch sponsored by Altona in the Gallery**

12:00-1:00 pm **Exhibits in the Gallery**

1:00-1:30 pm **Workshop sponsored by Altona**

**Title:** Hepatitis E viral load, Quebec experience in a clinical laboratory

**Speaker: Dr. Christian Renaud** **MD M.Sc. FRCPC**

Medical Microbiologist & Pediatric ID

CHU Sainte-Justine, Montréal, QC

 **Objectives:**

1. Learning about hepatitis E epidemiology in Quebec.
2. Understanding hepatitis E clinical manifestations.
3. Considering the benefits of hepatitis E RT-PCR in the evaluation of immunocompromised patients with hepatitis.

1:30-2:00 pm **Workshop sponsored by Quidel**

**Title:** Evaluation of Solana HSV 1+2/VZV assay compared to viral culture and commercial PCR assay for cutaneous or mucocutaneous specimens

 **Speaker: Dr. Simon Lévesque, PhD, Mcb.A., RMCCM**

 Clinical Microbiologist

 CIUSSS de l’Estrie – CHUS, Sherbrooke, QC

 **Objectives:**

1. Provide an overview of the Solana technology and the assays available.
2. Discuss the advantages of implementing a molecular assay for HSV and VZV detection.
3. Present the results of our evaluation study of the Solana HSV 1+2/VZV assay.

2:00-2:30 pm **Workshop sponsored by Biomerieux**

**Title:** The BioFire FilmArray: Pushing the Frontiers of Rapid Lower Respiratory Diagnostics

 **Speaker: Kristen J. Kanack**

 Senior VP Regulatory and Clinical Affairs

 BioFire Diagnostics, LLC

**Objectives:**

1. Discuss challenges of current methods used for aiding diagnosis of lower respiratory tract (LRT) infections.
2. Present the BioFire FilmArray Panel technology for sample-to-answer molecular detection of bacteria, viruses, and antimicrobial resistance markers.
3. Summarize data from the clinical evaluation of the BioFire FilmArray in LRTI.

2:30-3:00 pm **Coffee Break sponsored by Luminex in the Gallery**

2:30-3:00 pm **Exhibits in the Gallery**

3:00-3:30 pm **Workshop sponsored by Phoenix Airmid**

**Title:** The emerging threat of Carbapenem Resistant Organisms: How the revogeneTM will play a key role in helping infection control.

 **Speaker: Dr. Patrice Allibert, PhD**

CEO of GenePOC Inc.

**Objectives:**

1. To provide an overview of the emergence of CRO from a global perspective.
2. To identify the impact of CRO from a clinical point of view and infection control strategies.
3. To learn how the revogenTM molecular technology as part of the testing algorithm helps to improve patient’s outcome.

3:30-4:00 pm **Workshop sponsored by Pro-Lab**

**Title:** Eazyplex LAMP - Molecular Diagnostics Made Simple

**Speaker: Dr. Pui Sai Lau, PhD**

Chief Scientific Officer
Canadian Molecular Developments Inc. (A Pro-Lab Company)

 **Objectives:**

1. Discuss the key differences between PCR and LAMP.
2. Introduce the capabilities of the Genie instrument and LAMP technology.
3. Explore practical examples of LAMP in the clinical molecular diagnostic laboratory.

4:00-4:30 pm **Workshop sponsored by BD**

**Title:** BD Solutions: Helping to Provide Solutions to set the Patient on the Right Clinical Path

**Speaker: Craig Whiteford MS, PhD**

Assay Program Director

 BD Life Sciences

 **Objectives:**

Join us to learn more about:

1. A microbiome approach to Women’s Health testing.
2. Tackling the concern of CRE and CRE Screening.
3. How the new BD Max™ Assays can help support laboratories today and moving forward.

4:30-5:00 pm **Workshop sponsored by Seegene**

**Title:** Evaluation of the Allplex Respiratory Panel Assays 1, 2 and 3 for Detection of Respiratory Viruses

**Speaker: Dr. L. Y. Kong, MD**

5:00-6:00 pm **Executive Advisory Board Meeting**



**Auditorium**

**Peter Gilgan Research and Learning Centre**

**The Hospital for Sick Children, Toronto ON**

**Tuesday December 4, 2018**

8:00-9:00 am **Breakfast in the Gallery**

9:00-9:45 am **Defining and Detecting Drug Resistant Tuberculosis: Navigating an Evolving Landscape**

**Speaker: Dr. Frances Jamieson, MD, FRCPC**

 Medical Microbiologist

 Medical Lead for the TB and Mycobacteriology Laboratory, Pertussis laboratory, and Laboratory Surveillance at Public Health Ontario, Toronto, ON

**Objectives:**

1. Review the epidemiology of drug-resistant *M. tuberculosis* (Mtb) in Ontario and Canada (compared to world data), and understand implications for the detection of drug resistant Mtb.
2. Utilize knowledge and understanding of culture-based drug susceptibility testing (DST) and molecular methods for detection of anti-TB drug resistance to improve management of TB patients.
3. Recognize and understand caveats with both conventional culture-based DST and molecular prediction of drug resistance (including contradictory results) that should be considered in the determination of optimal anti-TB therapy.

9:45-10:30 am **Transitioning cytomegalovirus viral load testing from a laboratory developed test to the cobas® CMV quantitative nucleic acid assay**

**Speaker: Dr. Michael Payne MD, DTM&H, D(ABMM), CIC, FRCPC**

Medical Microbiologist, London Health Sciences Centre

Co-Section Head, Molecular Microbiology

Medical Director, Infection Prevention and Control

 **Objectives:**

1. Describe inter-assay variability with CMV viral load assays.
2. Introduce commutability issues with CMV viral load assays and the WHO International Standard.
3. Discuss process of clinician engagement when transitioning viral load assays.

10:30-11:00 am **Coffee Break sponsored by Luminex in the Gallery**

10:30-11:00 am **Exhibits in the Gallery**

11:00-11:45 am **Results of the 2018 National Challenge Panel for 16SrRNA Gene Sequencing and/or MALDI-TOF**

**Speaker: Kathryn Bernard**

Head, Special Bacteriology

National Microbiology Laboratory

Winnipeg, MB

**Objectives:**

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.

2. Discuss progress on implementation of a national Maldi-TOF database.

11:45-12:00 am **A Survey of Quality Control Practices in Molecular Microbiology Laboratories**

 **Speaker: Dr. Lee Goneau, PhD, FCCM**

 Clinical Microbiologist

Public Health Ontario | Santé Publique Ontario

Assistant Professor, Dept. of Laboratory Medicine and Pathobiology, University of Toronto, ON

 **Objectives:**

1. Review the current literature and gaps for QC strategies in molecular microbiology laboratories.
2. Discuss the need for harmonization and standardization of QC strategies in molecular microbiology laboratories.

12:00-1:15 pm **Lunch sponsored by Hologic in the Gallery**

12:00-1:15 pm  **Exhibits in the Gallery**

12:15-1:15 pm **NMG AGM (All participants are encouraged to attend)**

Auditorium

1:15-2:00 pm **Implementation of PCR for the detection of *Pneumocystis jirovecii* in Bronchoalveolar Lavage fluid**

 **Speaker:** **Dr.** **Aaron Campigotto MD FRCPC**

Head, Division of Microbiology

The Hospital for Sick Children, Toronto, ON

**Objectives:**

1. Describe the advantages associated with the use of PCR, compared to microscopy, for the detection of *Pneumocystis jirovecii* in bronchoalveolar lavage fluid.
2. Recognize the challenges in the interpretation of PCR results and describe approaches that may be implemented to overcome these challenges.

2:00-2:15 pm 15 minute break

2:15-3:55 pm **Tell Us About Your Laboratory. A Chance to Describe Testing in Your Laboratory, Trouble-shooting/Interesting Cases**

**Objectives:**

1. To allow laboratories across Canada to showcase new molecular assays/technologies employed in their laboratory and indicate their clinical impact.
2. To allow laboratories to share their experiences with molecular assays including trouble-shooting.
3. To create an opportunity for sharing of ideas and experience for laboratories across Canada using molecular technologies.

2:15-2:35 pm **Oh Heck…It’s STEC**

**Results of Replacing Culture with a Lab Developed Molecular Assay for Bacterial Enteric Pathogens on the BD MAX**

**C. Rutherford1**, A. Cabrera3, M. Smieja1,2

 1St. Joseph’s Healthcare, Hamilton, Ontario

2Department of Pathology and Molecular Medicine, McMaster University, Hamilton, Ontario

3London Health Sciences Centre

2:35-2:55 pm **Reducing Error rates in Amplicon Sequencing of HBV Drug Resistance Mutations on the Illumina MiSeq**

**G Ritchie** 1,2 , M Payne 1,2 , L Merrick 1 , T Bush 1, C Lowe 1,2

1. Division of Microbiology and Virology, Providence Health Care, Vancouver, British Columbia

2. Department of Pathology and Laboratory Medicine, University of British Columbia, Vancouver, BC, Canada

2:55-3:15 pm **Molecular Typing of the Gastrointestinal Parasite, *Cryptosporidium,* in Canadians**

 **R. A. Guy**1, C. A. Yanta1, S. A. Murphy1

1National Microbiology Laboratory at Guelph, Public Health Agency of Canada

3:15-3:35 pm **Potential Impact of Decreasing Turnaround Time of Cerebrospinal Fluid Enterovirus Polymerase Chain Reaction (PCR) Testing in Hospitalized Children.**

M. Alghounaim1, C. Caya2, M. Cho1, C. Yansouni1,2, N. Dendukuri2, and **J. Papenburg**1, 2

1Division of Microbiology, Department of Clinical Laboratory Medicine, McGill University Health Centre, Montreal, QC, Canada

2Research Institute of the McGill University Health Centre, Montreal, QC, Canada

3:35-3:55 pm **Evaluation of the Copan FecalSwab™ for collection, storage and molecular detection of diarrheagenic bacteria**

**M. Richard-Greenblatt**1,2**,** C. Rutherford1, K. Luinstra1, M. Smieja1,2

 1St. Joseph’s Healthcare, Hamilton, Ontario

2Department of Pathology and Molecular Medicine, McMaster University, Hamilton, Ontario

3:55 pm **Official Close of Meeting**

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

* The Hospital for Sick Children
* Abbott Molecular
* Accelerate Diagnostics
* Alere
* Altona
* BD
* Beckman Coulter
* Biomerieux
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* Copan Diagnostics Inc.
* Gold Standard Diagnostics
* Hologic
* Integrated DNA Technologies
* Inter Medico
* Luminex
* Microbix
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