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# **FINAL PROGRAM**

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

**Hollywood Theatre**

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

**Monday October 21, 2013**

8:00-8:30 am **Breakfast**

8:00-8:30 am **Registration**

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

Dr. Astrid Petrich, NMG Meeting Chair

9:10-9:40 am **Workshop sponsored by Phoenix Airmid Biomedical**

**Title: “**CLART® Clinical Array Technology. Clinical daily use of low density microarrays”.

Automate your Clinical Multiplex Diagnostics

**Speaker:** José Luis Lafarga López, MSc.

Genomica Territory Manager.

**Objectives:**

1. Explain and Describe Clinical Array Technology CLART®

2. Clinical use of microarrays in routine diagnostics, multiple detection. HPV. Respiratory Viruses, Herpes Viruses, Sexually Transmitted Diseases, Bacteria and Cancer.

3. Daily Clinical Results improvement by CLART®

9:40-10:10 am **Workshop sponsored by** **Integrated DNA Technologies**

**Title:** Optimizing Multiplex qPCR for Detecting Infectious Diseases

**Speaker:** Aurita Menezes, PhD.

qPCR Product Manager,

Integrated DNA Technologies

**Objectives:**

1. Design and Reaction criteria to consider when multiplexing
2. Use of Zen double quenched probes aids in accurate quantification of multiple fluorescent signals

10:10-10:40 am **Coffee Break in the Rotunda sponsored by Luminex Corporation**

10:10-10:40 am **Exhibits in the Rotunda**

* Alere Diagnostics Canada
* Bio Nuclear Diagnostics
* bioMérieux Canada
* Cedarlane Laboratories
* D MARK Biosciences
* Fluidigm Corporation
* Integrated DNA Technologies
* Inter-Medico
* Luminex Corporation
* Phoenix Airmid Biomedical
* Primera Dx
* ProLab Diagnostics
* Promega Corporation
* Qiagen
* Quidel Corporation
* Somagen Diagnostics Inc.
* ZeptoMetrix Corporation

10:40-11:40 pm **Workshop sponsored by Quidel Corporation**

**Speaker:** Dr. Tammi Ranalli

Senior Director, Molecular Business Unit

Quidel Corporation

**Title:** Quidel’s Ready-to-Use Reagents and Anytime, Anywhere Molecular Assays

**Objectives:**

1. Introduction to Quidel Molecular

2. Discussion of the Unique Reagent System and the Clinical Performance with Respiratory and Infectious Diseases

* Influenza &  Recent A(H7N9) Clearance
* hMPV/RSV
* HSV 1+2 /VZV

3. Amplivue:  Helicase Dependent Amplification (HDA) Technology as a Solution to Affordable, Instrument-free Molecular Testing

* *C. Difficile* Disease Overview
* Why Test and Testing Algorithms
* Method Options and Benefits of HDA technology
* Clinical performance

11:40-12:10 pm **Workshop sponsored by altona Diagnostics**

**Speakers:** Marek Smieja, MD PhD FRCPC

Head of Virology, St. Joseph’s Healthcare Hamilton

Infectious Diseases Physician and Microbiologist

Candy Rutherford MLT, ART

Technical Specialist Molecular Microbiology and Virology, HRLMP

**Title:** Multiplex PCR Detection of Herpesviruses and Varicella:  Why and How?

Objectives:

1.     To describe the clinical importance of lab diagnosis for herpes and varicella infections

2.     To evaluate the altona RealStar *alpha* Herpesvirus multiplex PCR for diagnosing skin and mucous membrane lesions

3.    To evaluate PCR testing with MSwab rapid nucleic acid extraction from skin and mucous membrane lesions

12:10-1:00 pm **Lunch in the Atrium Cafeteria generously sponsored by Zeptometrix Corporation**

1:00-2:00 pm **Workshop sponsored by Qiagen**

**Speaker:** Raed Samara, PhD, PMP

Global Product Manager

Qiagen

**Title:** Molecular analysis via Next Generation Sequencing (NGS)

**Objectives:**

1.      Primer on NGS

2.       NGS Pre-Analytics (sample prep) workflow

3.       Considerations for using NGS in Molecular Microbiology

2:00-3:00 pm **Workshop sponsored by Luminex Corporation**

**Speaker:** Dr. Susan Richardson

Head, Microbiology

The Hospital for Sick Children

Toronto, ON

**Title:** Luminex xTAG GPP assay: justification, implementation and early experience in GI multiplexing in children

**Objectives:**

1. Participants will understand the role of a comprehensive business case in considering the introduction of novel technology affecting multiple areas of the laboratory
2. Attendees will learn about the impact on the laboratory of the introduction of a multiplex assay that will replace various components of conventional GI pathogen diagnostics
3. Attendees will understand the early experience and clinical impact of GI multiplex PCR diagnostics in children

3:00-3:30 pm **Coffee Break Room**

3:00-3:30 pm **Exhibits in the Rotunda**

3:30-4:00 pm **Workshop sponsored by Alere Diagnostics Canada**

**Speaker:** Norman Moore, PhD  
Director of Scientific Affairs, Infectious Diseases, Alere Inc

**Title:** Alere i platform

**Objectives:**

1. Understand the molecular biology of how the Alere isothermal assay performs.

2. Understand the evaluation of the isothermal assay in a clinical trial for influenza.

3. Understand how rapid molecular results may impact therapy decisions.

**4:00-4:30 pm Special Presentation – Dr. Nick Antonishyn**

**Title:** Adoption of Massively Parallel Real-time PCR on a Nanofluidic Biochip for Clinical Microbiology.

**Objectives:**

1. To describe a nanofluidic technology by the Fluidigm Corp. that creates the basis for comprehensive syndrome-based diagnostics.
2. To demonstrate the advantage of this novel approach for practical clinical microbiology.



**Hollywood Theatre**

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

**Tuesday October 22, 2013**

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

8:00-9:00 am **Exhibits in the Rotunda**

* Alere Diagnositcs Canada
* Bio Nuclear Diagnostics
* bioMérieux Canada
* Cedarlane Laboratories
* D MARK Biosciences
* Fluidigm Corporation
* Integrated DNA Technologies
* Inter-Medico
* Luminex Corporation
* Phoenix Airmid Biomedical
* Primera Dx
* ProLab Diagnostics
* Promega Corporation
* Qiagen
* Quidel Corporation
* Somagen Diagnostics Inc.
* ZeptoMetrix Corporation

9:00-10:00 am **The Genomics Revolution- From One Gene to All Genes**

**Speaker:** Matthew Gilmour, PhD, ARMCCM

Clinical Microbiology

Diagnostic Services Manitoba

Winnipeg, MB

**Objectives:**

1. Classical molecular methods for microbe identification

2. Novel molecular approaches that are real-world possibilities for the clinical microbiology laboratory

3. The growing revolution of whole genome sequencing, and its eventual transition from public health to f

10:00-10:30 am **Results of a *Bordetella pertussis*/*parapertussis* Proficiency Panel**

**Speaker:** Astrid Petrich, PhD  
The Hospital for Sick Children

Toronto, ON

**Objectives:**

1. To describe the development of a *Bordetella pertussis*/*parapertussis* proficiency panel.
2. To discuss the results for the *Bordetella pertussis*/*parapertussis* proficiency panel sent out to laboratories throughout Canada.

10:30-11:00 am **Coffee Break in Rotunda**

10:30-11:00 am  **Exhibits in Rotunda**

11:00-11:30 am **Results of the National Proficiency Test for 16SrRNA Gene Sequencing and/ or MALDI-TOF**.

**Speaker:** Kathryn Bernard

Head, Special Bacteriology

National Microbiology Laboratory

**Objectives:**

1. Describe need for an external proficiency test for 16S rRNA gene sequencing and MALDI-TOF instrumentation

2. Describe bacteria selected for test, which in 2013, were ranked (degree of complexity) as easy, moderate or difficult

3. Present results by 25 participant laboratories for each of the 3 test bacteria, broken down by method; nuances regarding the underlying taxonomy for each bacterium was briefly reviewed.

4. Discuss next steps for a proficiency test

11:30-11:45 am **The Canadian MALDI-TOF User's Group (CMUG), a newly created, national forum for MALDI TOP users or potential users.**

**Speaker:** Kathryn Bernard

Head, Special Bacteriology

National Microbiology Laboratory-PHAC

**Objectives:**

1.  Present history and overview of CMUG organization

2. Review website and its usage to date

3. Review future activities of CMUG membership, MALDI-TOF updates with respect to FDA approval and potential role of NML for MALDI users.

11:45-12:15 pm **A Proposal for Molecular Testing; Inhouse Developed Laboratory Tests**

**Speaker:** Ivan Brukner

Molecular Diagnostics

Jewish General Hospital

**Objectives:**

1. Discuss the benefits of  developing and maintaining in-house laboratory assays: our examples

2. Discuss re-investment into developments and caching-up with technological  leaders: our suggestion

12:15-1:30 pm **Lunch in the Atrium Cafeteria generously sponsored by altona Diagnostics Canada**

12:30-1:15 pm **NMG AGM (All participants are invited to attend)**

Hollywood Theatre

1:15-1:45 pm **The Detective World of Shiga Toxin-Producing *E. coli* (STEC)**

**Speaker:** Linda Chui, PhD, ARMCCM

Alberta Provincial Laboratory

Edmonton, AB

**Objectives:**

1. Different methods for detecting STEC

2. Advantages and disadvantages of each method

**1:45-3:15 pm** **Trouble-shooting Vignettes**

**Chair:** Linda Chui, PhD, ARMCCM

Alberta Provincial Laboratory

Edmonton, AB

**Objectives:**

1. To learn about issues that can arise in molecular diagnostic testing

2. To discuss different trouble-shooting strategies.

**3:15 pm Official Close of Meeting**