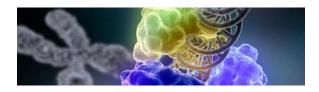


# Join us for A Molecular Micro Grand Slam!

Featuring:
Basic Theory – Good Practices –Regulatory Review – Test Your Technique



Friday, December 6, 2013

## Bristol Community College Fall River, Massachusetts

sponsored by

Northeast Branch American Society for Microbiology

and

**Bristol Community College** 

#### **Program Description**

The Molecular Micro Grand Slam is designed for laboratory professionals and students *with little to no molecular experience* who are looking to expand their knowledge and practical skills, using clinical microbiology as the focal point. Join us just for a morning of lectures (basic theory & applications) or join us in the morning and stay for afternoon lectures plus a hands-on lab workshop!

#### **Program Objectives**

Upon completion of this program, participants will be able to:

- Describe how properties of nucleic acids are exploited by sequence-based molecular methods for microbial detection and characterization
- Describe advantages and disadvantages associated with molecular tests used for diagnostic microbiology
- Name important features to consider when choosing a molecular platform or a molecular test for a laboratory
- Develop an initial verification for molecular infectious disease tests & plan post-implementation validation, ensuring that all regulations are covered
- Plan a molecular lab workflow using good molecular practices and demonstrate proper molecular sample handling techniques

#### **Program Faculty**

#### Nancy S. Miller, M.D., FCAP, FASCP

Medical Director, Clinical Microbiology & Molecular Diagnostics, Boston Medical Center

#### Beverley L. Orr, MT(ASCP)

Technical Supervisor, Clinical Microbiology Laboratory, Boston Medical Center

#### Marisa Chattman M.S., SM (ASCP)<sup>CM</sup>

Supervisor, Microbiology

Pathology and Lab Medicine, Tufts Medical Center

### Valerie M. Kosick, M(ASCP)<sup>CM</sup>

Assistant Supervisor, Clinical Microbiology Laboratory, Boston Medical Center

#### Course Facilitators

**Paulette Howarth, M.S., MLS**, Department of Natural Science, Bristol Community College Fall River, MA

#### Frank Scarano, Ph.D., MLS; MLS Department

**UMass at Dartmouth** 

#### **Program**

7:30 am Registration & Continental Breakfast

8am to noon Lectures:

Includes Basic Molecular Theory a break at 10am Methods & Applications

Platforms & Laboratory Considerations

12:15 to 1pm Lunch & Networking

1 to 3pm Lectures:

Verification & Validation Good Molecular Practices

3 to 4:30pm Hands-on workshop: Molecular techniques

4:30 to 5pm Q&A and closing comments

#### **Continuing Education Credits**

This continuing medical laboratory education activity is recognized by the American Society of Clinical Pathologists as meeting the criteria for 6 CMLE credit.

#### Information and Special Needs:

In compliance with the Americans with Disabilities Act, individuals needing special accommodations should notify Paulette Howarth at least two weeks prior to the workshop. Telephone: 508-642-0780.

#### Registration Information

Full-day program (lectures & hands-on workshop): \$75 includes breakfast, break, and lunch

Morning lectures only (includes breakfast and break): \$30 (Students \$15)

Pre-registration is required

Registration Deadline: November 30, 2013

The full-day program is limited to 24 people, awarded in the order of registration receipt.

Confirmations will be sent. Registrants will be advised once the program is filled.

No refunds will be given unless cancellation notice is received by November 30, 2013.

Please make checks payable to: NEB-ASM

or Northeast Branch-ASM

Mail registration with payment to:

Irene George, NEB-ASM P.O. Box 158

Dover, MA 02030

#### OR register online at:

http://events.constantcontact.com/register/event?llr=g8sdkygab&oeidk=a07e8hspfhf96361f78

#### Directions:

Bristol Community College Science Building "E" Room E 107

777 Elsbree Street, Fall River, MA 02720

#### From Boston and Points North

Take Route 128 to Route 24 South to Exit 5. Follow green signs halfway around the rotary to President Avenue. Turn right at the first light onto Elsbree Street. The campus is about ½ mile on the right. When you see the college's brick marquee take a right turn and follow the road to the rear of the campus and park in Lot #12. The entrance to E building is a two story glass fover between two brick buildings.

#### From Newport and points South

Take Route 138 North to Route 24 North to exit 5 to President Avenue. Follow underlined directions above.

#### From Providence and points West

Take I-195 East through Fall River to Route 24 North. Follow Route 24 North to Exit 5 to President Avenue. Follow underlined directions above.

#### From New Bedford and points East

Take I-195 West to Route 24 North to Exit 5 to President Avenue. Follow underlined directions above.

#### **Accommodations:**

Hampton Inn, Westport, MA

hamptoninn.hilton.com/Westport Telephone: 1 (888) 370 0981

#### **Molecular Micro Grand Slam!**

#### MORNING SESSION PROGRAM NOTES

#### Run the bases with the basics!

#### Faculty: Nancy S. Miller, M.D. and Beverley L. Orr, MT(ASCP)

Clinical Microbiology remains as dynamic as a change-up pitch! Molecular technologies have revolutionized in-vitro diagnostics for infectious diseases. Don't swing and miss! If you haven't had the chance to learn the basics or if you need to improve your swing, step up to this workshop. Get in and stay in the starting lineup!

Using clinical microbiology as the focus, morning lectures will include *basic* molecular vocabulary and theory, and an *introductory-level* discussion of a variety of topics such as:

- DNA, RNA, and PNA
- Molecular approaches: hybridization probes, signal-based amplification, and sequence-based nucleic acid amplification
- Method modifications: real-time PCR, isothermal amplification, melting temperature
- Sequence-based versus database dependent methods
- Applications: microbial identification, quantification, resistance profiling, strain typing, and sequencing
- Diagnostic platforms and assays
- Laboratory considerations
- References and additional information for self-study

At the end of this presentation participants will be able to:

- 1) Describe how properties of nucleic acids are exploited by sequence-based molecular methods for microbial detection and characterization
- 2) Name the features of real-time PCR that make it so useful for laboratory diagnostics
- 3) Describe different uses for molecular-based methods in clinical microbiology
- 4) List some advantages and disadvantages associated with molecular tests used for diagnostic microbiology
- 5) Name some important features and factors to consider when choosing a molecular platform or a molecular test for a laboratory

#### **Molecular Micro Grand Slam!**

#### AFTERNOON SESSION PROGRAM NOTES

# How to remain in the compliance game! Verification and validation of a molecular assay: An interactive session

**Lead Faculty: Beverley L. Orr, MT(ASCP)** 

Get in the game! Learn about verification & validation! This session will emphasize how to *easily* perform an initial verification of a molecular test without breaking your team's front office or bullpen – all while maintaining compliance with laboratory rules and regulations! Qualitative and quantitative examples with templates will be provided.

We'll cover the bases including: How to evaluate accuracy, precision and reproducibility, limit of detection, specimen acceptability, sensitivity, specificity, and predictive values – all without losing your mind or your losing valued lab technologists!

Ideas for post-implementation validation of molecular testing will be covered during the 7th inning stretch!

At the end of this presentation participants will be able to:

- 1. Develop and perform an initial verification for qualitative and quantitative molecular infectious disease testing, ensuring that all regulations are covered
- 2. List compliance requirements or suggestions for post-implementation validation for infectious disease molecular testing

# **Good molecular practices:**Sample manipulation to amplification...Without the contamination!

Lead Faculty: Marisa Chattman M.S., SM (ASCP)<sup>CM</sup>

At the end of this presentation participants will be able to recognize proper and improper molecular microbiology techniques and practices, and apply this knowledge to molecular testing workflow – to achieve accurate results while minimizing risk of contamination.

#### Hands-on workshop: Molecular techniques

Lead Faculty: Valerie M. Kosick, M(ASCP) CM

New to the game or Hall of Fame? Polish your technique for molecular gain!

Ninety-minute wet lab demonstrates and drills techniques for handling and processing molecular testing. Above and beyond sterile technique, molecular technique requires focus and finesse for accurate, uncontaminated results while performing low to high complexity tests.

At the end of the practical laboratory session, participants will be able to:

- 1) Plan a molecular lab space for preventing contamination
- 2) List and demonstrate molecular sample handling techniques

## **REGISTRATION FORM**

# **Molecular Micro Grand Slam!**

Bristol Community College F	riday, December 6, 2013
Name:	
Facility:	
Address:	Phone:
Email:	
Registration Fee:\$75 Full-day program\$30 Morning lectures only\$15 student fee, Morning lectures only	
Make check payable to: <b>NEB-ASM or NORTHEAST BRANCH-ASM</b>	M Registration deadline November 30, 2013
Mail to: Irene George, NEB-ASM, PO Box 158, Dover, MA 02030	
OR register online at:	
http://events.constantcontact.com/register/event?llr=g8sdkygab&oeidk=a07e8hspfhf96361f78	