Workshop Descriptions

May 27, 2020

5797  Current Concepts in Hemostasis and Thrombosis
8:30 am - 5:00 pm
7.0 CMLE Credits

John L. Francis, PhD
Director, Special Coagulation Laboratory, AdventHealth, Orlando, FL; Professor of Medical Education, University of Central Florida College of Medicine, Orlando, FL.

This workshop will help the participant gain a working understanding of current concepts in hemostasis, the laboratory investigation of its disorders, and the monitoring of newer antithrombotic agents and their impact on the coagulation laboratory. In the first session, participants will be introduced to the components of the hemostatic system and the modern view of how these interact in both physiological and pathological situations. The second session will discuss the principles of laboratory testing for hemostatic defects with emphasis on modern approaches based on our changing understanding of coagulation pathways. In session 3, participants will learn about the laboratory control of anticoagulant therapy, particularly the newly available anticoagulants and their mechanisms of action, laboratory control, and impact on coagulation testing. The workshop will conclude with a session on the evaluation of the hypercoagulable patient which will include discussion of newly recognized causes of thrombosis, the concept of thrombosis as a multigenic disorder, and more recently available methods of investigation.

Following this workshop, you will be able to:

- Understand the current concepts of the hemostatic system and the central roles of tissue factor and thrombin.
- Approach the laboratory investigation of patients with bleeding and clotting disorders in a logical manner using both established and emerging techniques based on modern concepts of hemostasis.
- Appreciate the impact that new antiplatelet and anticoagulant drugs will have on laboratory testing, and the role of the laboratory in managing these agents.
- Understand the concept of thrombophilia and its laboratory investigation.

2531  Clinical Chemistry: Review and Update
8:30 am - 4:30 pm
6.5 CMLE Credits

Robert Christenson, PhD
Professor of Pathology; Professor of Medical & Research Technology, University of Maryland Medical System, Baltimore, MD

Larry A. Broussard, PhD, DABCC Professor Emeritus, Department of Clinical Laboratory Sciences, School of Allied Health Professions, LSU Health Sciences Center, New Orleans, LA

Get up-to-date knowledge of critical areas in clinical chemistry:

- Biochemical Markers of Heart Disease: As we enter into the era of high-sensitivity cardiac troponin, it will be critical to understand what these assays bring to healthcare and how the laboratory and our clinical colleagues will be impacted. Other biomarkers, including B-type natriuretic peptide and NT-proBNP, are indicators of hemodynamic stress and are available to assist in diagnosis, risk assessment and monitoring of heart failure and cardiovascular disease. Discover how these cardiac biomarkers can add value to the laboratory and its professionals. Learn effective ways for introducing these improved biomarkers. The need for knowledgeable consultation and collaboration between the laboratory and clinical areas has never been greater.
Diabetes Mellitus: Learn about current recommendations for laboratory testing for the diagnosis and monitoring of diabetes, and the laboratory’s role in detecting complications of uncontrolled diabetes. Discuss the current tests available and potential new markers for diabetes detection and monitoring of the diabetic patient.

Liver Function and Dysfunction: The liver is susceptible to metabolic disease, attack by viruses and various toxins, as well as ischemia. Learn about the metabolite and enzyme analyses and various marker assays that are available for assessing liver function.

Clinical and Workplace Toxicology Update: Gain in-depth knowledge about the drug tests available to the laboratory for purposes of detection and support of the overdosed patient, pain management and workplace regulations. Learn about new guidelines for workplace drug testing that can impact the clinical toxicology testing capability of your laboratory.

Following this workshop, you will be able to:

- List the biochemical markers that assist in diagnosis and monitoring of myocardial injury (MI) and heart failure. Specify guideline-directed use of biomarkers.
- Articulate the role of the laboratory in the diagnosis and monitoring of diabetes mellitus.
- List and explain hepatic physiology and the laboratory assays available to assess liver function and dysfunction.
- List and discuss recommended tests for the evaluation of patients suspected of drug overdose, patients being treated for pain management, and donors being evaluated for workplace purposes/incidents.

May 28, 2020

9389  Body Fluid Analysis: Case Studies from the Bench
8:30 am - 4:30 pm
6.5 CMLE Credits

Jill Smith, MT(ASCP)SH
Hematology Specialist, Orlando Regional Medical Center, a division of Orlando Health; Clinical Instructor, University of Central Florida, Orlando, FL

Clinical data from the analysis of cerebrospinal, serous, and other body fluids is vital to patient care, but laboratorians are often uncomfortable with the identification of cellular elements. Designed specifically to improve your body fluid analysis skills, this information-filled workshop will present the characteristics of normal and abnormal cells observed in Wright-stained smears of cerebrospinal, pleural, peritoneal, pericardial, synovial, BAL and amniotic fluids.

In addition, you’ll learn a systematic approach to distinguishing the differences in benign, reactive, and malignant body fluid cells. Plus, you’ll join discussions of specimen handling and the use of the cytospin to obtain optimum, high-yield specimens. Case presentations will illustrate changes in cell populations with various reactive and malignant conditions.

Following this workshop, you will be able to:

- Identify the characteristics of the normal and abnormal cells observed in cerebrospinal, pleural, peritoneal, pericardial, synovial, BAL and amniotic fluids.
- Distinguish differences among benign, reactive, and malignant body fluid cells.
- Relate changes in cell populations to corresponding reactive and malignant conditions.
Reality Transfusion Medicine: Survival Strategies
8:30 am - 4:00 pm
6.0 CMLE Credits

Kathy D. Blaney, MS, SBB(ASCP); CHT(ABHI)
Blood Bank Technologist, Moffitt Cancer Center, Tampa, FL

This program is designed to present workable solutions to common transfusion service problems in the context of “real-life” situations. The case study approach demonstrates effective ways to recognize and resolve some common challenges faced in the transfusion lab which include:

- reagent use and misuse
- antibody problems
- ABO discrepancies
- newer technology and instrumentation issues
- unique patients’ blood needs
- transfusion reactions

This workshop is designed for all levels of blood bankers and will include group discussions to share different approaches to common problems.

Following this workshop, you will be able to:

- Describe the principles and potential sources of errors encountered with routine reagents used in the transfusion service.
- Identify ways to troubleshoot common problems with automation in the blood bank laboratory.
- List patient history/diagnoses that provide important clues for antibody identification and resolving ABO discrepancies.
- Differentiate the pathophysiology and transfusion needs in transplant, neonatal, cardiac, trauma, sickle cell, and cancer patients.
- Outline common transfusion reactions and the important steps of a transfusion reaction workup.

May 29, 2020

5801 Is it Reactive or Malignant? Enhancing Diagnostic Skills in Morphologic Hematology
8:30 am - 4:30 pm
6.5 CMLE Credits

Jill Smith, MT(ASCP)SH
Hematology Specialist, Orlando Regional Medical Center, a division of Orlando Health; Clinical Instructor, University of Central Florida, Orlando, FL

This session will focus on unique challenges encountered in the Hematology Laboratory. Morphologic features of cells will be examined to identify nuclear and cytoplasmic keys to differentiate malignant from benign changes. Cases covering a variety of hematologic disorders, including acute myeloid leukemia, myeloproliferative disorders, myelodysplastic syndrome, and the lymphoproliferative disorders will be reviewed. There will be a discussion of WHO classification as well as distinctive new therapies. Erythrocyte abnormalities (size, shape, color, inclusions) and other morphologic findings are discussed. Unknown cases will be presented throughout the workshop to reinforce the information reviewed.

Following this workshop, you will be able to:

- Develop a systematic approach for reviewing patient peripheral smears from the hematology/oncology service.
- Distinguish the morphologic features that can aid in the differential diagnosis of the patient to identify acquired, inherited or malignant cell changes in both the myeloid and lymphoid cell lines.
- Identify key morphologic changes in erythrocytes which aid in clinical diagnosis.
Building on a basic introduction to molecular theory, we will continue with molecular applications currently available, practical considerations when bringing molecular assays into the laboratory as well as regulatory issues that labs encounter. The day will conclude with an overview of the coming trends and exciting possibilities for molecular assays in the future.

Molecular testing is finding its way into every section of clinical laboratories both large and small. Molecular diagnostics has demonstrated advantages of sensitivity and specificity over traditional microbiology and is utilized in all areas of precision medicine. Many technologists have had limited exposure to the theory behind molecular testing during their formal training, but they are now asked to perform and even establish molecular testing in their laboratories. While traditional good laboratory practices are still important, molecular testing adds another layer of complexity to pre-analytic, analytic and post-analytic variables. Establishing appropriate QA/QC, unidirectional workflow, amplicon contamination control, as well as results interpretation, are a few of the many challenges. New test validation and verification vary significantly between lab developed tests and FDA approved in-vitro diagnostics. Unfamiliarity and confusion regarding the Molecular Pathology and Molecular Microbiology CAP checklists can be a significant hurdle. New test methodologies and applications in the molecular diagnostic realm are evolving much more quickly than other areas of the lab and keeping abreast of and evaluating their utility is another challenge. In this workshop we will address each of these areas.

Following this workshop, you will be able to:

- Explain the theory behind molecular diagnostics including nucleic acid structure, and properties as they relate to amplification and detection methods.
- Describe laboratory practices unique to molecular testing such as QA/QC, workflow, reporting, test development, validation and regulatory issues.
- Discuss new molecular technologies and applications recently introduced to clinical laboratories and how to evaluate their utility.