

**Education, Exhibits, Networking**

**2016 Northwest  
Medical Laboratory  
Symposium  
in the Pacific Northwest**

**Holiday Inn, Portland Airport  
Portland, OR  
October 12 - 15, 2016**

**AMERICAN SOCIETY FOR CLINICAL LABORATORY SCIENCE, REGION IX  
ASCLS-WASHINGTON  
ASCLS-OREGON**

**AMERICAN MEDICAL TECHNOLOGISTS, WESTERN DISTRICT  
OREGON STATE SOCIETY OF AMERICAN MEDICAL TECHNOLOGISTS  
NORTHWEST STATE SOCIETY OF AMERICAN MEDICAL TECHNOLOGISTS**

## Welcome to the 2016 Northwest Medical Laboratory Symposium

It won't be long until the leaves on the trees begin showing their glorious fall colors, the temperatures begin cooling off and the prime autumn opportunity for continuing medical laboratory education and professional networking is upon us. The NWMLS committee, composed of medical laboratory professionals from throughout the northwest, has once again planned a dynamic program. The American Society for Clinical Laboratory Science (ASCLS) and the American Medical Technologists (AMT) invite you to join us in Portland, OR for this year's Symposium October 12 – 15, 2016.

Our clients, patients, and colleagues in the allied health professions rightfully expect and deserve for us, as medical laboratory professionals, to maintain our professional credentials and competency. One means of doing this is to stay abreast of the latest developments in technology and testing. The NWMLS provides an excellent means of accomplishing this responsibility. Seminars covering topics in every aspect of laboratory medicine, from research to testing to management, are provided during this outstanding Symposium.

In addition to educational opportunities, you will not want to miss out on the chance to network with fellow laboratorians. This is your opportunity to gain refreshing encouragement from other medical laboratory professionals who are facing the same issues you face on a day-to-day basis.

The Exhibit Hall is not to be missed. This opportunity to meet laboratory industry vendors face-to-face and learn of the latest technological developments is always a highlight of the NWMLS. The industry representatives are available for you to visit with in a low intensity setting. They are happy to hear and respond to your questions. Please thank them for their continuing support of the NWMLS in the sponsorship of our speakers and breaks.

We extend a warm welcome to our Medical Laboratory Science students as they expand their knowledge, skills, and values in preparation to provide competent and ethical care. This is an excellent opportunity for you to develop a new awareness of the actual practice of clinical laboratory science and meet with scientists who are employed in many different areas and have many different roles that go beyond working in the hospital.

Please seriously consider this sincere invitation to join us at the Holiday Inn, Portland Airport for this year's Symposium. We look forward to seeing you there.

Shannon Billings  
Director, ASCLS Region IX

Sheryl Rounsivill  
AMT Western District Councilor

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***The 2016 Northwest Medical Laboratory  
Symposium Program and registration form  
are available on the Internet at the following  
URL***

***[www.asclswa.org/NWMLS.html](http://www.asclswa.org/NWMLS.html)***

***Updates and other information will be  
provided through this site.***

## 2016 NWMLS At A Glance

<b>Wednesday, October 12</b>	AM	1	2	3	4
	8:30 - 11:45 AM	Cases in Hematology and Flow Cytometry	Before I Agreed To Be A Supervisor	Hepatitis Testing Changing Biomarker Landscape	CLIA And QC OR State CLIA Programs and Updates
	<b>Exhibits: 11:45 AM – 2:15 PM</b>				
	PM	5	6	7	8
	2:15 - 5:30 PM	Cell Free DNA Screening	Implementing & Maintaining IQCP Calibration Verification	25 Hydroxyvitamin D & 1,25 Dihydroxyvitamin D	Updates in Autoimmune and HIV Testing
<b>Thursday, October 13</b>	AM	9	10	11	12
	8:30 - 11:45 AM	Inventory Management Minding the Gaps!	I-84 Parathyroid Hormone	Pre-analytical Variables in Coag Question on CAP Checklist	MVP plus New Anemia Parameters Digital Cell Morphology
	<b>Exhibits: 11:45 AM – 2:15 PM</b>				
	PM	13	14	15	16
	2:15 - 5:30 PM	New or Emerging Option for Blood Products TRALI	POC Testing	Science of Healthy Microbiomes	Opiates: Structure, Metabolism, Interpretation Opioid Health Crisis
	Eve	17			
6:00 - 7:30 PM	The Role of Lactate in the Risk Assessment of Sepsis Morbidity and Mortality				
<b>Friday, October 14</b>	AM	18	19	20	21
	8:30 - 11:45 AM	Genomics & Proteomics Microbiology Jeopardy Case Studies in Microbiology	RBC Genomics, RhD, & Zika	Interpreting Serum Protein and Hemoglobin Elp	Syphilis: Clinical Disease & Testing Utility of Tumor Markers
	<b>Exhibits: 11:45 AM – 2:15 PM</b>				
	PM	22	23	24	25
2:15 - 5:30 PM	High Risk Cardiac Patient Biosafety & Emerging Infectious Disease	Clinical Mass Spectrometry	Stop Clinical From Ordering Stupid Tests	Automation in Blood Banking	
<b>Saturday, October 15</b>	AM	26	27	28	29
	8:30 - 11:45 AM	CDC Parasitic Diseases; Telediagnosis with OSPHL	Certification Maintenance and Career Development Jobs and Interview Committee	Not Your Mother's PKU Test	Causes of Anemia
	PM	30	31	32	
	1:00 - 4:15 PM	Institutional Antibiogram	Biodevices & Neurotechnology Bioelectronic Medicine	Intro to Clinical Research	

# Welcome to the 2015 Northwest Medical Lab Symposium

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### Registration Hours

Wednesday, Thursday, Friday	7:30 AM - 8:30 AM 1:30 PM - 2:15 PM
Saturday	7:30 AM - 8:30 AM 12:30 PM - 1:00 PM

### Session Times

Wednesday, Thursday, Friday	8:30 AM - 11:45 AM 2:15 PM - 5:30 PM
Saturday	8:30 AM - 11:45 AM 1:00 PM - 4:15 PM

### Lunch

### Exhibit Hours

Wednesday, Thursday, Friday	11:45 AM - 2:15 PM
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Wednesday, Thursday, Friday	11:45 AM - 12:45 PM
Saturday	12:00 - 1:00 PM

***Earn 2.0 P.A.C.E. contact hours at no charge!***

Obtain the exam in your registration packet or from the exhibit registration desk. Questions can be answered at the various booths in the Exhibit Hall over the three days. You can earn 2.0 contact hours of P.A.C.E. or AMTrax credit by successfully completing the exam. Turn in the exam at the Exhibits desk for grading and you will receive the session code. Plan to earn these extra CE hours!

## NWMLS Committee

General Chair	Maja Chloupkova
Program	Sharon Laddusaw Iudita Repeta Cara Calvo Maja Chloupkova Helen Wand Jerri Ramirez Patty DeTurk Susan Beard
Exhibits	Brenda Kochis
Registration	Edna Anderson Brenda Kochis Audrey Whitley
Program Design	Brenda Kochis
Finance	Sigrid Reymond
Moderators	Louise Isbell
Hospitality	Susan Potter
Webmaster	Brenda Kochis

## ASCLS - Region IX

Regional Director Shannon Billings

**Region IX Forum** Friday, October 14, 2016  
6:00 - 7:30 PM

### ASCLS-OR

President	Patty DeTurk
President Elect	Ryan Howey
Secretary	Jacqueline Rice
Treasurer	Krista Moore
Past President	Maja Chloupkova

ASCLS-OR Board Meeting

Friday, October 14, 2016 Follows Region IX Forum

### ASCLS-Washington

President	Terese Abreu
President Elect	Shawna Martin
Secretary	Nicole Curatolo
Treasurer	Teresa Nguyen
Past President	Leslie Nakagawa

ASCLS-WA Board Meeting

Friday, October 14, 2016 Follows Region IX Forum

### CLSA

President	Cassandra Brooks
President Elect	Ashley Frost
Secretary	Tony Gregston
Treasurer	Stephanie Randrup
Past President	Brian Weisman

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## Western District of American Medical Technologists Officers and Business Meetings

Western District Councillor Sheryl Rounsivill

### OSSAMT

President	Marilyn Albertsen
President-Elect	Louise Isbell
Secretary	Audrienne Whitley
Treasurer	Edna Anderson

OSSAMT

Board Meeting, Thursday, Oct 13, 5:00 pm

Business Meeting, Friday, Oct 14, 6:00 pm

### NWSSAMT

President	Lourie Harrington
Secretary	Danielle Rathbun
Treasurer	Roxanne Erskine

NWSSAMT Board Meeting and Business Meeting

To be Determined

### Did You Know?

*P.A.C.E. Contact Hours are available for attending the Exhibits. All you have to do is correctly answer 80% of the questions on a quiz that we give you before you go into the Exhibits. The answers to these questions are available at the various booths. And you don't have to rush, since the questions can be answered over more than one Exhibit session.*

*Great way to earn 2.0 contact hours at no charge!*

# Holiday Inn, Portland Airport



**HOLIDAY INN**  
PORTLAND AIRPORT  
8439 NE Columbia Blvd,  
Portland, OR (503) 256-5000

**Exhibit Hall**  
**Columbia Conference Center**  
near the Holiday Inn, Portland Airport

The Hotel will honor the following overnight room rates:

**\$99 for single/quadruple occupancy plus lodging tax**

To make a reservation, there are two options:

- Call the hotel at 503-256-5000 or toll free at 855-642-6271 and ask for the **NW Medical Laboratory group rate** to obtain the conference rates.

- Register on the website. The web address is [www.hiportlandairport.com](http://www.hiportlandairport.com) and the group code is MED to obtain the group rates

- Note that these rates are only available until September 27, 2016. After that the hotel reserves the right to charge their standard rate.



# Holiday Inn and Columbia Conference Center



From the South:

Take I-5 North to I-84 East to I-205 North (Portland Airport/Seattle exit 8) to Exit 23B (US 30 West By Pass/Columbia Blvd). Turn right at the end of the exit, stay in the right lane. Just before the second traffic light turn right onto NE Columbia Blvd.

From South of Wilsonville:

Take I-5 North to I-205 North to Exit 23B (US30 West By Pass/Columbia Blvd.). Turn right at the end of the exit; stay in the right lane. Just before the second traffic light turn right onto NE Columbia Blvd.

From the North:

Take I-5 South to I-84 East to I-205 North (Portland Airport/Seattle exit) to Exit 23B (US 30 West By Pass/Columbia Blvd.) Turn right at the end of the exit; stay in the right lane. Just before the second traffic light turn right onto NE Columbia Blvd.

From North of Vancouver, WA:

Take I-5 South to I-205 South to Exit 23B (US 30 West By Pass/Columbia Blvd.) Turn right at the end of the exit. Just before the traffic light turn right onto NE Columbia Blvd.

From the West:

Take US 26 East to I-84 East to I-205 North (Portland Airport/Seattle exit) to Exit 23B (US 30 West By Pass/Columbia Blvd.) Turn right at the end of the exit; stay in the right lane. Just before the second traffic light turn right onto NE Columbia Blvd.

From the East:

Take I-84 West to Exit 9 (Seattle/Portland Airport) to I-205 North to Exit 23B (US 30 West By Pass/Columbia Blvd.) Turn right at the end of the exit; stay in the right lane. Just before the second traffic light turn right onto NE Columbia Blvd.

Airport Shuttle

The Holiday Inn Portland Airport provides complimentary airport shuttle service 24 hours a day, on demand. In the Baggage Claim area, call the hotel. Then walk from the Baggage Claim outside to Area 4 where the shuttle should arrive in 10 to 15 minutes after your call.

## Wednesday, October 12, 2016

<p><b>Session 1</b></p> <p>8:30 - 11:45 am</p> <p>Intermediate</p> <p>3 contact hours</p>	<p><b>Interesting Cases in Hematology and Flow Cytometry</b></p> <ul style="list-style-type: none"><li>- <b>Teresa Gauthier, MLS (ASCP)</b> PeaceHealth Laboratories Springfield, OR</li><li>- <b>Jennifer Embers, MLS (ASCP)</b> PeaceHealth Laboratories Springfield, OR</li></ul> <p>A presentation of various case studies spanning Bone Marrow Failures, Hemolytic Anemia and Lymphoproliferative Disorders. Cases studies to include PNH, aplastic anemia, myelodysplasia, AIHA, HUS, Hereditary spherocytosis, CLL, reactive lymphocytosis, Multiple Myeloma and perhaps a few more esoteric diseases. This is intended to be an interactive presentation with opportunities for dialog and a few “quizzes” throughout to gauge your knowledge.</p> <p>Objectives:</p> <ul style="list-style-type: none"><li>✓ Recognize indications of Bone Marrow failures and differentiate between PNH, Aplastic Anemia and Myelodysplasia.</li><li>✓ Discuss indications of Hemolytic Anemia and differentiate between AIHA, HUS and Hereditary Spherocytosis.</li><li>✓ Describe indications of Lymphoproliferative Disorders and differentiate between CLL, Reactive Lymphocytosis and Multiple Myeloma.</li></ul>
<p><b>Session 2</b></p> <p>8:30 - 11:45 am</p> <p>Intermediate</p> <p>3 contact hours</p>	<p><b>What I Wish You Had Told Me Before I Agreed To Be A Supervisor</b></p> <ul style="list-style-type: none"><li>- <b>Karl E. Kamper, MT(ASCP), FACHE</b> Willamette Valley Medical Center McMinnville, Oregon</li></ul> <p>Do you remember your first supervisor job, when suddenly everyone looked at you and you realized, I really don't have the answers? Or maybe you are the new supervisor, or contemplating a jump into the dark side of the lab? This course for technologists and leaders at all levels isn't just another lecture class. We will learn together and from each other as we discuss the CLSI Quality Management System Model, and apply these familiar laboratory principles to leadership.</p> <p>Objectives:</p> <ul style="list-style-type: none"><li>✓ Describe how to manage using CLSI QSE (Quality System Essentials).</li><li>✓ Develop confidence to successfully manage personnel and develop a strategy to prepare for and utilize assessments.</li><li>✓ Discuss the role of test and instrument selection in Equipment, Purchasing and Inventory decisions.</li></ul>



**Session  
3**

8:30 - 11:45 am

Intermediate

3 contact hours

**The ABCs of Hepatitis Testing**

**- Denise L. Uettwiller-Geiger, PhD, DLM(ASCP)**

Ortho Clinical Diagnostics  
Raritan, NJ

This session provides attendees with an overview of laboratory tests used to aid physicians in the diagnosis of viral hepatitis. The speaker will also review the CDC Guidelines for hepatitis screening and touch on the differences in commercially available hepatitis C assays.

**Objectives:**

- ✓ Define and discuss various causes of viral hepatitis.
- ✓ Explain clinically useful diagnostic test and the differences in available Hepatitis C assays.
- ✓ Describe CDC guidelines for hepatitis screening.

**Changing Biomarker Landscape in Heart Failure and Acute Kidney Injury**

Attendees will learn about the incidence and implications of acute kidney injury (AKI) and new biomarkers that can predict patient AKI risk. Attendees will also gain a broader understanding of heart failure biomarkers and their limitations in patients being treated with the new heart failure drug ENTRESTO™.

**Objectives:**

- ✓ Name two biomarkers used in heart failure assessment and describe their limitations.
- ✓ Describe the importance of earlier detection of acute kidney injury (AKI).
- ✓ Highlight the implications of biomarker use in ENTRESTO™ treated patients.

***Sponsor: Ortho Clinical Diagnostics***

The ability to meet face-to-face with other professionals to share ideas is why the NWMLS matters and adds value over online CE.  
.....Lisa (McDonnel) Klingler.....

**Session  
4**

8:30 - 11:45 am

Intermediate

3 contact hours

**CLIA and Quality Control**

- **Francisca Lehr, MSMT (ASCP)**  
Centers for Medicare & Medicaid Services  
Bothell, WA

This is an informational session about the history of the CLIA regulations and quality control. The traditional quality control of performing two levels of quality control material (QC) paves a new way of doing QC called Individualized Quality Control Plan (IQCP). As of January 1, 2016, IQCP is in effect and an alternative to the default QC requirement in the CLIA regulations. The default QC is performing two levels of control material each day of patient testing. The presenter will present a basic and practical approach to IQCP.

Objectives:

- ✓ Discuss the history of quality control as it evolves in the CLIA regulations.
- ✓ Describe what the default QC is in the current CLIA regulations.
- ✓ Write an IQCP for their test system.

**Sponsor: Centers for Medicare & Medicaid Services**

**Oregon State Agency CLIA Program and CLIA Updates**

- **Stephanie B Ringsage, BS MT (ASCP)**  
OHA/Public Health Division/OSPHL  
Hillsboro, OR

The speaker will present a CLIA update with a focus on the Oregon State Agency (SA) CLIA program and the oversight of clinical laboratories that have been issued a certificate of waiver (CoW) or certificate of Provider Performed Microscopy Procedure (PPMP) as well as the survey and certification activity for laboratories issued a certificate of compliance (CoC) or accreditation (AoC). Items to be discussed will include the SA responsibilities for survey and certification activity including data entry for non-Federal laboratories within the state, enrollment of total number of laboratories, certificate types, available resources such as educational booklets to better encourage quality laboratory testing for CoW or PPMP and available CMS brochures to help explain the CLIA regulation requirements for all laboratories.

Objectives:

- ✓ Describe the role of SA CLIA program and list who, when and how to contact the CLIA SA.
- ✓ Describe the types of CLIA certificates issued in the state- CoW, PPMP, CoC and CoA.
- ✓ Discuss the available resources to encourage quality laboratory testing and to help explain CLIA regulation requirements.

**Sponsor: OHA/Public Health Division/OSPHL**

**Session  
5**

2:15 - 5:30 pm

Advanced

3 contact hours

**Cell Free DNA Screening: Much More Than A  
'Baby Gender' Test**

- **Heather C. Dorsey, MS, CGC**

InformedDNA  
St Petersburg, FL

Roughly five years ago, cell free DNA based technologies became clinically available to help screen for Down syndrome during pregnancy. This technology has rapidly evolved by both screening for increased numbers of conditions and by being offered to a greater number of women during their pregnancy. The impact of the introduction of cell free DNA based screening on the field of prenatal diagnosis cannot be underestimated. Participants in this session will learn about the benefits and limitations of cell free DNA screening, what the future may hold, and current struggles with the rapid introduction of this powerful new technology into prenatal care.

Objectives:

- ✓ Describe the basic biology of cell free DNA.
- ✓ Describe cell free DNA screening, its benefits and limitations, and practical approaches to its incorporation into prenatal care.
- ✓ Identify questions to consider when thinking of adding cell free DNA screening to your test menu.

**Sponsor: InformedDNA**



**Don't Forget!**

**Visit the Exhibits**

**11:45 AM to 2:15 PM**

Get free 2.0 hours P.A.C.E. by completing an exam at the Exhibit Hall

**Session  
6**

2:15 - 5:30 pm

Intermediate

3 contact hours

**Implementing and Maintaining IQCP**

- **Jessica Wilson**  
Response Biomedical Corp.  
Vancouver, BC
- **Angela Carter**  
Response Biomedical Corp.  
Vancouver, BC

We will discuss implementing and maintaining IQCP, focusing on best practices and tips for maintaining a successful program. Areas we will cover include: 1) Risk Assessment - guidelines for comprehensive risk identification. 2) Quality Control Plan - eliminate and/or neutralize identified risks. 3) Quality Assessment - how to monitor the effectiveness of the QCP.

**Objectives:**

- ✓ Describe the best practices for a successful IQCP.
- ✓ Discuss the role of quality control and quality assessment.
- ✓ Outline the guidelines for risk identification.

**Sponsor: Response Biomedical Corp.**

**Everything (Well, Not Quite Everything) You Wanted To Know About Calibration Verification But Were Afraid To Ask. How Do I Interpret My Data? Did I Pass? What Do I Do If I Didn't?**

- **Glenn Mitchell**  
AUDIT MicroControls, Inc.  
Eatonton, GA

For this session we will present the who, what, where, when, why & how of calibration verification. Emphasis will be placed on how to analyze and interpret calibration verification data and graphs as several pass/fail scenarios will be presented and discussed. Troubleshooting protocol will also be reviewed.

**Objectives:**

- ✓ Discuss the basics of calibration verification.
- ✓ Describe how to read and interpret calibration verification results in both a pass and fail scenario.
- ✓ Describe troubleshooting protocol when calibration verification does not pass.

**Sponsor: AUDIT MicroControls, Inc.**



## Wednesday, October 12, 2016

<p><b>Session 7</b></p> <p>2:15 - 5:30 pm</p> <p>Intermediate</p> <p>3 contact hours</p>	<p style="text-align: center;"><b>Clinical Indications: 25 Hydroxyvitamin D &amp; 1,25 Dihydroxyvitamin D</b></p> <p>- <b>Steven Brimmer, PhD</b> DiaSorin, Inc. Stillwater, MN</p> <p>The laboratory often needs to guide clinicians on which Vitamin D test should be ordered for status and which test should be ordered for differential diagnosis. To do this well, technologists need to understand the 'pros and cons' for the various methods to determine 25-Hydroxyvitamin D and 1,25 Dihydroxyvitamin D, and the levels that constitute sufficient, insufficient, and deficient vitamin D status. Vitamin D testing has been used for a variety of reasons in the past, the presentation will also review the recent guidelines and which clinical indications the guidelines suggest in determining the patient's vitamin D status. Additionally, the discussion will cover the biochemistry of producing the active form of vitamin D (1,25 Dihydroxyvitamin D) and disease states for which it would be helpful to utilize this test.</p> <p>Objectives:</p> <ul style="list-style-type: none"><li>✓ Describe the basic of testing for 25 Hydroxyvitamin D &amp; 1,25 Dihydroxy vitamin D testing.</li><li>✓ Discuss which vitamin D assay is used to determine patient vitamin D status and list common reasons that populations throughout the world have low vitamin D.</li><li>✓ Discuss the guidelines; including a) When to test b) Vitamin D status levels, c) Recommended treatments for vitamin D insufficiency and deficiency, and d) Disease states that cause vitamin D insufficiencies and deficiencies.</li></ul> <p style="text-align: right;"><b>Sponsor: DiaSorin, Inc.</b></p>
<p><b>Session 8</b></p> <p>2:15 - 5:30 pm</p> <p>Intermediate</p> <p>3 contact hours</p>	<p style="text-align: center;"><b>Updates in Autoimmune and HIV Testing</b></p> <p>- <b>David J Tomichek, MBA, MT(ASCP)</b> Bio-Rad Laboratories Benicia, CA</p> <p>The Autoimmune session will briefly summarize current technologies of Immunofluorescence, Enzyme Immunoassay, and Multiplex testing and their advantages and disadvantages as it relates to disease.</p> <p>The HIV session will look at the history and current status of HIV testing and its implications in relation to the CDC guidelines.</p> <p>Objectives:</p> <ul style="list-style-type: none"><li>✓ Identify the advantages and disadvantages of the three Autoimmune technologies.</li><li>✓ Describe the different types of HIV screening tests.</li><li>✓ Describe how the newest HIV assays fall in line with the CDC testing algorithm.</li></ul> <p style="text-align: right;"><b>Sponsor: Bio-Rad Laboratories</b></p>

**Session  
9**

**Using Inventory Management to Drive Business  
Performance**

8:30 - 11:45 am

Intermediate

3 contact hours

- **Brenda Hastie, MLT(ASCP)<sup>CM</sup>, BBCM,CCM, HCM**

Ortho Clinical Diagnostics  
Raritan, NJ

This session provides attendees with a basic foundation in automated inventory management and the business justification to adopt the approach.

**Objectives:**

- ✓ Discuss the business reasons for adopting automated inventory management.
- ✓ Recognize the differences between manual approaches and one automated method.
- ✓ Describe how to make an informed decision based on costs and benefits.

**Minding the Gaps!**

- **Barbara Snyderman MLS(ASCP)<sup>CM</sup>, DLM(ASCP)**

Ortho Clinical Diagnostics  
Deptford, NJ

Due to delayed retirements, for the first time laboratories have employees across four generations. The speaker will define the characteristics of each generation as well as outline how to better communicate, understand and motivate them, hoping to create more harmony in our workplaces.

**Objectives:**

- ✓ Describe the four generations and characteristics of each.
- ✓ Describe motivating factors of the generations.
- ✓ Describe the challenges of staff bridging the generations.

**Sponsor: Ortho Clinical Diagnostics**



Seminar speakers have given me  
great "out of box" ideas to try."

**Session  
10**

8:30 - 11:45 am

Intermediate  
3 contact hours

**1-84 Parathyroid Hormone: For Better Patient Care**

- **Steven Brimmer, PhD**

DiaSorin, Inc.  
Stillwater, MN

This presentation will discuss the use of Parathyroid Hormone (PTH) tests that are used to diagnose and monitor hyperparathyroidism. The main focus will be on secondary hyperparathyroidism, because of its higher prevalence. The Center of Disease Control estimates that more than 1 in 10 adults in the United States have chronic kidney disease. More than 80% of these patients, or more than 16 million adults in America, have secondary hyperparathyroidism caused by chronic kidney disease. Hyperparathyroidism upsets the patient's calcium homeostasis, thereby, treatment is critical to maintain healthy bones.

Recent developments in PTH testing have made available assays that detect the whole PTH molecule and eliminated the cross-reactivity of inactive fragments. These third generation assays have been shown to be more reliable than the intact PTH assays and will be critical in improving patient care.

**Objectives:**

- ✓ Discuss the biochemistry of calcium hemostasis, including Parathyroid Hormone (PTH) role regulating calcium.
- ✓ Describe the key difference between the second generation (intact PTH) and third generation (1-84 PTH) assays and explain how to use PTH testing in primary hyperparathyroidism.
- ✓ Discuss how chronic kidney disease causes secondary hyperparathyroidism and describe the biochemistry of calcium hemostasis, including Parathyroid Hormone (PTH) role regulating calcium.

**Sponsor: DiaSorin, Inc**



**Session  
11**

8:30 - 11:45 am

Intermediate

3 contact hours

**Pre-Analytical Variables in the Coag Lab:  
Why Do They Matter?**

**Commonly Asked Coagulation Questions on the  
CAP Checklist**

- **Katherine (Katy) Whelchel MT(ASCP)SH**  
Diagnostica Stago, Inc  
Rogers, AR

Topic 1: Coagulation testing is particularly vulnerable to pre-analytical variables. This session will help identify best practices to minimize the variables that impact patient results.

Topic 2: CAP has added several new sections to the Coagulation Checklist in recent years, including Analytical Measurement Range, Calibration Verification, and Laboratory developed tests. This presentation will seek to clarify the confusion on these requirements and discuss ways to meet these requirements. We will also discuss the requirements in using D-Dimer for VTE exclusion.

Topic 1 Objectives:

- ✓ Explain how blood collection may impact test results.
- ✓ Describe best practices for sample transport and storage, and review sample processing procedures.
- ✓ Identify patient variables that may affect coagulation testing.

Topic 2 Objectives:

- ✓ Discuss Calibration Verification and Analytical Measurement Range and identify the differences between Analytical measurement Range and Reportable range.
- ✓ Define laboratory developed tests and current requirements.
- ✓ List the requirements in using D-Dimer for VTE Exclusion.

**Sponsor: Diagnostica Stago, Inc**

**Exhibits**

Did you get to see all the companies in the Exhibit Hall?  
More chances Thursday and Friday.

Don't forget to work on your Exhibit Hall Exam. A great  
opportunity to earn 2.0 contact hours for your effort!



**Session  
12**

8:30 - 11:45 am

Intermediate

3 contact hours

**MPV - An Old “New” Parameter, Plus New Anemia Parameters**

**- Kathy Davidson Altig, MT(ASCP)**

Beckman Coulter  
West Linn, OR

MPV is a parameter most of us ignore, or may not even report. Learn how to help diagnose thrombocytopenias with the patient’s first CBC. And, then discover more about the CBC, more complete than ever: how new Hematological Parameters are revolutionizing the oldest and most ordered test in the laboratory.

Objectives:

- ✓ Describe how to discriminate among different types of thrombocytopenia using the MPV.
- ✓ Discuss basic medical concepts about anemia sub-types, how they are diagnosed and treated.
- ✓ Outline hematological parameters enhancing sensitivity in detection and sub-classification of anemias.

**Sponsor: Beckman Coulter**

**Digital Cell Morphology, Improving Efficiency, Quality and Connectivity of the Clinical Laboratory With Relevant Case Studies**

**- Scott Dunbar, BS, MS**

Cellavision  
Flower Mound, TX

Using advanced software neural networks, this session will cover how Digital Cell Morphology can improve the bottleneck in Hematology, the differential bench in the laboratory. The session will also demonstrate how to improve the consistency from technologist to technologist in the laboratory. Finally, the session will end with case studies of peripheral blood smears and body fluid cyto-spin differentials.

Objectives:

- ✓ Describe how neural networks can improve cell morphology quality.
- ✓ Describe how remote review software can improve turnaround time.
- ✓ Demonstrate how viewing cells digitally can improve quality and patient care.

**Sponsor: Cellavision**

**Don't Forget! Visit the Exhibits**

**11:45 AM to 2:15 PM**

## Thursday, October 13, 2016

<p><b>Session 13</b></p> <p>2:15 - 5:30 pm</p> <p>Intermediate</p> <p>3 contact hours</p>	<p><b>From Bacterial Testing to Pathogen Reduction, What's New New or Emerging Options for Blood Products TRALI Risk Mitigation</b></p> <p>- <b>YanYun Wu, MD</b> Bloodworks Northwest Seattle, WA</p> <p>This session will discuss upcoming new rules on bacterial testing and recent updates on pathogen reduced blood products. The second topic will cover new or emerging options for blood products, such as liquid plasma, plasma and platelets with low titer, and others. The final topic will give updates on TRALI risk mitigation.</p> <p>Objectives:</p> <ul style="list-style-type: none"><li>✓ Describe the upcoming change regarding bacterial testing of platelets and available pathogen reduced blood products.</li><li>✓ Explain new or emerging options for blood products.</li><li>✓ Describe what is new is TRALI risk mitigation.</li></ul> <p><i>Sponsor: Bloodworks Northwest</i></p>
<p><b>Session 14</b></p> <p>2:15 - 5:30 pm</p> <p>Intermediate</p> <p>3 contact hours</p>	<p><b>Point of Care Testing: Past, Present and Right Around the Corner!</b></p> <p>- <b>Lura Wilhelm, MT (ASCP) Point of Care Specialist (AACC)</b> St. Charles Health System Bend, OR</p> <p>Are you ready to learn a little about historical (past) Point of Care Testing (POCT), what is available today (present) and to have an exciting peek of what is to come (right around the corner)?</p> <p>Point of Care Testing has been used for centuries, dating back to 1500 BC where ancient Hindu writings note that ants are attracted to the urine of people with a mysterious emaciating disease (diabetes). Uroscopy, the historic medical practice of visually examining a patient's urine for pus, blood, or other symptoms of disease, dates back to ancient Egypt, Babylon, and India. Fast forward to the 21st century. POCT has been a wild ride over the past few decades and one that many laboratorians do not really understand yet it impacts patient care and the laboratory immensely. POCT is testing performed outside the clinical laboratory in close proximity to where the patient is receiving care, most often performed by non-laboratory personnel, and the results are used for clinical decision making. There will be a discussion of current bedside testing and what is right for your organization and situation. Molecular Point of Care Tests are already available but we are on the brink of molecular POCT becoming the norm, not the exception. It will be a wild ride (hold on to your hats) but one that is here to stay and might even amaze the staunchest opposer to bedside testing! Come join us for a lively, interactive discussion of Point of Care Testing: Past, Present and Right Around the Corner!</p> <p>Objectives:</p> <ul style="list-style-type: none"><li>✓ Discuss how Point of Care Testing has been around for centuries.</li><li>✓ Describe the most common current day Point of Care Tests and consider what is right for your clinical setting.</li><li>✓ Consider futuristic Point of Care Tests that might be implemented in your life time.</li></ul>

**Session  
15**

**Opiates: Structure, Metabolism, and Interpretation of Urine  
and Oral Fluid Test Results**

2:15 - 5:30 pm

Intermediate

3 contact hours

- **Greg Grinstead, PhD**  
Legacy Laboratory Services  
Portland, OR

This session focuses on six opiates that are commonly prescribed, commonly used, and widely tested for in workplace drug testing and pain management compliance programs: morphine, codeine, hydrocodone, hydromorphone, oxycodone, and oxymorphone. We will cover the key structural features of each drug, major routes of metabolism, and interpretation of urine and oral fluid test results.

Objectives:

- ✓ Identify key structural features of major opiates used for pain control and tested for in workplace drug testing programs.
- ✓ Describe the major routes of metabolism for opiates and list key metabolites for common drugs.
- ✓ Interpret common patterns of urine and oral fluid test results for opiates.

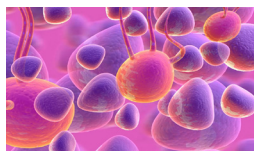
**Understanding the Opioid Public Health Crisis**

- **David K Roberts, PhD**  
Legacy Laboratory Services  
Portland, OR

An opioid public health crisis continues to claim lives to the point that overdose deaths from opioids is now the number one public health concern in the Pacific NW and in the U.S. Opioids include both prescription drugs as well as illegal drugs. The opioid crisis impacts not only the public but health care providers. In particular is the collision that occurs when the number one reason for seeking medical care - to treat pain - collides with aberrant drug behaviors related to opioid misuse. With increasing prescriptions paralleling deaths from opioid overdose, virtually all aspects of health care are impacted. Laboratories are uniquely positioned to help in the diagnosis of opioid related disorders. This talk provides background information regarding opioids which when coupled with testing knowledge is designed to position the laboratory to act as a resource for front line health care providers dealing with the opioid crisis.

Objectives:

- ✓ Discuss Opioid classes - morphine derivatives and synthetic drugs.
- ✓ Describe Opioid history and development.
- ✓ Discuss Opioid pharmacology and the Opioid overdose death epidemic.



## Thursday, October 13, 2016

### Session 16

2:15 - 5:30 pm

Intermediate

3 contact hours

### Don't Take That Antibiotic. You Might Get. . .Fat? The Science of Healthy Microbiome

- **Norman Moore, PhD**

Alere  
Scarborough, ME

Antibiotic resistance is a major global health threat. Yet, patients still demand antibiotics and doctors still prescribe them without identifying the etiological agent and tailoring therapy to it. New data is now showing links between disruption of our normal flora and a variety of diseases. This talk will explore the links to our microflora and obesity, autism, and other medical issues.

#### Objectives

- ✓ Define the issues of antibiotic resistance.
- ✓ Analyze the links between microbial flora disruption & other diseases.
- ✓ Describe current diagnostic options to better direct therapy.

**Sponsor: Alere**

### Session 17

6:00 - 7:30 pm

Intermediate

1.5 contact  
hours

### Evening Session

### The Role of Lactate in the Risk Assessment of Sepsis Morbidity and Mortality

- **Monet N. Sayegh, MD,MS,BSMT(ASCP)SH,CLS**

Siemens Healthcare  
Los Angeles, CA

The value of measuring lactate levels is expanding. Though generally considered a nonspecific biomarker, knowing lactate levels early in a patient's presentation can provide valuable information to help guide assessment and treatment. It can be particularly useful in ICU and ED settings where the presentation of symptoms may be inconclusive while diseases progress rapidly with severe pathology. Lactate testing can open a critical window for early intervention when treatment is most likely to be successful. This seminar provides a framework for understanding lactate and the role it can play as a prognostic indicator of various stages of sepsis morbidity and mortality.

#### Objectives:

- ✓ Discuss the role of lactate as a prognostic indicator for morbidity and mortality and identify disease states where lactate testing can add significant clinical value.
- ✓ Discuss the differences between the systemic inflammatory response (SIR), sepsis, severe sepsis and septic shock.
- ✓ Discuss the urgency associated with assessing lactate levels.

**Sponsor: Siemens Healthcare**

**Session  
18**

8:30 - 11:45 am

Intermediate

3 contact hours

**Genomics and Proteomics - Is This The End Of 'Culture' In Microbiology?**

- **Susan Sharp, PhD**  
Kaiser Permanente  
Portland, OR

This first session will begin with a discussion of some of the advantages and disadvantages associated with the newer rapid multiplex infectious disease assays. Emphasis will be placed on new molecular diagnostics for sepsis, as well as new methods that allow for rapid identification of bacteria and yeast in the microbiology laboratory.

Objectives:

- ✓ Describe a possible future for clinical microbiology that may differ from what we currently know.
- ✓ Discuss the role of both genomics and proteomics in the future of clinical microbiology.

**Microbiology - Jeopardy**

- **Margret Oethinger, MD, PhD**  
Providence Regional Laboratory  
Portland, OR

The second session will be an interactive game of who knows what it is? The emphasis will be on microorganisms in the human body across different domains, as seen through the eyes of an Infectious Diseases Histopathologist. To keep the guessing game limited we will also see straightforward Gram stains or photographs of conventional culture plates. The main goal is to have fun while we learn!

Objectives:

- ✓ Describe what different microorganisms look like in the human host.
- ✓ Discuss how different morphologies of microorganisms, both microscopically on a slide and macroscopically on a culture plate, allow the microbiologist to recognize them.

**Case Studies in Clinical Microbiology**

- **La'Tonzia L. Adams, MD, MS**  
Portland VA Healthcare System  
Portland, OR

This final session will discuss various rare cases with interesting clinical presentations. There will be a discussion of the entity and the microbiological diagnostics used to identify each case.

Objectives:

- ✓ Review interesting and unique cases seen in the Microbiology Department.
- ✓ Discuss various rare conditions, and be aware of unique clinical presentations and testing diagnostics.

## Friday, October 14, 2016

<p><b>Session 19</b></p> <p>8:30 - 11:45 am</p> <p>Intermediate</p> <p>3 contact hours</p>	<p><b>What's New in the Blood Bank: RBC Genomics, RhD, and Zika</b></p> <p>- <b>Meghan Delaney, DO, MPH</b> Bloodworks NW Seattle, WA</p> <p>- <b>Mary Jo Drew, MD, MHSA</b> Transfusion Medicine Consultant Portland, OR</p> <p>In this session the technique and uses of red blood cell genotyping will be described. Case examples will be used to show how red cell genotyping can improve transfusion medical care. A deeper review of the complexities of the RH blood group will be reviewed, including Weak D. Finally there will be an update on the concerns surrounding the Zika virus and its impact on the U.S. blood supply.</p> <p>Objectives:</p> <ul style="list-style-type: none"><li>✓ Describe red cell genotyping techniques and provide examples of how RBC genotyping can enhance transfusion testing.</li><li>✓ Provide examples of when Rh genotyping should be performed.</li><li>✓ Explain concerns surrounding the Zika virus and how regulations to prevent its transmission via blood products may affect the blood supply in the U.S.</li></ul> <p><b>Sponsor: Bloodworks NW</b></p>
<p><b>Session 20</b></p> <p>8:30 - 11:45 am</p> <p>Intermediate</p> <p>3 contact hours</p>	<p><b>Interpreting Serum Protein Electrophoresis and Hemoglobin HPLC/Electrophoresis Results</b></p> <p>- <b>Kevin Foley PhD, MT</b> Kaiser Permanente, NW Fariview, OR</p> <p>We will discuss the clinical relevance and interpretation of SPEP and Hemoglobin testing. This will include clinical background, review of normal and abnormal results, and case studies from real patients.</p> <p>Objectives:</p> <ul style="list-style-type: none"><li>✓ List the main clinical reasons (differential diagnoses) for SPEP and Hemoglobin testing.</li><li>✓ Identify abnormal SPEP results as well as abnormal Hemoglobin variants on HPLC and differentiate alpha and beta thalassemia.</li><li>✓ Suggest reasonable interpretive comments for abnormal results encountered in hemoglobin evaluations.</li></ul>

**Friday, October 14, 2016**

**Session  
21**

8:30 - 11:45 am

Intermediate

3 contact hours

**Clinical Utility of Tumor Markers in the Management of  
Breast and Prostate Cancer**

**- Monet N. Sayegh, MD, MS, BSMT(ASCP)SH,CLS**

Siemens Healthcare  
Los Angeles, CA

Biomarkers play a useful role in the diagnosis and treatment of cancer. The use of PSA, along with a digital rectal exam, can detect prostate cancer as much as 5-10 years earlier than a digital rectal exam alone. However, the current PSA test is limited in both sensitivity and specificity, resulting in both missed cancers and unnecessary biopsies. This seminar discusses the current utility of PSA testing, along with newer methods to improve specificity and sensitivity, including ratio testing with free to total PSA, and direct detection of the complexed PSA isoform. The role of HER-2/neu in the diagnosis and monitoring of breast cancer is also reviewed, including tests that utilize either tissue or serum samples.

**Objectives:**

- ✓ Describe the role PSA plays in the diagnosis and monitoring of prostate cancer.
- ✓ Discuss the value that ratios and isoforms can play in improving PSA testing.
- ✓ Describe the HER2/neu protein in breast cancer and the value of both tissue and serum based HER2/neu tests.

**Syphilis: Clinical Disease and Testing Algorithms**

Syphilis is an easily spread infection of humans caused by the bacterium *Treponema pallidum*. After years of decline in the United States, syphilis infections are again on the rise. This seminar reviews the pathology, epidemiology, and laboratory testing involved in a diagnosis of syphilis. New testing algorithms are discussed that may enhance detection of late-stage infections as well allow automation of the screening assay.

**Objectives:**

- ✓ Describe the progression of untreated infection with *Treponema pallidum* and the risk of undiagnosed or misdiagnosed cases of syphilis.
- ✓ Discuss the clinical utility of both treponemal and nontreponemal based tests.
- ✓ Describe traditional as well as newer screening algorithms to identify patients infected with syphilis.

**Sponsor: Siemens Healthcare**

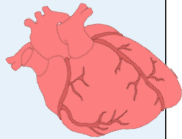
- » **Check your schedule.**
- » **Time to visit the Exhibits.**
- » **Lots of great information!**

**Session  
22**

2:15 - 5:30 pm

Intermediate

3 contact hours



**Uncovering The Hidden, High-Risk Cardiac Patient**

- **John Corso, MD**  
High Lakes Health Care  
Bend, OR

In this session, attendees will be introduced to the most current, and now widely available laboratory technology, to better evaluate the often-hidden cardiac risks in their patients by evaluating LDL Particle counts and size distribution, as well as highly specific inflammation markers. The paradigm for cardiac risk evaluation is undergoing dramatic change with new and better understanding of the atherosclerotic process.

Objectives:

- ✓ Discuss the need to go beyond simple LDL/HDL measurements to adequately stratify their patients cardiac risk.
- ✓ Describe how to incorporate the use of several different inflammation markers to better categorize and treat high risk patients.
- ✓ Identify, partly from case studies, the varied effects of different interventions on these emerging risk factors.

**Sponsor: Quest Diagnostics**

**Biosafety and Emerging Infectious Diseases**

- **Gina Ramoz, MBA**  
Oregon State Public Health Lab (OSPHL)  
Hillsboro, OR

This session will discuss practical tips and advice, the need for increased awareness against potential laboratory hazards, and the importance of conducting a “self-risk assessment” when working to address emerging infectious disease threats that face our nation. The focus will be on laboratory risks and acquired infections (LAI’s), personal protective equipment (PPE), engineering controls, and other risk mitigation strategies.

Objectives:

- ✓ Articulate Universal Precautions.
- ✓ Identify routes of exposure and mitigate potential exposure.
- ✓ Discuss potential laboratory hazards.

**Sponsor: Oregon State Public Health Lab (OSPHL)**



**Friday, October 14, 2016**

**Session  
23**

2:15 - 5:30 pm

Intermediate

3 contact hours

**Fitting Linear Quadrupoles and Round Flight Tubes into the Square Clinical Laboratory:  
The What, Where, and Why of Clinical Mass Spectrometry with Quality Needs for Success Identified**

**- Frederick G Strathmann, PhD, DABCC (CC, TC)**

University of Utah and ARUP Laboratories  
Salt Lake City, Utah

This session will discuss clinical applications of mass spectrometry, including a highlight of the most common types of mass spectrometry used, areas of laboratory medicine where each method has found success, and comparisons of these technologies for specific applications. I'll also touch on some old and some new challenges that face every laboratory using mass spectrometry in the clinical environment. An emphasis on quality improvements applicable to mass spectrometry and non-mass spectrometry laboratories will be included.

**Objectives:**

- ✓ Describe the most common types of mass spectrometry and list the areas of clinical laboratory medicine where mass spectrometry is currently used.
- ✓ Compare the utility of various mass spectrometry techniques for specific applications in laboratory medicine and discuss several unique challenges of clinical mass spectrometry.
- ✓ Discuss available methods and techniques to acquire a current state assessment of laboratory quality and develop a plan to implement a change to current quality practices and demonstrate the positive outcomes of a successful quality redesign.

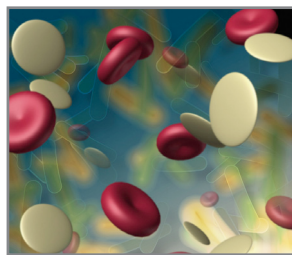
**Sponsor: ARUP Laboratories**



**Handouts**

Handouts are only available online at [www.asclswa.org](http://www.asclswa.org). Several weeks before the Seminar, registrants will receive an email from [BrenKoch@comcast.net](mailto:BrenKoch@comcast.net) with session confirmations and instructions for accessing the handouts. Be sure to print them and bring them with you to the meeting. No handouts will be available onsite.

<p><b>Session 24</b></p> <p>2:15 - 5:30 pm</p> <p>Intermediate</p> <p>3 contact hours</p>	<p><b>How to Stop Clinicians From Ordering Stupid Tests</b></p> <p>- <b>Kevin Foley PhD, MT</b> Kaiser Permanente, NW Fariview, OR</p> <p>This is a laboratory utilization discussion. We will discuss the lab's role in addressing poor lab utilization by discussing issues around, obsolete tests, abuse of stats, duplicate tests, using a send-out test formulary, and how we can use the electronic medical record (EMR) to aid and guide clinicians in test selection. This is a fun talk meant to be entertaining and informative. Come share your lab's pain with the group as we empower lab professionals to help drive appropriate test utilization.</p> <p>Objectives:</p> <ul style="list-style-type: none"><li>✓ List some drivers for inappropriate test ordering.</li><li>✓ Describe how the EMR can be used to aid and direct clinician lab ordering.</li><li>✓ Provide examples of obsolete or over-used lab tests and suggestions for controlling their use and identify the major lab utilization issues in your institution and strategize on some basic efforts to address them.</li></ul>
<p><b>Session 25</b></p> <p>2:15 - 5:30 pm</p> <p>Intermediate</p> <p>3 contact hours</p>	<p><b>Automation in Blood Banking</b></p> <p>- <b>Rachelle Barrett MLS (ASCP) SBB</b> Portland Adventist Medical Center Portland, OR</p> <p>Probably the last section of the laboratory to accept automation, the Blood Bank has seen much change over the last several years in technology. How did we get here and what are the obstacles in choosing the optimal automation. This discussion will cover automation in Transfusion Services, Donor services, and LIS Systems. We will look forward and discuss future technological advances in both Transfusion Service and Donor Centers.</p> <p>Objectives:</p> <ul style="list-style-type: none"><li>✓ Recall how automation began in Transfusion Services and Donor Centers.</li><li>✓ Compare and contrast the different market options for the Transfusion Service Automation.</li><li>✓ Discuss reasons to automate and reasons to not automate.</li></ul>



## Saturday, October 15, 2016

### Session 26

8:30 - 11:45 am

Intermediate

3 contact hours

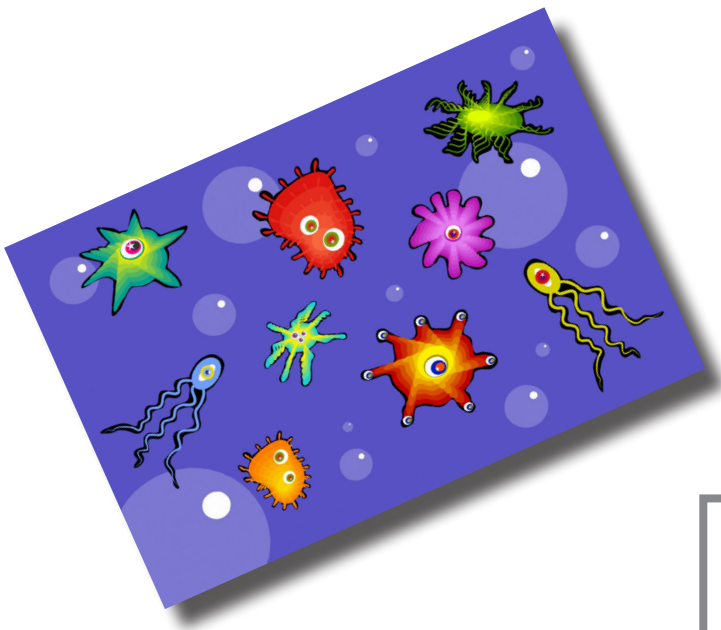
### CDC's Division of Parasitic Diseases (DPDX) Program Telediagnosis with the Oregon State Public Health Laboratory (OSPHL)

- **Dustin Brown MT(ASCP)**  
Oregon Institute of Technology  
Wilsonville, OR

Parasitology via Telediagnosis will include the use of digital imaging aids in the rapid diagnosis of unusual or difficult parasite samples using micro-photography and the Internet. This session will also be an overview of the service including interesting parasites and case studies from the Oregon State Public Health Laboratory, in conjunction with the Division of Parasitic Diseases (DPDx) at the Centers for Disease Control & Prevention (CDC).

#### Objectives:

- ✓ Describe the CDC DPDx telediagnostic services.
- ✓ Review unusual and or difficult parasite samples from prior telediagnostic submissions.
- ✓ Discuss the process of submitting images for telediagnostic assistance.



### Handouts

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**Session  
27**

8:30 - 11:45 am

Intermediate

3 contact hours

**Certification Maintenance and Career Development Paths for  
Medical Laboratory Professionals**

- **Maja Chloupkova, PhD, MLS (ASCP)<sup>CM</sup>**  
Legacy Laboratory Services  
Portland, OR

This session targets recent graduates, as well as more senior medical laboratory professionals who are curious about career advancement or career change opportunities. The session is divided to certification maintenance portion and career development in clinical laboratory and beyond portion. Certification maintenance is required for all who graduated in the year 2004 or later. Because of strict regulatory requirements, those who become certified soon after graduation have a better job outlook, and those who maintain their certification have better long-term opportunities for advancement. Career advancement in clinical laboratory includes technical path and managerial path. The session discusses major differences between these two paths and suggests ways to pursue one's career-related goals. The session also provides information about career opportunities available beyond clinical laboratory for those with medical laboratory degrees.

**Objectives:**

- ✓ Discuss why certification maintenance is vital to medical laboratory profession.
- ✓ Discuss certification maintenance requirements and list current agencies that provide certification maintenance programs.
- ✓ Describe two main career pathways in clinical laboratory and understand how to make career change and list career opportunities for medical laboratory professionals beyond the medical laboratory setting.

**Where to Look for Medical Laboratory Jobs and How to Impress The Interview Committee**

This session targets all levels of medical laboratory profession, and ends with a workshop session. It starts with information about job outlook for medical laboratory professionals. It then compares job opportunities and provides basic statistics to compare starting conditions in Region IX states (AK, OR, WA). The discussion then moves to job search engines and finishes with resume preparation, and tips to succeed at a job interview. The last portion is a short workshop session where we practice the basic strategy to respond to interview committee questions.

**Objectives:**

- ✓ Describe the job outlook for medical laboratory professionals.
- ✓ Discuss how to search for a job using currently available job searching engine and describe how to construct a strong resume.
- ✓ Discuss job opportunities in ASCLS Region IX state and discuss basic strategy to succeed at a job interview.

**Sponsor: Legacy Laboratory Services**

## Saturday, October 15, 2016

### Session 28

8:30 - 11:45 am

Intermediate

3 contact hours

### Not Your Mother's PKU test- What Is New In Newborn Screening?

- **Becky J Whittemore, MPH, MN, FNP-BC**

Oregon Public Health Laboratory  
Hillsboro, OR

Newborn screening has changed dramatically in the past 10 years. From the simple PKU test over 50 years ago to the identification now of 54 different disorders, screening during infancy has become a valuable tool for health care providers. Overview of the groups of disorders identified and the techniques used to collect the specimen will be discussed. Future plans for screening and interfacing with facilities are changes that may affect many laboratories.

Objectives:

- ✓ Describe 4 categories of disorders identified on the Newborn Screen.
- ✓ Explain proper collection and handling techniques for the screen.
- ✓ Discuss the changes in newborn screening over the past 10 years.

**Sponsor: Oregon Public Health Laboratory**

### Session 29

8:30 - 11:45 am

Intermediate

3 contact hours

### Causes of Anemia

- **Sarah Lowry, MSN, ACNP-BC, AOCNP**

- **Lisa Radcliff, DNP, AOCNP**

Oregon Health & Science University  
Portland, OR

We will start with a basic overview of lab findings related to anemia that may be evaluated in a primary care practice. We will then proceed to a more advanced discussion of the appropriate work up of anemia in a hematology clinic. This will include a review of differential diagnoses and recognition of emergent situations. Case are studies included.

Objectives:

- ✓ Identify primary causes of anemia.
- ✓ Anticipate appropriate testing.
- ✓ Describe results warranting a more urgent intervention.

**Session  
30**

1:00 - 4:15 pm

Intermediate

3 contact hours

**The Institutional Antibiogram:  
Is The Juice Worth The Squeeze? Who Is The Consumer?**

- **Scott Weissman, MD**  
Seattle Children's Hospital  
Seattle, WA

CLSI provides guidelines for the preparation and presentation of annual institutional antibiograms. In practice, there is considerable variability in the actual workflow followed by clinical microbiology laboratories, as well as variability in presentation to and engagement with various stakeholders in clinical care and Infection Prevention. Emerging concerns about growing antibiotic resistance and shrinking antibiotic development pipelines have led to re-examination of traditional antibiogram-related practices and highlighted new opportunities for maximizing the value to be extracted with minor modifications to existing workflow. This lecture will explore these opportunities (including Antimicrobial Stewardship and One Health approaches) and associated challenges.

**Objectives:**

- ✓ Define the existing and potential value of the standard institutional antibiogram to various stakeholders in the individual healthcare institution and to the community at large.
- ✓ Identify advantages and disadvantages of the standard institutional antibiogram as described in CLSI guidelines.
- ✓ Describe barriers to and opportunities for alternative methods of antibiogram preparation and presentation that leverage widely-available technical resources.



I really value exchanging information with those who attend seminars from all over the region and also appreciated the real spectrum of attendees - from students in the local Medical Technology program just getting started, to people who have been in the field for years and are looking for new ideas for their laboratories and/or to brush up on their skills, to a laboratorian developing next-generation diagnostic methods at a local biotechnology company.

.....Lisa (McDonnel) Klingler.....

**Session  
31**

1:00 - 4:15 pm

Intermediate

3 contact hours

**Biodevices and Neurotechnology to Improve Quality of Life  
After Brain and Spinal Cord Injury**

- **Chet T. Moritz, PhD**  
University of Washington  
Seattle, WA

Neuroprosthetic devices that interact with the nervous system by recording and stimulation have tremendous potential to improve quality of life after brain and spinal cord injury. Neuroprostheses have progressed from animal studies to human trials, including ongoing work using brain activity to control Functional Electrical Stimulation (FES) of paralyzed hand muscles. Another promising method for enabling rehabilitation and plasticity is spinal stimulation. Both epidural and intraspinal stimulation can activate neural circuits distal to an injury, leading to either direct muscle contraction or facilitating therapy and enabling volitional movements. Work is underway to merge these techniques and develop a brain controlled spinal stimulation system to restore volitional control of limb movements and perhaps promote directed plasticity and rehabilitation after brain and spinal cord injury.

**Objectives:**

- ✓ Describe the state of the art in neural technology and brain-computer interfaces.
- ✓ Explain how neural devices may promote plasticity within the nervous system.
- ✓ Provide examples of recent progress in the field of neural engineering to improve rehabilitation after central nervous system injury.

**Bioelectronic Medicine: Devices for Measuring and Modulating  
Nerves and Organs**

- **Thomas J Richner, PhD**  
University of Washington  
Seattle, WA

Every organ is innervated and is to some degree regulated by the nervous system. The visceral organs are regulated by the autonomic nervous system. Nerves leading to the organs cause changes such as contractions or exocytosis, and nerves leading from the organs relay sensory information back to clusters of cells (ganglia), the spinal cord, and the brain. The loop from the organ to the spinal cord and back to the organ creates a self-regulating system. However, disease or injury can interrupt the loop. In some cases pharmaceuticals can help, but they do not respond in real time to changing conditions and systemic drugs often have off-target side effects. Implanted devices that can record physiological parameters while stimulating and blocking peripheral nerves have the potential to partially restore function by reclosing the loop. This presentation will cover electrical and optical methods to measure and modulate the activity of nerve cells and how these methods can be applied to the urinary system and to the brain in particular. Electrode microarrays and genetic technologies will be discussed in detail. This research is currently involves rodent models, but the possibility of translation will be discussed as a future direction. As new technologies are developed, implanted devices can be tailored to each organ system.

**Objectives:**

- Describe the neuroanatomy of the autonomic nervous system and how it innervates visceral organs.
- ✓ Discuss how recent genetic and electrode technologies can be used to drive and inhibit neurons.
- ✓ Discuss the use of control system logic to understand the physiology of organs by identifying the sensor, actuator, and set point of the organ system with analogies to everyday appliances like thermostats.

**Session  
32**

1:00 - 4:15 pm

Intermediate

3 contact hours

**Introduction to Clinical Research**

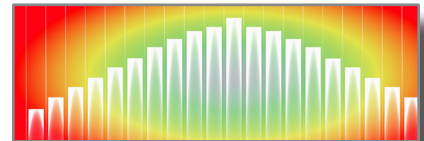
- **Patricia DeTurk, MST MT(ASCP)**

Clackamas Community College  
Milwaukie, OR

This session covers the basics of clinical research and the dynamics of setting up clinical trials. We will discuss the roles within the research team and their responsibilities as well as the purpose for the different phases of clinical testing. Included will be a discussion of proper data collection and Informed Consent. We will also cover how to recognize and address Research Misconduct.

**Objectives:**

- ✓ Discuss the ethics that must be addressed when setting up a clinical trial, as defined by the Belmont Report and discuss how to recognize and address Research Misconduct.
- ✓ Discuss the purpose for the different phases of clinical testing and the importance of data collection.
- ✓ Explain Informed Consent, how to address pediatric participants.



***Comments from past seminar attendees***

Knowledgeable, interactive, fun, good speakers, takes lots of questions. Enjoyed and learned a lot.

Really enjoyed this. Love the enthusiasm and passion for the topic. Very interesting and exciting.

Great speakers, lots of new info. Updates. These are the kinds of speakers we need. They explain current and new information. Speaker provided many helpful examples.



## SPONSORS



The 2016 Northwest Medical Laboratory Symposium would like to extend its sincere thanks for the following companies and organizations for their support.

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***OHA/Public Health Division/OSPHL***

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***Response Biomedical Corp.***

***Siemens Healthcare Diagnostics***

# EXHIBITORS & EXHIBIT HALL INFORMATION

The leading manufacturers and distributors will once again gather in the Exhibit Hall at the Columbia Conference Center to display their wares. This will be the 32nd year they have participated in the Northwest Medical Laboratory Symposium to provide access for Clinical Laboratorians to the newest products and to demonstrate the ability for aiding in the diagnosis and health care of the public. In addition, Siemens Healthcare Diagnostics will be bringing their demonstration van to display their larger pieces of equipment.

The vendors and their representatives are an integral part of our meeting and provide sponsorship for the continuing education sessions and other activities during this meeting. It is with the help and support from the laboratory supply companies that a volunteer group of individuals from the professional societies are able to arrange this Symposium.

As laboratory professionals, you do not have to register for the Symposium in order to view the displays in the Exhibit Hall. When you come to the Exhibit Hall, sign in on the log sheets and pick up a name badge and join the Committee in thanking the vendors for their support. The following companies have registered for space. For the latest information, please visit the vendor websites. Links may be found at [www.asclswa.org/NWMLS](http://www.asclswa.org/NWMLS), click on "Exhibits".

Abbott Diagnostics	Luminex Corporation
Accelerate Diagnostics	McKesson Laboratory Solutions
Advanced Instruments, Inc.	MEDTOX Diagnostics, Inc.
Alere	Meridian Bioscience, Inc.
American Red Cross: Pacific Northwest Blood Services	Mindray North America
ARKRAY USA	Northwest Software Solutions /StaffReady
ARUP Laboratories	Ortho Clinical Diagnostics
AUDIT MicroControls	Physician Office Laboratory Specialists
Beckman Coulter	Quidel
Bloodworks	Radiometer America
Cepheid	Response Biomedical Corp.
Corgenix - Orgentec Diagnostics	Roche Diagnostics
Delivery Express	Samaritan Health Services
Diagnostica Stago	Schuyler House
DiaSorin	Sekisui Diagnostics, LLC
Diasorin Molecular, LLC	Streck
General Water Technologies	Sysmex
Grifols	The Binding Site
Hardy Diagnostics	University of Washington
Hemosure, Inc.	Verbatim Americas
Hettich Instruments	WSLH Proficiency Testing
Instrumentation Laboratory	
Lattice, Inc	
Legacy Laboratory Services, LLC	

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## EXHIBIT HOURS

Wednesday, October 12	Exhibit Opening	11:45 AM – 2:15 PM
Thursday, October 13		11:45 AM – 2:15 PM
Friday, October 14	Exhibit Closing	11:45 AM – 2:15 PM

## EXHIBITOR PRODUCT LIST

List is updated as more companies sign up to exhibit. Check the website, [www.asclswa.org/Exhibits2015.html](http://www.asclswa.org/Exhibits2015.html).  
For Exhibit Information contact Brenda Kochis, Email: [BrenKoch@comcast.net](mailto:BrenKoch@comcast.net)

<b>Abbott Diagnostics</b>	Syphilis Assay; ROMA Calculation; Emerald 22
<b>Accelerate Diagnostics</b>	Accelerate Pheno(TM) System, Accelerate Phenotest(TM) BC Kit
<b>Advanced Instruments, Inc</b>	
<b>Alere</b>	Alere i; EPOC
<b>American Red Cross: Pacific Northwest Blood Services</b>	Platelet Additive Solution, Single Donor Platelets Pathogen Reduction
<b>ARKRAY USA Inc.</b>	Aution Hybrid AU-4050
<b>ARUP Laboratories</b>	
<b>AUDIT MicroControls, Inc.</b>	Linearity LQ Special Diabetes; Linearity FD Immunoassay Abbott Architect Series; Linearity FD Procalcitonin; Linearity LQ Vitamin D
<b>Beckman Coulter</b>	
<b>The Binding Site, Inc</b>	Optilite
<b>Bloodworks</b>	Pathogen reduced blood products, reference lab testing: Immunohematology, genomics, special coagulation, donor testing, patient blood management, medical consulting.
<b>Cepheid</b>	New On-demand nested PCR tests results less than 30 mins:: FLU/RSV Express; Trich. Carba-R for screening.
<b>Corgenix - Orgentec Diagnostics</b>	Alegria* automated system featuring patented SMC technology for autoimmune and infectious disease.  Extensive line of ELISA test kits for autoimmune, celiac, phospholipids and calprotectin  11-dehydro – thromboxane B2 (Aspirin Works) Test kit
<b>Delivery Express, Inc.</b>	Courier, Warehousing, Route, Driver Coverage
<b>Diagnostica Stago</b>	New Max Generation of Coag Analyzers; 24-hour control; Heparin anti-Xa; Pool Norm
<b>DiaSorin</b>	1, 25 Dihydroxyvitamin D; Direct Renin; Aldosterone
<b>DiaSorin Molecular, LLC</b>	
<b>General Water Technologies</b>	GWT 2000 Series systems - Innovative counter-top design
<b>Grifols</b>	HELIOS - All-in-one: IFA Slide Processing and Reading HELMED - IFA Slide Processing System Triturus - True Open Flexibility
<b>Hardy Diagnostics</b>	QuickSlide GramPRO 1 & HemaPRO, Carrot Broth, HardyCHROM
<b>HEMOSURE, INC.</b>	

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For Exhibit Information contact Brenda Kochis, Email: [BrenKoch@comcast.net](mailto:BrenKoch@comcast.net)

<b>Hettich Instruments</b>	Clinical and Research Centrifuges, Incubators
<b>Instrumentation Laboratory</b>	
<b>Lattice, Inc.</b>	
<b>Legacy Laboratory Services, LLC</b>	
<b>Legacy Laboratory Services, LLC</b>	
<b>Luminex Corporation</b>	
<b>McKesson Laboratory Solutions (LABSCO)</b>	
<b>MEDTOX Diagnostics, Inc</b>	MEDTOXScan Reader PROFILE - V
<b>Meridian Bioscience, Inc.</b>	Microbiology Diagnostic Products
<b>Mindray North America</b>	BS-200, BS-480, BS-3600, and BA-800M
<b>Northwest Software Solutions /StaffReady</b>	StaffReady Competency Software Solution
<b>Ortho Clinical Diagnostics</b>	VITROS 5600; ORTHO VISION
<b>Physician Office Laboratory Specialists</b>	Physician office laboratory Specialists (POLS)has been developing our turn key and consulting services for Physician owned Toxicology laboratories since 2010 and has thus acquired an extensive expertise working with-Pain Management or Medical Drug Rehabilitation facilities. Having based ourselves on the features demanded by large companies we have created innovative, user-friendly applications that are now available to small and medium-sized companies.
<b>Quidel</b>	Solana and GAS Assay; AmpliVue and HSV 1+2, Bordetella pertussis
<b>Radiometer America</b>	AQURE
<b>Response Biomedical Corp.</b>	RAMP® 200 high throughput multi-port analyzer; RAMP® Reader fully portable, lightweight reader; Response Cardiovascular current test menu: Troponin I, NT-proBNP, CK-MB and Myoglobin
<b>Roche Diagnostics</b>	
<b>Samaritan Health Services</b>	
<b>Schuyler House</b>	Laboratory Information Systems and medical information systems for laboratory and clinical practice
<b>Sekisui Diagnostics, LLC</b>	Sekisui Diagnostics becomes exclusive commercial partner for the Qualigen FastPack® IP System in the U.S. and international markets
<b>Streck</b>	Sed-rate instruments: Diesse MINI-CUBE & ESR-Auto Plus Body fluid controls: Sperm-Chex, Sperm-Chex Post VC, Cell-Chex, Cell-Chex Auto & LBC-Chex
<b>Sysmex</b>	
<b>University of Washington</b>	
<b>Verbatim Americas</b>	
<b>WSLH Proficiency Testing</b>	Proficiency Testing, Calibration Verification/Linearity and Online Training and Competency.

## Registration General Information

### To Register by Mail:

Complete the registration form and mail the registration form and check payable to **NWMLS** to:

2016 Northwest Medical Laboratory Symposium

Brenda Kochis

44 West 26th Avenue

Spokane, WA 99203-1818

If questions:

Contact: BrenKoch@comcast.net (email contact is preferred)

Phone: 509-939-8445 (leave message) Call before 8 pm please.

**Registration mail postmark by date: September 26, 2016** This assures that your form will be delivered in time for us to provide you with the information to access the handouts.

### To Register Online:

Go to [www.asclswa.org](http://www.asclswa.org) and click on the **NWMLS** tab then click on **Registration**. Click on **“Online Registration”** to go to the online form. **Credit cards can be used to pay for registration.**

- » Registrants using the online form must have a completed registration by **October 3, 2016** to receive lunch if eligible.
- **Lunch** is provided for those that register for two sessions (morning and afternoon) on the same day. Lunch is not provided for those that register for one session a day or for those that register onsite.
- **Handouts** for all sessions will only be available online. Registrants will be sent the web address, user-name and password to access the handouts. Please print your email address clearly.
- **All sessions** are approved for P.A.C.E. and AMTrax credits.
- **Hotel reservations:** See the website for more detailed information. Please call the hotel for reservations or register online. Ask for the “Northwest Medical Laboratory Group Rate” to get the seminar rates. Rates will be available until September 27, 2016 after which it will revert to standard hotel rates. See page 6 for more information.
- **No “NWMLS” Registration refunds** will be issued.
- **Fees are by session.** Each session is 3 hours (half day). Please register for the membership category that you qualify for. More information about fee categories are on the website at [www.asclswa.org](http://www.asclswa.org) tab: NWMLS, or on page 38.

### Special Member Registration Rates

Any person currently a member in good standing of the following organizations can qualify for special member registration rates for the meeting:

- AABB (American Association of Blood Banks)
- AACC (American Association for Clinical Chemistry)
- ASC (American Society of Cytology)
- ASCP (American Society of Clinical Pathologists)  
Laboratory Professional Membership Category

**NOTE: Certification only through ASCP**

**does NOT qualify you for “Special Member” rates.**

- ASCT (American Society for Cytotechnology)
- ASH (American Society of Hematology)
- ASM (American Society of Microbiology)
- CLMA (Clinical Laboratory Management Association)

# Registration Form

**2016 Northwest Medical Laboratory Symposium**

October 12 - 15, 2016

Portland, OR

**Online registration and credit card payment is available at**

**[www.asclswa.org/NWMLS.html](http://www.asclswa.org/NWMLS.html)**

**or**

**Mail this form with a check.**

First Name \_\_\_\_\_ Last Name \_\_\_\_\_

Address \_\_\_\_\_

City/State/Zip \_\_\_\_\_

Day Phone \_\_\_\_\_ Evening Phone \_\_\_\_\_

Institution \_\_\_\_\_

City/State \_\_\_\_\_

Email Address \_\_\_\_\_

**Are you willing to serve as a moderator?**  Yes  No

**Circle the sessions you will be attending.**

Wednesday Oct 12	AM	1	2	3	4
	PM	5	6	7	8
Thursday, Oct 13	AM	9	10	11	12
	PM	13	14	15	16
	Eve	17			
Friday, Oct 14	AM	18	19	20	21
	PM	22	23	24	25
Saturday, Oct 15	AM	26	27	28	29
	PM	30	31	32	

Category	# Sessions	Fee/session	Total Fee
<b>ASCLS/AMT Professional/Technical</b> .....		\$55.00	\$
ASCLS # _____ AMT # _____			
<b>Special Member</b> .....		\$70.00	\$
__AABB __AACC __ASC __ASCT __CLMA __ASM __ASH __ASCP Member number _____			
<b>Non-Member</b> .....		\$85.00	\$
<b>Phlebotomist</b> .....		\$35.00	\$
<b>Student</b> .....		\$25.00	\$
<b>Evening Session (Member, Nonmember, Special categories)</b> . . .		\$30.00	\$
<b>Evening Session (Phlebotomist, Student)</b> .....		\$20.00	\$
<b>Total Fee</b> .....			\$

Mail with check to

**2016 NWMLS**

Brenda Kochis

44 West 26th Avenue

Spokane, WA 99203-1818

Full payment in U.S. Dollars must accompany each mailed

registration. Make check payable to **NWMLS**

Mail by September 26 to assure timely arrival

**OR**

Online registration with credit card payment is available at

**[www.asclswa.org/NWMLS.html](http://www.asclswa.org/NWMLS.html)**

# Registration Fee Categories

Fees are listed for each attendance category. The list below defines those categories.

## Attendance Categories

**Member:** Any person who is a current member in good standing of the American Society for Clinical Laboratory Science (ASCLS) or the American Medical Technologists (AMT). Please list your membership number in the appropriate space on the registration form. New members are eligible for member rates. To join please see the information on the website: [www.asclswa.org](http://www.asclswa.org).

### **Special Member:**

Any person currently a member in good standing of the following organizations:

- AABB (American Association of Blood Banks)
  
- AACC (American Association for Clinical Chemistry)
  
- ASC (American Society of Cytology)
  
- ASCP (American Society of Clinical Pathologists)  
Laboratory Professional Membership Category  
NOTE: Certification through ASCP only does NOT qualify you for  
“Special Member” rates.
  
- ASCT (American Society for Cytotechnology)
  
- ASH (American Society of Hematology)
  
- ASM (American Society of Microbiology)
  
- CLMA (Clinical Laboratory Management Association)

**Student:** A student is defined as any person who is engaged at least half-time in a recognized program leading to either an associate’s or bachelor’s degree in a clinical laboratory science or one who is in a recognized Clinical Laboratory Internship program.

**Phlebotomist:** A phlebotomist is defined as any person whose primary responsibility is phlebotomy. Medical Assistants and AMT’s RMA are eligible for Phlebotomist fees.

# Special Notes

## General Information

Casual dress is appropriate for all sessions. There will be no smoking in any of the sessions.

Cell phones must be turned off during the sessions.

Your name badge is required for admission to all sessions and to the Exhibit Hall. Please wear your name badge at all times.

## Meeting Room Assignments

The session room assignments will be printed on the session sheet in your registration packet. A floor plan will be available at the registration desk.

## Message Center

A message board will be maintained at the registration desk for Emergency messages. The phone number Lynnwood Convention Center is 425-775-7600.

## Hospitality

In keeping with tradition, all exhibitors will participate in combined hospitality functions in the Exhibit Hall. **There will be no individual hospitality suites.**

## Updates

Updates will be posted on the website at [www.asclswa.org/NWMLS](http://www.asclswa.org/NWMLS)

Please check for session updates and or cancellation information.

## P.A.C.E.®

P.A.C.E.® credits have been approved for all appropriate sessions.

ASCLS-OR is approved as a provider of continuing education programs in the clinical laboratory sciences by the ASCLS P.A.C.E.® program. ASCLS-OR will use CE Organizer for documentation of continuing education credits. Please make note of the P.A.C.E.® number and of the session number that will be given to attendees in each session after the session break. Without this information, the attendee will not be able to obtain their electronic certificate.

## Handouts ONLY Available On-line

To keep registration rates as low as possible, the Northwest Medical Laboratory Symposium will no longer provide copies of the session handouts on-site at the meeting. Session handouts will be available for download at the ASCLS-WA website (<http://www.asclswa.org>). Click on the "NWMLS" tab. Remember to print copies of the handouts for the sessions for which you registered and bring them to the meeting with you. **No handouts will be provided onsite.** If you are having problems downloading the handout, please contact Brenda Kochis, [BrenKoch@comcast.net](mailto:BrenKoch@comcast.net).

Handouts for the sessions will be available on the ASCLS-WA website approximately 2 weeks prior to the meeting in a password protected area. You will receive the "password" and instructions on how to print the handouts approximately 2 weeks before the meeting. The email will be from [BrenKoch@comcast.net](mailto:BrenKoch@comcast.net), so watch for it. Register early so that you can print the handout material for your sessions. Handouts will NOT be provided for those that register onsite. If you plan to register onsite, please contact Brenda Kochis at [BrenKoch@comcast.net](mailto:BrenKoch@comcast.net) for information regarding handout access.