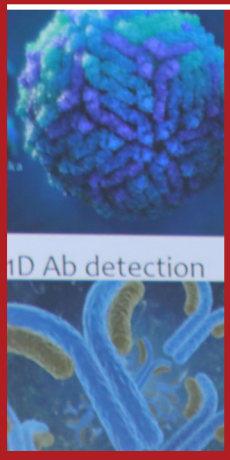
PROGRAM GUIDE

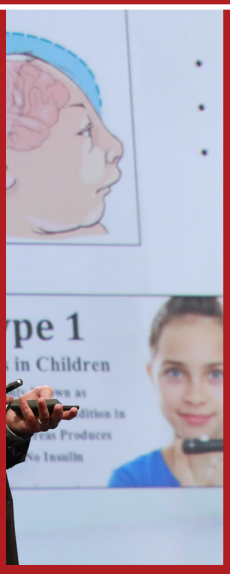
AACC
Better health through laboratory medicine.

71ST AACC ANNUAL

SCIENTIFIC MEETING

& CLINICAL LAB EXPO





AUGUST 4–8, 2019

ANAHEIM, CA USA

www.2019aacc.org

The Evolution of Syphilis Testing

You Don't Have to Use Treponemal Anymore . . .

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Arlington Scientific and **Awareness Technology** have created a synergistic partnership to meet an essential customer need for an affordable and fully automated nontreponemal RPR syphilis analyzer for diagnostic testing and blood donor screening. Both companies bring a combined 60+ year history of consistent quality, dependability and reliability to the relationship.

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- Walk-away system
- 190 samples per hour
- Titers to 1:2048
- Objective results
- Proprietary advanced imaging algorithm
- Improve efficiency and workflow

CONTENTS

SESSIONS BY DAY

Information in this guide is subject to change. The most up-to-date information can be found on the mobile app.
See page 3 for downloading instructions.

OFFICES & MEETING SERVICES

REGISTRATION

LOCATION: Exhibit Hall E

Saturday.....12:00pm–5:00pm
Sunday.....8:00am–6:30pm
Monday–Wednesday.....7:00am–5:00pm
Thursday.....8:00am–1:00pm

AACC STORE

LOCATION: Lobby B

Plan to visit the AACC store to browse some of AACC's bestsellers and AACC merchandise, including t-shirts, wearables and gifts.

AACC Store Hours

Sunday–Wednesday..... 9:00am–5:00pm
Thursday..... 9:00am–1:00pm

HOUSING

LOCATION: Exhibit Hall E

Representatives from Spargo, AACC's official housing agency, will be available to assist with your hotel accommodations.

INTERNATIONAL TRADE CENTER

LOCATION: Exhibit Hall E

The center is staffed by international trade specialists who will help international visitors identify and meet suppliers of products they wish to purchase, either for their own use or as distributors.

Monday–Wednesday..... 9:00am–5:00pm
Thursday..... 9:00am–1:00pm

AACC MEMBERSHIP

To learn more about membership, visit the AACC booth #4353. To join immediately, stop by the AACC Conference Registration Desk. Membership is valid for one full year beginning on the date that you join. Dues are as follows: Professional $239; Professional Affiliate $141; Transitional $81; Express $65; Trainee $39. Customize your membership by participating in one or more scientific divisions for an additional $15, $20 or $25 each.

CONTINUING EDUCATION CREDIT AND CERTIFICATE OF ATTENDANCE

See page 102 for instructions on obtaining ACCENT® or CME credit, as well as a Certificate of Attendance. This information can also be found at www.aacc.org/AMcredits19. If you have additional questions, visit the AACC booth #4353 on the Expo show floor, or send an email to education@aacc.org.

FACULTY AND PLANNER DISCLOSURE INFORMATION

All individuals involved in planning, developing, and/or presenting the contents of the 2019 AACC Annual Scientific Meeting Scientific Sessions were required to disclose whether or not they (or an immediate family member) has had a relevant financial relationship (within the last 12 months) with a commercial interest, and one or more of the commercial interest's products/services are related to or relevant to the presentation contents. All disclosed information was reviewed, and if any conflicts of interest were identified, they were resolved prior to the meeting. Completed disclosure forms are on file in the AACC headquarters office. A summary of the disclosures is available when accessing the presentation handouts at www.aacc.org/handouts. A limited number of printed copies of the disclosure summary are available upon request at Conference Registration.

AACC HEADQUARTERS OFFICE

LOCATION: Room 303B

Phone: 714.765.2004

Contact the AACC Office if you have general questions at the meeting. Also use this number if you have an emergency situation.

AACC Headquarters Office Hours

Friday.....12:00pm–5:00pm
Saturday.....12:00pm–5:00pm
Sunday.....8:00am–6:30pm
Monday–Wednesday.....7:00am–6:00pm
Thursday.....8:00am–4:00pm

Nursing Room Access: Room 109

BAGGAGE CHECK

LOCATION: Lobby Hall E

Tuesday–Wednesday..... 7:00am–6:00pm
Thursday..... 7:00am–2:00pm
Per item: coat check $3, bag or poster $4

CLINICAL LAB EXPO

LOCATION: Exhibit Halls A–D

Tuesday–Wednesday..... 9:30am–5:00pm
Thursday..... 9:30am–1:00pm
Refer to the Exhibit Guide *or the mobile app for exhibit listings and booth descriptions.*

Note: AACC permits individuals age 16 and 17 with a photo ID to register for and attend the 71st AACC Annual Scientific Meeting & Clinical Lab Expo if accompanied by a registered adult. Children under 16 are not permitted on the exhibit floor or in the educational sessions at any time.

FIRST AID/EMERGENCY

Emergency Phone Number:

Dial 714.765.8975 from any telephone in the convention center. In hotels, dial 0 from any phone.

PRESS ROOM

LOCATION: 213AB

Phone: 714.765.2002 and 714.765.2003

Sunday..... 9:00am–5:00pm
Monday–Wednesday..... 8:00am–5:00pm
Thursday..... 8:00am–1:00pm

Members of the media can register for the AACC Annual Scientific Meeting in the press room, and pre-registered media can pick up their badges and other meeting materials here. The press room is available for journalists who wish to hold interviews away from the exhibit floor and other public areas, and press room staff can also help to set up interviews between reporters and scientific session speakers. Additionally, registered media are welcome to work on stories here.

Materials

AACC media kits that include fact sheets and AACC press releases will be available, as well as Expo and conference program books. Phones, WiFi and laptop charging stations are available for the press. Free breakfast and lunch are also available for registered press Monday–Thursday of the meeting, and afternoon refreshments are available on Sunday.

The press room is available to exhibitors to display promotional materials and media kits. However, only registered media may use the rest of the press room, and company and public relations representatives will not be permitted beyond the entryway table after dropping off their materials.

Interviews

Registered media can inquire with press room staff to reserve space in Room 212A for conducting interviews. Use of this room is by appointment only and subject to availability.

Press Conferences

Press conferences take place in Rooms 213C and 213D. Details of scheduled press conferences are available from the press room. Press conferences are open to all registered journalists.

PHOTOGRAPHY

Except for photography specifically authorized by AACC, use of video and photographic equipment is prohibited on the exhibit floor and in the meeting rooms. Photography of poster sessions is permitted only with express permission of the presenting author.

LOCATION OF ACTIVITIES

Anaheim Convention Center

- Scientific Sessions, Plenary Sessions, Meet the Expert Sessions, Roundtable Sessions, AACC University, Oral Abstract Sessions, President's Invited Session, Chair's Invited Session
- Special Sessions
  - Laboratory Feud
  - **34225** Healthcare Forum: Laboratory Stewardship in Healthcare Innovation
  - **11002** Consumer Genomics, Direct-to-Consumer Genetic Testing, and Patient Empowerment
  - **12002** Disruptive Technology Award Competition
- AACC Clinical Lab Expo
- Product Showcase
- Poster Sessions
- AACC Opening Mixer & Division Networking Event
- Registration and Pre-Registered Badge Pick-Up
- Industry Workshop Theater Presentations
- Lecture Series Presentations

Anaheim Marriott and Hilton Anaheim

- AACC Governance Activities
- Affiliated Organization Meetings
- Industry Workshops
- Pre-Registered Badge Pick-Up (Marriott only)

DOWNLOAD THE 2019 MOBILE APP

With hundreds of exhibitors to navigate and dozens of educational sessions to attend, planning your busy days at the 71st AACC Annual Scientific Meeting & Clinical Lab Expo is essential to making the most of this dynamic event.

Now you can do all that and more with the FREE 2019 AACC Annual Scientific Meeting & Clinical Lab Expo app. Available for smartphones, tablets and desktops from the Apple App Store and on Google Play for Android devices.

- Plan each day with a built-in calendar.
- Browse exhibitors and map out your path through the Expo.
- Browse through new products available at the Expo.
- Take notes on scientific sessions or about exhibitors.
- Follow live tweets and other social media about the meeting.

To Download:

- Visit www.2019aacc.org/app.
- Search "AACC" for the app on the Apple App Store or on Google Play.

SHUTTLE SCHEDULE

SHUTTLE BUS SERVICE		
Date	**Service Hours**	**Frequency**
Saturday, August 3	11:30am–5:30pm*	Departures every 20 minutes
Sunday, August 4	6:00am–10:00am	Departures every 15 minutes
	10:00am–4:00pm	Departures every 30 minutes
	4:00pm–6:30pm*	Departures every 15 minutes
	7:00pm–8:30pm	Departures from Opening Mixer/ Anaheim Convention Center to route hotels
Monday, August 5	6:00am–10:00am	Departures every 15 minutes
	10:00am–4:00pm	Departures every 30 minutes
	4:00pm–6:30pm*	Departures every 15 minutes
Tuesday, August 6	6:00am–10:00am	Departures every 15 minutes
	10:00am–4:00pm	Departures every 30 minutes
	4:00pm–6:30pm*	Departures every 15 minutes
Wednesday, August 7	6:00am–10:00am	Departures every 15 minutes
	10:00am–4:00pm	Departures every 30 minutes
	4:00pm–6:30pm*	Departures every 15 minutes
Thursday, August 8	7:00am–10:00am	Departures every 15 minutes
	10:00am–12:00pm	Departures every 30 minutes
	12:00pm–3:00pm	Departures every 15 minutes
	3:00pm–6:00pm*	Departures every 30 minutes

** Indicates last time shuttle departs convention center to hotels. Last shuttle departs hotel coming to the center 1 hour prior to this time.*

Shuttle schedule may vary due to traffic and weather conditions.

If you need to arrange wheelchair-accessible transportation, please call 877.875.2455 at least 12 hours prior to pick-up or see a shuttle supervisor at the convention center.

ROUTES & BOARDING LOCATIONS

HOTELS IN WALKING DISTANCE TO/FROM THE CONVENTION CENTER

Anaheim Marriott
Clarion Hotel
Cortona Inn & Suites
Courtyard CC
DoubleTree Suites
Hilton Anaheim
Hyatt Place CC
Portofino Inn & Suites
Residence Inn CC
Sheraton Park Hotel

SPECIAL TRANSPORTATION

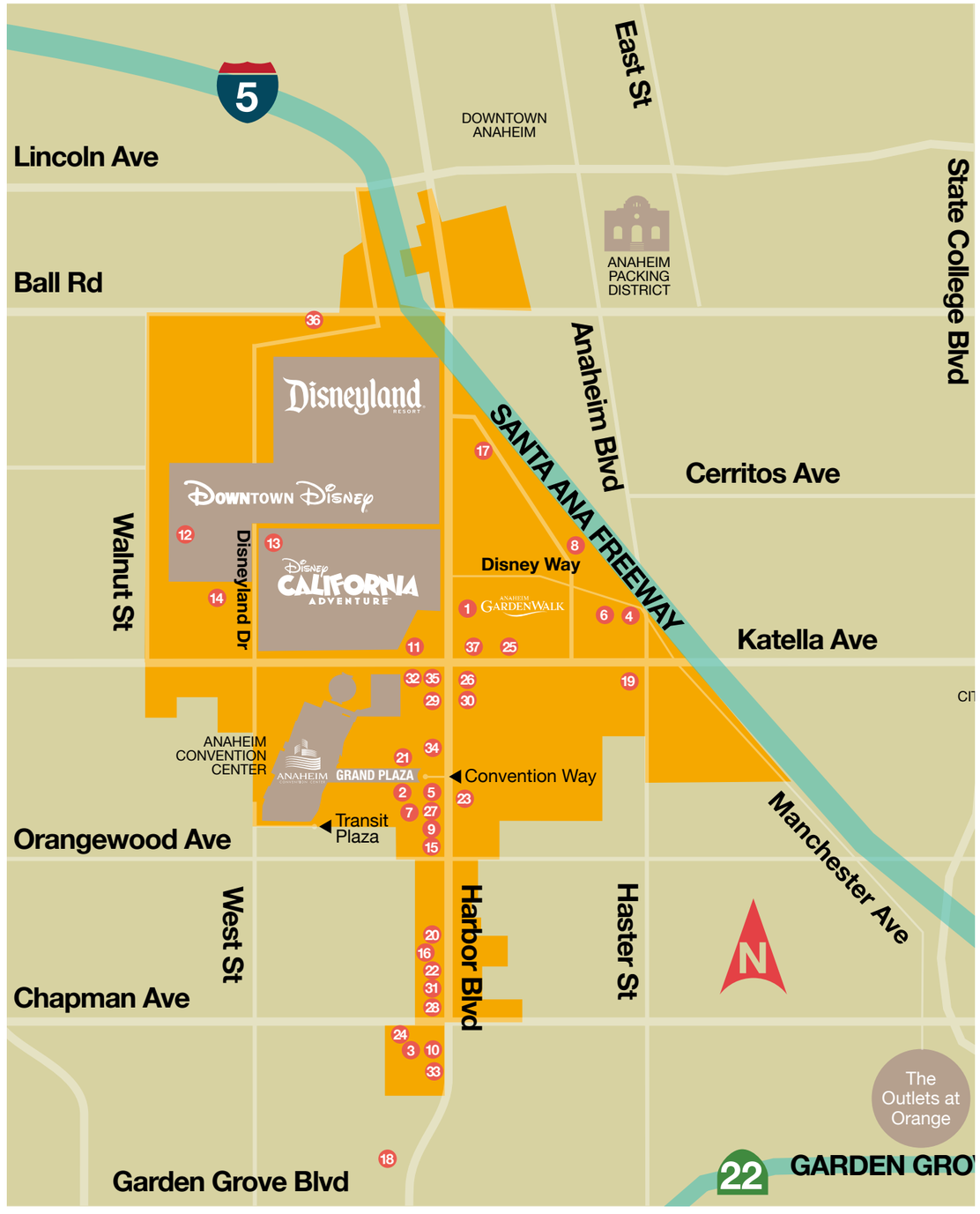
Opening Mixer & Division Networking Event will be outside the Anaheim Convention Center in the Grand Plaza, Sunday, August 4, 6:30pm–8:00pm. Return transportation from the convention center from 7:00pm–8:30pm.

Industry Workshops will be at the Hilton Anaheim and the Anaheim Marriott, Tuesday, August 6, and Wednesday, August 7. Transportation provided from route hotels to the convention center from 6:00am–8:30am, every 15–20 minutes.

Route #/Color	Hotel	Boarding Location
Route #1 — Red	Hyatt Regency Orange City	Conference Center Entrance
	Residence Inn Garden Grove	Hyatt Conference Center Entrance
	Embassy Suites South	Bus Stop Near Lobby
	Hampton Inn Garden Grove	Embassy Suites South
	Hilton Garden Inn Garden Grove	Embassy Suites South
Route #2 — Yellow	Anaheim Hotel	Curbside Lobby Entrance
	Fairfield Inn Anaheim	Curbside at Panera
	County Inn & Suites	Parking Lot Near Pool
	Clementine Inn & Suites	On S. Zeyn St. at Circle
	Candlewood Suites	At Clementine Stop
	Wyndham Garden Inn	Bus Stop at Wyndham
	Hotel Indigo	Bus Stop at Wyndham
	Desert Palms	Curbside Bus Stop
Route #3 — Blue	Marriott Suites	Curbside Near Lobby
	Delta Hotel	At Marriott Suites
	Homewood Suites	At Marriott Suites
	Sheraton Garden Grove	Curbside Near Driveway
	Great Wolf Lodge	Curbside Near Driveway
Route #4 — Green	Staybridge Suites	Curbside Near Lobby
	Disney's Grand Californian	Outside Lane at Lobby
	Disneyland Resort Hotel	Main Lobby Fantasy Tower
	Disney's Paradise Pier	Curbside Near Driveway
Route #5 — Orange	Homewood Suites CC	Lobby Entrance
	Red Lion	Curbside Lobby
	Hyatt House	Curbside Near Lobby
	Hampton Inn CC	Curbside Lobby Entrance

HOTEL INFORMATION

	Hotel	Address	Distance to Convention Center
1	Anaheim Hotel	1700 South Harbor Blvd	1/2 mile
2	Anaheim Marriott (Co-Headquarters Hotel)	700 West Convention Way	Adjacent
3	Anaheim Marriott Suites	12015 Harbor Boulevard	1 mile
4	Candlewood Suites Anaheim Resort Area	1733 South Anaheim Boulevard	1 mile
5	Clarion Hotel Anaheim Resort	616 Convention Way	1 block
6	Clementine Hotel & Suites (formerly Residence Inn Maingate)	1700 South Clementine Street	1 mile
7	Cortona Inn & Suites Anaheim Resort	2029 South Harbor Boulevard	1 block
8	Country Inn & Suites by Radisson Anaheim	1640 South Clementine Street	1 mile
9	Courtyard by Marriott Anaheim Resort Convention Center	2045 South Harbor Boulevard	4 blocks
10	Delta Hotels by Marriott	12021 Harbor Boulevard	1 mile
11	Desert Palms Hotel and Suites	631 West Katella Avenue	1 block
12	Disney's Grand Californian Hotel & Spa	1600 Disneyland Drive	1 mile
13	Disney's Paradise Pier	1717 South Disneyland Drive	1 mile
14	Disneyland Resort Hotel	1313 Disneyland Drive	1 mile
15	DoubleTree Suites by Hilton Hotel Anaheim Resort/Convention Center	2805 South Harbor Boulevard	3 blocks
16	Embassy Suites by Hilton Anaheim South	11767 Harbor Boulevard	1 mile
17	Fairfield Inn Anaheim Disneyland Resort	1460 South Harbor Boulevard	1 mile
18	Great Wolf Lodge Garden Grove	12681 Harbor Boulevard	1.7 miles
19	Hampton Inn & Suites Anaheim Resort Convention Center	100 West Katella Avenue	1/2 mile
20	Hampton Inn & Suites Anaheim–Garden Grove	11747 Harbor Boulevard	1 mile
21	Hilton Anaheim (Co-Headquarters Hotel)	777 West Convention Way	Adjacent
22	Hilton Garden Inn Anaheim–Garden Grove	11777 Harbor Boulevard	1 mile
23	Homewood Suites Anaheim Resort Convention Center	2010 South Harbor Boulevard	4 blocks
24	Homewood Suites by Hilton Anaheim–Main Gate	12005 Harbor Boulevard	1 mile
25	Hotel Indigo Anaheim	435 West Katella Avenue	1/2 mile
26	Hyatt House at Anaheim Resort/Convention Center	1800 South Harbor Boulevard	2 blocks
27	Hyatt Place at Anaheim Resort/Convention Center	2035 South Harbor Boulevard	1 block
28	Hyatt Regency Orange County	11999 Harbor Boulevard	1 mile
29	Portofino Inn & Suites	1831 South Harbor Boulevard	3 blocks
30	Red Lion Hotel Anaheim Resort	1850 South Harbor Boulevard	4 blocks
31	Residence Inn Anaheim Resort/Convention Center	640 West Katella Avenue	3 blocks
32	Residence Inn Anaheim Resort/Garden Grove	11931 Harbor Boulevard	1 mile
33	Sheraton Garden Grove	12221 Harbor Boulevard	1.5 miles
34	Sheraton Park Hotel at the Anaheim Resort	1855 South Harbor Boulevard	1 block
35	Springhill Suites Anaheim Resort/Convention Center	1801 South Harbor Boulevard	3 blocks
36	Staybridge Suites Anaheim at the Park	1050 West Ball Road	2 miles
37	Wyndham Garden Anaheim	515 West Katella Avenue	1/2 mile



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GOVERNANCE & SPECIAL EVENTS

All conference sessions and the Expo will take place at the Anaheim Convention Center (ACC).

TIME	MEETING NAME	HILTON	MARRIOTT	ROOM	TICKETED SESSION
SATURDAY, AUGUST 3, 2019					
1:00pm–5:30pm	SYCL Workshop		●	Marquis Northeast	●
6:00pm–8:00pm	SYCL Mixer		●	Platinum Patio	●
SUNDAY, AUGUST 4, 2019					
8:00am–10:00am	Lipoproteins and Vascular Diseases Division Executive Committee Meeting		●	San Diego	
9:00am–10:00am	Critical and Point-of-Care Testing Division Executive Committee Meeting		●	Platinum 8	
12:00pm–1:30pm	Management Sciences and Patient Safety Division 24th Annual Leadership Symposium	●		Huntington	●
12:00pm–2:00pm	International Travel Grant Luncheon	●		Santa Monica	
1:00pm–2:00pm	Pediatric and Maternal-Fetal Division Board Meeting		●	Newport Beach	
1:00pm–3:00pm	ABCC Clinical Chemistry Committee Meeting		●	Los Angeles	
1:00pm–3:00pm	ABCC Toxicology Committee Meeting		●	La Jolla	
1:30pm–4:30pm	Management Sciences and Patient Safety Division Executive Committee Meeting	●		Redondo	
2:00pm–4:30pm	NGSP Steering Committee	●		Manhattan	
4:00pm–5:30pm	Tumor Markers and Cancer Diagnostics Division Board Meeting	●		Lido C	
6:45pm–8:00pm	AACC Opening Mixer & Division Networking Event Supported by Sekisui Diagnostics LLC			ACC, Grand Plaza	
8:00pm–9:30pm	Joint Mixer of the Clinical Translational Science, History, and Pediatric and Maternal-Fetal Divisions	●		Oceanside	
MONDAY, AUGUST 5, 2019					
6:30am–8:00am	Michigan/NEO/Ohio Valley Local Sections Breakfast	●		Capistrano	
7:00am–8:30am	Southeast/Florida Local Sections Breakfast		●	Orange Salon 2	
7:00am–8:30am	Hematology and Coagulation Division Breakfast		●	Platinum 1	
7:30am–8:30am	Molecular Pathology Division Executive Board Meeting		●	Grand D	
8:00am–12:00pm	ABCC Board of Directors Meeting		●	Platinum 8	
12:00pm–2:00pm	Annual Therapeutic Drug Management and Toxicology Division Meeting		●	Platinum 7	
12:00pm–3:30pm	Endocrinology Division Luncheon Mixer	●		Santa Monica	
12:30pm–2:30pm	ABCC Molecular Diagnostics Committee Meeting		●	Los Angeles	
1:00pm–2:00pm	Student Oral Presentation Contest			ACC, 201AB	
1:00pm–5:00pm	Industry Division Membership Meeting		●	Platinum 3–4	

To purchase tickets for events, visit Registration in Hall E.

TIME	MEETING NAME	HILTON	MARRIOTT	ROOM	TICKETED SESSION
MONDAY, AUGUST 5, 2019 cont.					
2:00pm–4:00pm	NGSP IFCC Manufacturer Forum	●		California B	
2:15pm–3:30pm	Student Poster Contest			ACC, 201CD	
4:00pm–6:00pm	POC Professional Certification Board Meeting		●	Los Angeles	
5:30pm–9:30pm	Lipoproteins and Vascular Diseases Division Membership Reception, Poster Viewing, Dinner Lecture and Awards		●	Orange Salons 2–4	●
6:15pm–7:45pm	ABCC-SYCL Awards Reception		●	Elite Ballroom	
TUESDAY, AUGUST 6, 2019					
7:00am–8:30am	A Race Against Time: The Challenge of Sepsis for Clinicians and Laboratorians	●		Pacific AB	
7:00am–8:30am	The Clinical Use and Performance of High-Sensitivity Troponin Assays: Overcoming Challenges in Implementation		●	Platinum Ballroom 1	
7:30am–9:00am	Capital Local Section Networking Breakfast		●	Marquis Northwest	
7:30am–10:00am	ComACC Program Directors' Breakfast Meeting		●	Platinum 7	
11:00am–3:00pm	Division of Animal Clinical Chemistry Business Meeting and Lunch and Learn		●	Grand Ballroom G	
11:30am–2:00pm	Informatics Division Membership Meeting and Luncheon	●		Capistrano	
12:00pm–1:00pm	Biomarkers of Acute Cardiovascular Diseases Division Meeting		●	Platinum 2	
12:00pm–1:30pm	History of Clinical Chemistry Division Executive Committee Meeting		●	Gold Key III	
12:00pm–2:00pm	IFCC Committee on Clinical Applications of Cardiac Bio-Markers Meeting		●	Platinum 3	
12:00pm–2:00pm	Luncheon Symposium of the Clinical and Diagnostic Immunology, Molecular Pathology, Personalized Medicine, and Tumor Markers and Cancer Diagnostics Divisions		●	Grand E	●
12:00pm–2:30pm	Clinical Translational Science Division Lunch and Learn	●		Santa Monica	
1:00pm–2:30pm	Pediatric and Maternal-Fetal Special Session: The Importance of Developing Accurate Pediatric Reference Intervals		●	Platinum 4	
5:00pm–6:30pm	Midwest Local Section Mixer		●	Platinum 10	
5:00pm–7:00pm	CDC Clinical Standardization Programs Forum		●	Grand F	
5:30pm–7:00pm	Clinical and Diagnostic Immunology Division Mixer		●	Platinum 1	
6:00pm–8:00pm	Chicago Local Section Awards Dinner		●	Platinum 9	
6:00pm–8:00pm	Mass Spectacular hosted by the Mass Spectrometry and Separation Sciences and Proteomics and Metabolomics Divisions	●		Pacific D	●
6:00pm–8:00pm	Nutrition Division Symposium		●	Platinum 8	●
6:00pm–10:30pm	Critical and Point-of-Care Testing Division Member Meeting, Awards Ceremony and AfterGlow		●	Orange County Ballroom	
WEDNESDAY, AUGUST 7, 2019					
7:00am–8:30am	The Fourth Universal Definition of Myocardial Infarction in Conjunction with the Clinical Laboratory Practice Recommendations for the Use of High Sensitivity Cardiac Troponin in Acute Coronary Syndrome	●		Pacific CD	
8:00am–10:00am	C-Peptide/Insulin Standardization Manufacturer Meeting	●		Huntington	
12:00pm–2:00pm	AACC Academy Annual Awards Luncheon and Membership Meeting	●		Pacific AB	●
1:00pm–3:00pm	CDC Clinical Standardization Programs (CDC CSP)/Cholesterol Reference Method Laboratory Network (CRMLN) Annual Meeting		●	Platinum 8	
THURSDAY, AUGUST 8, 2019					
7:30am–10:00am	17th Annual Point-of-Care Coordinators Forum			ACC, Ballroom E	●

If no location is specified, the session will take place at the Anaheim Convention Center. Meeting rooms are subject to change.

SCIENTIFIC POSTER SESSIONS

Posters of accepted abstracts can be viewed in the Poster Area on the Expo show floor of the Anaheim Convention Center on Tuesday, August 6, and Wednesday, August 7. All posters will be displayed from 9:30am until 5:00pm. Presenting authors for all posters will be in attendance from 12:30pm until 1:30pm. Please refer to the onsite *Abstracts Titles Guide* for a complete schedule of posters.

TUESDAY, AUGUST 6

9:30am–5:00pm

Animal Clinical Chemistry	A-323 – A-332
Biomarkers of Acute Cardiovascular Diseases	A-001 – A-037
Clinical and Diagnostic Immunology	A-038 – A-125
Clinical Translational Science	A-126 – A-143
Endocrinology	A-150 – A-225
Factors Affecting Test Results	A-226 – A-273
Hematology and Coagulation	A-274 – A-310
Infectious Disease	A-389 – A-459
Informatics	A-311 – A-322
Proteomics and Metabolomics	A-144 – A-149
Tumor Markers and Cancer Diagnostics	A-333 – A-387

WEDNESDAY, AUGUST 7

9:30am–5:00pm

Critical and Point-of-Care Testing	B-182 – B-228
Lipoproteins and Vascular Diseases	B-001 – B-022
Management Sciences and Patient Safety	B-023 – B-066
Mass Spectrometry and Separation Sciences	B-067 – B-110
Molecular Pathology	B-111 – B-139
Nutrition	B-140 – B-150
Pediatric and Maternal Fetal	B-152 – B-181
Proteins/Enzymes	B-229 – B-259
TDM and Toxicology	B-260 – B-310
Technology/Design Development	B-311 – B-352

DIVISION POSTER ACTIVITIES

POSTER WALKS

Led by AACC Division subject matter experts, the walks highlight posters selected by the division for further discussion. Poster walks are free and limited to 20–30 participants. Participants must have full or daily conference registration and are asked to meet poster walk leaders outside the entrance to the poster display. Tours will leave at the following times:

WEDNESDAY, AUGUST 7

DIVISION	TIME
Critical and Point-of-Care Testing	12:30pm–1:30pm

NEW! ePOSTER SESSIONS

Interactive poster sessions will be conducted by presenting authors and moderated by AACC Division subject matter experts. The presentations will be shown on screens located in the poster section's seating area in the exhibit hall.

ePoster sessions are free and limited to 20–30 participants. Participants must have full or daily conference registration and are asked to meet session moderators at the ePoster Stations located in the Poster Theater area on the Expo show floor.

TUESDAY, AUGUST 6

DIVISION	TIME
Biomarkers of Acute Cardiovascular Diseases	10:00am–10:45am
Informatics	10:00am–10:45am
Personalized Medicine	10:45am–11:30am
Tumor Markers and Cancer Diagnostics	10:45am–11:30am
Therapeutic Drug Management and Toxicology	4:15pm–5:00pm

WEDNESDAY, AUGUST 7

DIVISION	TIME
Proteomics and Metabolomics	10:00am–10:45am
Mass Spectrometry and Separation Sciences	10:45am–11:30am
Clinical and Diagnostic Immunology	11:30am–12:15pm
Clinical Translational Science	12:15pm–1:00pm
Management Sciences and Patient Safety	2:00pm–2:45pm
Pediatric and Maternal-Fetal	2:00pm–2:45pm

ALL POSTERS ARE LOCATED ON THE EXPO SHOW FLOOR IN HALL A.

ORAL ABSTRACT PRESENTATIONS

New this year, Oral Abstract Presentations can be viewed on ePoster stations located in the poster section's seating area on the Expo show floor of the Anaheim Convention Center.

On Tuesday, August 6, from 11:30am–5:00pm, and Wednesday, August 7, from 10:00am–2:00pm, attendees with full or daily conference registration badges will be able to independently view the oral abstract posters on one of the ePoster stations. Viewing will be first-come, first-served.

Interactive poster sessions will be conducted by authors at the ePoster station on Tuesday, August 6. Participants must have full or daily conference registration.

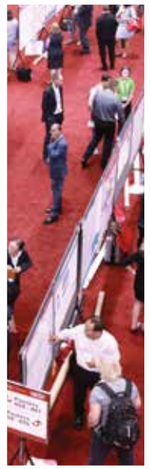
INTERACTIVE ePOSTER ORAL ABSTRACT PRESENTATION SCHEDULE:

TUESDAY, AUGUST 6

11:30am–12:15pm	Endocrinology
12:15pm–1:00pm	Immunology
2:00pm–2:45pm	Technology/Design Development
2:45pm–3:30pm	Point-of-Care
3:30pm–4:00pm	Utilization





STUDENT ORAL CONTEST PRESENTATIONS

The AACC Student Poster Contest showcases AACC's finest young scientists. The contest consists of two sessions. The first session is an oral competition with four pre-selected students presenting their work. A panel of judges rate the presentations on the basis of scientific content, originality/novelty and presentation (including slide appearance, verbal presentation, style and clarity). Four awards are given: first place, second place, and two honorable mentions.

The second session of the competition consists of poster presentations. Over 60 posters will be displayed and reviewed. Judges will evaluate each poster individually in timed rounds. Student presenters are rated on their ability to convey their work concisely, as well as the scientific merit and visual presentation of their poster. Four awards are given: first place, second place, and two honorable mentions.

MONDAY, AUGUST 5 | Anaheim Convention Center

ORAL PRESENTATIONS
1:00pm–2:00pm
Room 201AB

POSTER PRESENTATIONS
2:15pm–3:30pm
Room 201D

STUDENT ORAL CONTEST PRESENTATIONS

A-333 Lutao Du

Expression Signatures of Exosomal Long Non-coding RNAs in Urine Serve as Novelnon-invasive Biomarkers for Diagnosis and Recurrence Prediction of Bladder Cancer

A-227 Christopher Farnsworth

Parameters for Validating a Hospital Pneumatic Tube System: Lessons Learned from Closing a Satellite Laboratory

A-117 Katherine Turner

Going Gel Free: Adding M-protein Quantitation to MASS-FIX in the Clinical Lab

A-166 Jeffrey SoRelle

Long Term Effect of Hormone Therapy on Lab Values in Transgender Individuals

2019 STUDENT POSTER **PRESENTERS**

A-143 Ghaith Altawallbeh
Plasma Metabolites to Predict Response to Exercise in Alzheimer's Disease

A-217 Ghaith Altawallbeh
Evaluation of ARKRAY ADAMS HA-8180V for HbA1c Measurement

A-211 Ghaith Altawallbeh
Hyperthyroidism Diagnostic Test Utilization: An Evaluation of Current Ordering Practices

B-155 Enoch Anto
Algorithm of Suboptimal Health Status, Serum Magnesium and Calcium Levels as a Novel Approach for Prediction and Identification of Pregnant Women Likely to Develop Preeclampsia and Adverse Perinatal Complications in a Ghanaian Population

A-253 Amir Babalhavaeji
Evaluation of Hemolysis, Lipemia, and Icterus Interference in 19 Assays Performed on the Alinity c System

B-061 Emily Bachert
Daily Labs Quality Improvement: Pilot Program for Decreasing Unnecessary Lab Orders

B-308 Adina Badea
A Validated, Rapid Method for Detecting a Broad Panel of Pain-Management Drugs in Oral Fluid by High-resolution LC-MS/MS

A-032 Mustafa Barbhuiya
Analytical and Clinical Evaluations of the Elecsys 5th GEN Cardiac Troponin T Assay

B-165 Mary Kathryn Bohn
Pediatric Reference Intervals for 17 Roche cobas 8000 e602 Immunoassays in the CALIPER Cohort of Healthy Children and Adolescents

A-153 Raul Bortolin
Circulating miR-421 Expression Is Associated with Insulin Resistance in Metabolic Syndrome Patients

A-136 Teofilo Borunda
Clinical Laboratory Data Analytics for Identification and Progression of Non-alcoholic Fatty Liver Disease in New Mexico

A-139 Teofilo Borunda
Opportunity of Real Time, Longitudinal Clinical Laboratory Data to Enhance Diabetes Disease Surveillance

A-278 Madeleen Bosma
Automated and Cost-Efficient Early Detection of Hemolysis in Patients with Extracorporeal Life Support: Use of the Hemolysis-Index of Routine Clinical Chemistry Platforms

A-054 Bei Cai
Analysis of Aging Characteristics of Peripheral T Lymphocyte Subsets in Healthy Population in Western China

B-140 Chibuike Chukwunyere
Comparison of Serum Calcium Level in Normotensive and Hypertensive Pregnant Women

B-292 Sarah Delaney
Assessment of Mass Spectrometry-Based Urine Opioid Screening in Clinical Laboratories: How Well Does Your Assay Perform?

A-333 Lutao Du
Expression Signatures of Exosomal Long Non-coding RNAs in Urine Serve as Novel Non-invasive Biomarkers for Diagnosis and Recurrence Prediction of Bladder Cancer

A-178 Cristina Fajardo
IRS2 rs1865434 Variant Is Associated with Adiposity and Insulin Resistance in Brazilian Subjects

A-227 Christopher Farnsworth
Parameters for Validating a Hospital Pneumatic Tube System: Lessons Learned from Closing a Satellite Laboratory

B-003 Renata Freitas
miRNA Predictive Profile Based on <LDLR>, <APOB> and <PCSK9> 3'UTR Variants as Potential Biomarker for Familial Hypercholesterolemia

B-244 Cameron Furey
Do We Still Need Amylase in the Management of Acute Pancreatitis?

B-248 Kornelia Galior
Using NASH-FibroTest to Assess Liver Fibrosis, Steatosis and Inflammation in Patients with Nonalcoholic Steatohepatitis (NASH): Between-Laboratory Comparability of Results and Correlation with Biopsy/Imaging Studies for a New, Non-Invasive, Blood Test

A-172 Emily Garnett
Comparison of Two Vitamin D Immunoassays to Detect 25-OH Vitamin D2 and D3

B-036 Emily Garnett
Improving Thyroid Function Test Utilization via Implementation of a Reflexive Testing Algorithm

A-213 Keisha Hardeman
Review of Thyroid Function Test Ordering Patterns in Routine Pregnancy across Two Academic Medical Centers

A-154 Sara Hassan
Assessment of the Relation Between Body Fat Composition and Serum Kisspeptin Level in Obese versus Non Obese Women at the Time of Ovulation in Egypt

B-103 Rongrong Huang
Hunting Down the "Ghost": A Practical Lesson Learned from Investigating an Interference Peak in 1,25-Dihydroxyvitamin D Assay

A-285 Jose Jara-Aguirre
Evaluation of the Stability of Bivalirudin Effect on Activated Partial Thromboplastin Time (aPTT) in Citrated Whole Blood Samples

B-192 Choong Eun Jin
Rapid Diagnosis Platform Based on Combination of Microfluidic System and Homobifunctional Imidoester in Clinical Specimens

B-284 Christopher Koch
Evaluation of Drug Adsorption to the PIVO™ Needless Blood Collection Device

B-264 Grace Kroner
Comparative Cannabinoid Cross-reactivity in THC Immunoassays

B-136 Hongjin Lai
Cross Priming Amplification for Rapid Detection of Acinetobacter Baumannii and blaOXA-23 Carbapenemase Gene

B-153 Ruibing Li
Noninvasive Prenatal Diagnosis of Fetal Achondroplasia Using MALDI-TOF Mass Spectrometry

A-342 Jieli Li
Potential Role of Nuclear PD L1 Expression in Epithelial Mesenchymal Transitioned Circulating Tumor Cells as a Prognostic Marker in Prostate Cancer

B-278 Y. Ruben Luo
A Rapid Plate-Format Label-Free Immunoassay for Quantitation of Monoclonal Antibody Drugs and Detection of Anti-Drug Antibodies in Serum Samples

A-116 Anu Maharjan
Contribution of Autoantibody Testing in the Evaluation of Patients At-risk of Interstitial Lung Disease

B-325 Zahraa Mohammed-Ali
Analytical Performance Evaluation of 8 Assays on the Abbott Alinity ci Integrated Analyzer

A-381 Penn Muluhngwi
Comparison of Electrophoretic Systems to Detect Occult IgA Monoclonal Immunoglobulins

B-321 Penn Muluhngwi
Validation of Newly FDA-approved Kappa and Lambda Free Light Chain Assays on a Previously Untested Platform

A-131 Vijayalakshmi Nandakumar
Symmetric Dimethylarginine as an Alternative Marker for Estimation of Glomerular Filtration Rate

B-135 Camila Nobre
Intronic Variant in SPTB Gene as Suspected Cause of Hereditary Spherocytosis in a Brazilian Family: Segregation in the Family and RNA Analysis

A-269 Jayson Pagaduan
Utility of IFCC Standardized LDHI Method in a Pediatric Hospital

B-282 Heather Paul
Detection of Cannabinoid Compounds in Dried Blood Spots by Liquid Chromatography-Tandem Mass Spectrometry (LC-MS/MS)

A-240 Heather Paul
How High Can We Go? Expanding the Reporting Range of Ferritin to Facilitate The Acute Diagnosis of Hemophagocytic Lymphohistiocytosis

B-290 Heather Paul
Pre-analytical Contamination of Pediatric and Newborn Urine Drug Screening Samples with Tributoxyethylphosphate

B-100 William Phipps
Quantitative Amino Acid Analysis by LC-MS/MS Using a Low-Cost Derivatization Approach and Automated Liquid Handler

B-159 Jason Robinson
Evaluating Hemoglobin A1C Devices for Testing at the Point of Care in a Hub and Spoke Laboratory Model

A-027 Kwabena Sarpong
Urine Derived Renal Cells as Tools to Diagnose Salt Sensitivity

A-128 Kaori Sato Sato
CRISPR/Cas-mediated Generation of Mutant Mouse Models with Alzheimer's Disease Associated Mutations

B-019 Erin Schuler
Checkmate: Evaluating the Cardio Check POC Device for Accurate Determination of Lipid Profiles and Cardiovascular Risk in Ambulatory Patients

A-229 Cierra Sharp
A Case of Falsely Elevated Troponin Levels Using AccuTnI Assay: The Presence of an Unknown Interferant

A-166 Jeffrey SoRelle
Long Term Effect of Hormone Therapy on Lab Values in Transgender Individuals

B-349 Daniel Szulc
Non-invasive MRI for Assessment of Medical Grafts and Biomaterials in Vivo

B-170 Jennifer Taher
Assessing the Feasibility of Common Reference Intervals across Different Analytical Platforms: Evidence from CALIPER Pediatric Reference Intervals Database

A-186 Jennifer Taher
Choosing fT3 and fT4 Wisely: A Data Driven Reflexive Testing Approach to Reduce Thyroid Hormone Testing

A-187 Jennifer Taher
Best Practices in Medicine (BPiM): An Audit and Feedback Approach to "Right Size" Laboratory Test Utilization

A-144 Stefani Thomas
Enhanced Efficiency of Large-scale Clinical Proteomic Studies Using Sequential Window Acquisition of All Theoretical Mass Spectra (SWATH-MS)

A-084 Katherine Turner
Correlation Between Kappa Prozone Effect and IgA Kappa M-proteins in Serum Free Light Chain Assay

A-117 Katherine Turner
Going Gel Free: Adding M-protein Quantitation to MASS-FIX in the Clinical Lab

A-238 Hana Vakili
Complete Depletion of Residual Therapeutic Monoclonal Antibody Interference in Serum Samples from Multiple Myeloma Patients to Improve Detection of Endogenous M-proteins

A-004 William van Doorn
From Conventional to High-Sensitivity Assays: Re-evaluation of Cardiac Troponin T and I Kinetics after Acute Myocardial Infarction

B-098 Ruhan Wei
A Rapid and Sensitive LC-MS/MS Method for Quantitative Analysis of GSK-3 Inhibitors in Mouse Plasma

B-106 Ruhan Wei
Measurement of Monosialogangliosides in GM3 Synthase Deficiency Patient Plasma by a Novel UPLC/MS/MS Assay

A-301 Kenya Wilcots
Ubiquitin Specific Protease 7 (USP7) Role in Platelet Activation and Formation

B-072 Li Zha
Analysis of Vitamin A and Vitamin E on a Multiplexing LC-MS/MS Platform for Therapeutic Drug Monitoring (TDM)

B-131 Yu Zhang
Investigate MicroRNA-122 to Identify Liver Injury in Patients with Rhabdomyolysis

A-281 Ling Zhong
Circulating Long Noncoding RNA STAiR18 to Predict Disease Progression for Patients with Multiple Myeloma

AACC ACADEMY HONORS **NEW ACADEMY FELLOWS**

AACC Academy is proud to announce its Academy Fellows. As members of AACC Academy, these distinguished scientists are all doctorate-level professionals dedicated to enhancing the scholarship and practice of laboratory medicine. New Fellows will be honored during the Academy Awards Luncheon on Wednesday, August 7, during the AACC Annual Scientific Meeting.

AACC Academy honors the achievements of its members and through an active education and publication program enlists their support and expertise to bring about positive change in the current practice of laboratory medicine. To learn more about the Academy and its activities, visit https://www.aacc.org/community/aacc-academy.

NEW ACADEMY FELLOWS ACCEPTED SINCE JUNE 2018

Richard Baltaro, MD, PhD
Sharmistha Chatterjee, MD
Jessica Colon-Franco, PhD
Purnachandra Ganji, PhD, DSc
Nazar Haddad, MBCh
Tetsuya Hirano, MD, PhD
Mayowa Osundiji, MD, PhD
Ghzaleh Pourmahram, PhD
Tiffany Roberts, PhD
Rajitha Samarasinghe, MD
Randal Schneider, PhD
Nilika Wijeratne, MD

ASSOCIATE FELLOWS WHO BECAME ACADEMY FELLOWS SINCE JUNE 2018

Sultan Alouffi, PhD
Jianxin Lyu, PhD
Vinita Thakur, PhD

NEW ASSOCIATE FELLOWS ACCEPTED SINCE JUNE 2018

Mirza Baig, MD
Hoon Lee Chong, PhD
Iklas Darkhalil, PhD
Abhajeet Jagtap, PhD
Bin Wei, PhD
Fang Wu, PhD

2019 AACC AWARD WINNERS

Wallace H. Coulter Lectureship Award
DAVID R. WALT, PhD
Harvard Medical School & Wyss Institute for Bioinspired Engineering at Harvard University

Outstanding Lifetime Achievement Award in Clinical Chemistry and Laboratory Medicine
MITCHELL G. SCOTT, PhD
Washington University School of Medicine

Outstanding Contributions to Education in Clinical Chemistry
WILLIAM A. CLARKE, PhD
Johns Hopkins University School of Medicine

Outstanding Contributions Through Service to the Profession of Clinical Chemistry
MARIO PLEBANI, MD
University Hospital of Padova

Outstanding Scientific Achievements by a Young Investigator
LIVIA SCHIAVINATO EBERLIN, PhD
The University of Texas at Austin

AACC Past President's Award
DENNIS J. DIETZEN, PhD
Washington University School of Medicine

2019 AACC ACADEMY AWARD WINNERS

AACC Academy Award for Outstanding Contributions to Clinical Chemistry in a Selected Area of Research
KHOSROW ADELI, PhD
Hospital for Sick Children

AACC Academy Professor Alvin Dubin Award for Outstanding Contributions to the Profession and the Academy
DAVID KOCH, PhD
Emory University/Grady Memorial Hospital

AACC Academy George Grannis Award for Excellence in Research and Scientific Publication
GABRIELLE WINSTON-MCPHERSON, PhD
Henry Ford Hospital

2019 DISTINGUISHED **ABSTRACTS AWARDS**

The AACC Academy is pleased to announce the winners of the 2019 Distinguished Abstracts Awards. A group of Fellows selected these 20 abstracts for their scientific excellence from a pool of 813 abstracts accepted for the AACC Annual Scientific Meeting.

Winning abstracts will display the Academy blue ribbon during the AACC Annual Scientific Meeting poster sessions in Anaheim, CA.

A-026 Bernard Cook, Detroit, MI
A Baseline Novel High Sensitivity Cardiac Troponin I Level Below the Limit of Quantitation Rules Out Acute Myocardial Infarction in the Emergency Department

A-071 Oliver Senscheid, Mountain Lakes, NJ
Laboratory Diagnostics of Autoantibodies in Autoimmune Myopathies

A-117 Katherine Turner, Chardon, OH
Going Gel Free: Adding M-protein Quantitation to MASS-FIX in the Clinical Lab

A-143 Ghaith Altawallbeh, Cleveland, OH
Plasma Metabolites to Predict Response to Exercise in Alzheimer's Disease

A-148 Rebecca Bearden, Cleveland, OH
Protein Assisted Digestion Improves Sensitivity of Immunocapture-MRM Method to Quantify Stool Biomarker of Colorectal Cancer

A-238 Hana Klassen Vakili, Dallas, TX
Complete Depletion of Residual Therapeutic Monoclonal Antibody Interference in Serum Samples from Multiple Myeloma Patients to Improve Detection of Endogenous M-proteins

A-272 Mark Zaydman, St. Louis, MO
Extending the Analytical Measuring Range of Turbidometric Homogeneous Immunoassays Using a Novel Kinetic Calibration Method

A-278 Madeleen Bosma, Nieuwegein, Netherlands
Automated and Cost-Efficient Early Detection of Hemolysis in Patients with Extracorporeal Life Support: Use of the Hemolysis-Index of Routine Clinical Chemistry Platforms

A-311 Guixi Zheng, Jinan, China
Genome-Wide DNA Methylation Analysis by MethylRAD Reveals the Potential Biomarkers and Mechanism of Colon Cancer

A-320 Mark Cervinski, Lebanon, NH
The Average of Delta: Monitoring Assay Performance Through the Use of the Mean Intra-Individual Delta

A-349 Oscar Berlanga, Birmingham, United Kingdom
A Novel Mass Spectrometry Method for Monoclonal Free Light Chain Detection

A-387 Xiao-An Fu, Louisville, KY
Detection of Lung Cancer by Breath Analysis with Chemoselective Microreactors

B-061 Sara Bachert, Lexington, KY
Daily Labs Quality Improvement: Pilot Program for Decreasing Unnecessary Lab Orders

B-137 Nicholas Bevins, San Diego, CA
Quantitative Impact of Including or Excluding Synonymous Mutations from Tumor Mutational Burden Utilized as a Pan-Cancer Prognostic Marker

B-144 Irina Kirpich, Louisville, KY
Decreased Endogenous ω-6 PUFAs Induced Intestinal Mucosa Transcriptional Reprogramming That Contributed to Amelioration of Intestinal and Liver Injury in Mice in a Context of Systemic Inflammation and Chronic Ethanol Exposure

B-155 Enoch Anto, Kumasi, Ghana
Algorithm of Suboptimal Health Status, Serum Magnesium and Calcium Levels as a Novel Approach for Prediction and Identification of Pregnant Women Likely to Develop Preeclampsia and Adverse Perinatal Complications in a Ghanaian Population

B-174 Joshua Hunsaker, Salt Lake City, UT
Comparison of Disclosed Smoking Status to the Presence of Serum Nicotine and Metabolites in Maternal Quadruple Screen Specimens

B-199 Bonhan Koo, Seoul, Republic of Korea
Rapid and Accurate Multiple Detection Bio-Optical Sensor for Diagnosis of Emerging Infectious Diseases

B-203 Eberhard Spanuth, Heidelberg/Dossenheim, Germany
D-dimer, Presepsin and qSOFA for Early Assessment of Organ Dysfunction and Mortality Prediction in Patients Admitted with Sepsis to the Emergency Department

B-281 Jennifer Colby, San Francisco, CA
Large-Scale Analysis of Electronic Health Record Data Enables Systematic Discovery of Cross-Reactivity in Urine Drug Screening Immunoassays

PATHWAYS

These seven pathways highlight different dynamic areas of clinical laboratory medicine. Check out the sessions that support your area of interest and make the most of your educational experience in Anaheim.

DATA ANALYTICS	SESSION NUMBER	DAY
TICKET Pathology and Clinical Laboratory Informatics Boot Camp	193014	Sunday
TICKET Getting Started with R for Laboratory Medicine	193017	Sunday
Data Science and AI in Laboratory Medicine: What You Should Know Now and Will Need to Know in the Future	32107	Monday
Learning from Predictions: What We Need to Know about Machine Learning	33220	Tuesday
Storytelling with R: Application Showcase	33227	Tuesday
TICKET Artificial Intelligence and Data Science in Laboratory Medicine: Perspectives and Challenges	43102/53202	Tuesday
TICKET Predictive Analytics in the Clinical Laboratory	44124/54224	Wednesday

GENOMICS	SESSION NUMBER	DAY
Consumer Genomics, Direct-to-Consumer Genetic Testing, and Patient Empowerment	11002	Sunday
TICKET Clinical Laboratory Genomics: Practical NGS for Laboratorians	193015	Sunday
Chair's Invited Session: Race, Genomics and Medicine	32223	Monday
Clinical Chemistry's Hot Topics of 2019	33109	Tuesday
Quality Indicators that Determine the Performance of NGS Assays in Precision Oncology	33223	Tuesday
Meet the Expert: Using Biomarkers to Tailor Treatment for Breast Cancer	63101	Tuesday
TICKET Pharmacogenomics and Mass Spectrometry in the Clinical Lab: A Fledgling Partnership	44128/54228	Wednesday

INFECTIOUS DISEASES	SESSION NUMBER	DAY
TICKET Maximizing the Impact and Value of Laboratory Automation: Lessons Learned from Clinical Chemistry and Microbiology	192009	Sunday
Sepsis: Novel Biomarkers, New Technology, and Predictive Analytics	32433	Monday
Journal of Applied Laboratory Medicine's 2019 Hot Topics: Sepsis Diagnosis and Management: Role of Novel Biomarkers and Procalcitonin Confounders	34108	Wednesday
TICKET The Trials and Triumphs of HIV Testing	44102/54202	Wednesday
TICKET HIV Diagnostics: Past, Present and Future	44107/54207	Wednesday
Opportunities and New Approaches to Guide Utilization of Urine-Based Testing for Diagnosis of Infectious Disease	35105	Thursday

LAB MANAGEMENT	SESSION NUMBER	DAY
Ethical Issues in Laboratory Medicine	32101	Monday
The Value Proposition: Actionable Strategies for Enhancing the Value of Laboratory Medicine	33105	Tuesday
Breaking Down Gender from Cis to Trans	33216	Tuesday
Institutional Laboratory Stewardship Programs: Best Practices, Interventions, Informatics	33224	Tuesday
Strategies and Tactics for Practical Test Utilization Management	34102	Wednesday
Healthcare Forum: Laboratory Stewardship in Healthcare Innovation	34225	Wednesday

MATERNAL-FETAL	SESSION NUMBER	DAY
Predicting and Diagnosing Gestational Diabetes Mellitus (GDM): Are We Making Progress?	32106	Monday
Highlighting the Emerging Role of Anti-Müllerian Hormone (AMH) in Ovarian Reserve, Assisted Reproduction, Polycystic Ovary Syndrome (PCOS), and Other Diseases	32431	Monday
Integrating Laboratory Results to Increase Quality Care for Affected Newborns Identified through Newborn Screening: What Is the Optimal Workflow?	33106	Tuesday
TICKET Non-Invasive Prenatal Testing: Utilization of Cell-Free DNA in Fetal Aneuploidy Screening and Beyond	43115/53215	Tuesday
TICKET Preeclampsia Screening and Diagnosis: A Novel Approach	43116/53216	Tuesday
TICKET Umbilical Cord Testing—Moving Beyond Blood Gases	44115/54215	Wednesday
TICKET Diagnosing Inborn Errors of Metabolism: Challenging Cases in Biochemical Genetics	44126/54226	Wednesday

POINT-OF-CARE TESTING	SESSION NUMBER	DAY
TICKET Rise and Shine! The Essential Elements of a Point-of-Care Testing Boot Camp (Part 1)	191005	Sunday
TICKET Afternoon Reveille! Continuing the Essential Elements of a Point-of-Care Testing Boot Camp (Part 2)	192007	Sunday
Racing Against Time: Point-of-Care Testing in Mobile Health Settings	32218	Monday
Value-Added Partnerships between Clinical Laboratorians and Emergency Medicine Professionals to Improve Patient Care	32434	Monday
Digital Medicine and the Connected Health Consumer: What You Need to Know	33104	Tuesday
Worldwide Challenges in POCT—A Focus on Molecular POCT	33218	Tuesday
TICKET Managing the Wild Wild West of Point-of-Care Testing	44133/54233	Wednesday

TOXICOLOGY	SESSION NUMBER	DAY
Opioids and Beyond: The Clinical Laboratory's Role in the Opioid Epidemic	32220	Monday
Impact of Hormones on Drug Testing: From the Bench to the Bedside	33108	Tuesday
Interactive Pain Management Case Studies: Clinician and Laboratory Perspectives	33219	Tuesday
Moving Beyond Immunoassays for the Poisoned Patient: Analytical Approaches and Interactive Case Studies	34109	Wednesday
TICKET Supporting Opioid Addiction Programs with Unexpected Testing—Ethanol Metabolite Test Development in an Appalachian Laboratory	44130/54230	Wednesday
Artery Hot Topics 2019	35103	Thursday
Opportunities and New Approaches to Guide Utilization of Urine-Based Testing for Diagnosis of Infectious Disease	35105	Thursday

SESSION INFORMATION

SESSION LEVEL CONTENT

BASIC — Introductory content appropriate for participants who lack previous training or experience in the subject, or whose previous experience or training is minimal.

INTERMEDIATE — Requires knowledge of the basic theory applicable to the general subjects as well as some prior training and education in the subject.

ADVANCED — Specialized content appropriate for those with working knowledge of current theory and practices and who wish to refine their skills or learn the newest principles and techniques.

SPECIAL SESSIONS

SUNDAY, AUGUST 4

Consumer Genomics, Direct-to-Consumer Genetic Testing, and Patient Empowerment
During this session, two well-renowned experts in the field of consumer genomics and direct-to-consumer genetic testing will discuss the nuances between the different types of tests, regulatory aspects, clinical validity and utility, and how consumer genetic testing fits into medical care. Details on page 34.

MONDAY, AUGUST 5

Disruptive Technology Award Competition
The Disruptive Technology Award Competition searches for the next innovative testing solution that will improve patient care through diagnostic performance or access to high-quality testing. Three finalists will present brief lectures showing the detailed data supporting the performance of their novel development. Following the presentations, there will be a Q&A session between the judges and presenters whereby they will be scored, and a winner will be announced at the close of the event. Details on page 55.

WEDNESDAY, AUGUST 7

Laboratory Feud: Science and Practice Core Committee vs. Education Core Committee
This session will use the "Family Feud" game show-style format in which two teams (five members of the AACC Science and Practice Core Committee vs. five members of the Education Core Committee) will compete in an educational challenge covering various laboratory medicine topics. Details on page 91.

Healthcare Forum: Laboratory Stewardship in Healthcare Innovation
The healthcare delivery system is changing, and the clinical laboratory has a critical role to play in value-based care. Through laboratory stewardship programs and other collaborative efforts, laboratory professionals are well-positioned to help administrators achieve the often-conflicting objectives of reducing costs and improving patient care. By engaging stakeholders in the quality measurement community, laboratories can have greater involvement in shaping the future of healthcare. Join us for this year's healthcare forum and learn from our experts how you and your laboratory can succeed in this competitive healthcare environment. Details on page 90.

SESSION DESCRIPTIONS

All of the following sessions are open to conference registrants.

PLENARY SESSIONS
Designed for all levels, and featuring visionaries in clinical practice, research, business and policy.

SCIENTIFIC SESSIONS
These sessions are presented by highly regarded speakers, offering in-depth learning about specific areas of clinical laboratory practice.

MEET THE EXPERT SESSIONS
Attendance limited to 75 participants per session. Admission is first come, first served. These sessions are intense interactive discussions with plenary speakers.

CHAIR'S INVITED SESSION
The Chair of the 2019 Annual Meeting Organizing Committee created this special session of particular importance to attendees. Details on page 54.

PRESIDENT'S INVITED SESSION
The AACC President has created this special session of particular importance to attendees. Details on page 46.

ORAL ABSTRACT PRESENTATIONS
Selected abstracts identified by the Annual Meeting Organizing Committee will be presented. Details on page 14.

CONFERENCE RECORDING

The 71st AACC Annual Scientific Meeting will be recorded. Access to the streaming content is available for purchase as an 11-month subscription that will commence in August 2019 and close at the end of June 2020. The content is made available as streaming content only and is not available for download. The recording will include audio and presentation slides from most of the scientific sessions.

The recordings will be available approximately two weeks after the close of the meeting.

PRICE: $199 with registration or at the meeting/$299 after close of the meeting (August 8, 2019, 1:00pm PDT). To purchase, visit www.2019aacc.org or go to Conference Registration in Hall E.

REGISTRATION TYPES & EVENTS

Registration Type	Full Conference	Guest/ Spouse	Daily	Expo Only	Exhibitor	No Registration
EVENTS	• AACC Member • Non-Member • Trainee/Student Member • Emeritus Member	Limit 1 per full conference registrant	Admission/ tickets for day registered only	Exhibit Hall access		
Plenary Sessions 10000 Series	✓	✓	✓	X	✓	X
Scientific Sessions 30000 Series	✓	✓	✓	X	✓	X
Meet the Experts 60000 Series	✓	✓	✓	X	✓	X
AACC University 190000 Series	T TICKET $	⊘	$	⊘	$	⊘
Roundtable Sessions 40000 Series morning 50000 Series afternoon	T TICKET $	⊘	$	⊘	$	⊘
Poster Sessions Abstracts	✓	✓	✓	X	✓	X
Special Events	T TICKET $	$	$	$	$	$
AACC Opening Mixer & Division Networking Event Sunday, August 4	✓	✓	✓	X	✓	X
Clinical Lab Expo Exhibit Hall, August 6–8	✓	✓	✓	✓	✓	X
Industry Presentations (Hotel and Expo Floor)	✓	✓	✓	✓	✓	X

✓ Included with registration type T TICKET Ticket required $ May purchase ticket ⊘ NOT eligible to purchase ticket X May NOT attend

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SUNDAY AUGUST 4

PLENARY & SCIENTIFIC SESSIONS

TICKET Registration fees apply for each course.

AACC UNIVERSITY

MORNING

8:30am–11:30am

Preanalytical Variations: Basics and Beyond

191002
Room: 204C

Presentation Level: **BASIC**
ACCENT® Credits: 3

MODERATOR/SPEAKER
Ana-Maria Simundic, PhD
University Hospital Sveti Duh, Zagreb, Croatia

TICKET

SESSION OVERVIEW: The most frequent occurrences of laboratory errors occur in the preanalytical phase. This session will review the basics of the preanalytical phase, discuss approaches to improve quality in the preanalytical phase, and provide guidance for overcoming various preanalytical challenges. In addition, this course will also provide a series of interactive case presentations of some of the most common preanalytical errors in the clinical setting.

INTENDED AUDIENCE: This session is intended for all laboratory personnel, including laboratory directors and technologists.

LEARNING OBJECTIVES: After this session, participants will be able to:

1. Identify the most important sources of errors related to venous blood sampling and design approaches to address them.
2. Identify ways to detect and manage hemolysed samples and choose a most suitable strategy to overcome challenges related to hemolysis in the particular clinical context.
3. List and categorize preanalytical errors related to coagulation testing relative to their effect on sample quality and accuracy of test results and set up procedures to control preanalytical variability related to coagulation testing.
4. Recognize various preanalytical problems by analyzing real-life preanalytical cases and decide on the most appropriate strategy to address the problem.

SPEAKERS

Preanalytical Errors Related to Venous Blood Sampling
Ana-Maria Simundic, PhD
University Hospital Sveti Duh, Zagreb, Croatia

Blood Sample Hemolysis
Giuseppe Lippi, MD, PhD
Section of Clinical Biochemistry, University of Verona, Verona, Italy

Preanalytical Errors in Coagulation Testing
Dorothy Adcock, MD
Laboratory Corporation of America, Burlington, NC

8:30am–11:30am

Hemoglobin Electrophoresis

191003
Room: 204A

Presentation Level: **BASIC**
ACCENT® Credits: 3

MODERATOR/SPEAKER
John Mitsios, PhD
BioReference Laboratories, Elmwood Park, NJ

Developed in cooperation with Hematology and Coagulation Division

TICKET

SESSION OVERVIEW: This session will review specialized testing used for the diagnosis of hemoglobinopathies. In addition, this session will also provide an overview of the clinical presentation of patients with hemoglobinopathies.

INTENDED AUDIENCE: This session is intended for clinical chemists, laboratory technologists, residents and pathologists.

LEARNING OBJECTIVES: After this session, participants will be able to:

1. Describe the physiology of hemoglobin disorders.
2. Describe the methods/techniques used for hemoglobin electrophoresis.
3. Differentiate normal from abnormal hemoglobin electrophoresis.
4. Contrast different approaches to diagnosing different hemoglobinopathies.

SPEAKERS

Laboratory Diagnosis of Hemoglobinopaties
John Mitsios, PhD
BioReference Laboratories, Elmwood Park, NJ

Clinical Presentation and Clinical Case Studies
Amy Chadburn, MD
WCMC-NYPH, New York, NY

SUNDAY | AUGUST 4

AACC UNIVERSITY

TICKET Registration fees apply for each course.

MORNING

8:30am–11:30am

The Laboratory Test Life Cycle: Using CLSI Guidelines to Meet FDA, CLIA and ISO Requirements

191004
Room: 201AB

Presentation Level: **INTERMEDIATE**
ACCENT® Credits: 3

MODERATOR/SPEAKER:
J. Rex Astles, PhD, FAACC, DABCC
Centers for Disease Control and Prevention, Atlanta, GA

Developed in cooperation with CLSI

TICKET

SESSION OVERVIEW: This session will examine how quality can be ensured through establishment, validation, and verification of performance specifications for laboratory developed tests (LDTs). The test life cycle, related concepts, and definitions will be introduced. For each step in the test life cycle, speakers will discuss the FDA, CLIA, and ISO requirements. A specific LDT example will be provided to demonstrate how the CLSI documents can be used to meet the regulatory requirements.

INTENDED AUDIENCE: This session is intended for pathologists, laboratory directors, clinical chemists, researchers, medical technologists and trainees.

LEARNING OBJECTIVES: After this session, participants will be able to:

1. Explain the establishment and implementation stages in the laboratory test life cycle.
2. List the steps in the establishment and implementation stages.
3. Explain the FDA and CLIA regulations and guidance, and ISO standards requirements for each life cycle step.
4. Describe how CLSI guidelines can be used to meet these requirements.
5. Explain how checklists provided in EP19-A can help users document how to demonstrate acceptable evaluations during each step of the establishment and implementation stages.

SPEAKERS

Introduction to the Assay Life Cycle Model, Terminology and Illustration of How CLSI Guidelines Can Be Used to Meet Requirements
Paula Ladwig, MS, MT (ASCP)
Mayo Clinic, Rochester, MN

FDA QSR Requirements
Marcia Zucker, MS, PhD, FAACC
ZIVD LLC, Plaistow, NH

CLIA Requirements
J. Rex Astles, PhD, FAACC, DABCC
Centers for Disease Control and Prevention, Atlanta, GA

ISO Requirements
Lucia Berte, MA, MT (ASCP), SBB, DLM
Laboratories Made Better!, Broomfield, CO

8:30am–11:30am

Rise and Shine! The Essential Elements of a Point-of-Care Testing Boot Camp (Part 1)

191005
Room: 210B

Presentation Level: **BASIC**
ACCENT® Credits: 3

MODERATOR/SPEAKER
Peggy Mann, MS, MT (ASCP)
University of Texas Medical Branch, Galveston, TX

Developed in cooperation with Critical and Point-of-Care Testing Division

TICKET

SESSION OVERVIEW: This session will focus on important elements of procedure writing, including process mapping as well as training and competency assessments of testing personnel. The importance of building clinical partnerships for successful point-of-care testing delivery will be incorporated. Lectures will include audience response (polls) and a breakout session will add hands-on table exercises. (See Part 2 for focus areas in the afternoon boot camp session).

INTENDED AUDIENCE: This session is intended for point-of-care coordinators, medical technologists, lab managers/supervisors, pathologists, lab directors, clinical chemists and IVD industry scientists.

LEARNING OBJECTIVES: After this session, participants will be able to:

1. Describe a process for writing effective and efficient P&Ps.
2. Construct procedural documents that are understood by the non-laboratorian.
3. Compile and analyze a Process Map.
4. Build a basic training program that includes components, tools and strategies utilized for successful training.
5. Discuss competency assessment plans and procedures based on testing complexity.

SPEAKERS

Drill This! Training Is Different Than Competency Assessment
Peggy Mann, MS, MT (ASCP)
University of Texas Medical Branch, Galveston, TX

Ten-Hut!! Writing Procedures to Achieve Compliance
Lou Ann Wyer, MS, MT (ASCP), CQA (ASQ)
Sentara Healthcare, Virginia Beach, VA

FULL-DAY COURSES

8:30am–3:15pm

The Secrets to Success: Implementing Robust LC-MS/MS Methods in the Clinical Laboratory

193012
Room: 205AB

Presentation Level: **BASIC**
ACCENT® Credits: 6

MODERATOR/SPEAKER
Grace van der Gugten, BSc
St. Paul's Hospital/Mass Spec Laboratory, Vancouver, Canada

TICKET

SESSION OVERVIEW: This session aims to assist clinical laboratories interested in implementing mass spectrometry. It will cover the fundamentals of liquid chromatography and tandem mass spectrometry. There will be a discussion of sample preparation techniques, considerations for method development, validation, post-implementation monitoring, and troubleshooting.

INTENDED AUDIENCE: This session is intended for laboratory directors, clinical chemists, laboratory administrators, laboratory managers and supervisors, IVD industry scientists, pathologists, physicians, and medical technologists.

LEARNING OBJECTIVES: After this session, participants will be able to:

1. Describe the basics of liquid chromatography.
2. Describe the basics of tandem mass spectrometry.
3. Describe common sample preparation strategies.
4. Create a plan for method development and pre-validation.
5. Create a plan for method validation testing.
6. Develop a program for post-implementation monitoring.

SPEAKERS

The Secrets to Success: Implementing Robust LC-MS/MS Methods in the Clinical Laboratory—Part 1
Julianne Botelho, PhD
Centers for Disease Control and Prevention, Atlanta, GA

The Secrets to Success: Implementing Robust LC-MS/MS Methods in the Clinical Laboratory—Part 2
Grace van der Gugten, BSc
St. Paul's Hospital/Mass Spec Laboratory, Vancouver, Canada

8:30am–3:15pm

How to Truly "Excel" at Data Analysis and Visualization: An Introduction to the R Programming Language

193013
Room: 206AB

Presentation Level: **BASIC**
ACCENT® Credits: 6

MODERATOR/SPEAKER
Patrick Mathias, MD, PhD
University of Washington School of Medicine, Seattle, WA

TICKET

SESSION OVERVIEW: Analyzing data is a key element of effective laboratory practice and quality improvement activities. Outside of simple descriptive statistics and standard plots, data analyses in spreadsheets can be time-consuming and error-prone. R is a free statistical programming language that supports the complex data manipulation and analysis activities needed for efficient clinical laboratory practice. This session will introduce basic concepts of R programming and discuss overall best practices in working with large laboratory data sets.

INTENDED AUDIENCE: This session is intended for pathologists, laboratory directors, clinical chemists, medical technologists and industry scientists.

LEARNING OBJECTIVES: After this session, participants will be able to:

1. Describe the benefits of applying a programming language to analysis of clinical laboratory data.
2. Perform a simple set of analyses on a structured data set using R.
3. Use R to perform routine analyses of data for operational and quality improvement purposes at their home institution.

SPEAKERS

Basic Data Exploration Using the Tidyverse
Patrick Mathias, MD, PhD
University of Washington School of Medicine, Seattle, WA

More Advanced Data Exploration and Manipulation
Joseph Rudolf, MD
University of Minnesota Medical School, Minneapolis, MN

Method Validation Tasks Using R
Daniel Herman, MD, PhD
University of Pennsylvania, Philadelphia, PA

TICKET Registration fees apply for each course.

AACC UNIVERSITY

FULL-DAY COURSES

8:30am–3:15pm

Pathology and Clinical Laboratory Informatics Boot Camp

193014
Room: 207AB

Presentation Level: **BASIC**
ACCENT® Credits: 6

MODERATOR/SPEAKER
David McClintock, MD
Michigan Medicine, Ann Arbor, MI

Developed in cooperation with Informatics Division

TICKET

SESSION OVERVIEW: Informatics is best described as delivering the right information to the right person, at the right place and time, and in the right way. Unfortunately, most laboratory professionals haven't had formal training in informatics, even though they utilize its tools every day. This session serves as an informatics boot camp, providing participants the basics needed to understand and navigate this rapidly evolving field. Topics include LIS, EHR, and middleware; information system selection and life cycle; IT data governance; cybersecurity and information assurance; data extraction and analytics; and artificial intelligence and machine learning.

INTENDED AUDIENCE: This session is intended for clinicians, pathologists, laboratory directors, laboratory managers, clinical chemists, medical technologists, laboratory administrators and IVD industry scientists.

LEARNING OBJECTIVES: After this session, participants will be able to:

1. Define and describe the field of pathology and clinical laboratory informatics and understand its importance within clinical laboratory practice.
2. Describe how to best select health information systems and understand the system life cycle process.
3. Understand the basic principles behind the LIS, system middleware, and the EHR.
4. Understand the basic tenets of IT data governance, including the extra measures needed to ensure proper cybersecurity and information assurance.
5. Understand how data extraction and analytics help drive decision support tools, including artificial intelligence and machine learning applications.

SPEAKERS

Introduction/Information Systems—Overview, Selection, Life Cycle
David McClintock, MD
Michigan Medicine, Ann Arbor, MI

IT Governance/Cybersecurity Issues
Christopher Williams, EE, MD
University of Oklahoma Health Sciences Center, Edmond, OK

Data Extraction/Analytics/Artificial Intelligence
Bryan Dangott, MD
East Carolina University, Greenville, NC

8:30am–3:15pm

Clinical Laboratory Genomics: Practical NGS for Laboratorians

193015
Room: 208AB

Presentation Level: **BASIC**
ACCENT® Credits: 6

MODERATOR/SPEAKER
Christina Lockwood, PhD, DABMGG, DABCC
University of Washington, Seattle, WA

Developed in cooperation with Molecular Pathology Division

TICKET

SESSION OVERVIEW: Genetic testing using next-generation sequencing is advancing precision medicine. This session will describe key aspects of quality control, quality assurance, and regulatory considerations for NGS, the relative advantages and limitations of targeted versus comprehensive NGS tests, and NGS data analysis and particularly variant interpretation in the diagnosis of hereditary disorders. The speakers will use interactive case studies to emphasize the essential components of each topic.

INTENDED AUDIENCE: This session is intended for healthcare professionals, including clinical pathologists, physicians, laboratory directors, clinical chemists, laboratory managers, medical technologists, post-doctoral fellows and IVD industry scientists.

LEARNING OBJECTIVES: After this session, participants will be able to:

1. Discuss the basic concepts, benefits, and limitations of next-generation sequencing as clinical tests.
2. Understand the key challenges associated with external quality assessment for NGS tests.
3. Recognize the need for both targeted and comprehensive testing.
4. Describe the recommendations for variant classification and result interpretation in inherited disorders.

SPEAKERS

Variability In, Variability Out: Essentials of Quality Assurance in NGS
Christina Lockwood, PhD, DABMGG, DABCC
University of Washington, Seattle, WA

Choosing Wisely: Targeted Versus Genomic Tests
Ann Moyer, MD, PhD
Mayo Clinic, Rochester, MN

Challenges of Interpreting NGS Data for Inherited Disorders
Avni Santani, PhD
Children's Hospital of Philadelphia, Philadelphia, PA

Clinical Exome Sequencing: Best Practices for Variant Interpretation
Josh Deignan, PhD, ABMGG
University of California, Los Angeles, Los Angeles, CA

8:30am–3:15pm

Clinical Laboratory Leadership Essentials for the 21st Century

193016
Room: 209AB

Presentation Level: **INTERMEDIATE**
ACCENT® Credits: 6

MODERATOR/SPEAKER
Sedef Yenice, PhD, MBA
Group Florence Nightingale Hospitals, Istanbul, Turkey

TICKET

SESSION OVERVIEW: An essential component to leadership is relationship building, and good leadership is a learnable skill. Many people find themselves in leadership positions or aspiring to become leaders in laboratory medicine despite very little training on how to be an effective leader. This session attempts to fill in this apparent gap through discussion of leadership effectiveness and self-management as well as management of workplace relationships, including conflict resolution and leading teams.

INTENDED AUDIENCE: This session is intended for clinical chemists, laboratory directors, pathologists, laboratory supervisors, laboratory managers and medical laboratory technologists.

LEARNING OBJECTIVES: After this session, participants will be able to:

1. Identify the most effective leadership styles and describe strategies to improve their effectiveness as a leader.
2. Identify the expectations of followers and how to respond to those needs when developing and managing their team.
3. Describe how to resolve conflicts.
4. Describe how to select and manage a team toward success in projects.

SPEAKERS

The Leader Versus the Manager, Leading and Managing the Laboratory Team and the Leader as Visionary and Motivator
Sedef Yenice, PhD, MBA
Group Florence Nightingale Hospitals, Istanbul, Turkey

Leadership Attitudes and Styles, Learning Style and Impact on Relationships in the Workplace and Project Management Fundamentals
Edward Randell, PhD, FCACB
Memorial University, St. John's, Canada

Defining Conflict and Personal Responses to Conflict and Conflict Resolution Process
Matthias Orth, MD, PhD
Institut für Laboratoriumsmed, Stuttgart, Germany

SUNDAY | AUGUST 4

AACC UNIVERSITY

TICKET Registration fees apply for each course.

FULL-DAY COURSE

8:30am–3:15pm

Getting Started with R for Laboratory Medicine

193017

Room: 210A

Presentation Level: **INTERMEDIATE**

ACCENT® Credits: 6

MODERATOR/SPEAKER

Shannon Haymond, PhD, DABCC, FAACC

Lurie Children's Hospital of Chicago, Chicago, IL

TICKET

SESSION OVERVIEW: This hands-on course will teach the basics of interaction with the R statistical programming language through the RStudio interface with a goal of providing attendees the ability to perform the core statistical analyses and data visualization required for laboratory medicine clinical practice. Attendees will use R and RStudio on their personal laptops to participate in this interactive session.

INTENDED AUDIENCE: This session is intended for pathologists, laboratory directors, clinical chemists, fellows and trainees, medical technologists, and research scientists. Anyone involved in quality assurance activities, such as method validation analysis, research and development, or the preparation of academic laboratory medicine manuscripts will benefit.

LEARNING OBJECTIVES: After this session, participants will be able to:

1. Navigate and use the basic features of RStudio, produce publication-quality figures using R, and create reproducible reports and data workflows using R Markdown.
2. Import and export data in .csv or .xlsx formats.
3. Perform basic data cleansing and wrangling on large data sets.
4. Perform descriptive and graphical exploratory data analyses: mean, SD, quantiles, extrema, boxplots, violin plots, stripcharts, histograms, scatterplots and regression plots.
5. Perform statistical analyses in R: t-test, Wilcoxon signed rank and rank sum, ANOVA, repeated measures ANOVA, corrections for multiple comparisons, Deming and Passing Bablok regression, nonlinear regression, and CLSI precision calculations.

SPEAKERS

Moving from IDK to IDE
Daniel Holmes, MD
University of British Columbia, British Columbia, Canada

Data Cleansing: I've Tried Scrubbing, Even Soaking
Dennis Orton, PhD
Dr. C. J. Coady Associates, Surrey, Canada

The Stat of the Union Address
Stephen Master, MD, PhD, FAACC
Children's Hospital of Philadelphia, Philadelphia, PA

Dealing with My Vizness
Shannon Haymond, PhD, DABCC, FAACC
Lurie Children's Hospital of Chicago, Chicago, IL

AFTERNOON

12:15pm–3:15pm

Afternoon Reveille! Continuing the Essential Elements of a Point-of-Care Testing Boot Camp (Part 2)

192007

Room: 201AB

Presentation Level: **BASIC**

ACCENT® Credits: 3

MODERATOR/SPEAKER

Jeanne Mumford, MLS, MT (ASCP)

Johns Hopkins Hospital, Baltimore, MD

Developed in cooperation with Critical and Point-of-Care Testing Division

TICKET

SESSION OVERVIEW: This session will focus on important elements of integrating quality management into point-of-care testing (POCT), creating strong multidisciplinary team communications and integrating POCT connectivity. The importance of building clinical partnerships for successful POCT delivery will be incorporated. Lectures will include audience response (polls) and a breakout session will add hands-on table exercises. (See Part 1 for focus areas in the morning boot camp session).

INTENDED AUDIENCE: This session is intended for point-of-care coordinators, medical technologists, lab managers, supervisors, pathologists, lab directors, clinical chemistry scientists and IVD industry scientists.

LEARNING OBJECTIVES: After this session, participants will be able to:

1. Discuss options for meeting the most difficult accreditation and regulatory POCT standards.
2. Develop meaningful indicators for a POCT quality program, including analytics.
3. Outline implementation steps for connectivity and review troubleshooting strategies.
4. Identify key communication skills for successful multidisciplinary partnerships.
5. Identify the difference between the "one-size-fits-all" approach and working with best practices.

SPEAKERS

Integrating Quality Management and Compliance into POCT
Kimberly Skala, MT (ASCP)
Instrumentation Laboratory, Oak Lawn, IL

Connectivity: Get Out the Tin Cans and String! Saving Your Sanity Using Connectivity for POCT
Kerstin Halverson, MS
Instrumentation Laboratory, Farmington, MN

Leading Your Team with Successful Communication Skills
Jeanne Mumford, MLS, MT (ASCP)
Johns Hopkins Hospital, Baltimore, MD

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T TICKET Registration fees apply for each course.

AFTERNOON

12:15pm–3:15pm

AACC/IFCC Clinical Laboratory Practice Recommendations for Use of High-Sensitivity Cardiac Troponin Assays: Real Laboratory and Clinical Experience in the USA

192008

Room: 207CD

Presentation Level: **INTERMEDIATE**

ACCENT® Credits: 3

MODERATOR/SPEAKER

Fred Apple, PhD, DABCC
Hennepin County Medical Center, Minneapolis, MN

T TICKET

SESSION OVERVIEW: Evidence-based presentations with case studies, with interactive audience participation, will be presented to communicate and discuss practical implementation and experience with high-sensitivity cardiac troponin (hs-cTnI, hs-cTnT) assays. The session will cover the role of the central lab and point-of-care testing in the early rule-out/rule-in of myocardial infarction, risk assessment, and primary prevention in clinical practice. The AACC/IFCC clinical laboratory practice guidelines for defining quality control, normality and gender-specific 99th percentile upper reference limits will be addressed.

INTENDED AUDIENCE: This session is intended for for any laboratory/physician scientist, including pathologists, lab directors, clinical chemists, technologists, IVD industry scientists and regulatory experts.

LEARNING OBJECTIVES: After this session, participants will be able to:

1. Demonstrate an understanding of how to implement a high-sensitivity (hs) cardiac troponin assay into the clinical laboratory (central lab and POC), addressing sex-specific 99th percentiles, revising reporting units to whole numbers, quality control utilization, the role of the limit of detection (LoD) for early rule-out utilization, and how to implement a serial hs-cTn order set strategy (i.e., 0h and 1-3h) for early diagnostic accuracy for MI.
2. Describe unique aspects of required analytical validation for high-sensitivity troponin tests, and define approaches to address analytical interferences and outliers.
3. Describe how to establish a partnership and communication plan between the laboratory and emergency medicine and cardiology/all providers on how to implement hs-cTn testing into clinical practice along international evidence-based and expert opinion guidelines.
4. Address the appropriate need to measure hs-cTn in non-acute coronary syndrome (ACS) patients to detect myocardial injury and the role of hs-cTn testing in these patients' triage, management and outcome assessment.
5. Describe the subtle analytical and clinical interpretation differences between the different hs-cTnI and cTnT assays.

SPEAKERS

One-Year Experience of the Analytical Performance Following Implementation of the Gen 5 cTnT Assay into Laboratory Medicine Practice
Brad Karon, MD, PhD, FAACC
Mayo Clinic, Rochester, MN

One-Year Experience of the Clinical Performance Following Implementation of the Gen 5 cTnT Assay into Emergency Medicine Practice
Judd Hollander, MD
Thomas Jefferson University, Philadelphia, PA

One-Year Experience of the Clinical Performance Following Implementation of the Gen 5 cTnT Assay into Cardiology Practice
Allan Jaffe, MD
Mayo Clinic, Rochester, MN

Experience from the Clinicaltrials.gov "CONTRAST" Study on the Direct Comparison between hs-cTnI and Gen5 cTnT Assays in Patients Presenting to the Emergency Department: Are There Differences?
Fred Apple, PhD, DABCC
Hennepin County Medical Center, Minneapolis, MN

12:15pm–3:15pm

Maximizing the Impact and Value of Laboratory Automation: Lessons Learned from Clinical Chemistry and Microbiology

192009

Room: 204A

Presentation Level: **BASIC**

ACCENT® Credits: 3

MODERATOR/SPEAKER

Jonathan Genzen, MD, PhD
University of Utah/ARUP Laboratories, Salt Lake City, UT

T TICKET

SESSION OVERVIEW: Automation has the potential to improve laboratory accuracy, efficiency and throughput. Total laboratory automation is widely used in clinical chemistry laboratories, and instrumentation to automate culture-based testing is now available and is being implemented in microbiology laboratories. This multi-disciplinary session for AACC University will bring together laboratory medicine professionals from chemistry and microbiology to discuss total laboratory automation, including validation, implementation, and clinical impact.

INTENDED AUDIENCE: This session is intended for pathologists, lab directors, clinical chemists, technologists, managers, supervisors and industry scientists.

LEARNING OBJECTIVES: After this session, participants will be able to:

1. Explain the role and impact of total laboratory automation in clinical chemistry and clinical microbiology laboratories.
2. Discuss items to consider when evaluating potential automation solutions.
3. Identify best practices for implementation of automation in the clinical laboratory.

SPEAKERS

Avoiding Costly Mistakes in Automation Plans and Proposals
Jonathan Genzen, MD, PhD
University of Utah/ARUP Laboratories, Salt Lake City, UT

Implementation of Total Laboratory Automation in Clinical Chemistry
Anna Merrill, PhD, DABCC
University of Iowa, Iowa City, IA

Planning and Implementation of Automation in Microbiology
Carey-Ann Burnham, PhD
Washington University School of Medicine, St. Louis, MO

Post-Implementation and Workflow Considerations of Total Laboratory Automation in Microbiology
Melanie Yarbrough, PhD
Washington University, St. Louis, MO

12:15pm–3:15pm

Multiple Myeloma Diagnostics: Interpretation and Reporting of Protein Electrophoresis and Serum Free Light Chains

192010

Room: 204C

Presentation Level: **ADVANCED**

ACCENT® Credits: 3

Developed in cooperation with Clinical and Diagnostic Immunology Division

MODERATOR/SPEAKER

Ronald Booth, BSc, MSc, PhD, FCACB, FAACC
The Ottawa Hospital, Ottawa, Canada

T TICKET

SESSION OVERVIEW: This session will provide an interactive series of myeloma cases that include serum protein electrophoresis, immunofixation and serum free light chains. Attendees will be provided standardized approaches, examples, and advice on how to interpret and report these results, with a focus on the subtleties of effectively communicating relevant laboratory findings. Laboratory testing and discussion will include capillary electrophoresis and agarose gels. Case examples will include the clinical history and context as well as challenging interpretative aspects, such as monoclonal proteins that migrate in the alpha and beta region as well as samples with interferences from monoclonal therapeutic agents.

INTENDED AUDIENCE: This advanced session is intended for pathologists, laboratory directors, clinical chemists, medical technologists, and laboratory administrators.

LEARNING OBJECTIVES: After this session, participants will be able to:

1. Interpret serum and urine protein electrophoresis and immunofixation tests.
2. Describe approaches to quantitation of monoclonal proteins and other fractions.
3. Identify and resolve interferences that are encountered with protein electrophoresis.
4. Interpret serum free light chain results in the context of myeloma and other clinical conditions.
5. Effectively convey myeloma-related tests to clinicians.

SPEAKERS

Initial Detection and Measurement of a Monoclonal Protein
David Keren, MD
University of Michigan, Ann Arbor, MI

Clinical Reporting Considerations for Serum Free Light Chains and Monoclonal Protein Fractions
Ronald Booth, BSc, MSc, PhD, FCACB, FAACC
The Ottawa Hospital, Ottawa, Canada

Case Studies: Bridging the Old and the New
Maria Alice Willrich, MSc, PhD, DABCC, FAACC
Mayo Clinic, Rochester, MN

SUNDAY | AUGUST 4

TICKET Registration fees apply for each course.

AACC UNIVERSITY

AFTERNOON

12:15pm–3:15pm

Trust, but Verify: Getting the Most Out of Verification Protocols for FDA Approved Methods

192011
Room: 210B

Presentation Level: **INTERMEDIATE**
ACCENT® Credits: 3

MODERATOR/SPEAKER
David Koch, PhD, DABCC, FAACC
Emory University/Grady Memorial Hospital, Atlanta, GA

TICKET

SESSION OVERVIEW: This session will discuss the process of selecting and evaluating clinical laboratory methods. Attendees will develop an understanding of the correct approach to this key clinical laboratory task. This course uses a series of examples taken from the clinical laboratory evaluation process to focus attention on the critical aspects of method validations. This session emphasizes protocols that are essential for validation of FDA approved methods and instruments.

INTENDED AUDIENCE: This session is intended for clinical chemists, pathologists, laboratory directors, laboratory managers, IVD industry scientists and clinical laboratory scientists in the regulatory industry.

LEARNING OBJECTIVES: After this session, participants will be able to:

1. Evaluate the claims of manufacturers about method performance and discern whether these claims are well-grounded and pertinent.
2. Evaluate validation studies published in the literature.
3. Perform evaluation experiments designed to verify claims, confirm literature reports, compare achieved performance with desired performance, and make justifiable decisions about the method being tested.

SPEAKERS
Verification Experiments
Janetta Bryksin, PhD, DABCC
Emory University Hospital, Atlanta, GA

Introduction and Setting Clinical Performance Goals
David Koch, PhD, DABCC, FAACC
Emory University/Grady Memorial Hospital, Atlanta, GA

SPECIAL SESSION

3:30pm–4:30pm
Room: 204B

Consumer Genomics, Direct-to-Consumer Genetic Testing, and Patient Empowerment

11002
Presentation Level: **INTERMEDIATE** | ACCENT® Credits: 1

SESSION OVERVIEW: Consumer-initiated genetic testing is experiencing exponential growth with many new applications in the areas of health, wellness, and entertainment. However, while the uptake of these tests are high, the limitations of consumer genetic testing may not be well-understood by most consumers. During this session, two well-renowned experts in the field will discuss nuances between the different types of tests, regulatory aspects, clinical validity and utility, and how consumer genetic testing fits into medical care.

INTENDED AUDIENCE: This session is intended for pathologists, laboratory directors, clinical chemists, technologists, physicians and IVD industry scientists.

MODERATOR
Cathy Wurzer
Minnesota Public Radio, Saint Paul, MN

SPEAKERS
Consumer Genomics in 2019
Jill Hagenkord, MD
Ruby Consulting Group, San Jose, CA

DTC Genetic Testing and Patient Care: Hype, Harm and Hope
Theodora Ross, MD, PhD
UT Southwestern, Dallas, TX

PLENARY SESSION | 2019 WALLACE H. COULTER LECTURESHIP AWARD

Biomarker Discovery: From Technology Development to Clinical Applications

David R. Walt, PhD
Harvard Medical School & Wyss Institute for Bioinspired Engineering at Harvard University, Boston, MA

5:00pm–6:30pm
Room: Ballroom ABC

11001
Presentation Level: **BASIC** | ACCENT® Credits: 1

SESSION OVERVIEW: In this presentation, Dr. Walt will describe how biomarker discovery is performed today and will discuss how we can compress the timeframe from discovery to clinical impact. He will draw upon his experiences in translating research from an academic lab to the commercial sector. Some successful examples of how novel technologies have found their way to the clinic will be described. The goals of the presentation are for the audience to understand how new technologies can accelerate biomarker discovery and to realize that there are multiple challenges and barriers to implementing these new technologies for impactful diagnostic tests.

INTENDED AUDIENCE: This session is intended for pathologists, lab directors, clinical chemists, technologists, physicians and IVD industry scientists with an interest in biomarker discovery and translating research from academia to routine clinical settings.

LEARNING OBJECTIVES: After this session, participants will be able to:

1. Understand how new technologies can accelerate biomarker discovery.
2. Realize that there are multiple challenges and barriers to implementing these new technologies for impactful diagnostic tests.

WALLACE H. COULTER LECTURESHIP AWARD

The Wallace H. Coulter Lectureship Award recognizes an outstanding individual who has demonstrated a lifetime commitment and made important contributions to laboratory medicine and patient care, and who has significantly advanced education, practice or research. This award honors Wallace H. Coulter, founder of Coulter Corporation and inventor of the Coulter Principle, a simple but elegant innovation that revolutionized hematology and the practice of laboratory medicine, pioneered the field of flow cytometry and defined particle characterization.

AACC's most prestigious award—presented annually at the AACC Annual Scientific Meeting & Clinical Lab Expo—commemorates Coulter's outstanding contributions to diagnostics and his championship of research and innovation. It is fitting that his legacy will be celebrated with lectures by renowned leaders in healthcare.

MONDAY
AUGUST 5

PLENARY & SCIENTIFIC SESSIONS




PLENARY SESSION

Translating Genes, Brain and Behavior: A Next-Generation Human Framework

Julie Korenberg, MD, PhD
University of Utah, Salt Lake City, UT

8:45am–10:15am
Room: Ballroom ABC

12001
Presentation Level: **BASIC** | ACCENT® Credits: 1

SESSION OVERVIEW: Peering into the brain's black-box for how we think/feel/communicate reveals neural circuitry as a common language that yokes the power of human genetics to its influences in development and disease, on brain architecture and behavior. Uncommon partial aneuploidies (Williams and Down syndromes) provide genes influencing human cognition/social-emotional behavior, and these unexpectedly implicate primate hypothalamic circuitry. The trail leads, via neural imaging, to dysregulated hormones, a perturbed transcription factor (neuronal development), and an unknown tract spanning the brain limbic system. This is the next era of brain diagnostics and therapeutics in which new gene-disease associations are rapidly translated to brain circuitry.

INTENDED AUDIENCE: This session is intended for pathologists, lab directors, clinical chemists, technologists, physicians and IVD industry scientists with interests in brain diagnostics and therapeutics.

LEARNING OBJECTIVES: After this session, participants will be able to:

1. Understand how human genetic analyses of DNA, RNA, and protein can be used to describe individuals with brain disease.
2. Understand that rare individuals with only subsets of genes imbalanced exist and can be used to evaluate the genetic contributions of their gene differences to their phenotypes, in ways similar to knockout or transgenic mice.
3. Understand three types of neural imaging with magnetic resonance (MRI) that generate different brain information: volumetric, functional, and diffusion spectrum imaging (used for tractography or neural circuit definition).

MONDAY | AUGUST 5

TICKET Registration fees apply for each course.

ROUNDTABLE SESSIONS

7:30am–8:30am (40000 Series) or 12:30pm–1:30pm (50000 Series)

Roundtable sessions are presented twice daily. Attendance is limited to 10 participants per session. Advance registration and session fees are required. AACC does **not** provide meals for these sessions. You will be able to purchase your own food in the convention center prior to the session.

ACCENT® Credit: 1.0 (per session) unless otherwise noted in the mobile app, or at www.2019aacc.org | ACC, Ballroom DE

TITLE	SESSION # AM	SESSION # PM	SPEAKER	LEVEL
Promoting Laboratory Medicine to the Public: The Time to Act Is Now!	42101	52201	**Alan Wu,** PhD, University of California, San Francisco, San Francisco, CA	BASIC
Interferences with Thyroid Function Tests: Where Do We Stand?	42102	52202	**Damien Gruson,** PhD, Cliniques Universitaires Saint-Luc, Kraainem, Belgium	INTERMEDIATE
How Statistics Influence Our Clinical Decisions *Developed in cooperation with Management Sciences and Patient Safety Division*	42103	52203	**Oswald Sonntag,** PhD, Sonntag, Eichenau, Germany	BASIC
How People Try to Beat Drug Testing and Defend Positive Results	42104	52204	**Amitava Dasgupta,** PhD, DABCC, University of Texas–Houston Medical School, Houston, TX	BASIC
Measuring Scientific Impact with the H-Index	42107	52207	**William Schreiber,** MD, LifeLabs, Burnaby, Canada	BASIC
Hemoglobinopathies: Techniques and Interpretation	42108	52208	**Sean Campbell,** PhD, Montefiore Medical Center, Bronx, NY	INTERMEDIATE
Six Sigma and Your Lab Quality Management System—Have You Incorporated It Yet?	42109	52209	**Laura Smy,** PhD, MLS, University of Utah/ARUP Laboratories, Salt Lake City, UT	BASIC
Thrombotic Disorders in the Pediatric Population: Current Issues in Diagnosis and Management	42110	52210	**Olajumoke Oladipo,** MD, DABCC, FAACC, Penn State Milton S. Hershey Medical Center, Hershey, PA	BASIC
The Impact of the NGSP on HbA1c Measurement in the Clinical Laboratory	42111	52211	**Randie Little,** PhD, University of Missouri at Columbia, Columbia, MO	INTERMEDIATE
Follow-Up of Positive Newborn Screen Positive Results for Metabolic Disorders *Developed in cooperation with Pediatric and Maternal-Fetal Division*	42112	52212	**Uttam Garg,** PhD, DABCC, FAACC, FABFT, Children's Mercy Hospital, Kansas City, MO	BASIC
Biotin Interferences and Strategies for Mitigating Interference in Immunoassays	42114	52214	**Jieli Li,** MD, PhD, MD Anderson Cancer Center, Houston, TX	BASIC
Utility of Procalcitonin Measurement: Current Evidence and Clinical Utility in Pediatric and Adult Populations	42115	52215	**Jayson Pagaduan,** PhD, Texas Children's Hospital, Houston, TX	BASIC
The CDC Lipids Standardization Programs—Ensuring the Quality of Cardiovascular Disease Biomarker Measurements	42116	52216	**Uliana Danilenko,** PhD, Centers for Disease Control and Prevention, Atlanta, GA	INTERMEDIATE

Advances in Laboratory Testing for the Diagnosis and Management of Syphilis	42118	52218	**Mahesheema Ali,** MSc, PhD, Upstate Medical Hospital, Manlius, NY	INTERMEDIATE
Intraoperative Parathyroid Hormone Testing	42119	52219	**Xander Van Wijk,** PhD, DABCC, The University of Chicago Medicine & Biological Sciences, Chicago, IL	BASIC
Clinical Laboratory Management of Dyslipidemia in Children and Adolescents: Standing Plasma Test to Genetic Testing	42120	52220	**Mustafa Barbhuiya,** PhD, (MB) (ASCPi)CM, Penn State University College of Medicine, Hershey, PA	BASIC
Control Your Competencies: Transitioning from Paper to an Electronic System for Personnel Competencies	42121	52221	**Van Leung-Pineda,** PhD, DABCC, Children's Healthcare of Atlanta, Atlanta, GA	BASIC
Detecting Alzheimer's Disease with Biofluid Biomarkers: Innovations and a Research Framework That Inform Clinical Practice	42122	52222	**Danni Li,** PhD, DABCC, University of Minnesota, Minneapolis, MN	INTERMEDIATE
Implementing Blood Gas Instrumentation with Intelligent Quality Management	42123	52223	**Yachana Kataria,** PhD, DABCC, Boston Medical Center, Boston, MA	BASIC
Laboratory Strategies for Mitigating Pre-Analytical Errors	42124	52224	**Qing Meng,** MD, PhD, DABCC, FAACC, University of Texas/MD Anderson Cancer Center, Houston, TX	INTERMEDIATE
Pearls and Pitfalls of Estradiol and Testosterone Testing	42125	52225	**Amy Pyle-Eilola,** PhD, Nationwide Children's Hospital, Columbus, OH	INTERMEDIATE
Pharmacogenomics and Precision Medicine: Transferring Pharmacogenomics Findings into the Clinic	42126	52226	**Carmen Gherasim,** PhD, University of Michigan, Ann Arbor, MI	INTERMEDIATE
To Quant or Not to Quant? Limitations of Quantifying Low Concentration Monoclonal Proteins by Serum Protein Electrophoresis	42127	52227	**Katherine Turner,** PhD, Mayo Clinic, Rochester, MN	INTERMEDIATE
Issues Surrounding Automated Health Information Exchanges (HIEs) on External Lab Resulting *Developed in cooperation with Informatics Division*	42128	52228	**David McClintock,** MD, Michigan Medicine, Ann Arbor, MI	BASIC
Use of Test Result Normalization to Allow Mobile Real-Time Reporting of Both POC and Central Laboratory Results *Developed in cooperation with Informatics Division*	42130	52230	**Kenneth Blick,** PhD, University of Oklahoma Health Sciences Center, Oklahoma City, OK	INTERMEDIATE
Genetic Testing for Immunodeficiency Disorders	42131	52231	**Ann Moyer,** MD, PhD, Mayo Clinic, Rochester, MN	INTERMEDIATE
Current Cybersecurity Threats, Medical Devices and the Clinical Laboratory *Developed in cooperation with Informatics Division*	42132	52232	**Sharon Geaghan,** MD, FRCP(c), ABP Informatics, Stanford University, Menlo Park, CA	BASIC
Retrospective Analysis of Drugs in Patient Urine Assists in the Assessment of Patient Adherence and Improves Lab Operation	42133	52233	**Sheng Feng,** PhD, Hospital of the University of Pennsylvania, Philadelphia, PA	INTERMEDIATE
Drug Screening in Maternal and Newborn Populations	42134	52234	**Stephen Roper,** Washington University School of Medicine, St. Louis, Missouri	INTERMEDIATE

MONDAY | AUGUST 5

GLOBAL LAB QUALITY INITIATIVE WORKSHOP

TICKET

9:00–17:15
Room: California A, Hilton Anaheim

Taller de la Iniciativa Mundial de Calidad de Laboratorio Clínico: Manejo de riesgos en el laboratorio clínico: Herramientas para asegurar resultados de alta calidad

RESUMEN DE LA SESIÓN: Los análisis de laboratorio están sujetos a errores en la fase preanalítica, analítica y post analítica, que podrían causar daño al paciente. Asi mismo, la seguridad del paciente ha sido considerada un problema global de salud pública. No existe un esquema único de aseguramiento y control de calidad para mitigar los riesgos de los análisis de laboratorio. Por ello, el diseñar un plan de aseguramiento y control de calidad en base a manejo de riesgos para minimizar estos errores y mitigar los riesgos, es un elemento clave para mantener y mejorar las buenas prácticas de laboratorio.

Esta sesión está dirigida a científicos de laboratorio, tecnólogos médicos, supervisores, gerentes, directores, patólogos clínicos, y profesionales de química clínica.

INSCRIPCIÓN
La tarifa de inscripción es de $35 dólares antes del 20 de junio y $50 dólares después esta fecha. El espacio está limitado a los primeros 100 inscritos. El registro incluye el taller y el almuerzo.

MEET THE EXPERT

10:30am–11:30am

Biomarker Discovery: From Technology Development to Clinical Applications

62101
Room: 210B

Presentation Level: **BASIC**
ACCENT® Credits: 1

SESSION OVERVIEW: This session will provide an excellent opportunity for attendees to meet with Dr. Walt in a more intimate setting and listen to him discuss his talk, "Biomarker Discovery: From Technology Development to Clinical Applications."

INTENDED AUDIENCE: This session is intended for pathologists, lab directors, clinical chemists, technologists, physicians and IVD industry scientists with an interest in biomarker discovery and translating research from academia to routine clinical settings.

LEARNING OBJECTIVES: After this session, participants will be able to:

1. Understand how new technologies can accelerate biomarker discovery.
2. Realize that there are multiple challenges and barriers to implementing these new technologies for impactful diagnostic tests.

SPEAKER
David R. Walt, PhD
Harvard Medical School & Wyss Institute for Bioinspired Engineering at Harvard University, Boston, MA

MEET THE EXPERT

10:30am–11:30am

Translating Genes, Brain and Behavior: A Next-Generation Human Framework

62102
Room: 210C

Presentation Level: **BASIC**
ACCENT® Credits: 1

SESSION OVERVIEW: This session will provide an excellent opportunity for attendees to meet with Prof. Korenberg in a more intimate setting and listen to her discuss her talk, "Translating Genes, Brain and Behavior: A Next-Generation Human Framework."

INTENDED AUDIENCE: This session is intended for pathologists, lab directors, clinical chemists, molecular biologists, technologists, physicians and IVD industry scientists with interests in brain diagnostics and therapeutics.

LEARNING OBJECTIVES: After this session, participants will be able to:

1. Understand how human genetic analyses of DNA, RNA, and protein can be used to describe individuals with brain disease.
2. Understand that rare individuals, with only subsets of genes imbalanced, exist and can be used to evaluate the genetic contributions of their gene differences to their phenotypes, in ways similar to knockout or transgenic mice.
3. Understand three types of neural imaging with magnetic resonance (MRI) that generate different brain information: volumetric, functional, and diffusion spectrum imaging (used for tractography or neural circuit definition).

SPEAKER
Julie Korenberg, MD, PHD
University of Utah, Salt Lake City, UT

SCIENTIFIC SESSIONS

MORNING

10:30am–12:00pm

Ethical Issues in Laboratory Medicine

32101
Room: 207AB

Presentation Level: **BASIC**
ACCENT® Credits: 1.5

MODERATOR
Carey-Ann Burnham, PhD
Washington University School of Medicine, St. Louis, MO

Developed in cooperation with Management Sciences and Patient Safety Division

SESSION OVERVIEW: Ethical issues in laboratory medicine have been given limited attention by professionals in laboratory medicine. The first talk in this session will describe the basics of biomedical ethics, along with a review of the history of biomedical ethics and the core principles of modern biomedical ethics, including autonomy, beneficence (non-maleficence) and justice. The second session will examine the ethics of emerging infections and the clinical laboratory in light of those core principles. Both sessions will use interactive case studies to illustrate their points.

INTENDED AUDIENCE: This session is intended for laboratory directors, clinical chemists, pathologists, physicians, laboratory medicine residents and fellows, and IVD industry representatives.

LEARNING OBJECTIVES: After this session, participants will be able to:

1. Describe the guiding principles of bioethics.
2. Explain some of the ethical issues facing laboratory medicine today.
3. Describe emerging infectious disease risks to laboratories in the context of historical responses to infection and historical outbreaks.
4. Recognize the ethical value conflicts and knowledge gaps involved in laboratory response to emerging infections.

SPEAKERS
Ethical Issues in Laboratory Medicine
Ann Gronowski, PhD, DABCC
Washington University School of Medicine, St. Louis, MO

Ethical Issues in Emerging Infections and the Clinical Laboratory
Sheldon Campbell, PhD, MD
Yale School of Medicine, West Haven, CT

MONDAY | AUGUST 5

SCIENTIFIC SESSIONS

MORNING

10:30am–12:00pm

The Quest for Laboratory Quality through Competency Assessment

32102

Room: 206AB

Presentation Level: **INTERMEDIATE**

ACCENT® Credits: 1.5

MODERATOR/SPEAKER

Elia Mears, BHS, MS, MT (ASCP) SM
The Joint Commission, Houma, LA

SESSION OVERVIEW: Regardless of the simplicity of laboratory tests, errors can occur if not performed correctly, leading to significant patient harm. Competency assessment is a focused approach to achieve confirmation that personnel training is effective. In addition, established procedures produce quality results. All testing personnel, including nursing staff and physician providers, are required to be assessed for competency. This session will discuss regulatory requirements associated with competency. Further, strategies focused on the design and integration of competency assessment programs into the laboratory's quality management plan will be discussed.

INTENDED AUDIENCE: This session is intended for pathologists, laboratory directors, laboratory managers, laboratory supervisors, point-of-care coordinators, medical technologists, clinical laboratory scientists and other testing personnel.

LEARNING OBJECTIVES: After this session, participants will be able to:

1. Evaluate competency of testing personnel utilizing the regulatory assessment criteria.
2. Identify who is qualified to perform the assessment.
3. Integrate a competency assessment program as part of the laboratory's Quality Management Plan.

SPEAKER

The Quest for Laboratory Quality through Competency Assessment
Elia Mears, MS, MT (ASCP) SM
The Joint Commission, Houma, LA

10:30am–12:00pm

Clinical Utilization of D-Dimer Testing: Practical Guidance to Reduce Unnecessary Imaging Procedures While Improving Patient Care and Optimizing Healthcare Resources

32104

Room: 204A

Presentation Level: **INTERMEDIATE**

ACCENT® Credits: 1.5

Developed in cooperation with Hematology and Coagulation Division

MODERATOR

Sean Campbell, PhD
Montefiore Medical Center, Bronx, NY

SESSION OVERVIEW: Pathological blood clots, known as venous thromboembolism, include both deep venous thrombosis (DVT) and pulmonary embolism (PE). These are life-threatening conditions that require rapid actions for proper diagnosis and treatment. Clinical guidelines recommend the use of pretest probability scoring along with high-sensitivity D-dimer laboratory assays to screen for DVT and PE in patients presenting to the emergency room. This session will address institutional experiences and translational clinical research studies to fill knowledge gaps and provide actionable findings.

INTENDED AUDIENCE: This session is intended for clinical chemists, medical technologists, laboratory supervisors, laboratory directors, pathologists, hematologists, primary care physicians and hospital pharmacists.

LEARNING OBJECTIVES: After this session, participants will be able to:

1. Discuss the epidemiology and pathophysiology of VTE/PE/DVT.
2. Present clinical guidelines regarding use of PTP and D-dimer methods to screen DVT and PE in at-risk patients.
3. Illustrate case studies and institutional experience highlighting use of pretest probability and D-dimer to properly stratify patient risk and improve long-term outcomes.
4. Assess laboratory pitfalls regarding D-dimer reporting and commonly encountered issues potentially leading to clinician confusion and non-ideal patient outcomes.

SPEAKERS

Pathophysiology and Utility of the D-Dimer Assay in an Emergency Clinical Setting
Jeffrey Kline, MD
IU School of Medicine, Indianapolis, IN

D-Dimer Utilization at Montefiore Medical Center: Perspectives from the Laboratory
Morayma Reyes-Gil, MD, PhD
Montefiore Medical Center, Bronx, NY

10:30am–12:00pm

Universal Non-Targeted HCV Screening and Linkage to Care: Emergency Department and Laboratory Perspectives on Design, Implementation, and Results

32105

Room: 205AB

Presentation Level: **INTERMEDIATE**

ACCENT® Credits: 1.5

MODERATOR/SPEAKER

James Moore, MD, FACEP
UK HealthCare, Lexington, KY

SESSION OVERVIEW: This session will discuss the value of implementing a non-targeted hepatitis C virus (HCV) screening program, with direct linkage-to-care, within a large academic medical center. A multi-disciplinary approach to HCV screening will be described to demonstrate its effectiveness in designing, developing, implementing, measuring clinical success, and improving patient outcomes. Laboratory data and its impact on clinical care will be presented, with a focus on contemporary quality metrics.

INTENDED AUDIENCE: This session is intended for clinical chemists, physicians (pathology, emergency medicine, primary care, gastrointestinal medicine, infectious disease, public health, behavioral health, addiction specialists), medical directors, hospital executives, and policy experts.

LEARNING OBJECTIVES: After this session, participants will be able to:

1. Identify benefits to a non-targeted ED HCV screening program with linkage-to-care for patients in the United States.
2. Discuss needs and expectations for such a program from the perspective of the ED physician and other ED care givers, including their role in implementation.
3. Discuss needs and expectations for such a program from the perspective of the clinical laboratory medical director and other laboratorians, including their role in implementation.
4. Identify strategies to close the gap between current healthcare limitations regarding identifying patients at risk, diagnosing HCV infection, and connecting patients with care and treatment.
5. Recognize the financial impact a non-targeted ED HCV screening program with a linkage-to-care program could have on a healthcare system and patient quality of life.

SPEAKERS

Adult Emergency Department (ED) Universal Non-Targeted HCV Screening: An Emergency Physician's Perspective Addressing Public Health While Not Affecting Patient Flow
James Moore, MD, FACEP
UK HealthCare, Lexington, KY

Adult Emergency Department (ED) Universal Non-Targeted HCV Screening: A Laboratorian's Guide to Providing Accurate and Comprehensive HCV Testing Results That Affect Patient Care
Morgan McCoy, MD, PhD
University of Kentucky, Lexington, KY

SCIENTIFIC SESSIONS

MORNING

10:30am–12:00pm

Predicting and Diagnosing Gestational Diabetes Mellitus (GDM): Are We Making Progress?

32106
Room: 209AB

Presentation Level: **INTERMEDIATE**
ACCENT® Credits: 1.5

MODERATOR/SPEAKER
David Sacks, MD
National Institutes of Health, Bethesda, MD

Developed in cooperation with American Diabetes Association

SESSION OVERVIEW: Glucose intolerance with onset or first recognition of pregnancy is termed gestational diabetes mellitus (GDM). Both the fetus and the mother develop complications, which are reduced by therapy. Nevertheless, there is controversy surrounding the optimal screening and diagnostic strategies for GDM. Both the screening and diagnostic criteria vary among countries and between obstetric and diabetes organizations in a single country. In addition, there has been substantial interest over the last few years in earlier detection of GDM (i.e., before the current evaluation at 24–28 weeks of gestation). This session will review screening and diagnostic approaches for GDM, including early prediction strategies.

INTENDED AUDIENCE: This session is intended for pathologists, lab directors, clinical chemists, technologists, IVD industry scientists, students, trainees and endocrinologists.

LEARNING OBJECTIVES: After this session, participants will be able to:

1. Describe methods for screening and diagnosing GDM.
2. List advantages and limitations of the two most widely used GDM diagnostic criteria.
3. Discuss rationale and approach to early diagnosis of GDM.

SPEAKERS

We Should Use the IADPSG to Detect GDM
Florence Brown, MD
Joslin Diabetes Center, Boston, MA

We Should Use the Two-Step Method to Detect GDM
Amy Valent, D.O.
Oregon Health and Sciences University, Portland, OR

Let's Not Wait: Predicting GDM in the First Trimester
David Sacks, MD
National Institutes of Health, Bethesda, MD

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10:30am–12:00pm

Data Science and AI in Laboratory Medicine: What You Should Know Now and Will Need to Know in the Future

32107
Room: 207CD

Presentation Level: **BASIC**
ACCENT® Credits: 1.5

MODERATOR/SPEAKER
Daniel Herman, MD, PhD
University of Pennsylvania, Philadelphia, PA

SESSION OVERVIEW: As laboratorians, we report countless patient results. These data, in aggregate, can be leveraged to achieve operational and clinical goals. Much attention has been focused on the incorporation of machine learning and artificial intelligence (AI) into healthcare. But beyond analytics, realizing data-driven clinical goals requires clinical expertise and forward-looking data collection, storage, and access. This session will review the application of AI in laboratory medicine, drawing from the literature and speakers' experiences. We will also illustrate the data science process, applied to clinical data, comparing it to laboratory medicine practice, and will highlight the critical roles for laboratorians.

INTENDED AUDIENCE: This session is intended for pathologists, laboratory directors, clinical chemists, and academic and industry scientists.

LEARNING OBJECTIVES: After this session, participants will be able to:

1. Identify factors to consider when evaluating commercially available or laboratory-developed clinical multi-variable models or multi-analyte assays.
2. Describe different methods for time series prediction, as well as differences and requirements for each.
3. Recognize how decisions they make in the laboratory affect secondary use of data for clinical data science.
4. Identify potential aspects of their own laboratories that could be enhanced through clinical data science.
5. Realize some valuable secondary uses of data for the enhancement of medical care delivery.

SPEAKERS

How to Use Laboratory and Other Electronic Health Record Data to Screen for Undiagnosed Disease
Daniel Herman, MD, PhD
University of Pennsylvania, Philadelphia, PA

Applying Machine Learning to Clinical Laboratory Data to Identify Anomalies, Integrate Information and Enhance Laboratory Diagnosis
Jason Baron, MD
Massachusetts General Hospital, Boston, MA

Lab Medicine Beyond the Lab: Applying Lab Data and Data Science to Further the Practice of Medicine
Tyllis Chang, MD, CP
Clinical Informatics (ABP), Northwell Health Laboratories, Lake Success, NY

MONDAY | AUGUST 5

PRESIDENT'S INVITED SESSION

10:30am–12:00pm

Beyond the Clinical Laboratory Director: Careers for Clinical Chemists

32108

Room: 204B

Presentation Level: **BASIC**

ACCENT® Credits: 1.5

MODERATOR

Carmen Wiley, PhD, DABCC, FAACC
VERAVAS, Inc., Spokane, WA

SESSION OVERVIEW: This will be a panel discussion where each panelist will share his or her career experience outside of the traditional laboratory director. This will be followed by a moderated panel discussion where the participants' questions on how to explore other career opportunities in laboratory medicine will be answered.

INTENDED AUDIENCE: This session is intended for physicians, laboratory directors, clinical laboratory scientists/medical technologists, residents/fellows and IVD industry.

LEARNING OBJECTIVES: After this session, participants will be able to:

1. List the career opportunities available for clinical chemists.
2. Describe what roles clinical chemists play in these careers.
3. Create a plan for exploring these career opportunities.

SPEAKERS

My Career Beyond the Clinical Laboratory Director
Sky Countryman, BS
InSource Diagnostics, Monrovia, CA

My Career Beyond the Clinical Laboratory Director
Nathan Gochman, PhD, FAACC
Consultant, Anaheim, CA

My Career Beyond the Clinical Laboratory Director
Susan Evans, PhD, FAACC
BioDecisions Consulting, Los Gatos, CA

SCIENTIFIC SESSIONS

MID-DAY

12:30pm–2:00pm

Highlighting the Emerging Role of Anti-Müllerian Hormone (AMH) in Ovarian Reserve, Assisted Reproduction, Polycystic Ovary Syndrome (PCOS), and Other Diseases

32431

Room: 204C

Presentation Level: **INTERMEDIATE**

ACCENT® Credits: 1.5

MODERATOR/SPEAKER

Candice Ulmer, PhD
Centers for Disease Control and Prevention, Atlanta, GA

Developed in cooperation with Endocrinology Division

SESSION OVERVIEW: This session will discuss the clinical utility of anti-Müllerian hormone (AMH) as an emerging biomarker for health status and certain diseases. In addition, challenges in AMH quantitation and current standardization efforts to improve the interpretation of results will be discussed.

INTENDED AUDIENCE: This session is intended for clinical chemists, pathologists, medical technologists, industry scientists, lab supervisors/managers and manufacturers.

LEARNING OBJECTIVES: After this session, participants will be able to:

1. Summarize the current clinical use of AMH measurements and recent advancements that highlight AMH as a putative biomarker.
2. Highlight the emerging biomarker potential of AMH for various diseases.
3. Identify current challenges in AMH testing and describe current harmonization/ standardization efforts for AMH immunoassays.

SPEAKERS

The Role of AMH in Ovarian Reserve, Assisted Reproduction, and Ovulatory Dysfunction in Polycystic Ovary Syndrome
Joely Straseski, PhD, DABCC, MT (ASCP), FAACC
University of Utah & ARUP Laboratories, Salt Lake City, UT

The Emerging Clinical Biomarker Potential of AMH and Its Connection to Various Diseases
William Winter, MD, DABCC, FAACC
University of Florida, Gainesville, FL

Current Challenges in AMH Quantitation and the Importance of Standardization in Improving the Clinical Use of AMH as a Biomarker
Candice Ulmer, PhD
Centers for Disease Control and Prevention, Atlanta, GA

12:30pm–2:00pm

Employee Engagement: It's More Than Simply a Commitment to Patient Care

32432

Room: 207AB

Presentation Level: **BASIC**

ACCENT® Credits: 1.5

MODERATOR/SPEAKER

Cherie Petersen, BA
ARUP Laboratories, Salt Lake City, UT

SESSION OVERVIEW: Are you struggling with employee engagement and finally realizing it's not enough to just say, "We do it because of our commitment to patient care"? Employee engagement and positive workplace morale are products of linking your organizational mission to the specific and meaningful work laboratorians perform. During this session, we'll use laboratory case studies to discuss successful strategies for engaging and connecting laboratorians to the meaningful work they perform as part of the healthcare team.

INTENDED AUDIENCE: This session is intended for the spectrum of laboratory professionals in leadership positions, or those who aspire to be in leadership positions.

LEARNING OBJECTIVES: After this session, participants will be able to:

1. Discover factors that motivate and engage employees in the workplace.
2. Recognize strategies for connecting employees to the meaningful work being performed by your laboratory organization and team.
3. Discuss opportunities for promoting positive morale based on knowledge gleaned from laboratory-specific case studies.

SPEAKER

Employee Engagement: It's More Than Simply a Commitment to Patient Care
Cherie Petersen, BA
ARUP Laboratories, Salt Lake City, UT

12:30pm–2:00pm

Sepsis: Novel Biomarkers, New Technology, and Predictive Analytics

32433

Room: 205AB

Presentation Level: **INTERMEDIATE**

ACCENT® Credits: 1.5

MODERATOR/SPEAKER

T. Scott Isbell, PhD, DABCC, FAACC
Saint Louis University School of Medicine, St. Louis, MO

SESSION OVERVIEW: This session will highlight recent advances in our understanding and approach to the diagnosis and management of sepsis. Sepsis is the leading cause of in-hospital mortality, and is defined as life-threatening organ dysfunction caused by a deregulated host response to infection. There will be a specific focus on the pathophysiology and the utility of neutrophils as emerging biomarkers of sepsis. In addition, novel technologies and diagnostic approaches will be presented, including the use of predictive analytics in sepsis management.

INTENDED AUDIENCE: This session is intended for clinical chemists, pathologists, IVD scientists, clinical laboratory scientists, medical directors and clinicians.

LEARNING OBJECTIVES: After this session, participants will be able to:

1. Describe the potential use of chlorinated lipids as a sepsis biomarker.
2. Describe the potential point-of-care (POC) application of assessing neutrophil biophysics.
3. Describe how predictive analytics may be a useful tool in the management of sepsis.

SPEAKERS

Novel Chlorinated Lipids in Sepsis
David Ford, PhD
Saint Louis University School of Medicine, St. Louis, MO

Rapid Sepsis Diagnosis with Deformability Cytometry
Dino DiCarlo, PhD
University of California, Los Angeles, Los Angeles, CA

The Use of Predictive Analytics in Sepsis Management
T. Scott Isbell, PhD, DABCC, FAACC
Saint Louis University School of Medicine, St. Louis, MO

MONDAY | AUGUST 5

SCIENTIFIC SESSIONS

MID-DAY

12:30pm–2:00pm

Value-Added Partnerships between Clinical Laboratorians and Emergency Medicine Professionals to Improve Patient Care

32434
Room: 207CD

Presentation Level: **BASIC**
ACCENT® Credits: 1.5

MODERATOR/SPEAKER
Zhen Zhao, PhD, DABCC, FAACC
Weill Cornell Medicine, New York, NY

SESSION OVERVIEW: This session will use case studies, debate and skit formats to illustrate the successful alignment of emergency department (ED) patient care goals with clinical laboratory medicine capabilities at one large academic medical center. Leadership from both departments have identified areas of improvement in care delivery models and have collaboratively developed innovative strategies to advance clinical excellence and outcome-based institutional goals. This interdepartmental leadership team will share their experiences in developing award-winning patient care models and will provide recommendations for successful implementation of process improvement projects between patient-facing and clinician-facing departments.

INTENDED AUDIENCE: This session is intended for pathologists, emergency department medical directors, laboratory directors, clinical chemists, technologists, IVD industry scientists, and students.

LEARNING OBJECTIVES: After this session, participants will be able to:

1. Describe both the traditional and the new emergency team-based workflows and care models.
2. Discuss strategies and solutions of clinical laboratory and ED collaboration to support the new ED care models.
3. Explain the process and methods for quality improvement in both clinical laboratory and ED.

SPEAKERS

Joint Effort: Quality Improvement in ED and the Clinical Laboratory
Zhen Zhao, PhD, DABCC, FAACC
Weill Cornell Medicine, New York, NY

Shared Mission: Aligning ED Goals with Clinical Laboratory Capabilities
Peter Steel, MA, MBBS
Assistant Professor, Weill Cornell Medical Center, New York, NY

On-Demand POCT: Ambulance and Helicopter Testing in the Field
James Nichols, PhD, DABCC, FAACC
Vanderbilt University Medical Center, Nashville, TN

AFTERNOON

2:15pm–4:15pm

Quantitative Proteomics in Clinical Care: Development, Deployment and Future Directions

32216
Room: 205AB

Presentation Level: **INTERMEDIATE**
ACCENT® Credits: 2

MODERATOR
Daniel Holmes, MD
University of British Columbia, British Columbia, Canada

SESSION OVERVIEW: Compared to small molecule assays, the barriers to implementing quantitative mass spectrometry (MS) protein assays are higher due to the nature of the analyte. Quantitative MS protein assays require digestion and/or immunopurification. The speakers will discuss the analytical challenges of quantitative protein analysis by mass spectrometry and discuss successfully deployed assays, highlighting the advantages, challenges, and future opportunities with this technology.

INTENDED AUDIENCE: This session is intended for clinical chemists, clinical pathologists or medical laboratory technologists involved in or overseeing mass spectrometry assay development for application in a clinical environment.

LEARNING OBJECTIVES: After this session, participants will be able to:

1. Delineate challenges related to polymorphisms, post-translational modification, peptide selection, peptide time courses, and sensitivity of protein MS methods.
2. Outline how quantitative MS assays for proteins can be standardized according to calibration hierarchies in ISO 17511, enabling traceable protein test results.
3. Discuss the particular challenges that the matrix plays in the calibration of assays involving trypsinization.
4. Discuss the clinical and diagnostic advantages of mass spectrometry in relation to apolipoproteins and immunoglobulin subclasses.
5. Understand how proteins existing in complex mixtures proteoforms, like B-type natriuretic peptide, represent both a challenge and an opportunity for diagnosticians.

SPEAKERS

Metrological Traceability and MS-Based Apolipoprotein Quantification: Challenges and Opportunities
Christa Cobbaert, PhD
Leiden University Medical Center, Etten-Leur, Netherlands

Advantages and Challenges of Immunoglobulin G Subclass Measurement by Mass Spectrometry over Immunonephelometry
Andre Mattman, MD, FRCP(c)
St. Paul's Hospital, Vancouver, Canada

Solving a Clinical Challenge: The Absolute Quantification of B-Type Natriuretic Peptide Proteolysis, a Key Heart Failure Diagnostic and Therapeutic, in Human Plasma by CE-MS
Jennifer Van Eyk, PhD
Cedars-Sinai Medical Center, Los Angeles, CA

SCIENTIFIC SESSIONS

AFTERNOON

2:15pm–4:15pm

Providing Rapid PTH Measurements During Parathyroid Surgery: Challenges, Clinical Utilization, and Future Needs

32217
Room: 207AB

Presentation Level: **INTERMEDIATE**
ACCENT® Credits: 2

MODERATOR/SPEAKER
John Toffaletti, PhD, DABCC
Duke University Medical Center, Durham, NC

SESSION OVERVIEW: Rapid measurements of PTH during parathyroidectomies help guide removal of the appropriate amount of tissue. This need, coupled with the lack of suitable instrumentation, creates significant operational challenges for laboratories. Because PTH testing is not available on a handheld device, most PTH measurements are done on traditional chemistry testing platforms, with some located near the operating room. In this session, we will present our challenges in providing this service. In addition, an endocrine surgeon will present a video and cases that describe how physicians utilize laboratory and other tests to guide surgical removal of the appropriate amount of parathyroid tissue.

INTENDED AUDIENCE: This session is intended for laboratory scientists, pathologists, clinicians and persons from industry who desire to develop or refine their understanding of parathyroid surgery and the needs and challenges of providing rapid intraoperative measurements.

LEARNING OBJECTIVES: After this session, participants will be able to:

1. Describe the available instrumentation for rapid measurements of PTH and what improvements are needed for future instruments.
2. Evaluate intraoperative PTH measurements for successful removal of appropriate parathyroid tissue or adenoma.
3. Refine their ability to provide rapid PTH measurements at a particular institution.
4. Describe the basic processes in surgical removal of excess parathyroid tissue and understand how intraoperative PTH measurements minimize the need for more expensive frozen sections and fine needle aspirates.
5. Describe how physicians evaluate imaging scans in preparation for parathyroid surgery, use intraoperative PTH measurements to guide removal of parathyroid tissue/adenoma, and evaluate the success of parathyroid surgery.

SPEAKERS

Current Challenges and Future Needs of Providing Intraoperative PTH Measurements
John Toffaletti, PhD, DABCC
Duke University Medical Center, Durham, NC

Experience with Implementing a Rapid Intraoperative PTH Method at Geisinger Medical Center
Hoi-Ying Yu, PhD, DABCC, FAACC
Geisinger Health System, Danville, PA

Challenges of Successful Parathyroidectomy: Video and Case Discussions
Sanziana Roman, MD
University of California, San Francisco, San Francisco, CA

2:15pm–4:15pm

Racing Against Time: Point-of-Care Testing in Mobile Health Settings

32218
Room: 206AB

Presentation Level: **INTERMEDIATE**
ACCENT® Credits: 2

MODERATOR/SPEAKER
Anna Fuezery, PhD, DABCC, FCACB
Laboratory Medicine & Pathology, Edmonton, Canada

Developed in cooperation with Critical and Point-of-Care Testing Division

SESSION OVERVIEW: This session examines point-of-care testing (POCT) in mobile health settings. The session begins with a brief overview of mobile health, after which it delves into the details of supporting POCT in three specific programs: a stroke ambulance, paramedic vehicles and a hospital in the home service. The session concludes with a discussion of emerging technologies and their predicted impact on POCT in mobile settings.

INTENDED AUDIENCE: This session is intended for laboratory directors, clinical chemists, POCT coordinators and laboratory medicine trainees.

LEARNING OBJECTIVES: After this session, participants will be able to:

1. Define the concept of mobile health, list its key components, and explain its benefits to patient care.
2. Discuss the role of POCT in mobile health and the issues associated with its support in such settings.
3. Discuss emerging technologies and their predicted impact on POCT in mobile settings.

SPEAKERS

Point-of-Care Testing in Mobile Health: Where Are We Now and Where Do We Need to Go?
Anna Fuezery, PhD, DABCC, FCACB
Laboratory Medicine & Pathology, Edmonton, Canada

Point-of-Care Testing Projects in Mobile Settings—Learnings from Initiatives Supporting Australian Paramedic and Hospital in the Home Services
Andrew Sargeant, BSc
NSW Health Pathology, Newcastle, Australia

Emerging Point-of-Care Technologies for Mobile Diagnostics and Connected Health
Ping Wang, PhD
University of Pennsylvania, Philadelphia, PA

2:15pm–4:15pm

Biomarkers of Alzheimer's Disease: What's New in 2019?

32219
Room: 208AB

Presentation Level: **INTERMEDIATE**
ACCENT® Credits: 2

MODERATOR/SPEAKER
Alicia Algeciras-Schimnich, PhD, DABCC
Mayo Clinic, Rochester, MN

SESSION OVERVIEW: Alzheimer's disease (AD) is a complex degenerative brain disease and the most common cause of dementia. Although no treatment is currently available, significant discovery efforts are underway. Diagnosis of AD is based on clinical features and supplemented by determination of biomarkers of AD pathology. During this session, an overview of AD will be provided, followed by discussion of diagnostic and management criteria. A review of the current CSF biomarkers and the future of plasma biomarkers will be presented. The session will close with a summary of the challenges and opportunities for AD biomarkers in clinical practice and laboratory operations.

INTENDED AUDIENCE: This session is intended for pathologists, clinical chemists, medical technologists, physicians, IVD industry scientists, trainees, residents, and students.

LEARNING OBJECTIVES: After this session, participants will be able to:

1. Describe basic aspects of Alzheimer's disease pathobiology, current diagnostic criteria, and disease management strategies.
2. Discuss current clinical practice involving Alzheimer's disease biomarkers.
3. Demonstrate knowledge of Alzheimer's disease biomarkers' advantages and limitations.

SPEAKERS

Current Clinical, Diagnostic and Staging Criteria for Alzheimer's Disease
Douglas Galasko, MD
University of California, San Diego, La Jolla, CA

Early Detection of Alzheimer's Disease Pathology Using CSF and Blood-Based Biomarkers: Prospects and Challenges for Use in Clinical Practice
Leslie Shaw, PhD, DABCC
Hospital of University of Pennsylvania, Philadelphia, PA

Clinical Laboratory Implementation of Alzheimer's Disease Biomarkers: Pre-Analytical and Analytical Considerations
Alicia Algeciras-Schimnich, PhD, DABCC
Mayo Clinic, Rochester, MN

AFTERNOON

2:15pm–4:15pm

Opioids and Beyond: The Clinical Laboratory's Role in the Opioid Epidemic

32220

Room: 204C

Presentation Level: **INTERMEDIATE**

ACCENT® Credits: 2

MODERATOR

Sara Love, PhD, DABCC

Hennepin Healthcare, Minneapolis, MN

Developed in cooperation with TDM and Toxicology Division

SESSION OVERVIEW: Toxicology testing for opioid compliance and abuse impacts both clinicians and laboratorians, with increased testing demands across the scope of care. Accurate interpretation of results is often a source of discussion and generates questions from the patient care team. This session will describe the clinical needs and testing approaches for opioid assessment, providing common challenges and solutions for both community and specialty hospital laboratories. The session will use an interactive, case-based approach.

INTENDED AUDIENCE: This session is intended for medical technologists, laboratory supervisors and managers, laboratory directors, clinical toxicologists, clinicians, and industry scientists.

LEARNING OBJECTIVES: After this session, participants will be able to:

1. Lists common challenges/limitations encountered in opioid testing.
2. List two different practices that may be used to support toxicology testing for opioids.
3. Explain how teamwork between laboratorians and clinicians can help streamline toxicology testing.
4. Answer common clinical questions regarding opioid testing.

SPEAKERS

Opioids and Beyond: The Clinician Perspective
Ann Arens, MD
Hennepin County Medical Center, Minneapolis, MN

Opioids and Beyond: The Clinical Chemist Perspective
Sarah Wheeler, PhD, NRCC, FAACC
University of Pittsburgh Medical Center, Pittsburgh, PA

Opioids and Beyond: The Analytical Toxicologist Perspective
Jennifer Colby, PhD, DABCC, FAACC
Vanderbilt University Medical Center, Nashville, TN

Opioids and Beyond: Common Questions and an Interactive Series of Cases, Utilizing Audience Response Technology
Ann Arens, MD
Hennepin County Medical Center, Minneapolis, MN

2:15pm–4:15pm

Cardiovascular Precision Medicine: The Laboratory's Role in Advancing Personalized Patient Care

32222

Room: 207CD

Presentation Level: **INTERMEDIATE**

ACCENT® Credits: 2

MODERATOR/SPEAKER

Jing Cao, PhD, DABCC, FAACC

Texas Children's Hospital, Houston, TX

Developed in cooperation with Lipoproteins and Vascular Diseases Divisions; Personalized Medicine Division

SESSION OVERVIEW: Our increased understanding of common risk factors of cardiovascular diseases (CVD) has contributed to the declining mortality rate in the U.S. during the past several decades. Residual risk factors may now be addressed through precision medicine. This session will discuss the role of the laboratory and electronic medical record systems in advancing personalized medicine approaches for diagnosis and treatment of cardiovascular disease including a discussion of new lipid guidelines, implementing non-traditional CVD risk assessments, and the role of the laboratory in guiding physicians in their management of patients with CVD.

INTENDED AUDIENCE: This session is intended for laboratory professionals including laboratory directors, laboratory managers or supervisors, scientists, technologists, and IVD professionals.

LEARNING OBJECTIVES: After this session, participants will be able to:

1. Discuss the salient features of new cholesterol guidelines and the emphasis on personalized medicine approaches to CVD risk.
2. Analyze benefits and drawbacks of novel CVD risk factor assays including apo B, Lp(a), CRP, microalbuminuria and the role of the clinical laboratory in identification of risk-enhancing factors.
3. Discuss the role of the laboratory in harnessing tools and, along with data from electronic health records, in management of patients who are on non-statin lipid lowering therapies.

SPEAKERS

Survey on Laboratory Testing in Preventive Cardiovascular
Alan Remaley, MD, PhD
National Institutes of Health, Bethesda, MD

Personalized Approaches in the New Cholesterol Guidelines—Moving Beyond the Standard Lipid Profile
Sridevi Devaraj, PhD, DABCC, FAACC, FRSC
Texas Children's Hospital and Baylor Medical Center, Houston, TX

Utility of Non-Traditional CVD Risk Factor Assays in Clinical Laboratories, Focus on Apo B and Lp(a)
Jing Cao, PhD, DABCC, FAACC
Texas Children's Hospital, Houston, TX

Managing Cardiovascular Risk in the Era of Non-Statin Lipid Lowering Therapies
Alan Remaley, MD, PhD
National Institutes of Health, Bethesda, MD

2:15pm–4:15pm

Marijuana, Metabolomics, and Multiplexed Imaging—Late-Breaking Applications of Mass Spectrometry

32224

Room: 204A

Presentation Level: **INTERMEDIATE**

ACCENT® Credits: 2

MODERATOR/SPEAKER

Robert Fitzgerald, DABCC, NRCC, FAACC

University of California, San Diego, San Diego, CA

SESSION OVERVIEW: Mass spectrometry is a maturing platform for diagnosis and discovery. This late-breaking session highlights three areas where mass spectrometry allows for a better understanding of pathophysiology and expands our definition of "biomarker." Indicators of recent cannabis use, based on results from a clinical trial evaluating the effect of marijuana on driving performance, will be presented. The second talk demonstrates how a novel combination of elemental mass spectrometry enables massively multiplexed single cell analysis to provide insights into pathobiology. The last presentation reveals how activity metabolomics influences other omics and, by extension, reveals the active role of metabolites in disease states.

INTENDED AUDIENCE: This session is intended for clinical chemists, clinical and forensic toxicologists, pathologists, physicians, trainees, residents, and students.

LEARNING OBJECTIVES: After this session, participants will be able to:

1. Describe markers of recent marijuana use in blood, oral fluid, and breath samples.
2. Explain how multiple types of metabolomics data can be used to predict pathological events.
3. Describe how multiplexed ion beam imaging can be used as an improved tool for immunohistochemistry imaging of tissue for clinical diagnostics.

SPEAKERS

Markers of Recent Marijuana Use Relative to Driving Performance
Robert Fitzgerald, DABCC, NRCC, FAACC
University of California, San Diego, San Diego, CA

Massively Multiplexed Single Cell Analysis to Predict and Control Pathobiology
Sean Bendall, PhD
Stanford University School of Medicine, Palo Alto, CA

Activity Metabolomics: Identifying Metabolites That Alter Physiology
Gary Siuzdak, PhD
Scripps Research, La Jolla, CA

MONDAY | AUGUST 5

CHAIR'S INVITED SESSION

2:15pm–4:15pm

Race, Genomics and Medicine

32223
Room: 204B

Presentation Level: **INTERMEDIATE**
ACCENT® Credits: 2

MODERATOR
Timothy Amukele, MD, PhD
Johns Hopkins School of Medicine, Baltimore, MD

SESSION OVERVIEW: Historically, the practice of medicine has used race as a biologic variable in the diagnosis, management and treatment of patients. Race continues to be used as a factor in the practice of medicine and scientific research; however, it has become clear that race as a biologic variable is not supported by genomics. This session will cover the history of race-based medicine, the current health disparities in genomic medicine, and the future of genomics research.

INTENDED AUDIENCE: This session is intended for clinicians, pathologists, laboratory directors, clinical chemists, fellows and trainees, medical technologists, and research scientists. Anyone involved in patient care, research and development, healthcare management, or health policy will benefit.

LEARNING OBJECTIVES: After this session, participants will be able to:

1. Appreciate human biologic diversity and its implications for evidence-based medicine.
2. Understand how statistical approaches inform hypotheses about essential differences between racial/ethnic groups.
3. Identify how ethnicity influences genetic risk.
4. Avoid common errors in clinical decision making based on misunderstandings of genetics.
5. Understand some of the emerging clinical areas in which genomic medicine is being implemented.

SPEAKERS

Foundations and Consequences of Race-Based Medicine: Primum Non Nocere
Jay Kaufman, PhD
McGill University, Montreal, Canada

Health Care Disparities Despite Best Intentions in the Genomic Era
Isaac Kohane, MD, PhD
Harvard University, Boston, MA

The Human Genome Project Was Just the Beginning: Research at "The Forefront of Genomics"
Eric Green, MD, PhD
National Human Genome Research Institute, Bethesda, MD

SPECIAL SESSION

4:30pm–6:00pm
Room: Ballroom ABC

2019 AACC Disruptive Technology Award Competition

12002
Presentation Level: **BASIC** | ACCENT® Credits: 1.5

Supported by LabCorp

SESSION OVERVIEW: The Disruptive Technology Award Competition searches for the next innovative testing solution that will improve patient care through diagnostic performance or access to high-quality testing. It provides an opportunity for early to mid-stage start-ups in the medical device, diagnostic, or digital health/health IT spaces to showcase their technology and present to a large audience and a panel of judges. Three finalists will present lectures showing detailed data supporting the performance of their novel development. They will be judged for clinical validity, patient impact, market opportunity, business model, competitive analysis, IP strength, regulatory plan, team strength and stage of development.

INTENDED AUDIENCE: This session is intended for clinical chemists, IVD industry scientists, laboratory directors, laboratory technologists, medical technologists and pathologists.

LEARNING OBJECTIVES: After this session, participants will be able to:

1. Describe and evaluate the latest advances in medical technologies.
2. Assess the technology level readiness of attractive innovations.
3. Assess what investors and strategic partners in this field are looking for from these ventures.

JUDGES:

Mary Amor
Head Ventures & Business Development, Siemens Healthineers, New York, NY

Kelly Chun
Vice President & Scientific Director, Specialty Medicine, Laboratory Corporation of America, Calabasas, CA

Terry Fetterhoff
Senior Director, Technology Management, Head, U.S. Chief Technology Office, Hoffmann-La Roche, Inc., Pleasanton, CA

Scott Garrett
Senior Operating Partner, Water Street Healthcare Partners, Chicago, IL

Evan Norton
Divisional Vice President and Director of Abbott Ventures, Abbott Laboratories, Chicago, IL

FINALISTS:

Tim Sweeney, MD, PhD
Inflammatix, Burlingame, CA

Athurva Gore, PhD
Singlera Genomics, La Jolla, CA

Avishay Bransky, PhD
PixCell Medical Ltd., Yokneam Ilit, Israel

TUESDAY AUGUST 6

PLENARY & SCIENTIFIC SESSIONS

TUESDAY | AUGUST 6

PLENARY SESSION

Using Biomarkers to Tailor Treatment for Breast Cancer

Virginia Kaklamani, MD, DSc.
UT Health San Antonio MD Anderson Cancer Center, San Antonio, TX

8:45am–10:15am
Room: Ballroom ABC

13001
Presentation Level: **BASIC** | ACCENT® Credits: 1

SESSION OVERVIEW: Treatment of breast cancer has evolved in the past several years. The estrogen receptor has been used to select patients who are candidates for endocrine therapy. Genomic assays are currently being used to select patients who may not benefit from chemotherapy in the early-stage setting. Markers such as PIK3CA mutations, PD-L1 staining and ESR1 mutations select patients who may benefit from targeted therapies or may have tumors resistant to other therapies. Breast cancer evolves, and this evolution leads to emergence of resistance.

INTENDED AUDIENCE: This session is intended for pathologists, lab directors, endocrinologists, clinical chemists, technologists, physicians, and IVD industry scientists with interests in breast cancer and breast cancer testing and therapy.

LEARNING OBJECTIVES: After this session, participants will be able to:

1. Understand the role of genomic assays for breast cancer prediction and prognosis.
2. Understand the role of targeted endocrine therapy.
3. Understand novel agents for triple negative breast cancer.

TUESDAY | AUGUST 6

T TICKET Registration fees apply for each course.

ROUNDTABLE SESSIONS

7:30am–8:30am (40000 Series) or 12:30pm–1:30pm (50000 Series)

Roundtable sessions are presented twice daily. Attendance is limited to 10 participants per session. Advance registration and session fees are required. AACC does **not** provide meals for these sessions. You will be able to purchase your own food in the convention center prior to the session.

ACCENT® Credit: 1.0 (per session) unless otherwise noted in the mobile app, or at www.2019aacc.org | ACC, Ballroom DE

TITLE	SESSION # AM	SESSION # PM	SPEAKER	LEVEL
Challenges of Quality Control in Modern Analytical Systems	43101	53201	**Oswald Sonntag,** PhD, Sonntag, Eichenau, Germany	BASIC
Artificial Intelligence and Data Science in Laboratory Medicine: Perspectives and Challenges	43102	53202	**Damien Gruson,** PhD, Cliniques Universitaires Saint-Luc, Kraainem, Belgium	INTERMEDIATE
Serum Proteins following Autologous Hematopoietic Stem Cell Transplantation	43103	53203	**Gurmukh Singh,** MD, PhD, MBA, Augusta University Medical Center Inc., Augusta, GA	ADVANCED
Take Uncertainty Estimation into Your Own Hands with a New NIST Statistical Application	43105	53205	**Johanna Camara,** PhD, NIST, Gaithersburg, MD	BASIC
Can You Substitute Diesel with Gas in Your Car? The Story of Active Vitamin B12 and Total Vitamin B12	43106	53206	**Barnali Das,** MD, Kokilaben Dhirubhai Ambani Hospital, Mumbai, India	BASIC
Utility and Challenge of Intra-Operative Parathyroid Hormone Assays	43107	53207	**Jieli Li,** MD, PhD, MD Anderson Cancer Center, Houston, TX	BASIC
Perspectives to Improve Clinically Relevant Intra-Individual Variability in Intact PTH Immunoassay Results from Patients on Dialysis	43108	53208	**Hana Klassen Vakili,** PhD, University of Texas Southwestern Medical Center, Dallas, TX	INTERMEDIATE
Rule-Based Strategies for Laboratory Utilization Stewardship	43109	53209	**Ron Schifman,** MD, Southern Arizona VA Healthcare System, Tucson, AZ	INTERMEDIATE
Optimizing Testing for Transgender Patients	43111	53211	**Grace Kroner,** PhD, University of Utah/ARUP Laboratories, Salt Lake City, UT	BASIC
Let's Make It Easier to Get Things Right: Controlling Preanalytical Variation in Laboratory Testing	43112	53212	**Emily Garnett,** PhD, Baylor College of Medicine, Houston, TX	BASIC
Von Willebrand Disease: Laboratory Investigation and Clinical Correlation *Developed in cooperation with Hematology and Coagulation Division*	43113	53213	**John Mitsios,** PhD, BioReference Laboratories, Elmwood Park, NJ	INTERMEDIATE
Effective Clinical Decision Making through Use of Probability Theory	43114	53214	**Paul Johnson,** MPhD, DABCC, MT (ASCP), SUNY Upstate Medical University, Syracuse, NY	BASIC
Non-Invasive Prenatal Testing: Utilization of Cell-Free DNA in Fetal Aneuploidy Screening and Beyond	43115	53215	**Anu Maharjan,** PhD, University of Utah, Salt Lake City, UT	BASIC
Preeclampsia Screening and Diagnosis: A Novel Approach	43116	53216	**Saswati Das,** MD, Ram Manohar Lohia Hospital, Delhi, India	INTERMEDIATE
Current Methods in Toxicology: What Approach Should My Lab Use for Urine Drug Testing?	43117	53217	**Melissa Budelier,** PhD, Washington University in St. Louis, St. Louis, MO	BASIC
ANA Testing: The Renaissance of Indirect Immunofluorescence Assay (IFA)	43120	53220	**Vincent Ricchiuti,** PhD, LabCorp, Dublin, OH	INTERMEDIATE
Emerging Trends in Glomerular Filtration Rate Measurements for Kidney Transplant Evaluation	43121	53221	**Rongrong Huang,** PhD, Houston Methodist Hospital, Houston, TX	BASIC
The CDC Vitamin D Standardization-Certification Program (CDC VDSCP)—Improving the Clinical Measurement of Total 25-Hydroxyvitamin D	43122	53222	**Otoe Sugahara,** PhD, Centers for Disease Control and Prevention, Atlanta, GA	INTERMEDIATE
The CDC Hormone Standardization (HoSt) Program—Improving Clinical Measurements of Testosterone and Estradiol	43123	53223	**Krista Poynter,** PhD, Centers for Disease Control and Prevention, Atlanta, GA	INTERMEDIATE
Assay Interference by Topical Pharmaceuticals: Challenges in Identifying and Eliminating Contaminants in the Laboratory Workspace	43124	53224	**Jonathan Genzen,** MD, PhD, University of Utah/ ARUP Laboratories, Salt Lake City, UT	BASIC
Moving towards ISO: Hospital Accreditation Differences between DNV and the Joint Commission	43125	53225	**Emily Ryan,** MSc, PhD, DABCC, The Medical Center Navicent Health, Macon, GA	BASIC
Thyroid Testing During Pregnancy: Current Recommendations and Pitfalls	43126	53226	**Aaron Geno,** PhD, Dartmouth-Hitchcock Medical Center, Lebanon, NH	BASIC
Copeptin and Its Role in the Assessment of Water Balance and Cardiac Disorders	43127	53227	**Joshua Bornhorst,** PhD, DABCC, Mayo Clinic, Rochester, MN	INTERMEDIATE
Estimating LDL Equations: Time to Ditch Friedewald?	43128	53228	**Joe El-Khoury,** PhD, DABCC, FAACC, Yale University, New Haven, CT	INTERMEDIATE
Innovative, High-Throughput Methods to Identify Novel Cancer Metabolites	43129	53229	**Andria Denmon,** PhD, Fullerton College, Fullerton, CA	ADVANCED
Macromolecules: Big Complexes That Cause Big Problems	43130	53230	**Sara Wyness,** ASCP, ARUP Laboratories, Salt Lake City, UT	BASIC
Quality Challenges for Global Laboratory Medicine	43131	53231	**Praveen Sharma,** PhD, All India Institute Of Medical Sciences, Jodhpur, India	BASIC
The Use and Misuse of Procalcitonin in Clinical Practice	43132	53232	**Nikolina Babic,** PhD, Medical University of South Carolina, Charleston, SC	BASIC
Regulatory and Ethical Considerations for Computational Pathology Data Use *Developed in cooperation with Industry Division*	43133	53233	**David McClintock,** MD, Michigan Medicine, Ann Arbor, MI	BASIC
The Electronic Health Record and Transgender Care *Developed in cooperation with Informatics Division*	43134	53234	**Sharon Geaghan,** MD, FRCP(c), ABP Informatics, Stanford University, Menlo Park, CA	BASIC
Detecting Small-Molecule Analytes in Oral Fluid by LC-MS/MS: Matrix-Specific Factors to Consider for Assay Development	43135	53235	**Adina Badea,** PhD, UCSF/SFGH, San Francisco, CA	BASIC

TUESDAY | AUGUST 6

MEET THE EXPERT

10:30am–11:30 am

Using Biomarkers to Tailor Treatment for Breast Cancer

63101
Room: 210B

Presentation Level: **BASIC**
ACCENT® Credits: 1

SESSION OVERVIEW: This session will provide an excellent opportunity for attendees to meet with Dr. Kaklamani in a more intimate setting and listen to her discuss her talk, "Using Biomarkers to Tailor Treatment for Breast Cancer."

INTENDED AUDIENCE: This session is intended for pathologists, lab directors, endocrinologists, clinical chemists, technologists, physicians, and IVD industry scientists with interests in breast cancer and breast cancer testing and therapy.

LEARNING OBJECTIVE: After this session, participants will be able to:

1. Understand the role of genomic assays for breast cancer prediction and prognosis.
2. Understand the role of targeted endocrine therapy.
3. Understand novel agents for triple negative breast cancer.

SPEAKER
Virginia Kaklamani, MD, DSc.
UT Health San Antonio MD Anderson Cancer Center, San Antonio, TX

SCIENTIFIC SESSIONS

MORNING

10:30am-12:00pm

Relationships of Fructosamine, Glycated Albumin, and 1,5-Anhydroglucitol to Hyperglycemia: Pros and Cons for Use as Adjunct Markers in Management of Diabetes

33101
Room: 204A

Presentation Level: **INTERMEDIATE**
ACCENT® Credits: 1.5

MODERATOR/SPEAKER
Douglas Stickle, PhD, DABCC
Jefferson University Hospital, Philadelphia, PA

SESSION OVERVIEW: Episodic hyperglycemia is known to be a risk factor for complications of diabetes beyond that of average glucose. Plasma concentrations of fructosamine, glycated albumin, and 1,5-anhydroglucitol have all been touted as markers for episodic hyperglycemia. This session will discuss pros and cons of these markers with respect to clinical utilization in management of diabetes. We will review the physiology of the relationships of these markers to hyperglycemia, with comparison/contrast to hemoglobin A1c. We will discuss current literature and claims for use of these markers, current recommendations and practice in use of these markers and the potential future uses.

INTENDED AUDIENCE: This session is intended for pathologists, lab directors, technologists and physicians who are involved in measurement or clinical use of hyperglycemic markers.

LEARNING OBJECTIVES: After this session, participants will be able to:

1. List markers associated with hyperglycemia, supplemental to hemoglobin A1c.
2. Describe the physiological basis of the relationship of these markers to hyperglycemia.
3. Explain the limitations of these markers with respect to identification of episodic hyperglycemia.
4. Describe current recommendations and clinical practice in use of these markers.
5. Discuss anticipated future uses of these markers in diabetes management.

SPEAKERS
Relationships of Fructosamine, Glycated Albumin, and 1,5-Anhydroglucitol to Hyperglycemia: Comparisons to A1c
Douglas Stickle, PhD, DABCC
Jefferson University Hospital, Philadelphia, PA

Clinical Perspectives on Use of Fructosamine, Glycated Albumin, and 1,5-Anhydroglucitol in Management of Diabetes
Kathleen Dungan, MD, MPH
Ohio State University, Columbus, OH

10:30am–12:00pm

Medicina de Laboratorio Basada en la Evidencia: Que es y Cómo Aplicarla a la Práctica Clínica (Evidence-Based Laboratory Medicine: What Is It and How to Use It in the Clinical Practice)

33102
Room: 208AB

Presentation Level: **INTERMEDIATE**
ACCENT® Credits: 1.5

MODERATOR/SPEAKER
Eugenio Zabaleta, PhD
OhioHealth Mansfield Hospital, Mansfield, OH

SESSION OVERVIEW: (This presentation will be presented in Spanish.) The most important objective of evidence-based medicine (EBM) is to improve and optimize clinical decision making by using the best evidence available. Since many clinical decisions are influenced by laboratory results, it is vital for laboratorians to be involved in the development of evidence-based clinical practices at their institutions. The unique opportunities and challenges regarding the application of EBM to laboratory medicine will be discussed at this session.

INTENDED AUDIENCE: This session is intended for pathologists, lab directors, clinical chemists and medical technologists.

LEARNING OBJECTIVES: After this session, participants will be able to:

1. Explicar la importancia de la medicina basada en la evidencia. (Explain the importance of evidence-based medicine.)
2. Describir las herramientas disponibles en la historias clínicas electrónicas para la implementación de la medicina basada en la evidencia. (Describe the tools available in the electronic health record to implement EBM.)
3. Discutir porque los bioquímicos clínicos deben ser incluidos en el desarrollo de las prácticas clínicas basadas en la evidencia. (Discuss why laboratorians should be included in developing evidence-based clinical practices.)

SPEAKERS
Historias Clínicas Electrónicas: Como Implementar Medicina de Laboratorio Basada en la Evidencia Exitosamente (Electronic Health Record: How to Implement EBM Successfully)
Eugenio Zabaleta, PhD
OhioHealth Mansfield Hospital, Mansfield, OH

Medicina de Laboratorio Basada en la Evidencia (Evidence-Based Laboratory Medicine)
Felix Fares Taie
Fares Taie Instituto de Análisis, Mar del Plata, Argentina



SCIENTIFIC SESSIONS

MORNING

10:30am–12:00pm

Chasing Lactate in Sepsis: What Does It Mean, How Do We Use It, and Should We Reduce the Bloodletting?

33103
Room: 201AB

Presentation Level: **BASIC**
ACCENT® Credits: 1.5

MODERATOR/SPEAKER
John Toffaletti, PhD, DABCC
Duke University Medical Center, Durham, NC

SESSION OVERVIEW: With the evolving SEP-1 guidelines for sepsis diagnosis and management, blood lactate measurements have become a valuable indicator of deficits in oxygen metabolism and mitochondrial function that occur in sepsis, and help guide appropriate therapy. An elevated or rising lactate may signal a need for more aggressive medical interventions such as administering fluids, red blood cells, vasoactive agents, cardiac inotropes, supplemental oxygen, and/or antibiotics. However, the frequency of lactate testing and the criterium of >2 mmol/L being "elevated" are controversial. With over 60,000 institution-wide lactate measurements reported per year and the SEP-1 guidelines calling for lactate measured at 3 and 6 hours after sepsis onset, understanding the clinical needs and significance of elevated blood lactates can promote optimal management of critically ill patients and ensure more judicious use of this laboratory test.

INTENDED AUDIENCE: This session is intended for laboratory scientists, pathologists, clinicians and persons from industry.

LEARNING OBJECTIVES: After this session, participants will be able to:

1. Describe the biochemistry of lactate, specifically the mechanisms related to increased generation in sepsis.
2. Describe the pre-analytical factors that can affect lactate concentrations when collecting and handling specimens of blood.
3. Review the new SEP-1 criteria for sepsis diagnosis and management and the opposing viewpoints on the clinical value of these new guidelines.
4. Describe how clinicians use lactate and adjuvant tests to evaluate and monitor patients for possible sepsis and other causes of increased lactate concentrations.
5. Develop protocols to ensure more judicious use of lactate testing that will reduce costs.

SPEAKERS

Lactate Basics: Minimizing Pre-Analytical Errors and the Mechanisms of Lactate Production in Sepsis
John Toffaletti, PhD, DABCC
Duke University Medical Center, Durham, NC

Testing Wisely: Clinical Use of Lactate and Adjuvant Tests to Guide Patient Management in Sepsis and How Recent Guidelines May Affect Test Utilization
Craig Rackley, MD, ABIM
Duke University Medical Center, Durham, NC

10:30am–12:00pm

Digital Medicine and the Connected Health Consumer: What You Need to Know

33104
Room: 206AB

Presentation Level: **BASIC**
ACCENT® Credits: 1.5

MODERATOR
T. Scott Isbell, PhD, DABCC, FAACC
Saint Louis University School of Medicine, St. Louis, MO

SESSION OVERVIEW: Technological innovations are potentially disruptive to laboratory testing and healthcare. Digital health is often described as the integration of digital technologies with healthcare that seeks to empower people to track their health, decrease inefficiencies, improve access, reduce costs, and increase the quality of care. Smartphones, wireless devices, and wearables provide the ability for consumers to monitor, analyze, report, and share fitness and health data via the internet. Social media allows consumers to network with one another, and compare wellness and information on health and disease states. Direct-to-consumer testing is also on the rise as consumers become more educated and proactive about their own health. Further, there is increased interest in the collection and commercialization of consumer and patient health data along with its subsequent mining for potential medical breakthroughs. This is an exciting time of advancement in our field, and its intersection with the public is unprecedented. As with all paradigm shifts, questions and debates arise, and there is a need to balance the hype and misconceptions with accurate and clear scientific information. This session will engage social media as a modality to moderate interactive discussions and guide dialogue among attendees.

INTENDED AUDIENCE: This session is intended for healthcare consumers, patients, clinical laboratory scientists, medical technologists, clinicians, pathologists, IVD industry scientists, medical directors, laboratory directors and clinical chemists.

LEARNING OBJECTIVES: After this session, participants will be able to:

1. Describe trends resulting from the emergence of digital medicine.
2. Discuss challenges and opportunities for laboratorians in the era of digital medicine.
3. Enhance experiences at professional meetings through engagement on Twitter.

SPEAKERS

Engaged and Empowered Patients: How Connectivity Is Advancing a Paradigm Shift in Medicine
Shannon Haymond, PhD, DABCC, FAACC
Lurie Children's Hospital of Chicago, Chicago, IL

The Quantified Self: How Patients Are Using Technology to Create a Personalized Digital Health Dashboard
David Grenache, PhD, DABCC, MT (ASCP)
Tricore Reference Laboratories, Albuquerque, NM

The Value of Laboratory Medicine in Improving the Patient Care Experience: A Clinician Stakeholder's Perspective
Michael Kanter, MD
Kaiser Permanente School of Medicine, Pasadena, CA

SCIENTIFIC SESSIONS

MORNING

10:30am–12:00pm

The Value Proposition: Actionable Strategies for Enhancing the Value of Laboratory Medicine

33105

Room: 207CD

Presentation Level: **INTERMEDIATE**

ACCENT® Credits: 1.5

MODERATOR

Robert Christenson, PhD, ABCC, FACB

University of Maryland School of Medicine, Baltimore, MD

Developed in cooperation with IFCC Committee for the Value Proposition in Laboratory Medicine (C-VPLM)

SESSION OVERVIEW: Laboratory medicine must shift from a volume-based service and commoditization to a value-based model of [Benefit or Outcome ÷ Cost], defined in terms of health outcomes, cost reductions, improved efficiencies and/or customer satisfaction. The value proposition framework will be articulated as a means for specifying unmet need(s), outcomes and monitoring metrics for analysis of benefits, costs and value. Ways for improving the laboratorian-stakeholder interface through actionable testing strategies in molecular oncology, and high-sensitivity cardiac troponin will be presented. The laboratory's role in improving the patient care experience will be discussed from a clinician's perspective.

INTENDED AUDIENCE: This session is intended for pathologists, laboratory directors, clinical chemistry professionals, managers at all levels, federal and state regulators, technologists, institutional leaders, IVD industry scientists, and industry leaders at all levels.

LEARNING OBJECTIVES: After this session, participants will be able to:

1. List five elements of the value proposition framework.
2. Explain how to determine value of laboratory medicine testing.
3. Describe effective tools for enhancing value and explain a relevant example.
4. Develop a value propositon for a laboratory medicine topic of interest to their organization.

SPEAKERS

What Is a Value Proposition? The Value of Implementing High-Sensitivity Cardiac Troponin in the Emergency Department
Robert Christenson, PhD, ABCC, FACB
University of Maryland School of Medicine, Baltimore, MD

Molecular Oncology: Challenges, Rewards and Value
Michael Oellerich, MD, FRCP, FAACC
University Medical Center of the George-August-University, Göttingen, Germany

10:30 am–12:00 pm

Integrating Laboratory Results to Increase Quality Care for Affected Newborns Identified through Newborn Screening: What Is the Optimal Workflow?

33106

Room: 205AB

Presentation Level: **BASIC**

ACCENT® Credits: 1.5

MODERATOR/SPEAKER

Veronica Luzzi, PhD, DABCC

Providence Regional Laboratories, Portland, OR

SESSION OVERVIEW: Newborn screening (NBS) is a state mandated public health program that uses laboratory testing to screen and diagnose disorders in newborns that can cause serious acute and chronic health problems. The complexity of this system makes it vulnerable to system failures, including delayed treatments, which can have devastating consequences. This session will provide an overview of the NBS system and provide insight into opportunities for improving delivery of care to this population of newborns.

INTENDED AUDIENCE: This session is intended for medical technologists, supervisors, laboratory directors, in-vitro diagnostic research and development scientists, and trainees.

LEARNING OBJECTIVES: After this session, participants will be able to:

1. Discuss the role of public health laboratories in newborn screening.
2. Explain the pathway of information for newborn screening lab orders, test results, follow-up protocols and coordination of care to affected infants.
3. Identify opportunities for and initiate quality improvement efforts in electronic data exchange for newborn screening.
4. Describe the relevance of delivering results in a timely and accurate manner to improve patient care in the context of newborn screening.

SPEAKERS

The Newborn Screening System from Specimen Collection to Delivery of Results
Mary Carayannopoulos, PhD, DABCC
Rutgers Robert Wood Johnson University Medical School, New Brunswick, NJ

Implementation of Health Information Technology Solutions to Improve Delivery of Newborn Screening Results to Care Providers
Veronica Luzzi, PhD, DABCC
Providence Regional Laboratories, Portland, OR

10:30am–12:00pm

Therapeutic Drug Monitoring in Alternative Specimens: Advantages, Pitfalls and Analytical Challenges

33107

Room: 204C

Presentation Level: **INTERMEDIATE**

ACCENT® Credits: 1.5

MODERATOR/SPEAKER

William Clarke, PhD, DABCC, FAACC

Johns Hopkins University School of Medicine, Baltimore, MD

SESSION OVERVIEW: Oral fluid is an appealing matrix for therapeutic drug monitoring (TDM) because specimen collection is non-invasive and measurement of drugs in this specimen-type represents pharmacologically active free drug concentrations. In addition, TDM using dried blood spots is also gaining popularity due to the ease of collection and shipping, as well as the development of automated methods for drug analysis in dried blood spots. Less popular matrices for TDM analysis include interstitial fluid, tears, sweat and nasal mucus. This session will discuss the advantages and pitfalls of using various alternative specimens for TDM, including analytical challenges.

INTENDED AUDIENCE: This session is intended for pathologists, clinical chemists, toxicologists and medical technologists.

LEARNING OBJECTIVES: After this session, participants will be able to:

1. Describe advantages and disadvantages of using alternative specimens for TDM.
2. List analytical challenges involved in TDM using alternative specimens.
3. Describe approaches to deal with interferences and other challenges with alternative specimens.

SPEAKERS

Therapeutic Drug Monitoring in Alternative Specimens: An Overview
Amitava Dasgupta, PhD, DABCC
University of Texas–Houston Medical School, Houston, TX

Analytical Approaches and Challenges for TDM Using Alternative Specimens
William Clarke, PhD, DABCC, FAACC
Johns Hopkins University School of Medicine, Baltimore, MD

10:30am–12:00pm

Impact of Hormones on Drug Testing: From the Bench to the Bedside

33108

Room: 207AB

Presentation Level: **INTERMEDIATE**

ACCENT® Credits: 1.5

MODERATOR/SPEAKER

Claire Knezevic, PhD, DABCC

Johns Hopkins Medical Institutes, Baltimore, MD

SESSION OVERVIEW: Synthetic and endogenous hormones are known to affect not only physiology but also the pharmacology and efficacy of various drugs. People ingest, inject, and absorb synthetic hormones for a variety of reasons, ranging from performance enhancement for sports; as gender-affirming hormonal therapies, contraception, and symptom relief (menopause/endometriosis); and to replace or supplement endogenous hormone production. This session will survey the ways in which synthetic hormones influence drug pharmacology and how this can impact the practice of medicine.

INTENDED AUDIENCE: This session is intended for laboratory directors, physicians, pharmacists and clinical laboratory scientists.

LEARNING OBJECTIVES: After this session, participants will be able to:

1. Identify scenarios in which exogenous hormonal use may occur.
2. Characterize the relationship between common hormonal contraceptives and therapeutic drug classes.
3. Describe the influence of gender-affirming hormonal therapies on therapeutic drug classes, including antiretrovirals.

SPEAKERS

Interactions between Common Hormonal Contraceptives and Prescription Drugs
Claire Knezevic, PhD, DABCC
Johns Hopkins Medical Institutes, Baltimore, MD

The Influence of Estrogen-Based Gender-Affirming Hormonal Therapies on Drug Concentrations
Mark Marzinke, PhD, DABCC
Johns Hopkins University School of Medicine, Baltimore, MD

Direct-to-Consumer Genetic Testing: Pros and Cons
Eric Topol, MD
Scripps Research Translational Institute, La Jolla, CA

TUESDAY | AUGUST 6

SCIENTIFIC SESSIONS

MORNING

10:30am-12:00pm

Clinical Chemistry's Hot Topics of 2019

33109
Room: 204B

Presentation Level: **INTERMEDIATE**
ACCENT® Credits: 1.5

MODERATOR
Nader Rifai, PhD
Children's Hospital, Boston, MA

SESSION OVERVIEW: Advancements in miniaturization technology have revolutionized near patient testing and have been the subjects of numerous highly cited articles published in *Clinical Chemistry* and will be discussed in this session.

INTENDED AUDIENCE: This session is intended for pathologists, laboratory directors, clinical chemists, molecular diagnostics specialists, technologists and IVD industry scientists.

LEARNING OBJECTIVES: After attending this session, participants will be able to:

1. Describe the application of microfluidics and microbeads in digital analysis of proteins and nucleic acids.
2. Describe the main advances in mass spectrometry that led to miniaturizing it to bring it closer to the patient and away from the clinical laboratory.

SPEAKERS

Microfluidics-Enabled Digital Biology: Counting Nucleic Acid and Protein Molecules
Michael Ramsey, PhD
The University of North Carolina at Chapel Hill, Chapel Hill, NC

Clinical Mass Spectrometry; Getting Closer to the Patient
Livia Schiavinato Eberlin, PhD
University of Texas at Austin, Austin, TX

10:30am–12:00pm

Challenges in the Diagnosis and Management of Polycystic Ovary Syndrome: Multifaceted Perspectives

33110
Room: 209AB

Presentation Level: **BASIC**
ACCENT® Credits: 1.5

MODERATOR
Joesph Wiencek, PhD
University of Virginia School of Medicine, Charlottesville, VA

Developed in cooperation with Endocrinology Division; Pediatric and Maternal-Fetal Division

SESSION OVERVIEW: Polycystic ovary syndrome (PCOS) is globally one of the most common endocrine-metabolic disorders and causes of female infertility. However, approximately two-thirds of women with PCOS report significant delays in establishing PCOS as the primary diagnosis and subsequent inadequate follow-up care. International evidence-based guidelines were recently developed to address some of these important challenges. In this session, we will highlight the recent guidelines and explore the evolving roles of patients, researchers, clinicians, laboratorians, and industry partners as they relate to advancing PCOS care. A panel including a physician, laboratorian, and patient advocate will provide balanced and unique perspectives into this complex disease.

INTENDED AUDIENCE: This session is intended for laboratory directors, trainees, IVD industry scientists, IVD regulatory bodies, clinical chemists, pathologists and technologists.

LEARNING OBJECTIVES: After this session, participants will be able to:

1. Describe the pathophysiology and diagnostic work-up of polycystic ovary syndrome (PCOS) from the perspective of the clinical expert.
2. Explain the importance of timely PCOS diagnosis.
3. Discuss the analytical aspects of diagnostic testing in the assessment of suspected PCOS.
4. Identify resources available for patients living with PCOS.

SPEAKERS

Polycystic Ovary Syndrome: The Clinical Perspective
Christopher McCartney, MD
University of Virginia, Charlottesville, VA

Polycystic Ovary Syndrome: Learning the Diagnostic Playbook
Joely Straseski, PhD, DABCC, MT (ASCP), FAACC
University of Utah & ARUP Laboratories, Salt Lake City, UT

The Patient-Centered Approach to Advancing PCOS Research and Care
Sasha Ottey, MHA, MT (ASCP)
PCOS Challenge: The National Polycystic Ovary Syndrome Association, Atlanta, GA

AFTERNOON

2:30pm–5:00pm

Breaking Down Gender from Cis to Trans

33216
Room: 207AB

Presentation Level: **BASIC**
ACCENT® Credits: 2.5

MODERATOR/SPEAKER
Dina Greene, PhD, DABCC
Kaiser Permanente Washington, Renton, WA

SESSION OVERVIEW: Gender-affirming hormones are standard of care for transgender people who seek to medically transition. Sex hormones influence chemistry, hematology, and microbiology results. Our team has established transgender-specific reference intervals and performed pioneering investigations into the vaginal flora of transgender men and women. This session will empower the laboratory with the tools necessary for serving the transgender population.

INTENDED AUDIENCE: This session is intended for any individual who contributes to the laboratory profession.

LEARNING OBJECTIVES: After this session, participants will be able to:

1. Define sex and gender.
2. List which reference intervals should be used for transgender men and women.
3. Compare the vaginal flora between cisgender women, transgender men, and transgender women.
4. Diagram how EMR and LIS can be configured to include gender diversity.

SPEAKERS

Establishment of Prospective Hematology and Chemistry Reference Intervals for Transgender Men and Women
Dina Greene, PhD, DABCC
Kaiser Permanente Washington, Renton, WA

The Vaginal Flora of Transgender Men and Women
Gabrielle Winston-McPherson, PhD
Henry Ford Health System, Detroit, MI

A Trans Inclusive Approach to EMR/LIS Reporting
Martha Lyon, MSc, PhD, DABCC, FAACC
Royal University Hospital, Saskatoon, Canada

2:30pm-5:00pm

Making the Quantum Leap in Clinical Chemistry Teaching

33217
Room: 209AB

Presentation Level: **BASIC**
ACCENT® Credits: 2.5

MODERATOR/SPEAKER
Joesph Wiencek, PhD
University of Virginia School of Medicine, Charlottesville, VA

Developed in cooperation with Society for Young Clinical Laboratorians

SESSION OVERVIEW: Recent survey results show pathology residents typically do not have positive attitudes toward clinical chemistry. To possibly change this perspective, there needs to be a dynamic shift in the way we teach clinical chemistry. This scientific session will highlight current challenges, practical examples and medical education tools immediately available for clinical chemistry educators.

INTENDED AUDIENCE: This session is intended for IVD industry scientists, regulators of IVDs, laboratory directors, clinical chemists, technologists and anyone with an interest in teaching clinical chemistry.

LEARNING OBJECTIVES: After this session, participants will be able to:

1. Identify current challenges in teaching clinical chemistry.
2. Discuss current active learning strategies being utilized in medical education.
3. Highlight next-generation educational techniques and approaches to teach clinical chemistry.
4. Identify free educational resources that could be implemented immediately in clinical chemistry sessions.

SPEAKERS

Turning the Tide in Clinical Chemistry Education
Joesph Wiencek, PhD
University of Virginia School of Medicine, Charlottesville, VA

Clinical Chemistry Residency Training Program at the Oklahoma University Medical Center
Kenneth Blick, PhD
University of Oklahoma Health Sciences Center, Oklahoma City, OK

Teaching Clinical Chemistry through Diagnostic Management Team Leadership Principles
Michael Laposata, MD, PhD
University of Texas Medical Branch Galveston, Galveston, TX

TUESDAY | AUGUST 6

SCIENTIFIC SESSIONS

AFTERNOON

2:30pm–5:00pm

Worldwide Challenges in POCT—A Focus on Molecular POCT

33218

Room: 210C

Presentation Level: **INTERMEDIATE**

ACCENT® Credits: 2.5

MODERATOR/SPEAKER

James Nichols, PhD, DABCC, FAACC
Vanderbilt University Medical Center, Nashville, TN

Developed in cooperation with Critical and Point-of-Care Testing Division

SESSION OVERVIEW: Point-of-care testing (POCT) for infectious diseases has seen recent advancements in accuracy from the development of novel molecular methods. This session will cover issues specific to POCT implementation, management and methodologies that are applicable worldwide.

INTENDED AUDIENCE: This session is intended for laboratory directors, medical technologists, laboratory supervisors/managers, industry research, development and sales, and government and laboratory accreditation staff and inspectors.

LEARNING OBJECTIVES: After this session, participants will be able to:

1. Understand the performance differences between rapid antigen and molecular point-of-care testing for infectious diseases.
2. Describe benefits and challenges for POC test implementation within the practice.
3. Discuss guidelines and best practices from Europe and the United States for POC testing.

SPEAKERS

Solving the Challenges of POCT: People, Sites and Devices
James Nichols, PhD, DABCC, FAACC
Vanderbilt University Medical Center, Nashville, TN

Molecular Diagnostics at the POC: Overview and Perspectives from the United States with a Focus on Performance and Implementation in an End-User Express Care Clinic Setting
Leslie Donato, PhD, DABCC
Mayo Clinic, Rochester, MN

European Perspective for POCT—Challenges for Implementation in ED and ICU and New Guidelines and Best Practices from Europe
Peter Luppa, MD
Klinikum Rechts der Isar, Munich, Germany

2:30pm–5:00pm

Interactive Pain Management Case Studies: Clinician and Laboratory Perspectives

33219

Room: 204C

Presentation Level: **INTERMEDIATE**

ACCENT® Credits: 2.5

MODERATOR/SPEAKER

Paul Jannetto, PhD, DABCC, MT (ASCP), FAACC
Mayo Clinic, Rochester, MN

SESSION OVERVIEW: Pain is one of the most common reasons people seek care. Addiction and diversion of pain management medications is also a growing problem. Therefore, professional organizations and published recommendations include the use of laboratory tests, specifically urine drug testing. As a result, physicians are using a variety of urine drug tests to provide objective measures to effectively manage pain patients, assess compliance, and detect diversion. This session will discuss the advantages and limitations of these assays and use interactive case studies to directly apply this knowledge to correctly interpret patient test results using live interactions between a clinician and laboratorians.

INTENDED AUDIENCE: This session is intended for clinicians, pathologists, lab directors, clinical chemists, technologists, IVD industry scientists, residents and fellows.

LEARNING OBJECTIVES: After this session, participants will be able to:

1. Successfully integrate urine drug testing to support the treatment and monitoring of pain management patients.
2. Describe the limitations of various screening and quantitative urine drug tests.
3. Correctly interpret urine drug testing results from pain management patients.

SPEAKERS

Interactive Pain Management Case Studies: Understanding Metabolic Profiles, Drug Impurities, and Adulterated Urine Samples
Paul Jannetto, PhD, DABCC, MT (ASCP), FAACC
Mayo Clinic, Rochester, MN

Clinical Utilty and Limitations of Qualitative and Quantitatve Laboratory Testing for Pain Management
He Sarina Yang, PhD, DABCC, FACB
Quest Diagnostics, Valencia, CA

Interactive Pain Management Case Studies: Correctly Interpreting Urine Drug Test Results
Nancy Bratanow, MD
Midwest Comprehensive Pain Care, Milwaukee, WI

2:30pm–5:00pm

Learning from Predictions: What We Need to Know about Machine Learning

33220

Room: 208AB

Presentation Level: **BASIC**

ACCENT® Credits: 2.5

MODERATOR/SPEAKER

Min Yu, MD, PhD, DABCC
University of Kentucky, Lexington, KY

SESSION OVERVIEW: This session will provide a general overview of machine learning (ML) in laboratory medicine, focusing initially on key concepts, advantages, and opportunities. The second segment will explore the potential of ML to optimize the value of laboratory data in patient care. The last segment will address strategies for validating ML systems and monitoring their performance over time.

INTENDED AUDIENCE: This session is intended for pathologists, lab directors, clinical chemists, technologists and IVD industry scientists.

LEARNING OBJECTIVES: After this session, participants will be able to:

1. Recognize the strengths and limitations of ML techniques.
2. State the current landscape of ML applications in the laboratory medicine field.
3. Take advantage of ML, and identify projects and fields where ML approaches can facilitate optimal laboratory and clinical practice.
4. Plan initial and ongoing performance assessment programs for systems that incorporate ML.

SPEAKERS

Laboratory Intelligence: Embracing Machine Learning
Min Yu, MD, PhD, DABCC
University of Kentucky, Lexington, KY

Machine Learning Approaches towards Effective Laboratory Test Utilization–Clinician Perspective
Jonathan Chen, MD, PhD
Stanford Department of Medicine, Stanford, CA

Validation and Performance Monitoring of Machine Learning Systems
James Harrison, MD, PhD
University of Virginia, Charlottesville, VA

2:30pm–5:00pm

Como Mantener la Alta Calidad de sus Resultados de Laboratorio (How to Maintain the High Quality of Your Laboratory Test Results)

33221

Room: 205AB

Presentation Level: **BASIC**

ACCENT® Credits: 2.5

MODERATOR/SPEAKER

Van Leung-Pineda, PhD, DABCC
Children's Healthcare of Atlanta, Atlanta, GA

Developed in cooperation with Latin American Working Group within AACC's Global Lab Quality Initiative

SESSION OVERVIEW: (This session will be presented in Spanish.) Laboratory methods and assays ideally demonstrate acceptable analytical performance throughout the test lifecycle (from test validation phase until its end of use in clinical practice). It is critical to implement strategies and tools to monitor the quality and method performance over time, which can identify analytical issues as they arise before negatively impacting patient results. This session will discuss three primary areas important to producing quality laboratory results, as well as strategies and tools that are complementary to monitoring the performance of a laboratory method. The quality monitoring and assurance topics will focus on lot-to-lot reagent variability, quality control, and proficiency testing.

INTENDED AUDIENCE: This session is intended for Spanish-speaking attendees, laboratory directors, medical technologists, supervisors, in-vitro diagnostic scientists, and laboratory medicine trainees/students.

LEARNING OBJECTIVES: After this session, participants will be able to:

1. Understand what concepts the reagent lot-to-lot, quality control and proficiency testing studies apply to.
2. Evaluate best practices to implement evaluation of between-reagent lot variation in the clinical laboratory.
3. Understand how to use laboratory data to implement better QC practices.
4. Learn to use PT testing to troubleshoot method problems.

SPEAKERS

Evaluacion de la Variacion Entre Lotes de Reactivo Siguiendo las Recomendaciones CLSI EP26-A (Evaluation of Reagent Lot Variation Following Recommendations from CLSI EP26-A)
Veronica Luzzi, PhD, DABCC
Providence Regional Laboratories, Portland, OR

Diseñando Buenas Estrategias Para el Uso Eficiente del Control Interno de Calidad (Designing Good Strategies for Effective Use of Internal Quality Control)
Van Leung-Pineda, PhD, DABCC
Children's Healthcare of Atlanta, Atlanta, GA

Como Solucionar Problemas de Metodo con Ensayos de Control de Calidad Externo (Aptitud) (How to Method Issues with Proficiency Testing Material)
Juan David Garcia, MBA
University of Miami-Houston, League City, TX

AFTERNOON

2:30pm–5:00pm

Micronutrient Testing for Nutritional Assessment

33222

Room: 207CD

Presentation Level: **BASIC**

ACCENT® Credits: 2.5

MODERATOR/SPEAKER

Sarah Hackenmueller, PhD, DABCC, FAACC

University of Wisconsin, Madison, WI

Developed in cooperation with Nutrition Division

SESSION OVERVIEW: This session will focus on the clinical impetus and utility of laboratory testing for various vitamins and trace elements. Clinical testing of micronutrients occurs as part of broad nutritional assessments, evaluation of suspected deficiencies or toxicity, and for monitoring of parenteral nutrition. Appropriate ordering of micronutrient and vitamin testing, as well as interpretation of the results, requires an understanding of micronutrient distribution in the body and selection of appropriate specimen types. This session will review aspects of micronutrient intake and absorption, test utilization, analytical methodologies, and limitations associated with these analytes. Attendees will gain insight and strategies to successfully manage requests for micronutrient testing.

INTENDED AUDIENCE: This session is intended for clinical chemists, laboratory directors, pathologists, laboratory scientists, laboratory managers and trainees.

LEARNING OBJECTIVES: After this session, participants will be able to:

1. Describe micronutrient intake, absorption, and distribution in the body.
2. Discuss laboratory testing for micronutrient evaluation.
3. Recognize the value and limitations of vitamin and trace element analysis and results.
4. Evaluate the clinical utility of micronutrient testing for particular patients.

SPEAKERS

Micronutrients: Physiology and Pathophysiology
Sarah Hackenmueller, PhD, DABCC, FAACC
University of Wisconsin, Madison, WI

Vitamin Testing: Strategies for Success
Elizabeth Frank, PhD, DABCC, MT (ASCP), FAACC
ARUP Laboratories/University of Utah, Salt Lake City, UT

Trace Elements: Testing for Nutrition and Toxicity
Vilte Barakauskas, PhD, DABCC, FCACB
BCCWH, Vancouver, Canada

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2:30pm–5:00pm

Quality Indicators that Determine the Performance of NGS Assays in Precision Oncology

33223

Room: 201AB

Presentation Level: **INTERMEDIATE**

ACCENT® Credits: 2.5

MODERATOR/SPEAKER

Helen Fernandes, PhD, ABB, DABCC

Columbia University Medical Center, PGM Laboratory, New York, NY

Developed in cooperation with Molecular Pathology Division

SESSION OVERVIEW: Next-generation sequencing (NGS) oncology assays characterize multiple genomic variants including single nucleotide variants (SNV), indels, fusions, copy number alterations and other measures such as microsatellite instability (MSI) and tumor mutation burden (TMB). The analytical performance of NGS assays are complicated by variables such as tissue fixation, cellularity, quantity, quality and heterogeneity. As the breadth of information interrogated in tumors increases, the need to select QA/QC metrics that ensure optimal functioning at multiple levels poses challenges. QA/QC metrics should ensure that the sequencing data obtained is reliable for interpretation of variants in clinical reports. Quality indicators can be customized, depending on the type of NGS assay, to ensure optimal performance and include, but are not limited to, specimen selection, sequencing qualifiers, inter-assay variability, control monitoring and variant classification. This session will help identify the QC metrics to address specific indications queried in NGS assays. Specific examples will be utilized to demonstrate how QC monitoring can identify performance and trends through the NGS process.

INTENDED AUDIENCE: This session is intended for laboratory directors, supervisors, laboratory technologists, pathologists, scientists, laboratory administrators and industry personnel.

LEARNING OBJECTIVES: After this session, participants will be able to:

1. Recognize that QC metrics can vary among different genomic assays.
2. Select meaningful quality indicators for individual NGS assays.
3. Identify trends that can inform assay performance.

SPEAKERS

Precision Medicine: High-Complexity Testing for the Management of the Cancer Patient
Gregory Tsongalis, PhD, MSc, FAACC
Dartmouth-Hitchcock Health, Lebanon, NH

Development and Implementation of Quality Control Programs for NGS Based Assays
Andrea Ferreira-Gonzalez, PhD
Virginia Commonwealth University, Richmond, VA

Using Quality Indicators to Understand Trends and Deviations in Genomic Assays
Helen Fernandes, PhD, ABB, DABCC
Columbia University Medical Center, PGM Laboratory, New York, NY

SCIENTIFIC SESSIONS

AFTERNOON

2:30pm–5:00pm

Institutional Laboratory Stewardship Programs: Best Practices, Interventions, Informatics

33224
Room: 206AB

Presentation Level: **INTERMEDIATE**
ACCENT® Credits: 2.5

MODERATOR/SPEAKER
Jing Cao, PhD, DABCC, FAACC
Texas Children's Hospital, Houston, TX

Developed in cooperation with Management Sciences and Patient Safety Division

SESSION OVERVIEW: Appropriate test utilization is an important part of patient care, and laboratory stewardship programs are becoming increasingly necessary as the availability and costs of laboratory testing increase. There are many approaches to improving laboratory test utilization, including systematic changes to electronic health records, computerized provider order entry systems, stakeholder engagement, provider feedback, and proactive review of test requests. This session will describe a framework of national guidelines for laboratory stewardship programs, discuss examples of clinical impact of stewardship programs on academic medical center hospitals, and illustrate steps for integration and prioritization of informatics resources at the institution level.

INTENDED AUDIENCE: This session is intended for laboratory professionals including lab directors, lab managers and supervisors, scientists, and technologists, as well as IVD professionals with an interest in laboratory test utilization.

LEARNING OBJECTIVES: After this session, participants will be able to:

1. Identify the four key areas required in implementing a successful laboratory stewardship program.
2. Compare the differences in patient care before and after test utilization initiatives.
3. Describe successful strategies for optimizing computerized provider order entry systems and alerts to guide appropriate laboratory stewardship.

SPEAKERS

When the Going Gets Tough, Get Guidelines: National Guidelines to Elevate Laboratory Stewardship Programs
Jane Dickerson, PhD, DABCC
Seattle Children's Hospital, Seattle, WA

Test Utilization Strategies: Clinical Impact
Sridevi Devaraj, PhD, DABCC, FAACC, FRSC
Texas Children's Hospital and Baylor Medical Center, Houston, TX

Informatics Resources to Implement Effective Lab Test Stewardship Programs
Lee Schroeder, MD, PhD
University of Michigan, Ann Arbor, MI

Laboratory Stewardship Practices in Integrated Healthcare Systems
Jing Cao, PhD, DABCC, FAACC
Texas Children's Hospital, Houston, TX

2:30pm–5:00pm

Immunogenicity of Therapeutic Monoclonal Antibodies: Analytical and Clinical Perspectives

33225
Room: 210A

Presentation Level: **BASIC**
ACCENT® Credits: 2.5

MODERATOR/SPEAKER
Maria Alice Willrich, MSc, PhD, DABCC, FAACC
Mayo Clinic, Rochester, MN

Developed in cooperation with Clinical and Diagnostic Immunology Division

SESSION OVERVIEW: Immunogenicity is the property of a substance to illicit an immune response. Immmunogenicity to monoclonal antibody-based therapies may lead to production of anti-drug antibodies (ADAs) and inactivation of the therapeutic effects of the drug. Analytical methods and challenges, pharmacological and clinical evidence of their impact, and controversies in the interpretation of test results in the context of ADAs will be discussed.

INTENDED AUDIENCE: This session is intended for clinical laboratory directors and pathologists, clinical technologists, IVD manufacturers, and pharmaceutical scientists.

LEARNING OBJECTIVES: After this session, participants will be able to:

1. Explain the clinical impact of immunogenicity for therapeutic monoclonal antibodies.
2. Describe methods available for the assessment of monoclonal antibody therapeutics and anti-drug antibodies.
3. Discuss the challenges with test result interpretations in the setting of immunogenicity.

SPEAKERS

Not All Anti-Drug Antibodies Are Created Equal: Impact on Drug Pharmacokinetics and Clinical Outcomes
Niels Vande Casteele, PharmD, PhD
University of California, San Diego, La Jolla, CA

Methodologies used in the Clinical Laboratory for Assessment of Anti-Drug Antibodies and Therapeutic Monoclonal Antibodies
Maria Alice Willrich, MSc, PhD, DABCC, FAACC
Mayo Clinic, Rochester, MN

Controversies in Interpretation of Anti-Drug Antibodies Testing and Drug Quantitation Assays for Biologics
Melissa Snyder, PhD
Mayo Foundation, Rochester, MN

2:30pm–5:00pm

Autoantibody Testing in Autoimmune Neurological Diseases

33226
Room: 210B

Presentation Level: **BASIC**
ACCENT® Credits: 2.5

MODERATOR/SPEAKER
John Mills, PhD, DABMGG, DABCC
Mayo Clinic, Rochester, MN

SESSION OVERVIEW: Autoimmune neurology is an emerging subspecialty field with a focus on management of patients with immune-mediated diseases of the nervous system. Recent evidence suggests that autoimmune neurological diseases are far more common than traditionally believed. With the increased awareness of these diseases and identification of a growing number of disease-associated autoantibody biomarkers, there is an increased demand for autoantibody testing. This session will provide an overview of autoimmune neurological disorders, antibody-disease associations, current testing methodologies, antibody testing profiles and efforts to improve test utilization.

INTENDED AUDIENCE: This session is intended for laboratory directors, pathologists, clinicians, clinical chemists, supervisors, medical technologists, residents/fellows, IVD industry scientists, and other healthcare professionals.

LEARNING OBJECTIVES: After this session, participants will be able to:

1. Identify clinical features associated with autoimmune neurological conditions.
2. Describe the testing methodologies currently used for detection of autoantibodies targeting neural antigens.
3. Describe strategies to improve test utilization.

SPEAKERS

Autoimmune Neurology: Paraneoplastic Disorders and Beyond
Andrew McKeon, MD
Mayo Clinic, Rochester, MN

Laboratory Methods for Detection of Neural Autoantibodies
John Mills, PhD, DABMGG, DABCC
Mayo Clinic, Rochester, MN

Should I Approve This? Tackling an Increased Demand for Autoimmune Neurology Antibody Panels
Allison Chambliss, PhD, DABCC, FAACC
Keck School of Medicine of USC, Los Angeles, CA

AFTERNOON

2:30pm–5:00pm

Storytelling with R: Application Showcase

33227

Room: 204B

Presentation Level: **BASIC**

ACCENT® Credits: 2.5

MODERATOR/SPEAKER

Shannon Haymond, PhD, DABCC, FAACC

Lurie Children's Hospital of Chicago, Chicago, IL

Developed in cooperation with Informatics Division

SESSION OVERVIEW: This session will demonstrate the versatility and power of the R statistical programming language in application to clinical laboratory medicine by showcasing tools that have been built and implemented by the speakers. Applications will focus on utilizing R for data reporting and visualization.

INTENDED AUDIENCE: This session is intended for pathologists, laboratory directors, clinical chemists, medical technologists and laboratory administrators.

LEARNING OBJECTIVES: After this session, participants will be able to:

1. Describe ways that R can be used for creating automated and reproducible data analysis workflows in clinical laboratories.
2. Discuss the process for building an interactive application or dashboard using R.
3. Evaluate and solve clinical laboratory problems using computational thinking.

SPEAKERS

Enhancing Management of Laboratory Operations with R
Stephen Master, MD, PhD, FAACC
Children's Hospital of Philadelphia, Philadelphia, PA

Automated Reporting of Key Laboratory Performance Indicators Using R
Janet Simons, MD
Providence Health Care, Vancouver, Canada

Monitoring Mass Spectrometry System Performance Using R Dashboards
Shannon Haymond, PhD, DABCC, FAACC
Lurie Children's Hospital of Chicago, Chicago, IL

Set It and Forget it: Enabling Dashboards Using Database Connections in R
Patrick Mathias, MD, PhD
University of Washington School of Medicine, Seattle, WA

Comparing Different Statistical Approaches for Reference Intervals Using R Shiny
Dustin Bunch, PhD
Yale-New Haven Hospital, New Haven, CT

Reproducible Research and Manuscript Preparation Using R and the Bookdown Package
Daniel Holmes, MD
University of British Columbia, British Columbia, Canada

2:30pm–5:00pm

Clinical Endocrine Assays: What Endocrinologists Will Ask You

33228

Room: 204A

Presentation Level: **INTERMEDIATE**

ACCENT® Credits: 2.5

MODERATOR

David Sacks, MD

National Institutes of Health, Bethesda, MD

Developed in cooperation with Endocrine Society

SESSION OVERVIEW: Endocrinologists frequently contact the clinical lab for guidance on test selection and interpretation. An informal survey of clinicians attending the Endocrine Society Annual Conference identified some common areas of confusion, including biochemical markers of bone turnover in osteoporosis, interpretation of ACTH and cortisol assay results in challenging patients, and clinical evaluation of vitamin D metabolite assay results. This symposium will address these topics to prepare clinical laboratorians to answer the questions in these areas.

INTENDED AUDIENCE: This session is intended for pathologists, laboratory directors, clinical chemists, technologists, IVD industry scientists, students, trainees and endocrinologists.

LEARNING OBJECTIVES: After this session, participants will be able to:

1. Evaluate the different biochemical markers of bone turnover in metabolic bone disease.
2. Explain current issues with assays and tests of pituitary-adrenal function in patients with suspected, endogenous hypercortisolism.
3. Compare and contrast different methods of measuring the clinical useful metabolites of the vitamin D pathway.

SPEAKERS

Biochemical Markers of Bone Turnover in Osteoporosis
Angela Cheung, MD, PhD, FRCPC
University of Toronto, University Health Network, Toronto, Canada

Cushing's Syndrome: Interpreting Assay Results in Challenging Patients
Ty Carroll, MD
Medical College of Wisconsin, Menomonee Falls, WI

Clinical Evaluation of Vitamin D and Metabolite Assay Results
Neil Binkley, MD
University of Wisconsin School of Medicine and Public Health, Madison, WI

2:30pm–5:00pm

Blood Gas Testing: Basics and Beyond

33229

Room: 210D

Presentation Level: **BASIC**

ACCENT® Credits: 2.5

MODERATOR/SPEAKER

Brenda Suh-Lailam, PhD, DABCC, FAACC

Lurie Children's Hospital of Chicago, Chicago, IL

SESSION OVERVIEW: Blood gas analyses are essential for the management of critically ill patients. This session will review the basics of blood gas testing, discuss approaches for ensuring quality in blood gas analyses, and provide guidance on overcoming challenges associated with blood gas analyses in different clinical settings.

INTENDED AUDIENCE: This session is intended for pathologists, lab directors, physicians, nurses, clinical chemists, point-of-care coordinators and technologists.

LEARNING OBJECTIVES: After this session, participants will be able to:

1. Identify the major acid-base disturbances.
2. Define oxygen content, oxygen saturation, and fractional oxyhemoglobin.
3. Describe how to ensure quality in blood gas analysis.
4. Explain how to overcome challenges associated with performing blood gases in different clinical settings.

SPEAKERS

Foundations of Blood Gases
Gary Horowitz, MD
Tufts Medical Center, Boston, MA

Implementing Blood Gas Analysis at the Point of Care
Nichole Korpi-Steiner, PhD, DABCC
University of North Carolina, Chapel Hill, NC

Overcoming Challenges of Blood Gas Testing in Different Locations
Brenda Suh-Lailam, PhD, DABCC, FAACC
Lurie Children's Hospital of Chicago, Chicago, IL

WEDNESDAY AUGUST 7

PLENARY & SCIENTIFIC SESSIONS

WEDNESDAY | AUGUST 7

PLENARY SESSION

Towards Precision Medicine

Euan Ashley, BSc, MB ChB, FRCP, DPhil, FAHA, FACC, FESC

Stanford Center for Inherited Cardiovascular Disease, Stanford, CA

8:45am–10:15am

Room: Ballroom ABC

14001

Presentation Level: **BASIC** | ACCENT® Credits: 1

SESSION OVERVIEW: The session will introduce the concept of precision medicine, particularly with reference to clinical genomics, using specific patient examples, including from the Undiagnosed Diseases Network. Algorithmic approaches to human genome interpretation will be discussed and areas where current technologies fall short of clinical-grade test quality will be highlighted. Newer technologies such as long-read sequencing and new algorithms for improving test performance in complex areas of the genome will be introduced. Finally, near-term opportunities for predictive and preventive genomic medicine will be examined in the context of changing healthcare delivery environments.

INTENDED AUDIENCE: This session is intended for pathologists, lab directors, clinical chemists, molecular biologists, technologists, physicians, and IVD industry scientists with interests in genomics and precision medicine.

LEARNING OBJECTIVES: After this session, participants will be able to:

1. Understand what is meant by precision medicine and be able to provide examples.
2. Understand the opportunity and challenge represented by our ability to sequence whole human genomes at scale for clinical medicine.
3. Understand areas of need in the development of clinical genomics and the power and limitations of the human reference genome.
4. Understand the current state of the art in the application of clinical genomics to rare disease.
5. Understand how genomics will move from rare disease to affect every patient in the healthcare system.

WEDNESDAY | AUGUST 7

TICKET Registration fees apply for each course.

ROUNDTABLE SESSIONS

7:30am–8:30am (40000 Series) or 12:30pm–1:30pm (50000 Series)

Roundtable sessions are presented twice daily. Attendance is limited to 10 participants per session. Advance registration and session fees are required. AACC does **not** provide meals for these sessions. You will be able to purchase your own food in the convention center prior to the session.

ACCENT® Credit: 1.0 (per session) unless otherwise noted in the mobile app, or at www.2019aacc.org | ACC, Ballroom DE

TITLE	SESSION # AM	SESSION # PM	SPEAKER	LEVEL
Drug Interference—The Unsolved Problem	44101	54201	**Oswald Sonntag,** PhD, Sonntag, Eichenau, Germany	BASIC
The Trials and Triumphs of HIV Testing	44102	54202	**Vera Tesic,** MD, ABMM, University of Chicago, River Forest, IL	INTERMEDIATE
Grow Your Tribe: Tools to Help You Foster Employee Engagement	44103	54203	**Kenneth Hoekstra,** MSc, PhD, ABB, FAACC, Quest Diagnostics, Sedro-Woolley, WA	BASIC
Changing the Culture to a Culture of Change: Case Studies and Approaches to Empowering Change and Improvement *Developed in cooperation with Management Sciences and Patient Safety Division*	44104	54204	**Jack Zakowski,** PhD, FAACC, IVD Consulting LLC, Yorba Linda, CA	INTERMEDIATE
The CDC Clinical Standardization Programs—Improving the Measurement of Free Thyroxine	44105	54205	**Ashley Ribera,** Centers for Disease Control and Prevention, Atlanta, GA	INTERMEDIATE
HIV Diagnostics: Past, Present and Future	44107	54207	**Vincent Ricchiuti,** PhD, LabCorp, Dublin, OH	INTERMEDIATE
Vitamin D Measurements: How Much of This Sunshine Vitamin Testing Is Credible?	44109	54209	**Rachita Nanda,** MD, MAMS, AIIMS Raipur, Raipur, India	BASIC
Evaluation and Management of Interfering Substances in a Multicenter Setting: Focus on Lipemia	44110	54210	**Neval Akbas,** PhD, Medpace Reference Laboratories, Cincinnati, OH	INTERMEDIATE
Auto-Validation Rule Testing to Ensure Continuous Quality and Reliability	44111	54211	**Angela Martin,** ASCP, Norton Healthcare, Louisville, KY	BASIC
Sample Collection Devices as a Source of Pre-Analytical Errors: Impact of Collection Tube Components on Clinical Assays	44113	54213	**Raffick Bowen,** MHA, PhD, FCACB, DABCC, MLT(CSMLS), FAACC, Stanford Health Care, Stanford, CA	INTERMEDIATE
Developing an Individualized Quality Control Plan (IQCP)	44114	54214	**Evrim Erdogan,** PhD, DABCC, FAACC, Baystate Health System, Springfield, MA	INTERMEDIATE
Umbilical Cord Testing—Moving Beyond Blood Gases	44115	54215	**Amy Karger,** MD, PhD, DABCC, University of Minnesota, Minneapolis, MN	BASIC
A Case of Suspected Macroprolactinemia: Collaboration between Laboratorians and Clinicians in Interpreting Unexpected Test Results	44116	54216	**Christina Pierre,** PhD, University of Virginia, Charlottesville, VA	BASIC
Quality Assurance: Instrument Performance Comparison in a Multiple-Platform Testing Environment	44118	54218	**Yifei Yang,** PhD, DABCC, University of Utah & ARUP Laboratories, Salt Lake City, UT	BASIC
Review of Reference Intervals across Four Hospital Laboratories	44119	54219	**Alison Bransfield,** MS, Bon Secours Hospital, Cork, Ireland	INTERMEDIATE
LC-MS/MS for Pediatric Steroid Hormone Measurement: Overview and Practice	44120	54220	**Run Zhang Shi,** MD, PhD, Stanford Medical Center Clinical Laboratories, Palo Alto, CA	INTERMEDIATE
Pre-Analytical Pitfalls in Hemostasis Testing and Strategies for Preventing Them	44122	54222	**Anna Merrill,** PhD, DABCC, University of Iowa, Iowa City, IA	BASIC
Validation and Implementation of Automated Analyzers across Multiple Laboratory Sites—A Practical Approach	44123	54223	**Kika Veljkovic,** PhD, FCACB, LifeLabs, Toronto, Canada	INTERMEDIATE
Predictive Analytics in the Clinical Laboratory	44124	54224	**Niklas Krumm,** MD, PhD, University of Washington, Seattle, WA	BASIC
Emerging Biomarkers in Dementia—Challenges and Opportunities	44125	54225	**Erin Schuler,** PhD, University of Kentucky, Lexington, KY	INTERMEDIATE
Diagnosing Inborn Errors of Metabolism: Challenging Cases in Biochemical Genetics	44126	54226	**Irene De Biase,** MD, PhD, ABMG, University of Utah/ARUP Laboratories, Salt Lake City, UT	INTERMEDIATE
Pharmacogenomics and Mass Spectrometry in the Clinical Lab: A Fledgling Partnership	44128	54228	**Grace Williams,** PhD, Dartmouth-Hitchcock Medical Center, Lebanon, NH	BASIC
Reference Intervals for Thyroid Function Tests During Pregnancy	44129	54229	**Sonia La'ulu,** ASCP, ARUP Laboratories, Salt Lake City, UT	BASIC
Supporting Opioid Addiction Programs with Unexpected Testing—Ethanol Metabolite Test Development in an Appalachian Laboratory	44130	54230	**Danyel Tacker,** PhD, DABCC, FAACC, West Virginia University Hospitals, Morgantown, WV	BASIC
Improving the Measurement of Parathyroid Hormone (PTH) and Related PTH Variants through the Development of a Reference Measurement Procedure *Developed in cooperation with Partnership for the Accurate Testing of Hormones (PATH)*	44131	54231	**Candice Ulmer,** PhD, Centers for Disease Control and Prevention, Atlanta, GA	BASIC
Experiences Implementing Moving Averages to Assist with Quality Assurance	44132	54232	**Adam McShane,** PhD, DABCC, Cleveland Clinic, Cleveland, OH	INTERMEDIATE
Managing the Wild Wild West of Point-of-Care Testing	44133	54233	**Edward Leung,** PhD, DABCC, FAACC, Children's Hospital Los Angeles, Los Angeles, CA	INTERMEDIATE
Label-Free Immunoassay: A New Horizon for the Quantitation of Proteins and Therapeutic Monoclonal Antibodies?	44134	54234	**Y. Ruben Luo,** PhD, University of California, San Francisco, San Francisco, CA	ADVANCED
Preanalytical Challenges and Analytical Interference in Cancer Patient	44135	54235	**Lakshmi Ramanathan,** PhD, Memorial Sloan-Kettering Cancer Center, New York, NY	BASIC
Drug-Induced Liver Injury: Recognition, Classification and Evaluation	44136	54236	**Jada (Yu) Zhang,** MD, PhD, San Francisco General Hospital, San Francisco, CA	INTERMEDIATE
How Do We Get Physicians to Order the Right Test?	44137	54237	**Eugenio Zabaleta,** PhD, OhioHealth Mansfield Hospital, Mansfield, OH	INTERMEDIATE

MEET THE EXPERT

10:30am–11:30am

Towards Precision Medicine

64101
Room: 210B

Presentation Level: **BASIC**
ACCENT® Credits: 1

SESSION OVERVIEW: This session will provide an excellent opportunity for attendees to meet with Dr. Ashley in a more intimate setting and listen to him discuss his talk, "Towards Precision Medicine."

INTENDED AUDIENCE: This session is intended for pathologists, lab directors, clinical chemists, molecular biologists, technologists, physicians and IVD industry scientists with interests in genomics and precision medicine.

LEARNING OBJECTIVES: After this session participants will be able to:

1. Understand what is meant by precision medicine and be able to provide examples.
2. Understand the opportunity and challenge represented by our ability to sequence whole human genomes at scale for clinical medicine.
3. Understand areas of need in the development of clinical genomics and the power and limitations of the human reference genome.
4. Understand the current state of the art in the application of clinical genomics to rare disease.
5. Understand how genomics will move from rare disease to affect every patient in the healthcare system.

SPEAKER
Euan Ashley, BSc, MB ChB, FRCP, DPhil, FAHA, FACC, FESC
Stanford Center for Inherited Cardiovascular Disease, Stanford, CA

SCIENTIFIC SESSIONS

MORNING

10:30am–12:00pm

Putting QC into Practice

34101
Room: 204C

Presentation Level: **BASIC**
ACCENT® Credits: 1.5

MODERATOR/SPEAKER
Lorin Bachmann, PhD, DABCC, MT (ASCP)
Virginia Commonwealth University, Richmond, VA

SESSION OVERVIEW: This session will focus on real-world, practical approaches for implementing a QC program. Topics covered include determining QC target values and standard deviations, determining frequency of analysis, choosing QC multi-rule strategies, establishing QC acceptance criteria, and innovative approaches for improving the efficiency of QC review. Practical procedures for evaluation of lot changes of reagent, calibrator and QC materials will be presented, and solutions to commonly encountered problems will be explored. Performance monitoring approaches such as among-instrument assessment and using commutable certified reference materials will be explained. Case studies and real-world examples will be used to demonstrate the concepts presented in the session.

INTENDED AUDIENCE: This session is intended for pathologists, laboratory directors, laboratory managers, clinical laboratory scientists, pathology residents and fellows, physicians, and industry scientists.

LEARNING OBJECTIVES: After this session, participants will be able to:

1. Design a QC program that integrates practice guideline recommendations with practical approaches specific for an individual laboratory.
2. Identify and address common QC practices that can inadvertently lead to erroneous conclusions about laboratory results quality.
3. Troubleshoot and resolve issues commonly encountered when changing lots of QC, calibrator and reagents.
4. Develop tools to efficiently manage routine QC and performance monitoring review.

SPEAKERS
Putting QC into Practice
Greg Miller, PhD, DABCC
Virginia Commonwealth University, Richmond, VA

Beyond QC: Ongoing Performance Monitoring
Lorin Bachmann, PhD, DABCC, MT (ASCP)
Virginia Commonwealth University, Richmond, VA

10:30am–12:00pm

Strategies and Tactics for Practical Test Utilization Management

34102
Room: 205AB

Presentation Level: **INTERMEDIATE**
ACCENT® Credits: 1.5

MODERATOR/SPEAKER
Ron Schifman, MD
Southern Arizona VA Healthcare System, Tucson, AZ

SESSION OVERVIEW: This session will present simple and practical techniques for rapid implementation of test utilization improvements. An interactive format will be used to examine participants' current test stewardship activities as the contextual framework for demonstrating various easy-to-apply techniques that address common, real-world test utilization problems. Examples include ways to avoid ordering mistakes, use of prerequisite testing protocols, test menu and nomenclature structure, reducing misinterpretation risks, a simple process to identify over-ordering of specific test(s), and guidance for investigating common and easily solved problems. Pre-registrants will receive a form to collect data from their laboratory for use at this session.

INTENDED AUDIENCE: This session is intended for laboratory managers, administrators, laboratory directors and pathologists.

LEARNING OBJECTIVES: After this session, participants will be able to:

1. Apply various practical and effective laboratory stewardship techniques in their practice setting.
2. Describe the benefit of readily available data indicators to check local test utilization practices and identify potential problems.
3. List the most common reasons for test ordering problems and specific method(s) for resolving each type.

SPEAKERS
Laboratory Stewardship: A Very Practical Approach
Ron Schifman, MD
Southern Arizona VA Healthcare System, Tucson, AZ

Simple Techniques for Effective Test Ordering Practices
Peter Perrotta, MD
West Virginia University, Morgantown, WV

10:30am–12:00pm

Intellectual Property and Landmark Patent Lawsuits: The Role of U.S. Patents for Clinical Laboratory Diagnostic Tests

34103
Room: 206AB

Presentation Level: **INTERMEDIATE**
ACCENT® Credits: 1.5

MODERATOR
Alan Wu, PhD
University of California, San Francisco, San Francisco, CA

SESSION OVERVIEW: With reference to laboratory diagnostics, recent court decisions have altered 30 years of jurisprudence affecting what can and cannot be patented (e.g., *Cleveland Clinic v True Health*, *Myriad v AMP*, *Mayo v Prometheus*, and *Sequenom v Ariosa*). This has introduced incoherence, induced uncertainty, and dampened enthusiasm for private investments. Academics, industry, and investors must understand the reasons that courts intervened to change U.S. law about patentable subject matter. In addition, the session will cover the current limits of patent law, as well as the implications for current practice and future prospects for molecular diagnostics.

INTENDED AUDIENCE: This session is intended for pathologists, lab directors, clinical chemists, technologists, industry-based scientists and IVD investors.

LEARNING OBJECTIVES: After this session, participants will be able to:

1. Predict whether a new diagnostic technology is patentable.
2. Know what type of data they will need to generate to support a patent.
3. Explain why the courts seem to disfavor certain technologies, such as diagnostics and computer software, and favor others, such as new drugs.
4. Discuss the rationale for recent Supreme Court and appellate-level federal court decisions that have limited patentable subject matter in molecular diagnostics.
5. Apply findings from the history and legal background to daily operations of molecular testing labs, and to future scenarios for developing and performing molecular diagnostics.

SPEAKERS
What Do You Have to Do to Patent a Diagnostic Test These Days?
Jonathan Loeb, PhD
Dechert LLP, Mountain View, CA

Why Have Courts Balked? Understanding Court Decisions on Molecular Diagnostics
Robert Cook-Deegan, MD
Arizona State University, Washington, DC

WEDNESDAY | AUGUST 7

SCIENTIFIC SESSIONS

MORNING

10:30am–12:00pm

Surviving the Regulatory and Accreditation Landscape: The Must-Know Secrets for Success!

34104

Room: 207CD

Presentation Level: **INTERMEDIATE**

ACCENT® Credits: 1.5

MODERATOR/SPEAKER

Brad Karon, MD, PhD, FAACC

Mayo Clinic, Rochester, MN

Developed in cooperation with College of American Pathologists

SESSION OVERVIEW: This session will be an interactive, case-based session for new and experienced laboratory directors, managers, supervisors and quality personnel focusing on regulatory and accreditation issues that put laboratories at risk. Participants will get practical tips to handling challenging issues such as proficiency testing, competency assessment, delegation of duties, and others.

INTENDED AUDIENCE: This session is intended for laboratory directors, administrators, managers, supervisors and quality personnel.

LEARNING OBJECTIVES: After this session, participants will be able to:

1. List the most recent regulatory issues adversely impacting laboratories.
2. Explain how the laboratory's ordering, performing, resulting and investigation/response to proficiency testing can be optimized to avoid regulatory/compliance penalties.
3. Describe new regulatory/compliance trends related to competency assessment, personnel requirements, and delegation of duties that have caused regulatory/compliance problems for laboratories.

SPEAKERS

What Every New Laboratory Leader Needs to Know about Laboratory Accreditation and Regulation
Charles Eby, MD
Washington University, St. Louis, MO

What's New in Laboratory Accreditation and Regulation: Just When You Thought You Knew Where the Landmines Were
Brad Karon, MD, PhD, FAACC
Mayo Clinic, Rochester, MN

10:30am–12:00pm

Getting by with a Little Help from My Friends: "Speed Dating" with Peers to Troubleshoot Common Issues in the Clinical Laboratory

34105

Room: 201AB

Presentation Level: **BASIC**

ACCENT® Credits: 1.5

MODERATOR/SPEAKER

Steven Cotten, PhD, DABCC, FAACC

University of North Carolina at Chapel Hill, Chapel Hill, NC

SESSION OVERVIEW: Bring your knowledge and real-world experience to work through commonly encountered matters related to clinical pathology. This interactive session will provide a "speed-dating" workshop format for discussing issues encountered by laboratorians. Attendees will rotate tables between four topics covering identifying problem specimens, discontinuing or changing testing methods, harmonization of an analyte across a health system, and improving point-of-care testing accountability. Attendees will pair up with others to discuss the pre-defined scenarios. At the end, the host at each table will provide a high-level summary with a hand-out and facilitate further discussion.

INTENDED AUDIENCE: This session is intended for trainees, pathologists, laboratory directors, clinical chemists, technologists and others involved with managing laboratory operations.

LEARNING OBJECTIVES: After this session, participants will be able to:

1. Identify workflow strategies to manage specimen exception handling.
2. Prioritize considerations in the discontinuation of in-house laboratory testing.
3. Mitigate common challenges with analyte harmonization across labs and health systems.
4. Recommend effective strategies to improve point-of-care compliance and inspection readiness.

SPEAKERS

One Is the Loneliest Number: Analyte Method Harmonization or Lack Thereof in a Health System
Steven Cotten, PhD, DABCC, FAACC
University of North Carolina at Chapel Hill, Chapel Hill, NC

Should I Stay or Should I Go? Discontinuing Fractionated 25-OH Vitamin D
Jane Dickerson, PhD, DABCC
Seattle Children's Hospital, Seattle, WA

I've Got Ninety-Nine Problems and a Sample Is One: Managing and Tracking Problem Specimens in the Clinical Lab
Mark Marzinke, PhD, DABCC
Johns Hopkins University School of Medicine, Baltimore, MD

Every Breath You Take: Approaches to Enhancing POC Compliance and Accountability
Corinne Fantz, PhD, DABCC
Roche Diagnostics Corp., Atlanta, GA

10:30am–12:00pm

Towards Improved Cardiovascular Disease (CVD) Risk Screening and Prevention by Improving Measurement of Blood Lipids

34106

Room: 204A

Presentation Level: **INTERMEDIATE**

ACCENT® Credits: 1.5

MODERATOR/SPEAKER

Uliana Danilenko, PhD

Centers for Disease Control and Prevention, Atlanta, GA

SESSION OVERVIEW: This session will discuss the current state of standardization and harmonization efforts directed towards biomarkers of cardiovascular disease, specifically blood lipids and lipoproteins. The importance of developing updated analytical performance criteria, as well as the clinical implications, will be highlighted. Clinical, pre-analytical, and analytical aspects of lipid measurements will also be addressed.

INTENDED AUDIENCE: This session is intended for laboratory directors, clinical chemists, physicians and IVD industry scientists.

LEARNING OBJECTIVES: After this session, participants will be able to:

1. Summarize current programs and materials available to improve blood lipids measurements.
2. Identify current analytical and pre-analytical challenges of CVD biomarkers testing.
3. Describe emerging CVD biomarkers that aid with clinical decisions for CVD risk screening and prevention.

SPEAKERS

Current State of Cardiovascular Disease Biomarkers Standardization
Uliana Danilenko, PhD
Centers for Disease Control and Prevention, Atlanta, GA

Revision of the Analytical Performance Criteria for Blood Lipids Measurement: An Update from the Working Group
Hubert Vesper, PhD
Centers for Disease Control, Atlanta, GA

Lipid Measurements and Clinical Care: The National Lipid Association Perspective
Peter Wilson, MD
Emory University School of Medicine, Atlanta, GA

WEDNESDAY | AUGUST 7

SCIENTIFIC SESSIONS

MORNING

10:30am–12:00pm

Beautiful Skin but Erroneous Lab Results: The AACC Academy's Guidance Document on Biotin Interference

34107
Room: 207AB

Presentation Level: **BASIC**
ACCENT® Credits: 1.5

MODERATOR/SPEAKER
Patrick Kyle, PhD, ABFT, DABCC, FAACC
University of Mississippi Medical Center, Jackson, MS

SESSION OVERVIEW: This session reviews the highlights of the AACC Academy's recent guidance document on biotin interferences with clinical laboratory assays. The mechanisms of biotin interference with both competitive and non-competitive assays and methods to identify suspected interferences will be discussed. Steps that clinicians and laboratorians can take to reduce or eliminate biotin interferences will also be presented.

INTENDED AUDIENCE: This session is intended for clinicians, pathologists, clinical chemists, medical laboratory scientists and laboratory administrators.

LEARNING OBJECTIVES: After this session, participants will be able to:

1. Identify types of assays that could exhibit biotin interference.
2. List methods to help identify suspected biotin interference.
3. Design methods to reduce or mitigate potential biotin interference.

SPEAKERS

Beautiful Skin but Erroneous Lab Results: The AACC Academy's Guidance Document on Biotin Interference
Angela Ferguson, PhD, DABCC, FAACC
Children's Mercy Hospitals and Clinics, Kansas City, MO

Patrick Kyle, PhD, ABFT, DABCC, FAACC
University of Mississippi Medical Center, Jackson, MS

10:30am–12:00pm

***Journal of Applied Laboratory Medicine*'s 2019 Hot Topics: Sepsis Diagnosis and Management: Role of Novel Biomarkers and Procalcitonin Confounders**

34108
Room: 201CD

Presentation Level: **ADVANCED**
ACCENT® Credits: 1.5

MODERATOR/SPEAKER
Robert Christenson, PhD, ABCC, FACB
University of Maryland School of Medicine, Baltimore, MD

Developed in cooperation with Journal of Applied Laboratory Medicine

SESSION OVERVIEW: Sepsis, a widespread medical emergency, occurs in ~6% of hospitalizations but causes one-third of hospital deaths. How the biomarkers iNOS and human neutrophil lipocalin may assist in guiding urgent, life-saving management of early sepsis will be discussed. Also, procalcitonin measurement may be useful; pros, cons and limitations will be discussed

INTENDED AUDIENCE: This session is intended for pathologists, laboratory directors, clinical chemistry professionals, laboratory managers, microbiologists, physicians and other clinical professionals in emergency medicine, ICU, infectious disease, as well as federal and state regulators, medical laboratory scientists, IVD industry scientists and IVD decision-makers.

LEARNING OBJECTIVES: After this session, participants will be able to:

1. Define criteria for sepsis diagnosis and explain the qSOFA scoring system for risk assessment.
2. Describe the pros and cons of procalcitonin for acute sepsis diagnosis and for ruling in and ruling out viral infection.
3. Explain a plausible role of iNOS in the pathophysiology of sepsis and critically discuss its possible use as an early sepsis diagnostic.
4. Describe HNL as a biomarker and list three ways it might be utilized for differential diagnosis of early sepsis.

SPEAKERS

Inducible Nitrous Oxide Synthase in Sepsis: Bad Actor but Promising Diagnostic
Richard Sweet, MD
UCSF Medical Center, San Francisco, CA

Human Neutrophil Lipocalin: Use in Early Diagnosis and Monitoring of Acute Infections
Robert Christenson, PhD, ABCC, FACB
University of Maryland School of Medicine, Baltimore, MD

Procalcitonin Pros, Cons and Confounders
Jessica Colon-Franco, PhD, DABCC
Cleveland Clinic, Solon, OH

10:30am–12:00pm

Moving Beyond Immunoassays for the Poisoned Patient: Analytical Approaches and Interactive Case Studies

34109
Room: 208AB

Presentation Level: **INTERMEDIATE**
ACCENT® Credits: 1.5

MODERATOR/SPEAKER
Amitava Dasgupta, PhD, DABCC
University of Texas–Houston Medical School, Houston, TX

SESSION OVERVIEW: Urine toxicology testing has significant limitations when a patient presents with a potential overdose or poisoning. Many illicitly manufactured drugs and novel psychoactive substances, including synthetic amphetamines, cannabinoids, and opioids, such as fentanyl analogs, are not detected by routine drug testing. This session will emphasize how to effectively communicate with clinicians for further testing, describe analytical tools used for monitoring the poisoned patient, and highlight the complexity of the current overdose epidemic in the United States through interactive case studies (audience response).

INTENDED AUDIENCE: This session is intended for pathologists, clinical chemists, toxicologists and medical technologists.

LEARNING OBJECTIVES: After this session, participants will be able to:

1. Understand circumstances when routine toxicology testing may fail to identify the causative agent in a poisoned patient.
2. Communicate effectively with ordering physicians to identify the probable cause of negative toxicology results and decide what further testing should be conducted.
3. Describe the advantages and disadvantages of different analytical approaches for drug detection.
4. Interpret clinical symptoms and analytical results associated with illicitly manufactured drugs and novel psychoactive substances, including synthetic amphetamines, cannabinoids, and opioids.

SPEAKERS

The Poisoned Patient: How to Communicate with Clinicians and Guide Further Testing
Amitava Dasgupta, PhD, DABCC
University of Texas–Houston Medical School, Houston, TX

Moving Beyond Urine Toxicology Immunoassays: Analytical Testing Strategies and Interactive Case Studies
Kara Lynch, PhD, DABCC, FAACC
ZSFG Clinical Laboratory, San Francisco, CA

AFTERNOON

2:30pm–5:00pm

Liquid Chromatography-Tandem Mass Spectrometry, Advanced Topics

34216
Room: 207CD

Presentation Level: **ADVANCED**
ACCENT® Credits: 2.5

MODERATOR/SPEAKER
Brian Rappold
LabCorp, Raleigh, NC

Developed in cooperation with Mass Spectrometry and Separation Sciences Division

SESSION OVERVIEW: Liquid chromatography-tandem mass spectrometry (LC-MS/MS) is a maturing technique for diagnostic laboratories. An introduction of testing protocols using LC-MS/MS has been introduced at AACC University (The Secrets to Success: Implementing Robust LC-MS/MS Methods in the Clinical Laboratory); this course intends build on that session by exploring experimental pathways of more esoteric assays (i.e., clinical protein analysis) as well as considerations for operational execution of LC-MS/MS in the clinical lab.

INTENDED AUDIENCE: This session is intended for users of liquid chromatography-tandem mass spectrometry technology (laboratory technicians, scientists and lab directors).

LEARNING OBJECTIVES: After this session, participants will be able to:

1. Evaluate the validation protocols utilized in their laboratory to ensure scientific rigor is applied to de novo assays on liquid chromatography platforms.
2. Apply experimental paradigms to the development and optimization of LC-MS/MS workflows.
3. Understand better the unique challenges presented by analysis of human matrices by LC-MS/MS.

SPEAKERS

Liquid Chromatography-Tandem Mass Spectrometry, Advanced Topics
Brian Rappold
LabCorp, Raleigh, NC

Andrew Hoofnagle, MD, PhD
University of Washington, Seattle, WA

Russell Grant, PhD
LabCorp, Burlington, NC

SCIENTIFIC SESSIONS

AFTERNOON

2:30pm–5:00pm

Better Diagnoses, Improved Patient Outcomes through Patient-Centered Laboratory Medicine

34217
Room: 204B

Presentation Level: **INTERMEDIATE**
ACCENT® Credits: 2.5

MODERATOR/SPEAKER
Danielle Freedman, MBCh, MD, FRCPath
Luton & Dunstable Hospital, Luton, Bedfordshire, United Kingdom

SESSION OVERVIEW: Every nine minutes, someone in a U.S. hospital dies because of an incorrect or delayed medical diagnosis. The reduction of diagnostic error and unnecessary or harmful procedures, the focus on improved patient outcomes, and the shift from volume to value are key themes of 21st-century medicine. The clinical laboratory has a pivotal role in all these areas. This session will explore the broad linkage of laboratory testing to patient outcomes. The discussion will include the value of point-of care testing, and will indicate new approaches to delivering patient-centered laboratory medicine.

INTENDED AUDIENCE: This session is intended for medical technologists, clinical chemists, pathologists, laboratory supervisors/managers, laboratory directors and industry scientists.

LEARNING OBJECTIVES: After this session, participants will be able to:

1. Describe the factors that influence the link between laboratory testing and patient outcomes.
2. Review the changes in delivery of diagnostic medicine envisaged in the National Academies' report "Improving Diagnosis in Health Care" (2015).
3. Explain the role of the diagnostic management team (DMT) in improving test selection and results interpretation.
4. Discuss the application of the DMT approach to specific clinical problems.
5. Summarize the evidence relating to the impact of point-of-care testing on patient outcomes.

SPEAKERS

Overview: Linking Laboratory Medicine to Patient Outcomes
Michael Hallworth, MA, MSc, FRCPath
Shrewsbury, United Kingdom

The New Diagnostic Team—Moving Forward
Michael Laposata, MD, PhD
University of Texas Medical Branch Galveston, Galveston, TX

From Hemoglobins to Toxicology: The Diagnostic Management Team and Interpretive Services in Action
James Nichols, PhD, DABCC, FAACC
Vanderbilt University Medical Center, Nashville, TN

The Value of Point-of-Care Testing—Does It Improve Outcomes?
Danielle Freedman, MBCh, MD, FRCPath
Luton & Dunstable Hospital, Luton, Bedfordshire, United Kingdom

2:30pm–5:00pm

Tackling Infectious Disease Testing and Interpretation: Considering the Perspectives of the Core Clinical Laboratory and Point-of-Care Testing

34218
Room: 204A

Presentation Level: **INTERMEDIATE**
ACCENT® Credits: 2.5

MODERATOR/SPEAKER
Nicole Tolan, PhD, DABCC
Brigham and Women's Hospital, Boston, MA

SESSION OVERVIEW: This workshop-style, interactive session will use practical, case-based scenarios along with audience participation techniques to help attendees identify best practices in infectious disease testing and interpretation. For each infectious disease covered (HIV, HCV, HBV, C. diff, flu and syphilis), speakers will briefly present the relevant analytical and clinical considerations for evaluating testing methods, determining necessary reflex confirmations, and demonstrating the value of personalized reporting and interpretation of results. Breakout sessions will then follow each presentation and include roundtable discussions of case examples for attendees to determine how to best optimize workflows, reduce unnecessary costs, and ultimately, support quality patient care.

INTENDED AUDIENCE: This session is intended for clinical chemists, pathologists, laboratory directors, laboratory technologists, point-of-care professionals, industry scientists and regulatory agency representatives.

LEARNING OBJECTIVES: After this session, participants will be able to:

1. Examine the principles of various infectious disease testing methods to appreciate their limitations in the screening or diagnosis of infectious diseases.
2. Consider the medical significance of infectious disease testing and identify the clinical scenarios where clinical chemistry/POC testing interpretations add value to patient care.
3. Evaluate current testing recommendations in light of specific case-based examples to potentially improve their own practice in infectious disease testing and interpretation.

SPEAKERS

Evaluating the Clinical Considerations and Method Limitations for HIV, HCV and Flu Testing
Nicole Tolan, PhD, DABCC
Brigham and Women's Hospital, Boston, MA

Evaluating the Clinical Considerations and Method Limitations for HBV, C. Diff and Syphilis Testing
Gary Horowitz, MD
Tufts Medical Center, Boston, MA

2:30pm–5:00pm

Renal Tubules in Acid/Base Disorders and Blood Pressure Regulation: We Don't Get Respect!

34219
Room: 205AB

Presentation Level: **INTERMEDIATE**
ACCENT® Credits: 2.5

MODERATOR/SPEAKER
William Winter, MD, DABCC, FAACC
University of Florida, Gainesville, FL

SESSION OVERVIEW: Renal tubular disorders are underappreciated and often not well understood due to the biological and clinical complexities of the disease. Presentation of the pathophysiology of renal tubular disorders, as well as interpretation of relevant clinical laboratory tests, will empower attendees to appropriately guide discussions with clinicians surrounding the role of the renal tubules in acid/base balance and blood pressure regulation and ultimately impact test utilization. This session will use a case-based format to solicit interactive discussion among participants.

INTENDED AUDIENCE: This session is intended for pathologists, pathology trainees, laboratory directors, clinical chemists, medical technologists and IVD industry scientists.

LEARNING OBJECTIVES: After this session, participants will be able to:

1. Explain to clinicians the physiology of renal acid/base balance.
2. Assist clinicians in test selection and interpretation regarding renal tubular acid/base disorders.
3. Explain to clinicians the physiology of renal tubular blood pressure regulation.
4. Assist clinicians in test selection and interpretation regarding renal tubular disorders causing hypo or hypertension.

SPEAKERS

Renal Tubules and Blood Pressure Regulation
Neil Harris, MBChB, MD, FAACC
University of Florida, Gainesville, FL

Renal Tubular Acid/Base Disorders
William Winter, MD, DABCC, FAACC
University of Florida, Gainesville, FL

SCIENTIFIC SESSIONS

AFTERNOON

2:30pm–5:00pm

Patient-Based Quality Control Techniques: Statistical Power from and for the Masses

34220
Room: 206AB

Presentation Level: **INTERMEDIATE**
ACCENT® Credits: 2.5

MODERATOR/SPEAKER
Mark Cervinski, PhD, DABCC, FAACC
Dartmouth-Hitchcock Medical Center, Lebanon, NH

SESSION OVERVIEW: This session will describe the evolution of patient-based quality control techniques from theory into practice, and will include a comparison of the strengths and weaknesses of techniques such as the average of normals and patient moving averages. The session will include the differing unique perspectives of the hospital-based laboratory and high-throughput large reference laboratory. Examples where patient-based quality control successfully detected the onset of analytic error prior to traditional quality control events will be presented in a case-based format.

INTENDED AUDIENCE: This session is intended for laboratory directors, clinical chemistry fellows and trainees, clinical chemists, clinical pathologists, laboratory technologists, and IVD industry representatives.

LEARNING OBJECTIVES: After this session, participants will be able to:

1. Describe the evolution of patient-based quality control from theory into practice.
2. List common patient-based quality control techniques and contrast the limitations of each.
3. Explain the limitations of patient-based quality control techniques in regard to error detection of low volume tests, skewed distributions and other data challenges.
4. Evaluate which patient-based quality control techniques are applicable to their patient populations and analyte menu.

SPEAKERS

Background and Recent Developments in Moving Average Quality Control
Huub van Rossum, PhD
The Netherlands Cancer Institute, Antoni Van Leeuwenhoek Hospital Amsterdam, Amsterdam, Netherlands

Development, Implementation and Validation of Moving Averages in a Hospital-Based Laboratory
Mark Cervinski, PhD, DABCC, FAACC
Dartmouth-Hitchcock Medical Center, Lebanon, NH

Patient-Based Quality Control: Experience from a Large U.S.-Based Reference Laboratory
James Fleming, PhD, MSc, NRCC, FACB
LabCorp, Elon, NC

2:30pm–5:00pm

The Devil Is in the Details: Coagulation Testing for Different Patient Populations

34221
Room: 204C

Presentation Level: **BASIC**
ACCENT® Credits: 2.5

MODERATOR/SPEAKER
Anna Merrill, PhD, DABCC
University of Iowa, Iowa City, IA

Developed in cooperation with Hematology and Coagulation Division

SESSION OVERVIEW: Disorders in coagulation present various clinical and analytical challenges. The landscape of treatment and laboratory monitoring for these disorders is rapidly changing. This session will focus on clinical and laboratory aspects of coagulation in commonly encountered patient populations: patients with liver disease, patients taking direct oral anticoagulants (DOACs), and patients with autoimmune disorders, including thyroid disease.

INTENDED AUDIENCE: This session is intended for pathologists, clinical chemists, laboratory technologists, fellows in clinical chemistry, and residents.

LEARNING OBJECTIVES: After this session, participants will be able to:

1. Discuss the "rebalancing" of hemostasis in liver disease and the anticipated effect on routine coagulation tests.
2. Describe the impact of direct oral anticoagulants on common coagulation tests.
3. Explain the proposed pathophysiology for the association between coagulation disorders and autoimmune/thyroid disease.
4. Recognize the limitations of the CoaguChek point-of-care instruments for monitoring anticoagulation in various patient populations.

SPEAKERS

Coagulation Testing in Patients with Liver Disease
Anna Merrill, PhD, DABCC
University of Iowa, Iowa City, IA

Coagulation Testing in Patients Taking Direct Oral Anticoagulants
Lindsay Bazydlo, PhD, DABCC, FAACC
University of Virginia, Charlottesville, VA

Coagulation Testing in Patients with Thyroid and Other Autoimmune Disorders
Olajumoke Oladipo, MD, DABCC, FAACC
Penn State Milton S. Hershey Medical Center, Hershey, PA

2:30pm–5:00pm

Overcoming the Challenges of ANA Testing

34223
Room: 207AB

Presentation Level: **INTERMEDIATE**
ACCENT® Credits: 2.5

MODERATOR/SPEAKER
Melissa Snyder, PhD
Mayo Clinic, Rochester, MN

Developed in cooperation with Clinical and Diagnostic Immunology Division

SESSION OVERVIEW: Antinuclear antibody (ANA) testing presents the clinical laboratory with many unique challenges, from methodological differences to clinical applications. This session will include an overview of ANA testing with a focus on clinical interpretation, a methodological comparison between immunofluorescence and immunoassays, and a discussion on the advantages and limitations of laboratory automation related to ANA testing.

INTENDED AUDIENCE: This session is intended for clinical laboratory directors and pathologists, clinical technologists, IVD manufacturers, and pharmaceutical scientists.

LEARNING OBJECTIVES: After this session, participants will be able to:

1. Identify the three primary methods available to the clinical laboratory for ANA detection.
2. Describe the parameters that a lab would consider when selecting a method for ANA testing.
3. List advantages and limitations of automation of ANA by IFA.

SPEAKERS

Clinical and Laboratory Strategies for Improved ANA Testing: Polishing the Gold Standard Immunofluorescence ANA
Mark Wener, MD, ABMLI, ABIM, ABIM-RHEUM
University of Washington Medical Center, Seattle, WA

ANA Detection by Indirect Immunofluorescence and by Immunoassay
Xavier Bossuyt, MD
UZ-KU Leuven Medical Center, Leuven, Belgium

Can Automation Bring ANA Testing out of the Dark Room and into the Modern Laboratory?
Melissa Snyder, PhD
Mayo Clinic, Rochester, MN

2:30pm–5:00pm

Clinical Applications of Established and Emerging Multi-Analyte Testing Approaches

34224
Room: 209AB

Presentation Level: **INTERMEDIATE**
ACCENT® Credits: 2.5

MODERATOR/SPEAKER
Alicia Algeciras-Schimnich, PhD, DABCC
Mayo Clinic, Rochester, MN

SESSION OVERVIEW: Implementing multi-analyte tests that combine biomarkers, patient demographics and clinical information into an algorithm to generate a disease risk score is becoming increasingly common in clinical laboratories. This session will center on the clinical utility and implementation considerations of established multi-analyte strategies along with highlighting emerging multi-analyte testing approaches.

INTENDED AUDIENCE: This session is intended for laboratory directors, clinical chemists, medical laboratory scientists, laboratory administrators, physicians and IVD industry scientists.

LEARNING OBJECTIVES: After this session, participants will be able to:

1. List the regulatory and infrastructure considerations related to the adoption of multi-analyte assays with algorithmic analyses (MAAA) in clinical laboratories.
2. Describe the clinical utility of MAAA in cancer.
3. Describe emerging MAAA approaches for the diagnosis of acute and chronic diseases, including sepsis and liver diseases.
4. Describe emerging MAAA approaches in the setting of acute coronary syndrome.

SPEAKERS

Applications of MAAA in Oncology: Clinical Utility and Implementation Considerations
Alicia Algeciras-Schimnich, PhD, DABCC
Mayo Clinic, Rochester, MN

Scoring the Utility of Emerging Multi-Analyte Tests across Diseases—from Liver Fibrosis to Preeclampsia and Sepsis
Jessica Colon-Franco, PhD, DABCC
Cleveland Clinic, Solon, OH

Choosing Wisely with Laboratory Tests in Patients with Possible Acute Coronary Syndrome: The Evidence for a Clinical Chemistry Score
Peter Kavsak, PhD
McMaster University & Juravinski Hospital and Cancer Centre, Hamilton, Canada

WEDNESDAY | AUGUST 7

SPECIAL SESSION

2:30pm–5:00pm
Room: 210A

Healthcare Forum: Laboratory Stewardship in Healthcare Innovation

34225
Presentation Level: **INTERMEDIATE** | ACCENT® Credits: 2.5

MODERATOR
Loretta Doan, PhD
AACC, Washington, DC

Developed in cooperation with Policy and External Affairs Core Committee

SESSION OVERVIEW: The session will address the current shifts in healthcare delivery and payments away from volume-based fee-for-service models toward value-based models with bundled or capitated payments. To be successful, the new models will require collaboration and cooperation across the entire spectrum of providers and healthcare professionals, each of whom has a unique role in providing high-value, cost-efficient care. This session will address the framework of the shifting models, the needs of integrated healthcare systems, and tools for laboratory directors to implement successful laboratory stewardship programs.

INTENDED AUDIENCE: This session is intended for laboratory directors, laboratory managers, medical technologists, and other laboratory and industry personnel responsible for regulatory, payment and compliance issues.

LEARNING OBJECTIVES: After this session, participants will:

1. Understand the new value-based healthcare environment.
2. Know how laboratories can help healthcare systems achieve common objectives.
3. Understand how laboratories demonstrate the value of their services.
4. Learn what tools are available for guiding appropriate test utilization and improving care.

SPEAKERS

How Healthcare Is Changing and What That Means for Patients
Shantanu Agrawal, MD, MPhil
National Quality Forum, Washington, DC

What Integrated Healthcare Systems Need from Laboratory Stewardship Programs
Jonathan Gleason, MD
Carilion Clinic, Roanoke, VA

PLUGS: A National Movement, Forum, and Resources for Laboratory Stewardship Programs
Jane Dickerson, PhD, DABCC
Seattle Children's Hospital, Seattle, WA

SPECIAL SESSION

4:00pm–5:00pm
Room: Hall A, Poster Theater

Laboratory Feud: Science and Practice Core Committee vs. Education Core Committee

Presentation Level: **BASIC**

SESSION OVERVIEW: This session will use the "Family Feud" game show-style format in which two teams (five members of the AACC Science and Practice Core committee vs. five members of the Education Core Committee) will compete in an educational challenge covering various laboratory medicine topics. It will be not only educational, but also provide a platform for the audience to become more familiar with some of our AACC leaders.

INTENDED AUDIENCE: This session is intended for all AACC members including pathologists, lab directors, clinical chemists, technologists, IVD industry scientists, residents and fellows.

LEARNING OBJECTIVES: After this session, participants will be able to:

1. List various clinical biomarkers and their clinical utility.
2. Identify the most commonly used/abused drugs.
3. Recognize common factors that can affect laboratory test results.

MODERATOR
Paul Jannetto, PhD, DABCC, MT (ASCP), FAACC
Mayo Clinic, Rochester, MN

SCIENCE AND PRACTICE CORE COMMITTEE TEAM
Team Captain: Lakshmi Ramanathan, PhD
Memorial Sloan-Kettering Cancer Center, New York, NY

Kerstin Halverson, MS
Instrumentation Laboratory, Farmington, MN

Amy Pyle-Eilola, PhD
Nationwide Children's Hospital, Columbus, OH

Joesph Wiencek, PhD
University of Virginia School of Medicine, Charlottesville, VA

Yan Victoria Zhang, PhD, DABCC
University of Rochester Medical Center, Rochester, NY

EDUCATION CORE COMMITTEE TEAM
Team Captain: Elizabeth Frank, PhD, DABCC, MT (ASCP), FAACC
ARUP Laboratories/University of Utah, Salt Lake City, UT

Steven Cotten, PhD, DABCC, FAACC
University of North Carolina at Chapel Hill, Chapel Hill, NC

Andrew Don-Wauchope, MD, MBChB, FRCPE
LifeLabs, Toronto, Canada

Veronica Luzzi, PhD, DABCC
Providence Regional Laboratories, Portland, OR

Hubert Vesper, PhD
Centers for Disease Control, Atlanta, GA



THURSDAY AUGUST 8

PLENARY & SCIENTIFIC SESSIONS

PLENARY SESSION

Extreme Molecular Diagnostics

Carl Wittwer, MD, PhD
Professor of Pathology, University of Utah, Salt Lake City, UT

8:45am–10:15am
Room: Ballroom ABC

15001
Presentation Level: **BASIC** | ACCENT® Credits: 1

SESSION OVERVIEW: Extreme molecular diagnostics takes only seconds. With very short turn-around times, pre-analytical and post-analytical challenges are minimized, point-of-care testing makes sense, and high-throughput is not necessary. Real-time "extreme" PCR in <15 seconds (35 cycles, 60-bp human genomic DNA) is specific, sensitive, and high yield. High-speed melting analysis (4 seconds) allows single base genotyping and variant scanning. Rapid reverse transcription and sample preparation will enable sample-to-answer diagnostics in <1 minute. The value of point-of-care testing depends on how quickly it can be performed.

INTENDED AUDIENCE: This session is intended for pathologists, lab directors, molecular biologists, clinical chemists, technologists, physicians, and IVD industry scientists with an interest in molecular diagnostics and nucleic acid amplification technology.

LEARNING OBJECTIVES: After this session, participants will be able to:

1. Explain what is meant by extreme PCR.
2. Describe the technology underlying extreme PCR and high-speed melting analysis.
3. Understand the implications of extreme molecular diagnostics for clinical testing.

THURSDAY | AUGUST 8

MEET THE EXPERT

10:30am–11:30am

Extreme Molecular Diagnostics

65101
Room: 210B

Presentation Level: **BASIC**
ACCENT® Credits: 1

SESSION OVERVIEW: This session will provide an excellent opportunity for attendees to meet with Dr. Wittwer in a more intimate setting and listen to him discuss his talk, "Extreme Molecular Diagnostics."

INTENDED AUDIENCE: This session is intended for pathologists, lab directors, molecular biologists, clinical chemists, technologists, physicians and IVD industry scientists with an interest in molecular diagnostics and nucleic acid amplification technologies.

LEARNING OBJECTIVES: After this session, participants will be able to:

1. Explain what is meant by extreme PCR.
2. Describe the technology underlying extreme PCR and high-speed melting analysis.
3. Understand the implications of extreme molecular diagnostics for clinical testing.

SPEAKER
Carl Wittwer, MD, PhD
Professor of Pathology, University of Utah, Salt Lake City, UT

SCIENTIFIC SESSIONS

MORNING

10:30am–12:00pm

Return of Individual Specific Research Results to Participants: The National Academies of Sciences, Engineering and Medicine Report

35101
Room: 206AB

Presentation Level: **INTERMEDIATE**
ACCENT® Credits: 1.5

MODERATOR/SPEAKER
James Nichols, PhD, DABCC, FAACC
Vanderbilt University Medical Center, Nashville, TN

SESSION OVERVIEW: Research drives scientific discovery and advances laboratory medicine. While HIPAA grants research participants access to their study results, CLIA requires minimal quality standards if research results are intended for clinical care. This session will explore this regulatory conflict and the impact of recommendations from the recent National Academies of Sciences, Engineering and Medicine report on hospital and academic laboratory operations.

INTENDED AUDIENCE: This session is intended for research staff, principle investigators, laboratory medical directors, and IVD industry and government personnel involved in funding, managing and conducting clinical and basic research studies.

LEARNING OBJECTIVES: After this session, participants will be able to:

1. Examine the evidence on benefits and risks of returning individual results to research participants.
2. Appreciate the ethical, social, operational and regulatory aspects of returning individual research results to participants.
3. Identify if and when it is appropriate to return individual results to research participants.

SPEAKERS
Returning Individual Research Results to Participants: A Clinical and Research Laboratory Perspective
James Nichols, PhD, DABCC, FAACC
Vanderbilt University Medical Center, Nashville, TN

Returning Individual Research Results to Participants: Guidance for a New Research Paradigm
Jeffrey Botkin, MPH, MD
University of Utah, Salt Lake City, UT

10:30am–12:00pm

Plasma Microvesicles: A Treasure Trove of Novel Biomarkers for Disease Diagnosis

35102
Room: 201AB

Presentation Level: **INTERMEDIATE**
ACCENT® Credits: 1.5

MODERATOR/SPEAKER
Alan Wu, PhD
University of California, San Francisco, San Francisco, CA

SESSION OVERVIEW: As a means of communication, cells secrete biological materials through the formation and shedding of microvesicles. These circulating extracellular nanoparticles contain proteins and nucleic acids that are specific to the host cell. Methods are available for isolation of microvesicles from plasma. Analysis of microvesicle content provides a source of biomarkers for disease detection.

INTENDED AUDIENCE: This session is intended for academic and industry-based researchers who develop and validate new biomarkers for disease detection, clinical laboratory directors and scientists who implement novel technologies and assays, and regulatory personnel who would like to learn about the future direction of lab diagnostics.

LEARNING OBJECTIVES: After this session, participants will be able to:

1. Explain what microvesicals are and how they may be used.
2. Explain how microvesicle analsyis can be used for detection of reversible myocardial injury.
3. Explain how microvesical analysis can be used for cancer detection using uveal melanoma as an example.
4. Explain the role of microvesicle-associated nitric oxide synthase in the pathophysiology of sepsis and how it can be used as a diagnostic marker.

SPEAKERS
Detection of Cardiac Troponin in Microvesicles for Detection of Reversible Myocardial Ischemia
Alan Wu, PhD
University of California, San Francisco, San Francisco, CA

Proteomic Discovery of Extracellular Vesicle Proteins for Prostate Cancer and Uveal Melanoma
Alex Rai, PhD, DABCC, FAACC
Columbia University, New York, NY

Detection of Inducible Nitric Oxide Synthase (iNOS) in Circulating Microvesicles as a Biomarker to Detect and Diagnose the Onset of Sepsis
Richard Sweet, MD
UCSF Medical Center, San Francisco, CA

THURSDAY | AUGUST 8

SCIENTIFIC SESSIONS

MORNING

10:30am–12:00pm

Artery Hot Topics 2019

35103

Room: 204B

Presentation Level: **BASIC**

ACCENT® Credits: 1.5

MODERATOR

Allison Chambliss, PhD, DABCC, FAACC

Keck School of Medicine of USC, Los Angeles, CA

SESSION OVERVIEW: Using AACC's online forum, Artery, as a metric, we have identified three common areas of ambiguity facing today's clinical laboratorians: individualized quality control plans, oral glucose tolerance testing, and drugs of abuse immunoassay screening. Relevant to each of these challenges, this session will provide essential scientific background, current regulations and/or practice guidelines, and practical opportunities for resolution.

INTENDED AUDIENCE: This session is intended for pathologists, laboratory directors, clinical chemists, laboratory managers and supervisors, technologists, and IVD industry scientists who are involved with clinical laboratory testing.

LEARNING OBJECTIVES: After this session, participants will be able to:

1. Describe the CMS standards and requirements related to the Individualized Quality Control Plan (IQCP).
2. Develop concrete strategies for minimizing pre-analytical errors in oral glucose tolerance testing.
3. Discuss modern complications of urine drug screening practices.

SPEAKERS

You Do WHAT?!?: Individualized Quality Control
Tiffany Roberts, PhD, DABCC, FAACC, DABHI
University of Louisville, Louisville, KY

Gestational Glucose Screening: The Sweet Smell of Best Practices
Sean Campbell, PhD
Montefiore Medical Center, Bronx, NY

Did a Literal Reading of a Package Insert During an Inspection Expose a Valid Point about Urine Drug Screens?
Danyel Tacker, PhD, DABCC, FAACC
West Virginia University Hospitals, Morgantown, WV

10:30am-12:00pm

Removing Laboratory Barriers to Improve Kidney Disease Testing and Diagnosis

35104

Room: 204C

Presentation Level: **INTERMEDIATE**

ACCENT® Credits: 1.5

MODERATOR

Lakshmi Ramanathan, PhD

Memorial Sloan-Kettering Cancer Center, New York, NY

Developed in cooperation with Management Sciences and Patient Safety Division

SESSION OVERVIEW: Chronic Kidney Disease (CKD) is a public health issue. Over 80% of the 30 million people with CKD are undiagnosed in primary care, including almost 50% of patients in kidney failure. The National Kidney Foundation, the nation's leading laboratories and prominent pathology organizations are collaborating to remove laboratory test ordering and reporting barriers to CKD testing. This session brings perspectives on this collaboration from patients, nephrologists, pathologists and primary care physicians.

INTENDED AUDIENCE: This session is intended for clinical chemists, clinical pathologists, residents, fellows, clinical laboratory scientists, medical technologists, research scientists, and laboratory supervisors and managers.

LEARNING OBJECTIVES: After this session, participants will be able to:

1. Describe the clinical and cost implications of timely recognition of CKD.
2. Recognize the pre-analytical and analytical limitations of currently available tests.
3. Understand how clinical laboratory testing can be applied in CKD population health.

SPEAKERS

Understanding CKD in a Population Health Model
Joseph Vassalotti, MD
Kidney Foundation, New York, NY

Removing Laboratory Barriers to CKD Detection and Monitoring
Greg Miller, PhD, DABCC
Virginia Commonwealth University, Richmond, VA

A Patient's Perspective on CKD Diagnosis and Quality of Life
David Rosenbloom, BA
USC University Hospital, Los Angeles, CA

10:30am–12:00pm

Opportunities and New Approaches to Guide Utilization of Urine-Based Testing for Diagnosis of Infectious Disease

35105

Room: 205AB

Presentation Level: **INTERMEDIATE**

ACCENT® Credits: 1.5

MODERATOR/SPEAKER

Melanie Yarbrough, PhD

Washington University, St. Louis, MO

SESSION OVERVIEW: Recent advances in urine collection devices and diagnostic testing have provided opportunities for clinical laboratories to improve upon stagnant practices that may have deleterious effects on test utilization and result quality. This case-based session will highlight the importance of pre-analytical variables in urine testing, describe the impact of reflex algorithms on urine culture utilization, and describe how laboratory-based initiatives to reduce unnecessary urine testing can support value-based care and impact patient care.

INTENDED AUDIENCE: This session is intended for laboratory directors, clinical chemists, laboratory administrators, laboratory managers and supervisors, pathology trainees, pathologists, physicians, and medical technologists.

LEARNING OBJECTIVES: After this session, participants will be able to:

1. Describe optimal urine collection and transport guidance for infectious disease testing.
2. Explain the workflow and advantages of reflex algorithms for urine culture in clinical laboratories.
3. Describe the impact of diagnostic stewardship for urine cultures on patient outcomes and value-based care.

SPEAKERS

Innovations and Considerations for Pre-Analytical Variables in Urine-Based Testing
Audrey Schuetz, MD, MPH
Mayo Clinic, Rochester, MN

Implementation and Impact of Reflex Algorithms on Urine Culture Utilization
Melanie Yarbrough, PhD
Washington University, St. Louis, MO

Laboratory-Directed Initiatives to Reduce Catheter-Associated Urinary Tract Infections and Support Value-Based Care: A Physician's Perspective
David Warren, MD, MPH
Washington University School of Medicine, St. Louis, MO

10:30am–12:00pm

Hemostatic Disorders That Can Kill You

35106

Room: 204A

Presentation Level: **INTERMEDIATE**

ACCENT® Credits: 1.5

MODERATOR/SPEAKER

William Winter, MD, DABCC, FAACC

University of Florida, Gainesville, FL

Developed in cooperation with Hematology and Coagulation Division

SESSION OVERVIEW: Dangerous common thrombotic disorders require early recognition, diagnosis, and treatment because they are amenable to treatments that result in positive patient outcomes. This session will discuss common thrombotic disorders, including heparin-induced thrombocytopenia (HIT) and the anti-phospholipid syndrome (APLS). For these disorders, a selected combination of a few tests may be more helpful than a "shotgun" battery of coagulation testing. These coagulation tests are not necessarily esoteric laboratory assays, and often results may be within the reference range even in serious conditions. It is essential that laboratorians become familiar with these life-threatening conditions in order to prioritize their workload within a busy core laboratory and have productive discussions with the clinical hematology team in order to provide them with appropriate guidance and interpretation.

INTENDED AUDIENCE: This session is intended for clinical chemists, laboratory directors, medical technologists, trainees and pathologists.

LEARNING OBJECTIVES: After this session, participants will be able to:

1. Explain to clinicians and other laboratorians the biology and pathophysiology of heparin-induced thrombocytopenia (HIT) and the anti-phospholipid syndrome (APLS).
2. Create an awareness of the essential laboratory features and test-selection criteria relative to these life-threatening thrombotic disorders.
3. Evaluate the causes of a prolonged aPTT, which can (paradoxically) signal both a life-threatening bleeding disorder and a thrombotic disorder.

SPEAKERS

The Anti-Phospholipid Syndrome
William Winter, MD, DABCC, FAACC
University of Florida, Gainesville, FL

Heparin-Induced Thrombocytopenia
Neil Harris, MBChB, MD, FAACC
University of Florida, Gainesville, FL

AACC BOOTH, MEMBER LOUNGE & STORE

AACC BOOTH

Stop by and visit booth #4353 on the Expo show floor to learn how AACC is at the forefront of new approaches in laboratory medicine, as well as addressing the complexity of an evolving healthcare landscape and promoting new thinking and new skills.

AACC MEMBER LOUNGE

AACC members are invited to visit the Member Lounge located at the AACC booth #4353 on the Expo show floor. This members-only benefit provides a place to recharge between sessions, mingle with colleagues and enjoy light refreshments.

AACC Booth/Member Lounge Hours

Tuesday–Wednesday.....9:30am–5:00pm
Thursday.....9:30am–1:00pm

Member Lounge Activities

Tuesday, August 6

SYCL Meet & Greet 1:00pm–2:00pm
Artery Happy Hour 3:00pm–5:00pm
(RSVP required — see the Artery for details)

Wednesday, August 7

SYCL Meet & Greet 1:00pm–2:00pm

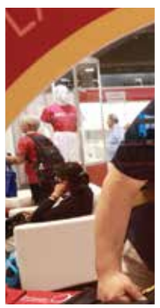
AACC STORE

Plan to visit the AACC store, located in Lobby B, to browse some of AACC's bestsellers and AACC merchandise for purchase, including t-shirts, wearables and gifts.

AACC Store Hours

Sunday–Wednesday.....9:00am–5:00pm
Thursday.....9:00am–1:00pm

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AACC's International Travel Grant Program is a way for you to give back to the clinical chemistry profession. Through your generous donations, emerging laboratory scientists from outside the U.S. and Canada are supported and encouraged to contribute to excellence in the profession. These grants bring laboratorians from all over the world to the AACC Annual Scientific Meeting, allowing them to network with colleagues, attend cutting-edge scientific sessions and tour the AACC Clinical Lab Expo.

"Having the chance to meet and talk to the experts in the field of laboratory medicine through AACC has been one of the most important things in my professional life."

— Manjula Dissanayake, Sri Lanka

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— Weiyan Zhou, China

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SPEAKER INDEX

LF = Laboratory Feud: Science and Practice Core Committee vs. Education Core Committee

ACCENT® CREDIT & CERTIFICATE OF ATTENDANCE

ACCENT® CE CREDITS

The American Association for Clinical Chemistry (AACC) designates this live activity for a maximum of 30.0 ACCENT® continuing education (CE) credit hours towards the AACC Clinical Chemist's Recognition Award. AACC is an approved CE provider for clinical laboratory professionals licensed in states that require documentation of CE, including California, Florida, Louisiana, Montana, Nevada, New York, North Dakota, Rhode Island, Tennessee, and West Virginia. ACCENT® credit is also recognized by several organizations: AAB, ABCC, ACS, AMT, ASCLS, ASCP, ASM, CAP, IFCC, and NRCC.

For number of ACCENT® credits available per session, see session descriptions in this Program Guide, *or visit the mobile app or www.2019aacc.org and click on "Conference Program."*

Credit amounts are subject to change. For the most up-to-date information on credits available by session, check the mobile app or visit www.2019aacc.org and select "Conference Program."

JOINT ACCREDITATION STATEMENT

In support of improving patient care, this activity has been planned and implemented by the Postgraduate Institute for Medicine and the American Association for Clinical Chemistry (AACC). The Postgraduate Institute for Medicine is jointly accredited by the Accreditation Council for Continuing Medical Education (ACCME), the Accreditation Council for Pharmacy Education (ACPE), and the American Nurses Credentialing Center (ANCC), to provide continuing education for the healthcare team.

PHYSICIAN CONTINUING MEDICAL EDUCATION (CME)

Postgraduate Institute for Medicine

The Postgraduate Institute for Medicine designates this live activity for a maximum of 30.0 *AMA PRA* Category 1 Credits™. Physicians should claim only the credit commensurate with the extent of their participation in the activity. For information about *AMA PRA* Category 1 Credits™ per session, go to the CME Session Info icon in the mobile app or www.aacc.org/AMcredits19.

CONTINUING EDUCATION CREDIT AND CERTIFICATE OF ATTENDANCE INSTRUCTIONS

1. To claim your credits and/or to obtain your Certificate of Attendance, click the Claim CE/CME Credits icon in the mobile app.
2. Log in using your last name and AACC Customer Number (or badge number).
3. For CE and CME credits, you will be required to evaluate each session attended; then print (or save) your Verification of Participation (credit) certificate.
4. Sessions that you attend where your name badge is scanned will automatically appear in your session list. You may add more sessions and you may delete sessions.
5. Credits may be claimed at any time, i.e., at the end of each session, each day, or after the meeting ends.
6. Credits may be claimed using a computer, laptop, tablet, smartphone or other electronic device. Computers will be available on site at the AACC booth #4353 in the Expo.
7. Credits for the 2019 AACC Annual Scientific Meeting must be claimed by June 1, 2020, with the exception of credits claimed by California- and Florida-licensed laboratory professionals (see information below.)

Special Instructions for California- and Florida-Licensed Laboratory Professionals Receiving ACCENT® Credit

If you would like AACC to report your credits to your state licensing agency (Laboratory Field Services for California and CE BROKER for Florida), you must:

- Claim your credits within 30 days of the AACC Annual Scientific Meeting; and
- Enter your California or Florida license number in the appropriate box when claiming your ACCENT® credits.

Eligibility to Earn Continuing Education Credit

You must be registered for the Annual Scientific Meeting to be eligible to earn continuing education credit (ACCENT® or AMA PRA Category 1 Credit™) for the following scientific sessions of the AACC Annual Scientific Meeting: AACC University, Plenary, Symposia, Roundtable, Poster Session and Meet the Expert Sessions. Individuals registered as Guest/Spouse or Expo Only are not eligible to earn credit.

FREQUENTLY ASKED QUESTIONS

How do I get credit for the scientific sessions (Plenary, AACC University, Symposia, Poster Session, Meet the Expert, and Roundtable Sessions)?	Click on the Claim CE/CME Credits icon in the mobile app or go to www.aacc.org/AMcredits19 and follow the instructions to evaluate each session you attended and then print (or save) your Verification of Participation (credit) certificate.
What is the deadline for claiming credits or getting a Certificate of Attendance for the 2019 AACC Annual Scientific Meeting?	The deadline for claiming credits and getting your Certificate of Attendance for this year's meeting is June 1, 2020, with the exception of California and Florida laboratory professionals (see further information below).
Do I need to take any additional steps for my ACCENT® credit if I am a licensed laboratory professional in California or Florida?	Yes, if you would like AACC to report your credits to your state health licensing agency (Laboratory Field Services for California and CE BROKER for Florida), you must enter your license number in the appropriate box when you claim your ACCENT® credits. Credits must be claimed within 30 days of the AACC Annual Scientific Meeting.
What's the difference between ACCENT® credit and AMA PRA Category 1 Credit™?	ACCENT® credit is for clinical laboratory professionals, and AMA PRA Category 1 Credit™ is for physicians only.
Can I obtain my continuing education credits or Certificate of Attendance on-site at the Annual Scientific Meeting?	Yes, there will be a computer in the AACC booth #4353 in the Expo. You may also use your own computer, laptop, tablet, smartphone, or other electronic device.
How do I get my Certificate of Attendance for the 2019 AACC Annual Scientific Meeting?	Click on the Claim CE/CME Credits icon in the mobile app or go to www.aacc.org/AMcredits19 and follow the instructions to obtain your Certificate of Attendance. You will need your AACC Customer Number (or badge number) located on your badge.
Who can answer additional questions about continuing education credit?	Contact the AACC Education Team at education@aacc.org.

Visit the AACC Booth #4353
for more information.

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Providing laboratories with innovative technologies and reliable automation solutions, Sysmex shares your ongoing commitment to the advancement of healthcare. Join us at this year's AACC expo to learn how Sysmex is expanding our portfolio beyond hematology. We designed the UN-2000™ Automated Urinalysis System and PS-10™ Sample Preparation System for Flow Cytometry to further streamline laboratory processes. Software solutions like Caresphere™ Laboratory Management and BeyondCare℠ Quality Monitor provide powerful metrics that can be accessed when and where you need them. Developing science-centric tools like our Advanced Clinical Parameters (ACP) and next generation educational programs like Virtual Instructor-Led Training (VILT), Sysmex is proud to continuously develop the products and services that allow more time for laboratory scientists to focus on laboratory science.

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