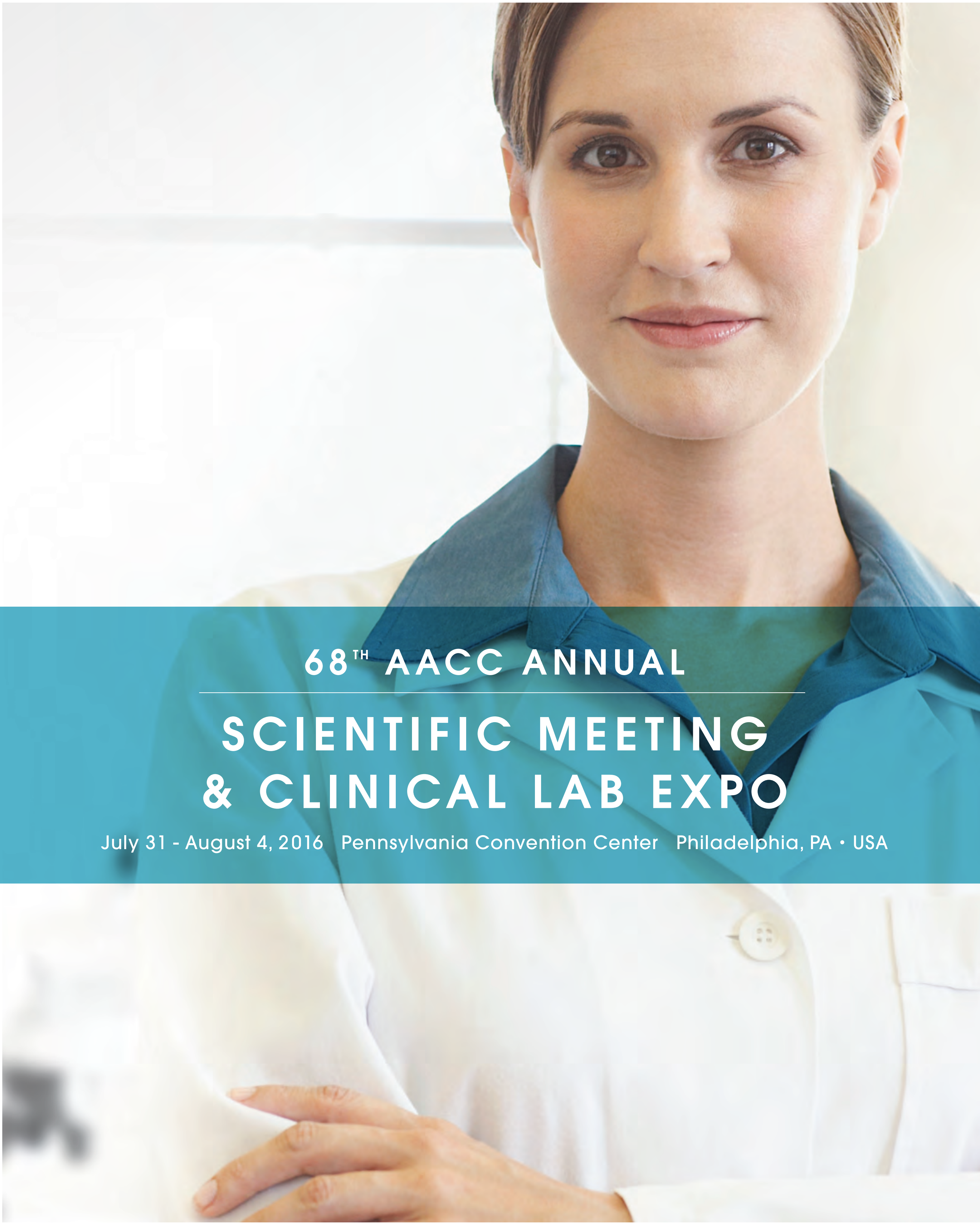

68TH AACC ANNUAL

SCIENTIFIC MEETING & CLINICAL LAB EXPO

July 31 - August 4, 2016 Pennsylvania Convention Center Philadelphia, PA • USA

PROGRAM GUIDE

www.aacc.org/2016am

AACC

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Make critical decisions with confidence.

Drive faster delivery of quality patient test results and improve the financial health and efficiency of the laboratory with our unique portfolio of clinical information management tools.

DISCOVER THE DIFFERENCE AT BOOTH #2600.

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CONTENTS

68TH AACC ANNUAL SCIENTIFIC MEETING & CLINICAL LAB EXPO

SESSIONS BY DAY

KEY EVENT DETAILS

IMPORTANT PHONE NUMBERS

AACC Office – Room 126AB
215.418.2272
Contact the AACC Office if you have questions about registration, or general questions about the meeting (session times/locations or expo times/locations).

Also use this number if you have an emergency situation.

Press Room – Room 120ABC
215.418.2267 and 215.418.2268
Contact if you need to reach AACC PR Staff or need information on press registration, press conferences or interviews.

Emergency/First Aid
In Convention Center, dial 4911 from any phone.

In Hotels, dial 0 from any phone.

LOCATION OF ACTIVITIES

Pennsylvania Convention Center

- Scientific Sessions
  - Plenary Sessions
  - Symposia
  - Meet the Expert Sessions
  - Brown Bag Sessions
  - Short Courses
  - AACC University
  - Oral Abstract Sessions
  - President's Invited Sessions
  - Chair's Invited Session
- Special Session
- AACC Clinical Lab Expo
- New Products Showcase
- Poster Sessions
- Registration
- Industry Workshop Theater Presentations
- OEM Lecture Series Presentations

Philadelphia Marriott Downtown

- AACC Community Opening Mixer
- AACC Governance Activities
- Affiliated Organization Meetings
- Industry Workshops

Sheraton Philadelphia Downtown

- Affiliated Organization Meetings

Please check the on-site shuttle bus flyer for the most up-to-date hotel listings and routes

PUT YOUR MEETING PLAN IN YOUR POCKET

The 2016 AACC Annual Scientific Meeting & Clinical Lab Expo App
With hundreds of exhibitors to navigate and dozens of educational sessions to attend, planning your busy days at the 68th AACC Annual Scientific Meeting & Clinical Lab Expo is essential to make the most of this dynamic event.

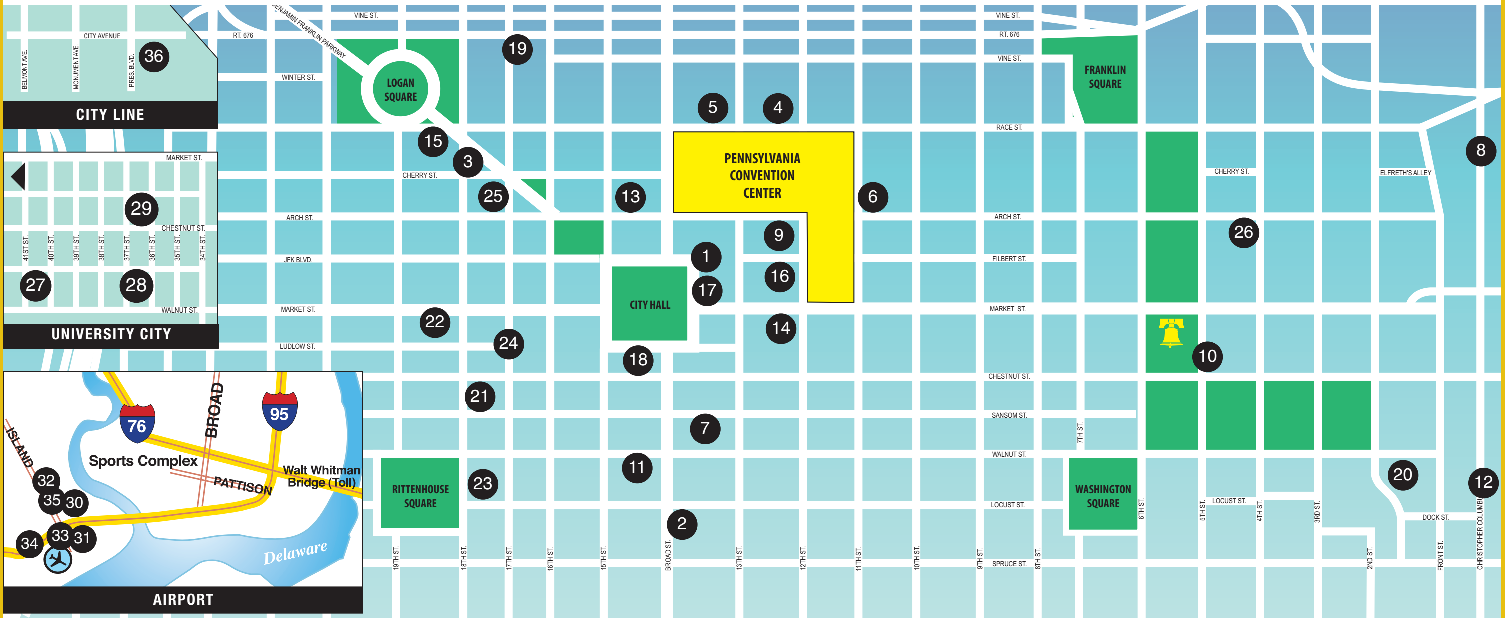
Now you can do all that and more with the FREE 2016 AACC Annual Scientific Meeting & Clinical Lab Expo app! Available for smartphones and tablets from the Apple ITunes store and on Google Play for Android devices.

- Keep track of the educational sessions you're attending
- 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
- Organize your notes about exhibitors or check off which ones you've visited
- Follow live tweets and other social media about the meeting

To Download:

- visit www.aacc.org/2016app
- Search for the app on the Apple iTunes Store or on Google Play

HOTEL INFORMATION



Downtown

1. Courtyard by Marriott Philadelphia Downtown (Formerly Crown Plaza Philadelphia West) — 215.496.3200
2. DoubleTree by Hilton Philadelphia Center City — 215.893.1600
3. Embassy Suites Philadelphia Center City — 215.561.1776
4. Four Points by Sheraton Philadelphia Center City — 215.496.2700
5. Hampton Inn Philadelphia Center City—Convention Center — 215.665.9100
6. Hilton Garden Inn Philadelphia Center City — 215.923.0100
7. Holiday Inn Express Philadelphia Midtown — 215.735.9300
8. Holiday Inn Express Philadelphia Penn's Landing — 215.627.7900
9. Home2 Suites Philadelphia Center City — 215.627.1850
10. Hotel Monaco Philadelphia — 215.925.2111
11. Hyatt at the Bellevue — 215.893.1237
12. Hilton Philadelphia at Penn's Landing — 215.928.1234
13. Le Meridien Philadelphia — 215.422.8200
14. Loews Philadelphia Hotel — 215.627.1200
15. The Logan (Formerly Four Seasons) — 215.963.1500
16. Philadelphia Marriott Downtown—Co-Headquarters Hotel — 215.625.2900
17. Residence Inn by Marriott Philadelphia Center City — 215.557.0005
18. Ritz-Carlton Philadelphia — 215.523.8000
19. Sheraton Philadelphia Downtown—Co-Headquarters Hotel — 215.448.2000
20. Sheraton Society Hill Hotel — 215.238.6000
21. Sofitel Philadelphia — 215.569.8300
22. Sonesta Hotel Philadelphia — 215.561.7500
23. The Warwick Hotel Rittenhouse Square — 215.735.6000
24. Westin Philadelphia — 215.563.1600
25. The Windsor Suites — 215.981.5678
26. Wyndham Philadelphia Historic District — 215.923.8660

University City

27. Homewood Suites by Hilton University City — 215.382.1111
28. The Inn at Penn, a Hilton Hotel — 215.222.0200
29. Sheraton Philadelphia University City Hotel — 215.349.6300

Airport

30. Aloft Philadelphia Airport — 267.298.1700
31. DoubleTree by Hilton Philadelphia Airport — 215.365.4150
32. Four Points by Sheraton Philadelphia Airport — 215.492.0400
33. Philadelphia Marriott Airport — 215.492.9000
34. Renaissance Philadelphia Airport Hotel — 610.521.5900
35. Sheraton Suites Philadelphia Airport — 215.365.6600

Cityline

36. Crowne Plaza Philadelphia West — 215.477.0200

SHUTTLE SCHEDULE

SHUTTLE BUS SERVICE TO THE PENNSYLVANIA CONVENTION CENTER

Shuttle schedule may vary due to traffic & weather conditions.

Date	Service Hours	Departures
SUNDAY JULY 31	9:00am - 6:00pm*	Every 30 minutes
MONDAY AUGUST 1	6:00am - 10:00am 10:00am - 3:00pm 3:00pm - 6:30pm*	Every 15 minutes Every 30 minutes Every 15 minutes
TUESDAY AUGUST 2	6:00am - 10:00am 10:00am - 3:00pm 3:00pm - 6:30pm*	Every 15 minutes Every 30 minutes Every 15 minutes
WEDNESDAY AUGUST 3	6:00am - 10:00am 10:00am - 3:00pm 3:00pm - 6:30pm*	Every 15 minutes Every 30 minutes Every 15 minutes
THURSDAY AUGUST 4	7:00am - 11:00am 11:00am - 6:00pm*	Every 15 minutes Every 30 minutes

** Last time shuttle departs convention center to hotels. Last shuttle departs hotel going to the Convention Center one hour prior to this time.*

SPECIAL TRANSPORTATION

AACC Community Opening Mixer
Philadelphia Marriott Downtown, Sunday, July 31

Return transportation from the Philadelphia Marriott Downtown departs the Convention Center at 7:00pm, 7:30pm, 8:00pm, and 8:30pm (last shuttle).

Morning Industry Workshops
Tuesday, August 2 and Wednesday, August 3

Transportation is provided from hotels to the Convention Center 6:30am - 8:30am, every 15-20 minutes.

All sessions are held at the Philadelphia Marriott Downtown, which is connected to the Pennsylvania Convention Center.

HOTELS WITHIN WALKING DISTANCE

Courtyard Philadelphia Downtown
Four Points by Sheraton City Center
Hampton Inn Convention Center
Hilton Garden Inn
Homes2 Suites by Hilton
Le Meridien
Loews Philadelphia
Marriott Downtown
Residence Inn Philadelphia

If you need to arrange wheelchair-accessible transportation, please call 404.597.7757 at least 12 hours prior to pick-up or see a shuttle supervisor at the Convention Center.

ROUTES & BOARDING LOCATIONS

Route#/Color	Hotel	Boarding Location
#1 - Red	Sonesta Hotel	Curbside on Market St.
	Embassy Suites City Center	Curbside on 18th St.
	The Logan *(Formerly Four Seasons)*	Curbside on 18th St.
	Sheraton Philadelphia Downtown	Curbside across 17th St.
#2 - Blue	Ritz Carlton	Curbside on Penn Sq.
	Doubletree Philadelphia	Curbside on Locust St. (Front of Hotel)
	Hyatt at The Bellevue	Front of Doubletree
	Holiday Inn Express Midtown	Curbside on 13th St.
#3 - Green	The Windsor Suites	17th St. (Curbside Front of Hotel)
	Westin Philadelphia	17th St. (Across from Main Entrance)
	Sofitel	17th St.(Curbside Front of Hotel)
	Radisson Blu Warwick Hotel	17th St. (Curbside Front of Hotel)
#4 - Yellow	Homewood Suites by Hilton University	Walnut Between 41st/42nd Sts.
	Sheraton University City	Curbside on 36th St. (Front of Hotel)
	The Inn at Penn	Sheraton Curbside on 36th St.
#5 - Orange	Holiday Inn Express Penn's Landing	Curbside on Christopher Columbus Blvd.
	Sheraton Society Hill	Corner Dock St. @ 38th Parallel Pl.
	Hilton at Penn's Landing	Curbside on Christopher Columbus Blvd.
	Wyndham Historic District	Market St. @ 4th St.
	Hotel Monaco	Across Market St. @ 5th St.
#6 - Pink	Renaissance Philadelphia Airport	Front of Hotel
	Philadelphia Marriott Airport	Curbside on Garage Access Rd.
	Doubletree Philadelphia Airport	Curbside on Island Ave.
	Aloft Philadelphia Airport	Four Points - Main Entrance
	Four Points by Sheraton Philadelphia Airport	Main Entrance
	Sheraton Suites Philadelphia Airport	Four Points - Main Entrance
#7 - Grey	Courtyard by Marriott Philadelphia City Avenue	Front of Hotel

OFFICES & MEETING SERVICES

REGISTRATION

Location: Grand Hall

Saturday	2:00pm - 5:00pm
Sunday	8:00am - 6:30pm
Monday - Wednesday	7:00am - 5:00pm
Thursday	8:00am - 1:00pm

AACC STORE

Location: Bridge

Plan to visit the AACC bookstore to examine some of AACC's new titles that have been released since last year's meeting and all the other bestsellers. AACC merchandise is available for purchase including t-shirts, AACC wearables, and gifts. The AACC Store is open from Sunday through Thursday.

AACC Store Hours

Monday, August 1	9:00am - 5:00pm
Tuesday, August 2	9:00am - 5:00pm
Wednesday, August 3	9:00am - 5:00pm
Thursday, August 4	9:00am - 1:00pm

ACCENT/CME BOOTH

Location: Grand Hall

See page 104 for detailed instructions for claiming Continuing Education credit, i.e. (ACCENT® and CME). **Read instructions carefully as they are new and different from past years.** If you have additional questions, come to the ACCENT/CME booth or send an email to education@aacc.org.

HOUSING

Location: Grand Hall

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

Note: All locations are in Pennsylvania Convention Center unless otherwise noted.

INTERNATIONAL TRADE CENTER

Location: Bridge

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. Also available at the Center are a number of individuals with a variety of language skills to provide translation assistance.

Monday - Wednesday	9:00am - 5:00pm
Thursday	9:00am - 1:00pm

AACC MEMBERSHIP

Membership information and applications are available in the AACC Member Center, the AACC Store, the AACC Booth and at the AACC Conference Registration Desk. (One year Professional Member dues are $227, Professional Affiliate dues are $134, Transitional Dues are $76 and Trainee dues are $37.) You can customize your membership by joining one or more divisions that target your specialized area(s) of interest for an additional $15, $20 or $25 each, depending on the division(s) you select.

AACC HEADQUARTERS OFFICE

Location: Room 126AB
215-418-2272

Friday	Noon - 5:00pm
Saturday	Noon - 5:00pm
Sunday	8:00am - 6:30pm
Monday - Wednesday	7:00am - 6:00pm
Thursday	8:00am - 4:00pm

BAGGAGE CHECK

Location: 12th & Arch Street Concourse

Tuesday	7:00am - 6:00pm
Wednesday	7:00am - 6:00pm
Thursday	7:00am - 2:00pm

Per item: Coat Check, Bag or Poster $3

CLINICAL LAB EXPO

Location: Exhibit Hall A – E, Second Level

Tuesday - Wednesday	9:30am - 5:00pm
Thursday	9:30am - 1:00pm

Refer to Exhibit Guide for exhibit listing and booth descriptions.

AACC permits individuals age 16 and 17 with a photo ID to register for and attend the 68th 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 4911 from any telephone in the Convention Center.

PRESS ROOM

Location: Room 120ABC
215.418.2267 and 215.418.2268

Sunday	9:00am - 5:00pm
Monday	8:00am - 8:00pm
Tuesday - Wednesday	8:00am - 5:00pm
Thursday	8:00am - 1:00pm

Members of the media can register for the Annual Scientific Meeting in the press room, where pre-registered media can pick up their badges and other meeting materials. The press room serves as the coordination point for reporters to set up interviews with participants and is available for exhibitors and journalists who wish to meet away from the exhibit floor and other public areas. 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 hookups are available for the press. Free breakfast and lunch also is available for registered press each day of the meeting.

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 reserve space in Room 109AB to conduct interviews. Use of this room is by appointment only and subject to availability.

Press Conferences

Press conferences take place in Room 121A or 121B. 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.

JOIN THE CONVERSATION

Follow AACC @_AACC and use the hashtag #2016AACC to join the conversation.

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Brigham and Women's Hospital, Boston, MA

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University of Texas MD Anderson Cancer Center, Houston, TX

Julianne Botelho, PhD
Centers for Disease Control and Prevention, Atlanta, GA

ABSTRACTS/ORAL PRESENTATIONS

Octavia M. Peck-Palmer, PhD
University of Pittsburgh School of Medicine, Pittsburgh, PA

Donald LeGatt, PhD
University of Alberta Hospital, Edmonton, AB, Canada

BROWN BAGS

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THANK YOU TO ALL SUPPORTERS OF THE 68TH AACC ANNUAL SCIENTIFIC MEETING & CLINICAL LAB EXPO.

As of June 1, 2016

Roche Point of Care

PHILADELPHIA LOCAL SECTION

GOVERNANCE & SPECIAL EVENTS

Day	Time	Event	Philadelphia Marriott Downtown	Sheraton Philadelphia Downtown	Meeting Room
SATURDAY July 30	**8:30am - 5:30pm**	ABCC Certification Examination	■		407-409
	11:00am - 6:00pm	AACC Philadelphia Local Section	■		414-415
	Noon - 3:00pm	Management Sciences & Patient Safety Division Executive Committee Meeting	■		303
	1:00pm - 5:30pm	SYCL Workshop: Clinical Lab Directors in the Spotlight—Essential Communication Skills for the Modern Lab Director	■		Grand Ballroom, Salons K & L
	5:30pm - 7:30pm	SYCL Mixer— Clinical Lab Directors in the Spotlight	■		Grand Ballroom, Salon H
	5:30pm - 8:30pm	21st Annual Management Sciences & Patient Safety Division Leadership Seminar	■		Grand Ballroom, Salon I
SUNDAY July 31	**9:00am -5:00pm**	AACC Philadelphia Local Section	■		414-415
	10:00am -11:30am	CPOCT Division Executive Committee Meeting	■		303
	Noon - 1:00pm	Proposed Tumor Markers and Cancer Diagnostics Division Organization Meeting	■		305
	Noon -1:30pm	International Travel Grant Luncheon	■		Independence Ballroom, Salon II
	12:30pm - 2:00pm	Proposed Hematology & Coagulation Division Organization Meeting	■		310
	1:00pm - 3:00pm	ABCC Clinical Chemistry Exam Committee Meeting	■		306
		ABCC Molecular Diagnostics Exam Committee Meeting	■		304
		ABCC Toxicology Exam Committee Meeting	■		501
	2:00pm - 3:00pm	Pediatric & Maternal-Fetal Division Annual Board Meeting	■		308
	2:00pm - 4:30pm	NGSP Steering Committee Meeting		■	Salons 5 & 6
	6:45pm - 8:00pm	AACC Community Opening Mixer	■		Grand Ballroom
	7:30pm - 9:00pm	Pediatric and Maternal-Fetal, Informatics, Clinical Translational Science, and Industry Divisions Joint Mixer	■		Independence Ballroom, Salon II
	7:45pm - 10:30pm	Awards Recognition Dinner	■		Liberty Ballroom, Salon A
MONDAY August 1	**8:00am - Noon**	American Board of Clinical Chemistry	■		Independence Ballroom, Salons I & II
	8:00am - 6:00pm	AACC Philadelphia Local Section	■		414-415
	10:00am - 4:00pm	Verificación de métodos analíticos. Pasos a seguir para verificar las especificaciones de los fabricantes.	■		Liberty Ballroom, Salons B & C
	Noon - 1:30pm	IFCC Committee - Standardization of Thyroid Function Tests (C-STFT)	■		Liberty Ballroom, Salon A
		IFCC Corporate Members Meeting	■		303
	Noon - 2:00pm	Biomarkers of Acute Cardiovascular Diseases Division Lunch Meeting	■		Independence Ballroom, Salon I
		Endocrinology Division Luncheon & Mixer	■		Franklin 3
		Molecular Pathology Division Poster Awards Session	■		412
		TDM & Toxicology Division Meeting and Luncheon	■		Independence Ballroom, Salon III
	Noon - 2:30pm	Clinical Translational Science Division Luncheon & Symposium	■		Grand Ballroom, Salon I
	12:30pm - 2:30pm	Industry Division Meeting—Hot Topics on FDA & LDT: Precision Medicine and Laboratory Developed Tests	■		309
	1:00pm - 2:00pm	Student Oral Presentation			201A
	2:15pm - 3:30pm	Student Poster Competition			201B
	4:00pm - 5:30pm	Lipoproteins & Vascular Diseases Division Executive Committee Meeting	■		303

GOVERNANCE & SPECIAL EVENTS

Day	Time	Event	Philadelphia Marriott Downtown	Sheraton Philadelphia Downtown	Meeting Room
MONDAY August 1	**5:30pm - 7:00pm**	CLSI Member Reception		■	Philadelphia Ballroom, South
	5:30pm - 9:30pm	Annual LVD Division Dinner Meeting: Current Topics in Cardiovascular Disease	■		Liberty Ballroom, Salon C
	6:15pm - 7:45pm	Joint ABCC - SYCL Reception	■		Independence Ballroom
	6:00pm - 8:00pm	AACC Global Lab Quality Initiative Mixer	■		Franklin I
TUESDAY August 2	**7:00am - 8:30am**	Ohio/Michigan Local Sections Breakfast	■		309
		Personalized Medicine Division Awards & Membership Meeting	■		308
	7:30am - 8:30am	AACC Rocky Mountain Section Breakfast and Business Meeting	■		501
	7:30am - 9:00am	ComACC Program Director's Breakfast Meeting	■		Independence Ballroom, Salon II
	8:00am - 6:00pm	AACC Philadelphia Local Section	■		414-415
	9:00am - 11:00am	Division of Animal Clinical Chemistry General Business Meeting	■		303
	11:00am - Noon	Molecular Pathology Division Executive Board Meeting	■		307
	11:30am - 1:00pm	Informatics Division Membership Meeting & Luncheon	■		Independence Ballroom, Salon III
	11:30am - 1:30pm	Midwest Section Annual Meeting & Luncheon	■		310
	Noon - 2:00pm	NGSP IFCC Manufacturer Forum		■	Horizons Rooftop Ballroom
	Noon - 2:30pm	Division of Animal Clinical Chemistry Lunch & Learn	■		Independence Ballroom, Salon II
		Joint Division Luncheon - Mass Spectrometry, Molecular Pathology, Proteomics & Metabolomics	■		Liberty Ballrom, Salon C
	12:30pm - 2:00pm	History Division Luncheon Meeting	■		309
	2:30pm - 4:30pm	SYCL Committee Meeting	■		303
	5:30pm - 7:30pm	AdvaMedDx Live	■		Independence Ballroom, Salon III
		CDC Standardization Programs Forum		■	Independence Ballroom, B
		Clinical Diagnostic & Immunology Division Business Meeting & Mixer	■		305
		Transforming Molecular Testing Through Automation: New Insights and Possibilities	■		Independence Ballroom, Salons I & II
		Washington University School of Medicine Alumni Reception	■		Franklin 9
	6:00pm - 8:00pm	CPOCT Division Membership Meeting & Mixer	■		Liberty Ballroom
	6:00pm - 9:00pm	International Lipoprotein Standardization Forum	■		Franklin 3
	6:00pm - 9:30pm	Nutrition Division Networking Seminar	■		309
	8:00pm - 11:00pm	CPOCT Division Afterglow	■		Liberty Ballroom
WEDNESDAY August 3	**7:00am - 8:30am**	Academy Council Meeting & Breakfast	■		401
	7:00am - 9:00am	C-peptide/Insulin Standardization Manufacturer Meeting		■	Salons 5 & 6
	7:30am - 9:00am	CPD Executive Meeting	■		304
	8:00am - 6:00pm	AACC Philadelphia Local Section	■		414-415
	12:15pm - 2:30pm	NACB Academy Annual Luncheon and Membership Meeting	■		Liberty Ballroom
	12:30pm - 2:00pm	International Harmonization Consortium Luncheon	■		303
	5:30pm - 7:30pm	NRCC Reception		■	Salon 10
THURSDAY August 4	**7:00am - 10:00am**	14th Annual Point-of-Care Forum			103ABC
	8:00am - 3:00pm	AACC Philadelphia Local Section	■		414-415

If no location is specified, the session will take place at the Pennsylvania Convention Center.

TUESDAY
August 2

9:30am - 5:00pm

Cancer/Tumor Markers	A-001 – A-062
Cardiac Markers	A-063 – A-094
Clinical Studies/Outcomes	A-095 – A-160
Endocrinology/Hormones	A-161 – A-238
Factors Affecting Test Results	A-239 – A-278
Hematology/Coagulation	A-279 – A-302
Immunology	A-303 – A-340
Mass Spectrometry Applications	A-341 – A-390
Nutrition/Trace Metals/Vitamins	A-391 – A-400

Posters of accepted abstracts can be viewed in the Terrace Ballroom of the Pennsylvania Convention Center, on Tuesday, August 2 and Wednesday, August 3. 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 Title Guide for a complete schedule of posters.

WEDNESDAY
August 3

9:30am - 5:00pm

Animal Clinical Chemistry	B-001 – B-006
Automation/Computer Applications	B-007 – B-033
Electrolytes/Blood Gas/Metabolites	B-034 – B-045
Infectious Disease	B-046 – B-114
Lipids/Lipoproteins	B-115 – B-129
Management	B-130 – B-182
Molecular Pathology/Probes	B-183 – B-219
Pediatric/Fetal Clinical Chemistry	B-220 – B-240
Point-of-Care Testing	B-241 – B-282
Proteins/Enzymes	B-283 – B-301
TDM/Toxicology/DAU	B-302 – B-347
Technology/Design Development	B-348 – B-373

TUESDAY
August 2

12:30pm - 1:30pm

Division	Tour Leader
Biomarkers of Acute Cardiovascular Disease	Pete Kavsak
Clinical & Diagnostic Immunology	Maria A. Willrich
Clinical Translational Science	Vincent Ricchiuti
Endocrinology	Bill Winter

WEDNESDAY
August 3

12:30pm - 1:30pm

Division	Tour Leader
Critical and Point-of-Care Testing	Sarah Brown
Informatics	William Coughlin
Management Sciences & Patient Safety	Dan Chen
Pediatric & Maternal Fetal	David Carpentieri
Proteomics & Metabolomics	Mari DeMarco
Therapeutic Drug Management & Toxicology	Jim Ritchie

NEW LOCATION!

ALL POSTERS LOCATED IN THE TERRACE BALLROOM

Led by AACC Division subject matter experts, walks highlight posters selected by the division for further discussion. Poster walks are free, limited to about 20-30 participants, and last about 30-minutes. Participants must have a full or daily conference registration and are asked to line up next to the tour signs outside the entrance to the poster display. Walks commence at the times listed in the left column.

AACC STUDENT POSTER CONTEST

Monday, August 1

Pennsylvania Convention Center

Oral Presentations	1:00pm - 2:00pm Room 201A
Poster Presentations	2:15pm - 3:15pm Room 201B

The AACC student poster contest showcases AACC's finest young scientists. The contest consists of two sessions. The first half is an oral competition with four students presenting their work. A panel of judges will rate the talks 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 oral competition will include a 'People's Choice Award' that will be given to the student thought to have the best presentation using an audience participation electronic voting system.

The second half of the competition consists of poster presentations. Over 60 posters will be displayed and reviewed. Three judges evaluate each poster individually in timed rounds. Student presenters are rated on their ability to convey their work concisely. Posters are scored on scientific merit and oral and visual presentation.

AACC ORAL PRESENTATIONS

A Novel LC-MS/MS Method for the Quantitation of Abiraterone Metabolites in Patients with Castration-Resistant Prostate Cancer: Innovation of Separation of Diastereoisomers without Using a Chiral Column
M. Alyamani of Cleveland State University

Smartphones Can Monitor Medical Center Pneumatic Tube System Parameters
G. R. Mullins of the University of Virginia, Charlottesville, VA

Clinical Utility of Aldosterone, Renin Mass and the Aldosterone/Renin Mass Ratio for the Work Up of Suspected Primary Aldosteronism
J. R. Wiencek of Vanderbilt University School of Medicine, Nashville, TN

Drug Monitoring of Methotrexate in Breast Milk: Understanding Transport from Cells to Humans
S. R. Delaney of the University of Toronto, Toronto, ON, Canada

2016 STUDENT POSTER PRESENTERS

A-005 Xin Zhang, Jinan, China
Nested Quantitative PCR Approach for Urinary Cell-Free EZH2 mRNA and its Clinical Application in Bladder Cancer

A-008 Liyun Cao, Houston, TX
Combining Prostate Cancer Antigen 3 (PCA3) and Prostate-Specific Antigen (PSA) Improves Diagnostic Accuracy in Men at Risk of Prostate Cancer

A-022 Ling Zhong, Chengdu, China
Changes in IGH & T-cell receptor gene monoclonal rearrangement by using circulating tumor DNA could become a valuable tool in monitoring minimal residual disease for patients with acute myeloid leukemia

A-023 Emili Manna, Kolkata, India
Nullification by insulin of the testosterone-induced syntheses of the signal molecules for the development of acute myocardial infarction in breast cancer through nitric oxide synthesis

A-051 Ventzi Hristova, Baltimore, MD
Biomarker Discovery by Proteomic Analysis of Ubiquitin Modification in Ovarian Cancer Cells

A-057 Haoliang Xu, Chicago, IL
Elevation of serum human chorionic gonadotropin level in a patient with giant cell tumor of the bone

A-082 Pankaj Kumar, Ambejoga, India
Lipid dual index: Measure HDL quality, not quantity in myocardial infarction patients from India

A-095 Akeem Lawal, Abuja, Nigeria
Vitamin D status of women with risk factors for gestational diabetes mellitus in Abuja, Nigeria

A-146 Siaw Li Chan, Chicago, IL
Evaluation of Astute Medical NEPHROCHECK® Test System as a risk-assessment device for moderate to severe acute kidney injury (AKI)

A-161 Janak Pathak, Tianjin, China
Systemic Inflammation Affects Human Osteocyte Signaling

A-195 Zahra Shajani-Yi, Lebanon, NH
A Laboratory Comparison Study of the Roche cobas and Siemens IMMULITE 2000 Adrenocorticotropic Hormone (ACTH) Assays

A-213 Khushbu Patel, St. Louis, MO
Establishing reference intervals for hCG in postmenopausal women

A-235 Adam McShane, Cleveland, OH
A Sudden Manufacturer Discontinuation Makes Free Testosterone Testing Quite Testy

A-245 John Hoon Rim, Seoul, Korea
In vitro effect of two types of medical contrast media on routine chemistry results by three automated chemistry analyzers

A-246 Mitchell McGill, St. Louis, MO
Pseudohypercreatinemia due to monoclonal 1gM kappa

A-255 Eva María García Agudo, Sevilla, Spain
Is it possible to reduce the test of lactose tolerance to 30 minutes?

A-258 Anna Merrill, Seattle, WA
Method-to-Method Variability in Urine Albumin Measurements

A-260 Brooke Katzman, Rochester, MN
Investigation of biotin interference in common thyroid function tests using the Roche Elecsys® immunoassay system

A-263 Jesse Seegmiller, Minneapolis, MN
A Negative Interference Observed in an Enzymatic Creatinine Assay Due to Dopamine Dobutamine

A-267 Brittany Carroll, New York, NY
Efficacy of Calcium Correction in a Cancer Population

A-269 Morenike Longe, Ibadan, Nigeria
Sample Rejection in Clinical Chemistry Assay: Causes and Trends in a Named Laboratory: A pilot Study

A-271 Jessica Gifford, Calgary, AB, Canada
Evaluating microtainer neonatal whole blood minimum volume requirements

A-272 Irina Perjar, Chapel Hill, NC
Identification of biotin interference with selected VIROS® biotin-streptavidin-based immunoassays in individuals taking supplements

A-274 Michael Winik, New York, NY
Effects of Hemolysis, Icterus and Lipemia Interference on Routine Clinical Chemistry and Therapeutic Drug Monitoring Assays

A-294 Menglei Ahu, Rocky River, OH
Assessing Falsely Elevated Mean Cell Volume (MCV) Due to Sample Transport Delay

A-314 Nansy Albtoush, Cleveland, OH
Screening Pharmacologically Active Compounds Against TSG-6, A Therapeutic Target for the Treatment of Asthma

2016 STUDENT POSTER PRESENTERS

A-352 Clayton Wilburn, Houston, TX
Development of a Simplified Extraction and High Performance Liquid Chromatography—Tandem Mass Spectrometry (HPLC-MS/MS) Method for Plasma Propofol Quantitation

A-369 Qianyang Huang, Lakewood, OH
Determination of Monosialogangliosides in Human Plasma by a Novel UPLC/MS/MS Assay in Combination with Chemical Derivatization

A-370 Allison Chambliss, Baltimore, MD
Development, Optimization, and Evaluation of an Ultra Performance Liquid Chromatographic—Tandem Mass Spectrometric (UPLC-MS/MS) Method for the Quantification of the Anti-Malarial Atovaquone in Plasma

A-383 Sami Albeiroti, Los Angeles, CA
Ethyl Glucuronide and Ethyl Sulfate in Urine: LC-MS/MS Method Evaluation and Assessment of Total Excretion Levels Post Alcohol Intake

A-392 Santosh Pradhan, Kathmandu, Nepal
Evaluation of Serum Vitamin B 12 Level in Type 1 Diabetes Mellitus

B-002 Fidelis Olumese, Benin, Nigeria
Histopathological Changes in Some Organs of Diabetic Rats Administered Aqueous or Ethanolic Root Extract of Uvaria Chamae

B-010 Burak Bahar, Maywood, IL
Web-based Method Comparison for Clinical Chemistry

B-099 Maria Almeida, Brasilia, Brazil
Calprotectin evaluation as an inflammation marker in different stages of Kawasaki disease

B-119 Megumi Sato, Tokyo, Japan
Serum amyloid A increases the antioxidant ability of high density lipoprotein

B-120 Kouji yano, Tokyo, Japan
Effect of Differentiation and Foam Cell Formation on Cholesterol Efflux Capacity of Apolipoprotein A-1

B-125 Stephen Roper, Houston, TX
Performance of Calculated Low Density Lipoprotein Cholesterol in a Pediatric Population

B-163 Albert Tsui, Edmonton, AB, Canada
Test utilization of serum free light chain assay in Northern Alberta

B-181 Waseem Anani, Milwaukee, WI
Examination of the Incidence of Excessive Blood Collection and Iatrogenic Anemia in Hospitalized Patients

B-183 Moustafa Ahmed, Jeddah, Saudi Arabia
Association between Plasminogen Activator Inhibitor-I 4G/5G Promotor Genotype and its Circulating Levels in Middle Eastern Population

B-218 Kornelia Galior, Decatur, GA
Molecular tension probes to investigate the mechanopharmacology of smooth Muscle cells

B-228 Neval Akbas, Houston, TX
Optimization of Estradiol Measurements to Improve Utility in the In Vitro Fertilization Setting

B-237 Kaitlyn Bloom, Philadelphia, PA
A Quantitative Method for the Measurement of Dried Blood Spot Amino Acids using Ultra-Performance Liquid Chromatography

B-238 Victoria Higgins, Toronto, ON, Canada
Pediatric reference intervals for 1,25-dihydroxyvitamin D in the CALIPER Cohort of Healthy Children and Adolescents

B-269 Dong Jin Shin, Baltimore, MD
Design and evaluation of a mobile nucleic acid amplification testing system in a hospital emergency setting

B-271 Ravali Alagandula, Cleveland, OH
A Rapid Dilute and Shoot-Flow Injection Tandem Mass Spectrometric Method for Quantification of Phenobarbital in Urine

B-280 Cara Randall, Chapel Hill, NC
Comparative analysis of lactate quantitation via the Radiometer ABL800 and point-of-care i-STAT and GEM4000 systems

B-322 Fang Wu, Salt Lake City, UT
Metabolic Patterns of Drugs and Drug Metabolites Observed in Urine, Serum or Plasma

B-328 Imir Metushi, San Diego, CA
Validation of a Broad Spectrum Drug Screening Method Using High Resolution LC-TOF

B-331 Jennifer Powers, Salt Lake City, UT
Up in smoke: Uncovering a Lack of Evidence for Proton Pump Inhibitors as a Source of THC Immunoassay False Positives

NACB/AACC ACADEMY HONORS NEW ACADEMY FELLOWS

The AACC Academy is proud to announce the following new Academy Fellows. As Academy members these distinguished scientists are all doctorate-level professionals dedicated to enhancing the scholarship and practice of clinical biochemistry. New Fellows will be honored during the Academy awards luncheon on Wednesday, August 3 during the AACC Annual Scientific Meeting.

The official Academy of AACC 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 clinical biochemistry. To learn more about the Academy and its activities, visit **www.aacc.org/community/national-academy-of-clinical-biochemistry**.

ACADEMY FELLOWS ACCEPTED SINCE JUNE 2015

Syed K. Haque, MBBS

Joshua Allen Hayden, PhD

Jianxin Lyu, PhD
Associate

Octavia Peck Palmer, PhD

Weike Mo, PhD

Peter Platterborze, PhD

Rojeet Shrestha, PhD
Associate

Konstantinos Makris, PhD
Associate

Xiaochun Zhang, MD, PhD

Tim Lang, PhD

Subhadip Choudhuri, PhD
Associate

Mari DeMarco, PhD

Zheng Cao, PhD

Jennifer Colby, PhD

Ayman Ibrahim, PhD

Ikhlas Darkhalil, PhD

Reham Saeed Shams El-Din, MD, PhD
Associate

Katie Thoren, PhD

Saswati Das, MBS
Associate

Manoj Tyagi, PhD

Xin Yi, PhD

Hari Nair, PhD

Bonny Van, PhD

Sarah Hackenmueller, PhD

NACB/AACC ACADEMY: 2016 DISTINGUISHED ABSTRACTS AWARDS

The AACC Academy is pleased to announce the winners of the 2016 Distinguished Abstracts Awards. A group of Fellows selected these 29 abstracts for their scientific excellence from a pool of 1,024 abstracts accepted for the AACC Annual Scientific Meeting. Winning abstracts will display the Academy blue ribbon during the AACC Annual Scientific Meeting poster sessions.

Supported by Abbott Diagnostics.

A-010 Akimichi Ohsaka, Bunkyo-ku, Japan
Novel Flowcytometry-Based Approach to Detect Tumor Cells in Body Fluid Using Sysmex Automated Hematology Analyzer

A-013 Alvaro Gonzalez, Pamplona, Spain
EGFR Analysis in cfDNA Reflects Tumor Heterogeneity and has Prognostic Value in Non-Small Cell Lung Cancer

A-015 Lusia Sepiashvili, Rochester, MN
Detection and Characterization of Serum Free Light Chains by MALDI-TOF MS in Immunofixation Electrophoresis-Negative Specimens with Abnormal Free Light Chain Ratios

A-021 Katherine Turner, Chardon, OH
Quantification of Death Receptors as Tumor Markers for the Prediction of TRAIL Sensitivity by Flow Cytometry

A-051 Ventzi Hristova, Baltimore, MD
Biomarker Discovery by Proteomic Analysis of Ubiquitin Modification in Ovarian Cancer Cells

A-064 Paul Collinson, London, United Kingdom
Rule out myocardial infarction by admission limit of detection measurement using contemporary and high sensitivity troponin assays

A-073 Tomris Ozben, Antalya, Turkey
Potential Risk Predictors for Cardiovascular Diseases in Patients with Obstructive Sleep Apnea Syndrome

A-088 Alexey Katrukha, Turku, Finland
Different susceptibility of BNP and proBNP to neprilysin cleavage suggests a limited effect of neprilysin inhibition by LCZ696 on the level of immunoreactive BNP

A-134 Eberhard Spanuth, Heidelberg, Germany
Comparison of Presepsin and Neutrophil Gelatinase-Associated Lipocalin in Predicting Acute Kidney Injury in Cardiac Surgery Patients

A-185 Zhen Zhao, Bethesda, MD
A longitudinal Evaluation of Thyroid hormones by Mass Spectrometry During Normal Pregnancy

A-242 Jun Gong, Malden, MA
The Preparation and Validation of Cystatin C Calibrators Traceable to ERM-DA471/IFCC

A-246 Mitchell McGill, St. Louis, MO
Pseudohypercreatinemia due to monoclonal IgM kappa

A-335 Michael Mbughuni, Rochester, MN
Cryoglobulinemia typing using Matrix Assisted Laser Desorption/Ionization - Time of Flight Mass Spectrometry (MALDI-TOF MS).

A-341 Mohammed Alyamani, Cleveland, OH
A Novel LC-MS/MS Method for the Quantitation of Abiraterone Metabolites in Patients with Castration-Resistant Prostate Cancer: Innovation of Separation of Diastereoisomers Without Using a Chiral Column

A-363 Chengbin Wang, Beijing, China
Noninvasive prenatal diagnosis of fetal RhD status from RhD negative pregnant women using MALDI-TOF Mass Spectrometry

A-379 Valentinas Gruzdys, Cleveland, OH
A high-resolution accurate mass (HRAM) mass spectrometry method to assist in identification of hemoglobin variants

A-380 Paula Ladwig, Rochester, MN
Advantages of Standardized/Kitted Methods for Protein Digestion; a Monoclonal Antibody Example

B-053 Gustavo Barra, Brasilia, Brazil
Simultaneous detection of zika, chikungunya and dengue viruses in EDTA-plasma samples by RT-qPCR: If their vector is versatile their detection assays also should be

B-062 Danielle Fortuna, Philadelphia, PA
Quantification of CSF chemokines and cytokines allows for rapid laboratory detection of CNS infections and further discrimination between viral and non-viral pathogens

B-063 Elian Rakhmanaliev, Singapore, Singapore
Next Generation Sequencing-based HIV-1 Drug Resistance Monitoring System

B-123 Ryuji Toh, Kobe, Japan
Cholesterol uptake capacity, a new concept of HDL functionality, for risk stratification in coronary artery disease

B-124 E.C. Harte, Crumlin, United Kingdom
Development of a New Biochip Array for ApoE4 Classification from Plasma Samples Using Immunoassay Based Methods

B-220 Ioannis Papassotiriou, Athens, Greece
Evaluation of GDF-15 and YKL-40 as Early Markers of Subclinical Diabetic Nephropathy and Cardiovascular Morbidity in Young Patients with Type 1 Diabetes Mellitus

B-282 Mary Rozmanc, Toronto, ON, Canada
Analytical Evaluation of the Roche CARDIAC Troponin T Assay Performed on the POC Cobas® h232 Instrument

B-307 Irene Shu, Des Plaines, IL
In vitro formation of ethyl glucuronide in meconium specimens

B-311 Jennifer Colby, Nashville, TN
Comparison of paired umbilical cord tissue and meconium samples for detection of in utero drug exposure

B-328 Imir Metushi, San Diego, CA
Validation of a Broad Spectrum Drug Screening Method Using High Resolution LC-TOF

B-331 Jennifer Powers, Salt Lake City, UT
Up in Smoke: Uncovering a Lack of Evidence for Proton Pump Inhibitors as a Source of THC Immunoassay False Positives

B-348 Mark Cameron, Southfield, MI
A Novel Chemistry for Analyte Quantification by Immunoassay: A Case Study Using Spatial Proximity Analyte Capture Luminescence

JOIN THE CONVERSATION

Follow AACC @_AACC and use the hashtag #2016AACC to join the conversation.

SESSION INFORMATION

FACULTY DISCLOSURE INFORMATION

The AACC, in compliance with the ACCME Standards for Commercial Support, requires anyone who is in a position to control the content of an educational activity to disclose (or an immediate family member) has had a relevant financial relationship (within the last 12 months) with a commercial interest whose products/services may be related to or discussed in the activity.

Faculty members whose names are accompanied by an asterisk (*) disclosed that they may have had a relevant financial relationship with a commercial interest within the last 12 months. These relationships were reviewed by the Annual Meeting Organizing Committee and conflicts of interest were resolved prior to the Annual Scientific Meeting.

Faculty members whose names are accompanied by a pound sign (#) disclosed that they have had no relevant financial relationships with a commercial interest within the past 12 months.

Faculty members whose names are accompanied by a plus sign (+) had not submitted a disclosure form at the time of printing.

Completed disclosure forms are on file in the AACC office, and a handout summarizing all faculty disclosure information is distributed to Annual Scientific Meeting attendees in their registration materials.

SESSION LEVEL CONTENT

Each session is assigned a level of content – Basic, Intermediate or Advanced. The definitions of those levels are as follows:

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 who wish to refine their skills or learn the newest principles and techniques.

AACC REGISTRATION RESOURCE CENTER

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2. Login
Enter the following to login:

A. BADGE NUMBER: Listed on left side of badge

B. LAST NAME: Exactly as entered when registering

REGISTRATION TYPES & EVENTS

REGISTRATION TYPE / EVENTS	FULL CONFERENCE	GUEST/SPOUSE	DAILY	EXPO ONLY	NO REGISTRATION
	- AACC Professional, Professional Affiliate, Transitional Member - Non-member - Trainee/Student Member - Emeritus Member	Limit 1 per full registrant	Admission/tickets for day registered ***only***	Expo only, Exhibit Hall	
Plenary Sessions 10000 Series	✔	✔	✔	✗	✗
Symposia 30000 Series	✔	✔	✔	✗	✗
Short Courses 70000 Series	✔	✔	✔	✗	✗
Meet the Experts 60000 Series	✔	✔	✔	✗	✗
AACC University 190000 Series (T TICKET)	$	May NOT purchase ticket	$	May NOT purchase ticket	May NOT purchase ticket
Brown Bag Sessions 40000 Series morning 50000 Series afternoon (T TICKET)	$	May NOT purchase ticket	$	May NOT purchase ticket	May NOT purchase ticket
Special Events (T TICKET)	$	$	$	$	$
Special Event AACC Community Opening Mixer	✔	✔	✔	✗	✗
Clinical Lab Expo Expo Only, Exhibit Hall	✔	✔	✔	✔	✗
Free Lunch Wednesday only, Exhibit Hall (Ticket included with registration)	✔	✔	✔	✔	✗
Poster Sessions Abstracts	✔	✔	✔	✗	✗
Industry Workshops	✔	✔	✔	✔	✗
OEM Lectures	✔	✔	✔	✔	✗
Special Session	✔	✔	✔	✗	✗

✔ Included with registration type T TICKET Ticket required $ May purchase ticket May *NOT* purchase ticket ✗ May **NOT** attend

AACC Announces

The Journal of APPLIED LABORATORY MEDICINE

An AACC Publication

Inaugural Issue

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In this Issue:

Endocrinology and Metabolism

- High Sensitivity Micro Liquid Chromatography Tandem Mass Spectrometry Assay for Serum Estradiol without Derivatization

Molecular Diagnostics and Genetics

- A Novel System Control for the Quality Control of Next Generation Sequencing based Diagnostic Tests

Clinical Immunology

- Utility of Anti-Nuclear Antibody (ANA) Screening by Various Methods in a Clinical Laboratory Patient Cohort

Proteomics and Protein Markers

- Novel chemiluminescent enzyme immunoassays for individual quantification of three endogenous molecular forms of atrial natriuretic peptide in human plasma
- Performance evaluation of an ELISA for the quantitative measurement of alpha-1-antitrypsin in stool

Point-of-Care Testing

- Analytical and Clinical Evaluation of the NOWDiagnostics ADEXUSDx hCG Test Using Whole Blood

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TOPIC TRACK SESSIONS

Eight Topic Tracks highlight distinct dynamic areas of clinical laboratory medicine. Check out the sessions that support your area of interest, to make the most of your educational experience.

CANCER

		SESSION NUMBER	DAY
	New Immunotherapies: The Beginning of the End of Cancer?	**32102**	Monday
	Obesity and Cancer	**72223**	Monday
T TICKET	Updates on Prostate Cancer Biomarkers	**42102/52202**	Monday
T TICKET	Liquid Biopsies: The Techniques and Applications	**42122/52222**	Monday
	Plenary Session: The Epigenetic Basis of Common Human Disease	**13001**	Tuesday
	Meet the Expert: The Epigenetic Basis of Common Human Disease	**63101**	Tuesday
	The Emerging Role of Mass Spectrometry in the Measurement of Monoclonal Immunoglobulins	**33104**	Tuesday
T TICKET	Adoption Trends of Liquid Biopsy Technologies	**43106/53206**	Tuesday
T TICKET	Screening for Cancer: Recommendations and Controversies	**43110/53210**	Tuesday

ENDOCRINOLOGY

	What Are Disorders of Sexual Development?	**72107**	Monday
	Measurement of Free Hormones in Blood: Technical and Clinical Challenges	**32411**	Monday
	Obesity and Cancer	**72223**	Monday
T TICKET	The Assessment of Insulin Resistance and Selection of the Appropriate Method for the Assessment	**42105/52205**	Monday
T TICKET	Diagnosis and Monitoring of Congenital Adrenal Hyperplasia, Polycystic Ovarian Syndrome and Pubertal Abnormalities Using Mass Spectrometry	**42111/52211**	Monday
T TICKET	Measurements of Total and Free Testosterone in Clinical Laboratories	**42123/52223**	Monday
T TICKET	Parathyroid Hormone Assay Challenges and Harmonization Progress	**43102/53202**	Tuesday
T TICKET	Thyroglobulin and Anti-Thyroglobulin Autoantibodies Assays in the Management of Thyroid Cancer Patients: Which Assay Should I Offer?	**43108/53208**	Tuesday
T TICKET	Laboratory Tests Related to Calcium and Bone Metabolism	**43117/53217**	Tuesday
	Diabetic Nephropathy: Where Are We Now?	**33211**	Tuesday

T TICKET TIcket and additional fees required.

TOPIC TRACK SESSIONS

GENOMICS

	Session	Session Number	Day
	Beyond Single-Gene Analysis: Paving the Way to Comprehensive Tumor Genomic Profiling	**33219**	Monday
	Plenary Session: The Epigenetic Basis of Common Human Disease	**13001**	Tuesday
	Meet the Expert: The Epigenetic Basis of Common Human Disease	**63101**	Tuesday

LIQUID BIOPSY/CIRCULATING DNA

	Session	Session Number	Day
T TICKET	Prenatal Screening for Down Syndrome: from Maternal Serum Screening to Cell-Free Fetal DNA Testing	**42117/52217**	Monday
T TICKET	Liquid Biopsies: The Techniques and Applications	**42122/52222**	Monday
T TICKET	Adoption Trends of Liquid Biopsy Technologies	**43106/53206**	Tuesday
	Personalized, Genotype-Directed Treatment and Liquid Biopsy for Non-Small Cell Lung Cancer (NSCLC)	**34210**	Wednesday
	Precision Medicine Delivered by Advances in Circulating Cell-Free DNA Diagnostics	**34212**	Wednesday

MASS SPECTROMETRY

	Session	Session Number	Day
	Building New or Adding On: Fundamentals for Overcoming Challenges in Operationalizing Clinical Mass Spectrometry	**72106**	Monday
	Be Prepared! Sample Preparation Strategies for Multiple Matrices in the LC-MS/MS Clinical Toxicology Laboratory	**72414**	Monday
T TICKET	An Introduction to Metabolomics for Translational and Clinical Labs	**42124/52224**	Monday
	The Emerging Role of Mass Spectrometry in the Measurement of Monoclonal Immunoglobulins	**33104**	Tuesday
	The Next Frontier in Precision Medicine—Targeted Peptide Diagnostic Mass Spectrometry Assays	**33212**	Tuesday
T TICKET	Smart LCMS: The Key to Worry Free Method Development and Implementation	**43111/53211**	Tuesday
	Plenary Session: Direct Mass Spectrometric Profiling of Biological Tissues—A New Paradigm in Histology	**14001**	Wednesday
	Meet the Expert: Direct Mass Spectrometric Profiling of Biological Tissues—A New Paradigm in Histology	**64101**	Wednesday
	Sampling, the Next Generation: Emerging Clinical Mass Spec Applications in Alternative Matrices	**74214**	Wednesday
T TICKET	Mass Spectrometry in the Clinical Lab: Applications for Emergency Toxicology	**44103/54203**	Wednesday
T TICKET	Evaluation of Time-of-Flight High Resolution Mass Spectrometry for Broad Spectrum Drug Screening in Urine	**44122/54222**	Wednesday

TOPIC TRACK SESSIONS

POINT-OF-CARE TESTING

		SESSION NUMBER	DAY
T TICKET	The Impact of Preanalytical Variables on Critical Care Point-of-Care Testing	**191004**	Sunday
T TICKET	Expanding Point-of-Care Testing in Healthcare Systems for Patient Centered Care	**192010**	Sunday
	Chair's Invited Session: mHealth and the Continuum of Patient Care	**32412**	Monday
	Oral Abstract Session: POCT-Utilization, QA/QC and Advances in Technologies	**32216**	Monday
T TICKET	Issues in the Practical Implementation of POCT: Overcoming Challenges	**442120/52220**	Monday
	Evaluating the Hypoxemic Patient: Oxygen and Oxygen-Related Parameters Used in Critical Care Settings	**74107**	Wednesday

PRENATAL

T TICKET	Prenatal Screening for Down Syndrome: From Maternal Serum Screening to Cell-Free Fetal DNA Testing	**42117/52217**	Monday
	Oral Abstract Session: Breakthroughs in Maternal, Fetal and Pediatric Medicine	**33101**	Tuesday
	Precision Medicine Delivered by Advances in Circulating Cell-Free DNA Diagnostics	**34212**	Wednesday

TOXICOLOGY

	Oral Abstract Session: What's New in Toxicology and Therapeutic Drug Monitoring	**34101**	Wednesday
	Oral Fluid in the Clinical Toxicology Laboratory: Ready for Prime Time?	**74217**	Wednesday
T TICKET	Mass Spectrometry in the Clinical Lab: Applications for Emergency Toxicology	**44103/54203**	Wednesday
T TICKET	Evaluation of Time-of-Flight High Resolution Mass Spectrometry for Broad Spectrum Drug Screening in Urine	**44122/54222**	Wednesday
	Plenary Session: The Great Cannabis Experiment: Medical Miracle? Harmless High? Civil Consequences?	**15001**	Thursday

T TICKET TIcket and additional fees required.

	SUNDAY, JULY 31	MONDAY, AUGUST 1	
7:30		7:30 **Brown Bag Sessions** T TICKET	
8:00			
8:30			
8:45		8:45 **Plenary Session** Pennsylvania Convention Center, Grand Ballroom	
9:30			
10:00			
10:15			
10:30	10:30 **AACC University Courses** T TICKET	10:30 **Morning Meet the Expert**	10:30 **Morning Symposia & Short Courses**
11:30			
Noon			
12:30		12:30 **Brown Bag Sessions** T TICKET	12:30 **Mid-Day Symposia & Short Courses**
1:00			
1:30	1:30 **AACC University Courses** T TICKET		
2:00			
2:30		2:30 **Afternoon Symposia & Short Courses**	
3:00			3:00 **Afternoon Meet the Expert**
3:30			
4:00			
4:30		4:30 **Special Session** *Theranos Science & Technology: The Miniaturization of Lab Testing* Pennsylvania Convention Center, Grand Ballroom	
5:00	5:00 **Opening Plenary Session** Pennsylvania Convention Center, Grand Ballroom		
5:30			
6:00			
6:30			
6:45	6:45 **AACC Community Opening Mixer** Philadelphia Marriott Downtown, Grand Ballroom		
7:00			
8:00			

WEEK AT-A-GLANCE

USE THIS HANDY REFERENCE CHART TO PLAN YOUR EDUCATION SCHEDULE AND ACCESS DETAILED DESCRIPTIONS FOR EACH DAY'S SESSIONS AND LOCATIONS.

TUESDAY, AUGUST 2

7:30
Brown Bag Sessions
T TICKET

8:45
Plenary Session
Pennsylvania Convention Center, Grand Ballroom

9:30
Clinical Lab Expo Open
Scientific Poster Session Open
NEW LOCATION!
Posters located in the Terrace Ballroom

10:30
Morning Meet the Expert

10:30
Morning Symposia & Short Courses

12:30
Brown Bag Sessions
T TICKET

2:30
Afternoon Symposia & Short Courses

WEDNESDAY, AUGUST 3

7:30
Brown Bag Sessions
T TICKET

8:45
Plenary Session
Pennsylvania Convention Center, Grand Ballroom

10:30
Morning Meet the Expert

Noon
Free Lunch on Expo Floor

12:30
Brown Bag Sessions
T TICKET

2:30
Afternoon Symposia & Short Courses

THURSDAY, AUGUST 4

AM

9:30
Clinical Lab Expo Open
Scientific Poster Session Open
NEW LOCATION!
Posters located in the Terrace Ballroom

10:30
Morning Symposia
& Short Courses

8:45
Plenary Session
Pennsylvania Convention Center,
Grand Ballroom

9:30
Clinical Lab Expo Open

10:30
Morning Symposia

PM

*Please check the AACC Annual Scientific Meeting & Clinical Lab Expo website at www.aacc.org/2016am for the most up-to-date schedule.

SUNDAY, JULY 31

PLENARY & EDUCATION SESSIONS

PLENARY SESSION 11001

THE PROGRAMMABLE BIO-NANO-CHIP: A PLATFORM TO DIGITIZE BIOLOGY

*JOHN McDEVITT, PHD
College of Dentistry of New York University
New York, NY

SUNDAY, JULY 31 | 5:00pm - 6:30pm | LEVEL: BASIC | CE CREDIT: 1

Pennsylvania Convention Center – Grand Ballroom

INTENDED AUDIENCE

This session is intended for: pathologists, lab directors, clinical chemists, immunologists, molecular biologists, technologists, and IVD industry scientists.

SESSION OVERVIEW

Programmable Bio-Nano-Chip (p-BNC) sensor systems can digitize biological signatures for many health conditions. These systems have multiplexing and multi-class (cellular, genomic, proteomic) capabilities. This session will explore their many applications, e.g. in cancer diagnostics, cardiovascular diseases, saliva-based diagnostics, infectious diseases, drugs of abuse detection and cell imaging. Dr. McDevitt has pioneered this technology for digitizing biological signatures for a broad range of key health conditions, with numerous applications. His recent research has been sponsored by major programs funded by the National Institute of Dental and Craniofacial Research (NIDCR) division of the National Institutes of Health (NIH), the Bill and Melinda Gates Foundation, the National Aeronautics and Space Administration (NASA) and the United Kingdom's Home Office Scientific Development Branch. His work was recognized with the "Best of What's New Award" in the Medical Device Category for 2008 by *Popular Science*. Dr. McDevitt's individual honors include the Presidential Young Investigator Award, the 2010 California Polytechnic Distinguished Alumni Award and the Exxon Education Award.

EXPECTED OUTCOME

After this session, participants will be able to: 1) explain the basic concept of programmable Bio-Nano-Chip sensor systems; 2) outline how such systems can provide cellular, genomic and proteomic readouts of biological systems; and 3) list potential clinical applications of such devices.

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, 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 Wallace Coulter's outstanding contributions to diagnostics and his championship of research and innovation. It is fitting that his legacy be celebrated with lectures by renowned leaders in healthcare.

2016 AACC AWARDS

To be presented during the opening Plenary Session

John T. McDevitt, PhD
New York University
College of Dentistry
Wallace H. Coulter Lectureship Award

Edward R. Ashwood, MD
ARUP Laboratories and the University of Utah
Outstanding Lifetime Achievement Award in Clinical Chemistry and Laboratory Medicine

Ann M. Gronowski, PhD
Washington University School of Medicine
Outstanding Contributions in Education

Larry A. Broussard, PhD
Louisiana State University Health Sciences Center
Outstanding Contributions through Service to the Profession of Clinical Chemistry

Mari DeMarco, PhD
St. Paul's Hospital
Outstanding Scientific Achievements by a Young Investigator

Elaine Mardis, PhD
The Genome Institute, Washington University School of Medicine
The Morton K. Schwartz Award for Significant Contributions in Cancer Research Diagnostics

David D. Koch, PhD
Emory University and Grady Memorial Hospital
Past President's Award

Supported by Abbott Diagnostics, BD, and Siemens Healthineers

2016 NACB/AACC ACADEMY AWARD WINNERS

Martin Fleisher, PhD
Memorial Sloan-Kettering Cancer Center
AACC-NACB Award for Outstanding Contributions to Clinical Chemistry in a Selected Area of Research

William Winter, MD
University of Florida
NACB Professor Alvin Dubin Award for Outstanding Contributions to the Profession and the Academy

Joe El-Khoury, PhD
Yale University
George Grannis Award for Excellence in Research and Scientific Publication

Supported by Abbott Diagnostics

Sunday | 10:30am - Noon

T TICKET Bleeding and Clotting: An Introduction to Coagulation

191001

Pennsylvania Convention Center - 201A

Level: Basic
CE Credit: 1.5

MODERATOR
#William Winter, MD, FCAP, FACB, DABCC
University of Florida, Gainesville, FL

Supported by an educational grant from Roche Point of Care.

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

SESSION OVERVIEW: This course will provide a basic review of the physiology of hemostasis, including platelet function, the coagulation cascade and thrombolysis. Common routine laboratory tests, such as PT, aPTT, Activated Clotting Time, and D-dimer will be described, and strategies for diagnosis of common bleeding and thrombotic disorders will be outlined.

EXPECTED OUTCOME: After this session, participants will be able to: 1) outline the mechanisms of clot formation; 2) contrast different approaches to the evaluation of the coagulation cascade; and 3) list key clinical tests important in the diagnosis of common bleeding and thrombotic disorders.

SPEAKERS

The Biology of Coagulation
#William Winter, MD, FCAP, FACB, DABCC
University of Florida, Gainesville, FL

Assessment of the Coagulation Cascade in the Core Laboratory
#John Mitsios, PhD
Weill Cornell Medical College/New York Presbyterian Hospital, New York, NY

T TICKET Hot Topics in Laboratory Regulations

191002

Pennsylvania Convention Center - 201B

Level: Intermediate
CE Credit: 1.5

MODERATOR
#James Nichols, PhD, DABCC, FACB
Vanderbilt University Medical Center, Nashville, TN

Developed in cooperation with AACC Government Relations Committee, CLSI.

INTENDED AUDIENCE: This session is intended for: laboratory directors, medical technologists, laboratory administrators, manufacturers, government inspectors, public health laboratory staff, and government laboratory staff.

SESSION OVERVIEW: A number of recent regulatory changes impact clinical laboratory operations, including IQCPs, Laboratory Developed Tests, and the Use of Glucose Meters on Critically Ill Patients. In this session, the government and laboratory perspectives will be presented and the audience encouraged to pose questions for open debate.

EXPECTED OUTCOME: After this session, participants will be able to: 1) identify three current hot topics in laboratory regulation; 2) outline government guidance on each topic; and 3) ensure compliance with these regulations.

SPEAKERS

A Laboratory Perspective on Current Regulatory Topics
#James Nichols, PhD, DABCC, FACB
Vanderbilt University Medical Center, Nashville, TN

A Government Perspective on Current Regulatory Topics
#Karen Dyer, BA, MT(ASCP), DLM
Centers for Medicare & Medicaid Services, Baltimore, MD

T TICKET TIcket and additional fees required.

Sunday | 10:30am - Noon

T TICKET

Getting the Most Out of Verification Studies for FDA Approved Methods

191003

Pennsylvania Convention Center - 201C

Level: Intermediate
CE Credit: 1.5

MODERATOR
***Nils Person, PhD, FACB**
Siemens Healthcare Diagnostics, Madison, NJ

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

SESSION OVERVIEW: This session will discuss how to achieve the most from required verification studies of commercial methods. The primary studies will be reviewed focusing on the relevant CLSI protocols and the application of clinically based quality goals. Finally, common challenges will be discussed focusing on ways to avoid them and practical solutions.

EXPECTED OUTCOME: After this session, participants will be able to: 1) establish clinically relevant performance goals for laboratory methods; 2) utilize CLSI guideline documents to verify method performance; and 3) identify common pitfalls in the performance of verification studies and know how to avoid them.

SPEAKERS

Method Verification: Getting Good Data, Avoiding Pitfalls
*Nils Person, PhD, FACB
Siemens Healthcare Diagnostics, Madison, NJ

Selection of Performance Goals
*Sten Westgard, MS
Westgard QC, Inc., Madison, WI

T TICKET

The Impact of Preanalytical Variables on Critical Care Point-of-Care Testing

191004

Pennsylvania Convention Center - 204A

Level: Intermediate
CE Credit: 1.5

MODERATOR
***Ana Stankovic, MD, PhD**
BD Diagnostics, Franklin Lakes, NJ

INTENDED AUDIENCE: This session is intended for: pathologists, laboratory administrators, quality managers, nursing supervisors, and healthcare professionals with an interest in reducing preanalytical variability in critical care point-of-care testing and improving the reliability of critical care testing and patient care.

SESSION OVERVIEW: The primary purpose of point-of-care testing (POCT) is to generate results quickly for immediate intervention, vital in critical care. As in central laboratories, preanalytical variability poses a challenge. This session presents common variables, impact on critical care testing (blood gases, co-oximetry, potassium, ionized calcium) and methods for reducing potential for errors due to preanalytical issues.

EXPECTED OUTCOME: After this session, participants will be able to: 1) identify sources of preanalytical variability in point-of-care testing as compared to the core laboratory; 2) evaluate the impact of preanalytical variables on the laboratory and patient as well as on healthcare costs; and 3) implement methods to improve sample quality in point-of-care testing by decreasing and/or preventing errors.

SPEAKERS

Overview of Preanalytical Variables in Point-of-Care Testing
*Ana Stankovic, MD, PhD
BD Diagnostics, Franklin Lakes, NJ

Improving Point-of-Care Testing for Critical Care
*John Toffaletti, PhD, DABCC
Duke University Health System, Durham, NC

Sunday | **10:30am - Noon**

T TICKET

Laboratory Director Boot Camp—What, When, Why, and How to Validate New Tests and Meet Regulatory Requirements

191005

Pennsylvania Convention Center - 204B

Level: Basic
CE Credit: 1.5

MODERATOR

#Keri Donaldson, MD
Penn State Milton S. Hershey Medical Center, Hershey, PA

Developed in cooperation with College of American Pathologists.

INTENDED AUDIENCE: This session is intended for: pathologists, residents, PhDs, laboratory supervisors, and medical technologists.

SESSION OVERVIEW: Laboratory Director Boot Camp will provide attendees with the knowledge and skills to deploy new clinical laboratory tests in clinical chemistry, coagulation, and molecular diagnostics in their laboratories. The faculty will provide a general overview of the CLIA and CAP regulatory requirements for the implementation of new tests, including conducting test validation, defining the analytical measurement range (as appropriate for quantitative assays), establishing reference ranges, and meeting the requirements for ongoing monitoring of test performance including participation in proficiency testing. Faculty will offer examples from the areas of clinical chemistry, molecular diagnostics, and coagulation, and relate the general principles to specific tests in these areas.

EXPECTED OUTCOME: After this session, participants will be able to: 1) recognize the regulatory requirements that must be met before implementing a new laboratory test; 2) outline practical approaches to meeting requirements; and 3) develop and implement a plan for ongoing assessment of test performance.

SPEAKERS

Laboratory Director Boot Camp—What, When, Why, and How to Validate New Tests and Meet Regulatory Requirements
#Wieslaw Furmaga, MD
University of Texas Health Science Center, San Antonio, TX

Method Validation: What, When, and How
#Keri Donaldson, MD
Penn State Milton S. Hershey Medical Center, Hershey, PA

Sunday | 10:30am - Noon

T
TICKET

Laboratory Management Overview: The Challenging Landscape and the Keys Like IQCP, Harmonization and Lean Six Sigma Strategies

191006

Pennsylvania Convention Center - 204C

Level: Basic
CE Credit: 1.5

MODERATOR
***Barnali Das, MD, DNB, PGDM**
Kokilaben Dhirubhai Ambani Hospital, Mumbai, India

INTENDED AUDIENCE: This session is intended for: pathologists, clinical chemists, laboratory directors, supervisors, laboratory managers, quality managers, personnel of regulatory agencies, medical technologists, business leaders, and anyone interested in test utilization and quality.

SESSION OVERVIEW: This session discusses the global challenges in the laboratory and provides solution by Individualized Quality Control Plan (IQCP), IFCC's global harmonization of patient's results and Lean–Six Sigma. The session will examine recent developments in two regulatory areas in the U.S.: IQCP and the FDA's oversight of Laboratory Developed Tests (LDTs).

EXPECTED OUTCOME: After attending the session, participants will be able to: 1) list current regulatory changes related to IQCP and LDTs; 2) discuss examples of variability in methods and laboratory practices that contribute to clinically significant differences in patient results; 3) identify steps that can be taken to harmonize methods and laboratory practices to reduce variability in patient results; 4) design a customized internal quality-control management strategy based on the sigma metrics calculation of each parameter in the laboratory along with plotting the method decision chart, sigma metrics chart and OPSpecs chart; and 5) identify 'critical to quality' (CTQ) components based on a value stream map of laboratory, design laboratory process flow following 'Define, Measure, Analyze , Improve, Control' and calculate defect per million opportunities to forecast effectiveness of lean-six sigma.

SPEAKERS

Recent Changes in the U.S. Laboratory Regulatory Arena: IQCP and LDTs
#Anthony Killeen, MD, PhD
University of Minnesota, Minneapolis, MN

How to Cut the Extra Flab from Your Lab Platter: Lean-Six Sigma Paves the Way
*Barnali Das, MD, DNB, PGDM
Kokilaben Dhirubhai Ambani Hospital, Mumbai, India

Towards Global Harmonization of Patient's Results in Laboratory Medicine: IFCC's Perspective
#Graham Beastall, PhD, BSc, EurClinChem, FRCPath, FRCP, CBE
Laboratory Medicine Consulting, Glasgow, United Kingdom

Sunday | **1:30am - 4:00pm**

T
TICKET

Best Practices in Continuous Laboratory Compliance

192007

Pennsylvania Convention Center - 201A

Level: Intermediate
CE Credit: 2.5

MODERATOR
***Brad Karon, MD, PhD, FCAP, FACB**
Mayo Clinic, Rochester, MN

Developed in cooperation with College of American Pathologists.

INTENDED AUDIENCE: This session is intended for: pathologists, residents, PhDs, and laboratory managers and supervisors.

SESSION OVERVIEW: What is your proficiency testing (PT) telling you? In this course, faculty will describe ways to avoid critical PT failures (cease testing), optimal methods for performing alternative assessment of performance (AAP) when commercial PT is not available and strategies to get the most out of internal self-inspections.

EXPECTED OUTCOME: After this session, participants will be able to: 1) describe how CAP monitors PT performance, including adverse actions taken; 2) apply best practices to alternative assessment of performance to improve laboratory quality; 3) utilize the self-inspection process to continually improve laboratory performance; 4) predict when unsuccessful PT performance may lead to adverse actions; and 5) develop strategies to address PT failures before they become critical.

SPEAKERS

Preventing Critical Proficiency Testing Failures
*Brad Karon, MD, PhD, FCAP, FACB
Mayo Clinic, Rochester, MN

Best Practices in Alternative Assessment of Performance
#Christina Wojewoda, MD, FCAP
University of Vermont Medical Center, Burlington, VT

Improving the Quality and Value of the Laboratory Self-Inspection
#Selwyn Baptist, MD, FCAP
St Barnabas Medical Center, Livingston, NJ

T
TICKET

Documenting Analytical Performance of Lab Developed Tests

192008

Pennsylvania Convention Center - 201C

Level: Intermediate
CE Credit: 2.5

MODERATOR
***Nils Person, PhD, FACB**
Siemens Healthcare Diagnostics, Madison, NJ

INTENDED AUDIENCE: This session is intended for: clinical chemists, pathologists, lab directors, lab supervisors/managers, and other laboratory professionals.

SESSION OVERVIEW: This session will discuss validating and documenting the analytical performance of laboratory developed tests and other highly complex methods. It will focus on the use of relevant CLSI guidelines as well as the development of clinically based quality requirements. The course will also provide specific recommendations for avoiding common issues in study design and data analysis.

EXPECTED OUTCOME: After this session, participants will be able to: 1) establish clinically based performance goals for methods; 2) list the studies necessary to effectively compare performance to clinical goals as well as meet regulatory requirements; 3) identify common challenges in performing validation studies and develop solutions; and 4) utilize performance data to effectively monitor method performance over time.

SPEAKERS

Validation Studies for LDTs: What is Needed and How to Avoid Common Challenges
*Nils Person, PhD, FACB
Siemens Healthcare Diagnostics, Madison, NJ

Developing Quality Goals for Lab Developed Tests
#Sten Westgard, MS
Westgard QC, Inc., Madison, WI

Sunday | 1:30am - 4:00pm

T TICKET

Troubleshooting Clinical Laboratory Errors: Collaborative Case Studies

192009

Pennsylvania Convention Center - 201B

Level: Intermediate
CE Credit: 1

MODERATOR
***Sol Green, PhD, FACB**
BD Preanalytical Systems, Franklin Lakes, NJ

Developed in cooperation with Management Sciences and Patient Safety Division.

INTENDED AUDIENCE: This session is intended for: pathologists, laboratory directors, phlebotomists, quality managers, nurse managers, and healthcare professionals who recognize the importance of minimizing these errors in order to ensure accurate test results and better patient care.

SESSION OVERVIEW: Preanalytical and analytical errors may affect specimen quality and test results. Why do these errors happen? This collaborative workshop presents actual case studies to identify the causes of common errors to begin to develop strategies to eliminate or minimize them.

EXPECTED OUTCOME: After this session, participants will be able to: 1) identify common sources of preanalytical and analytical errors 2) define the impact of these errors on test results; and 3) explore initiatives to reduce or eliminate these errors in their laboratories.

SPEAKERS

Troubleshooting the Sources of Preanalytical Variability
*Sol Green, PhD, FACB
BD Preanalytical Systems, Franklin Lakes, NJ

Troubleshooting and Reducing Analytical Errors
*Jack Zakowski, PhD
Beckman Coulter, Inc., Brea, CA

Laboratory Interferences: Clinical Cases
#Geoffrey Baird, MD, PhD
University of Washington, Seattle, WA

JOIN THE CONVERSATION

Follow AACC @_AACC and use the hashtag #2016AACC to join the conversation.

Sunday | 1:30am - 4:00pm

T TICKET

Expanding Point-of-Care Testing in Healthcare Systems for Patient-Centered Care

192010

Pennsylvania Convention Center - 204A

Level: Basic
CE Credit: 2.5

MODERATOR
***Nichole Korpi-Steiner, PhD, DABCC, FACB**
University of North Carolina, Chapel Hill, NC

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

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

SESSION OVERVIEW: Point-of-care (POC) testing is evolving. Key considerations for new POC test requests and essential managerial tools for high-quality assurance and regulatory compliance will be discussed in an interactive format using an audience response-system and group discussions of practical POC testing scenarios.

EXPECTED OUTCOME: After this session, participants will be able to: 1) describe the expanding role of point-of-care testing (POCT) into diverse clinical settings for patient-centered care; 2) identify POCT clinical considerations and managerial challenges; and 3) discuss tools and strategies for enhancing POCT quality practices, regulatory compliance and multi-disciplinary collaboration.

SPEAKERS

One POCT Request, 2 Requests, 3 Requests, 4
*Nichole Korpi-Steiner, PhD, DABCC, FACB
University of North Carolina, Chapel Hill, NC

Five POCT Sites, 6 Sites, 7 Sites, More!
*Peggy Mann, MS, BS, MT(ASCP)
University of Texas Medical Branch, Galveston, TX

Eight POCT Errors, 9 Errors, 10 Errors, Whoa!
*Jeanne Mumford, Bachelor, MT(ASCP)
Johns Hopkins Hospital, Baltimore, MD

T TICKET

Troubleshooting for Clinical LC-MSMS Laboratories

192011

Pennsylvania Convention Center - 204B

Level: Intermediate
CE Credit: 2.5

MODERATOR
***Judith Stone, PhD, ABCC, MT(ASCP)**
UCSD Toxicology Laboratory, San Diego, CA

INTENDED AUDIENCE: This session is intended for: pathologists, lab directors, clinical chemists, supervisors, technologists, and LC-MSMS specialists.

SESSION OVERVIEW: This session will present the theory and practical advice for identifying and preventing the root causes of common problems with clinical LC-MS/MS assays and instruments. Approximately 80% of the course will be spent with attendees in small discussion groups for problem solving and troubleshooting of LC-MS/MS cases drawn from the practice of the faculty members. Cases that might present a risk to patient safety will be included.

EXPECTED OUTCOME: After this session, participants will be able to: 1) list five important criteria for robust LC-MS/MS method development and validation; 2) design an effective preventative maintenance schedule for LC-MS/MS; and 3) utilize system suitability tests, pressure traces, chromatograms and PM/reagent tracking records to solve five common LC-MS/MS problems.

SPEAKERS

Troubleshooting Cases from 20 to 2,000 Samples/Day
*Judith Stone, PhD, ABCC, MT(ASCP)
UCSD Toxicology Laboratory, San Diego, CA

Troubleshooting Cases from A Large Reference Laboratory
#Frederick Strathmann, PhD, DABCC
University of Utah and ARUP Laboratories, Inc., Salt Lake City, UT

Troubleshooting Cases from An Academic Medical Center
*Autumn Breaud, MSc, MT(ASCP)
Johns Hopkins Hospital, Baltimore, MD

Sunday | 1:30am - 4:00pm

T TICKET

The ABC's of Installing an Automation Line

192012

Pennsylvania Convention Center - 204C

Level: Intermediate
CE Credit: 2.5

MODERATOR
#Danyel Tacker, PhD, FACB, DABCC
West Virginia University, Morgantown, WV

INTENDED AUDIENCE: This session is intended for: laboratory directors and managers, especially those who are planning on installing or updating chemistry automation solutions.

SESSION OVERVIEW: This session will provide laboratory directors and managers an outline of steps required to update or install chemistry automation, based on the speakers' own experiences. The session will discuss selection of an automation line, development of an implementation schedule, and approaches to successful project completion while avoiding or overcoming common hurdles.

EXPECTED OUTCOME: After this session, participants will be able to: 1) identify the features of an automated chemistry solution that are most critical to their own laboratory's needs; 2) construct a realistic timeline for executing an automation installation or upgrade; and 3) develop a plan to maintain project oversight and continued progress toward completion of an automation solution.

SPEAKERS

How to Select/Evaluate Chemistry Automation Solutions—Avoiding "Eeny Meeny Miney Mo"
#Danyel Tacker, PhD, FACB, DABCC
West Virginia University, Morgantown, WV

How to Realistically Plan Out the Project—Creating the Bones
*Joshua Hayden, PhD, DABCC
Weill Cornell Medical College, New York, NY

How to Put (and Keep) the Plan in Place—Keeping it on the Rails
#Sarah Hackenmueller, PhD, DABCC
University of Wisconsin, Madison, WI

SPEAKER DISCLOSURE (*) (+) (#)

* Speakers whose names are preceded by an asterisk (*) have disclosed, in accordance with ACCME Standards and the policy of the AACC, that they have a relationship that, in the context of their presentation, could be perceived by some people as a real or potential conflict of interest (e.g., ownership of stock, research grants, or consulting fees). The speakers do not consider their presentations to be influenced by these relationships.

Speakers who disclose that they have no relationships that could be perceived as a conflict of interest are noted with a (#). Disclosure forms are on file in the AACC office.

+ Speakers who had not returned a disclosure form by the time of printing are noted with a (+).

All speakers will have completed forms prior to the start of the Annual Scientific Meeting. A detailed handout on speaker disclosure will be distributed at the Annual Scientific Meeting.

MONDAY, AUGUST 1

PLENARY & EDUCATION SESSIONS

PLENARY SESSION 12001

HALVING PREMATURE DEATH

#RICHARD PETO, MSC, FRS
University of Oxford, Oxford, United Kingdom

MONDAY, AUGUST 1 | 8:45am - 10:15am | LEVEL: BASIC | CE CREDIT: 1

Pennsylvania Convention Center – Grand Ballroom

INTENDED AUDIENCE

This session is intended for: pathologists, lab directors, clinical chemists, immunologists, molecular biologists, technologists, and IVD industry scientists.

SESSION OVERVIEW

The speaker, Sir Richard Peto, believes that while death in old age is inevitable, death before old age is not. He will give an overview of the important causes of death in various parts of the world, and explain his vision that with global efforts, halving premature death should be an achievable goal. Sir Richard is an epidemiologist of world stature who has made important contributions to meta-analysis and who has led a number of practice-changing large-scale randomized clinical trials. He is one of the pioneers of meta-analysis, a mathematical method in which the outcomes of multiple studies are combined to produce a single result in an objective and logical way.

EXPECTED OUTCOME

After this session, participants will be able to: 1) list major causes of death in various parts of the world; 2) explain how a proportion of such causes are preventable; and 3) discuss the global efforts that would be needed to achieve the ambitious goal of halving premature death.

PLEASE REFER TO THIS GUIDE WHEN MAKING YOUR SESSION SELECTIONS

Each session is identified by a five- or six-digit session number.

EXAMPLE
Session **72105** is a:
A. Short Course
B. On Monday
C. In the Morning

SESSION TYPE
A. FIRST DIGIT
1 = Plenary Sessions
3 = Symposia
4 = AM Brown Bag Sessions
5 = PM Brown Bag Sessions
6 = Meet the Expert Session
7 = Short Courses
19 = Sunday AACC University Sessions

SESSION DAY
B. SECOND DIGIT
1 = Sunday
2 = Monday
3 = Tuesday
4 = Wednesday
5 = Thursday

SESSION TIME
C. THIRD DIGIT
1 = am
2 = pm
4 = Mid-day

The last two digits are AACC internal numbers.

Monday | 7:30am - 8:30am & 12:30pm - 1:30pm

T TICKET Brown Bag 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 food in the Convention Center prior to the session.

CE Credit: 1.0 (per Brown Bag Session) unless otherwise noted

TITLE	SESSION NUMBER AM	PM	LEVEL	SPEAKERS
Beyond PSA: Novel Biomarkers for Detection of Prostate Cancer	**42101**	**52201**	Intermediate	**#Bernard Cook, PhD, DABCC, FACB** Henry Ford Hospital, Detroit, MI
Updates on Prostate Cancer Biomarkers	**42102**	**52202**	Intermediate	**#Liyun Cao, MD** MD Anderson Cancer Center, Houston, TX
Laboratory-Initiated Follow-up of Abnormal and Unexpected Results	**42103**	**52203**	Intermediate	**#Ibrahim Hashim, PhD, DABCC, FACB** U of Texas Southwestern Medical Center, Dallas, TX
Testing for 1,25-dihydroxyvitamin D: New Assays, More Clinical Perspectives?	**42104**	**52204**	Intermediate	**#Damien Gruson, PhD** Cliniques Universitaires Saint Luc, Brussels, Belgium
The Assessment of Insulin Resistance and Selection of the Appropriate Method for the Assessment	**42105**	**52205**	Intermediate	**#Anwar Borai** King Khalid National Guard Hospital, Jeddah, Saudi Arabia
The CDC Hormone Standardization (HoSt) Program—Improving Clinical Measurements of Testosterone and Estradiol	**42106**	**52206**	Intermediate	**#Ashley Ribera** Centers for Disease Control and Prevention, Atlanta, GA
Developing Electronic Alerts for Acute Kidney Injury in Hospitalized Patients	**42107**	**52207**	Basic	**#Paul Yip, PhD, FCACB, DABCC** University Health Network, Toronto, ON, Canada
Utilizing Dashboard Capabilities in the Clinical Chemistry Core Lab and Outreach Settings	**42108**	**52208**	Basic	**#Steven Wong, PhD, DABCC (TC), FACB** Wake Forest University School of Medicine, Winston-Salem, NC
Discrepancies in HIV Screening and Confirmation Results	**42109**	**52209**	Intermediate	**#Anthony Okorodudu, PhD, MBA, DABCC** University of Texas Medical Branch, Galveston, TX
Ethanol Metabolites Testing in Non-Traditional Matrix Types: Case Studies	**42110**	**52210**	Intermediate	***Irene Shu, PhD, DABCC** United States Drug Testing Laboratories, Inc., Des Plaines, IL
Diagnosis and Monitoring of Congenital Adrenal Hyperplasia, Polycystic Ovarian Syndrome and Pubertal Abnormalities Using Mass Spectrometry	**42111**	**52211**	Basic	***Lorin Bachmann, PhD, DABCC** Virginia Commonwealth University, Richmond, VA
Sigma Value—A Performance Indicator and Quality Improvement Tool	**42112**	**52212**	Intermediate	**#Vanessa Lo, BSc(First Hons), MSc, MBA, MISM, MPA** Hong Kong Sanatorium and Hospital, Happy Valley, Hong Kong, China
Body Fluid Validation in the Clinical Lab	**42113**	**52213**	Basic	**#Steven Cotten, PhD, DABCC** Ohio State University, Wexner Medical Center, Columbus, OH

TITLE	SESSION NUMBER AM	PM	LEVEL	SPEAKERS
Lipoprotein-Associated Phospholipase A2: Concentration or Activity—Which to Measure?	**42114**	**52214**	Intermediate	***Leslie Donato, PhD** Mayo Clinic, Rochester, MN
Of Mice and Men: Species Differences Relevant to Specimen Collection and Clinical Laboratory Parameters for the Laboratory Investigator *Developed in cooperation with Animal Clinical Chemistry Division.*	**42115**	**52215**	Basic	**#Susan Emeigh Hart, VMD, PhD, DACVP, DABT** Boehringer Ingelheim Pharmaceuticals, Inc, Ridgefield, CT
CLIA Requirements for Validation of Laboratory Developed Tests	**42116**	**52216**	Basic	**#Vincent Ricchiuti, PhD** Laboratory Corporation of America Holdings, Dublin, OH
Prenatal Screening for Down Syndrome: From Maternal Serum Screening to Cell-Free Fetal DNA Testing	**42117**	**52217**	Basic	**#Waddah Katrangi, BS, MS, PhD** Mayo Clinic, Rochester, MN
Tactics for Reducing Laboratory Turnaround Times: Instrumentation, Processes, and Technology	**42118**	**52218**	Basic	**#Patrick Kyle, BS, PhD, NRCC, DABCC, FACB** University of Mississippi Medical Center, Jackson, MS
Issues in the Practical Implementation of POCT: Overcoming Challenges	**42120**	**52220**	Basic	**#Joesph Wiencek, PhD** Vanderbilt University School of Medicine, Nashville, TN
The Autoimmune Response: Effective Diagnosis of Systemic Autoimmune Disorders Using Laboratory Data	**42121**	**52221**	Basic	**#Zahra Yi, PhD** Dartmouth-Hitchcock Medical Center, Lebanon, NH
Liquid Biopsies: The Techniques and Applications	**42122**	**52222**	Intermediate	**#John Mills, PhD** Mayo Clinic, Rochester, MN
Measurements of Total and Free Testosterone in Clinical Laboratories	**42123**	**52223**	Intermediate	**#Jing Cao, PhD, DABCC** Texas Children's Hospital, Houston, TX
An Introduction to Metabolomics for Translational and Clinical Labs	**42124**	**52224**	Basic	**#Lacy Moss, BS, PhD, MLS (ASCP)** Wake Forest Baptist Medical Center, Winston-Salem, NC
Serum vs. Plasma: Which Specimen Should You Use?	**42125**	**52225**	Basic	***Jeffrey Chance, PhD** BD Life Sciences - Preanalytical Systems, Franklin Lakes, NJ
Selecting the Appropriate Samples and Diagnostic Tests for Porphyria	**42126**	**52226**	Basic	**#Rejwi Dahal, PhD** University of Texas Medical Branch, Galveston, TX
Point-of-Care Testing and Population Health Management	**42127**	**52227**	Intermediate	***Kathleen David, BA Biology, MT(ASCP)** TriCore Reference Lab Albuquerque, NM
Who Can Help with this Point-of-Care Project? Thinking Outside the Box *(ACCENT® Credit only)*	**42128**	**52228**	Basic	***Karen Jenkins, MT(ASCP)** Emory University Hospital Midtown, Atlanta, GA
Nonfasting Lipid Profiles	**42129**	**52229**	Basic	**#Khushbu Patel, PhD, BS** Washington University, St. Louis, MO

Monday | **10:30am - 11:30am**

Halving Premature Death

62101

Pennsylvania Convention Center - 106AB

Level: Basic
CE Credit: 1

MODERATOR
***Yuk Ming Dennis Lo, MD PhD**
Prince of Wales Hospital, Shatin, Hong Kong, China

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

SESSION OVERVIEW: This session provides an excellent opportunity for a limited number of attendees to meet with Sir Richard Peto to discuss the major causes of death around the world. Sir Richard will explain how, with global efforts, halving premature death should be an achievable goal. Sir Richard is an epidemiologist of world stature who has made important contributions to meta-analysis and who has led a number of practice-changing large-scale randomized clinical trials.

EXPECTED OUTCOME: After this session, participants will be able to: 1) list the major causes of death in various parts of the world; 2) explain how a proportion of such causes are preventable; and 3) debate the global efforts that would be needed to achieve the ambitious goal of halving premature death.

SPEAKER
Meet the Expert: Halving Premature Death
#Richard Peto, MSc, FRS
University of Oxford, Oxford, United Kingdom

The Programmable Bio-Nano-Chip: A Platform to Digitize Biology

62102

Pennsylvania Convention Center - 107AB

Level: Basic
CE Credit: 1

MODERATOR
#Gwendolyn McMillin, PhD, DABCC
University of Utah & ARUP Laboratories, Salt Lake City, UT

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

SESSION OVERVIEW: This session provides an excellent opportunity for a limited number of attendees to meet with Dr. McDevitt about his work on the development and application of the Programmable Bio-Nano-Chip. Dr. McDevitt has pioneered this technology for digitizing biological signatures for a broad range of key health conditions, with numerous applications. His recent research has been sponsored by major programs funded by the National Institute of Dental and Craniofacial Research (NIDCR) division of the National Institutes of Health (NIH), the Bill and Melinda Gates Foundation, the National Aeronautics and Space Administration (NASA) and the United Kingdom's Home Office Scientific Development Branch. His work was recognized with the "Best of What's New Award" in the Medical Device Category for 2008 by *Popular Science*. Dr. McDevitt's individual honors include the Presidential Young Investigator Award.

EXPECTED OUTCOME: After this session, participants will be able to: 1) explain the basic concept of Programmable Bio-Nano-Chip sensor systems; 2) outline how such systems can provide cellular, genomic and proteomic readouts of biological systems; and 3) list the potential clinical applications of such devices.

SPEAKER
The Programmable Bio-Nano-Chip: A Platform to Digitize Biology
*John McDevitt, PhD
College of Dentistry of New York University, New York, NY

Monday | **10:30am - Noon**

ORAL ABSTRACT SESSION

Hot Topics in Clinical Chemistry

32101

Pennsylvania Convention Center - 114 Lecture Hall

Level: Intermediate
CE Credit: 1.5

MODERATOR

#Donald LeGatt, PhD, FCACB
University of Alberta Hospital, Edmonton, AB, Canada

INTENDED AUDIENCE: This session is intended for: clinical laboratorians, physicians, pathologists, clinicians, industry scientists, post-doctoral fellows, laboratory directors and laboratory supervisors/managers.

SESSION OVERVIEW: AACC is dedicated to advancing the science and practice of laboratory medicine. A select group of members have reviewed the abstracts submitted for the AACC annual meeting. The Annual Meeting Organizing Committee (AMOC) has reviewed the abstracts and selected several regarded as hot topics in clinical chemistry. The authors have been invited to present their findings as oral presentations. Each 15-minute presentation will be followed by a 5-minute question-and-answer session.

EXPECTED OUTCOME: After attending this session, participants will be able to: 1) describe the latest advances in selected hot topics in clinical chemistry; 2) relate research in selected hot topics in clinical chemistry to the practice of pathology and laboratory medicine; and 3) integrate state-of-the-art knowledge in selected hot topics in clinical chemistry into the roles and responsibilities of the clinical laboratory professional.

SPEAKERS

A Novel LC-MS/MS Method for the Quantitation of Abiraterone Metabolites in Patients with Castration-Resistant Prostate Cancer: Innovation of Separation of Diastereoisomers Without Using a Chiral Column
#Mohammad Alyamani
Cleveland State University, Cleveland, OH

Screening Pharmacologically Active Compounds Against TSG-6, a Therapeutic Target for the Treatment of Asthma
#Nansy Albtoush
Cleveland State University, Cleveland, OH

Graft-Derived Cell-Free DNA—A Promising Rejection Marker in Liver Transplantation—Results from a Prospective Multicenter Trial
*Ekkehard Schutz
Chronix Biomedical, Göttingen, Germany

Monday | **10:30am - Noon**

New Immunotherapies: The Beginning of the End of Cancer?

32102

Pennsylvania Convention Center - 118AB

Level: Intermediate
CE Credit: 1.5

MODERATOR
#Eleftherios Diamandis, MD, PhD, FRCPC
Mount Sinai Hospital and University Health Network, Toronto, ON, Canada

Developed in cooperation with American Society of Clinical Oncology (ASCO), Clinical Society Collaborations Committee.

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

SESSION OVERVIEW: Cancer therapy is often ineffective. Recently, new targets for cancer therapy have been identified by mobilization of various players of the immune response, including PD1, PDL1 and CTLA-4. Such targeting produces robust antitumor responses.

EXPECTED OUTCOME: After this session, participants will be able to: 1) understand the principles of new cancer immunotherapies; 2) describe very recent findings from phase 1 and phase 2 clinical trials; and 3) identify the need to develop predictive biomarkers for these novel and rapidly proliferating immunomodulatory agents.

SPEAKERS

Identifying Prognostic and Predictive Biomarkers for New Immunotherapeutic and Immunomodulatory Targets
#Ivan Blasutig
University Health Network, Toronto, ON, Canada

Recent Developments and Early Phase Clinical Trials of Cancer Immunotherapy
*Lillian Siu, MD
University Health Network, Toronto, ON, Canada

Cardiac Troponin: Rule Out and Rule In Strategies and Use in Chronic Disease—Issues We Need To Be Sensitive To

32103

Pennsylvania Convention Center - 113AB

Level: Advanced
CE Credit: 1.5

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

Developed in cooperation with Clinical Society Collaborations Committee.

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

SESSION OVERVIEW: The session will address the role of cardiac troponin (cTn), with emphasis on high-sensitivity assays, to rule in/out myocardial injury and infarction in patients presenting with acute and chronic disease. Evidence based strategies and appropriate test utilization will be addressed.

EXPECTED OUTCOME: After attending this session participants will be able to: 1) explain how cTn defines normality and recognize the need for sex-defined 99th percentile values with hs-cTn assay implementation; 2) describe how cTn is used as a biomarker used to detect myocardial injury; 3) apply clinical and laboratory strategies using hs-cTn assays that will improve the ability for an early rule out of MI within three hours of presentation compared to contemporary assays; and 4) define a framework for establishing hs-cTn assays into laboratories for clinical use through clinical partnership and appropriate test utilization, with the goal of improving patient outcomes.

SPEAKERS

Clinical Chemist Prospective
*Fred Apple, PhD, DABCC
Hennepin County Medical Center, Minneapolis, MN

Emergency Medicine Perspective
*Judd Hollander, MD
Thomas Jefferson University, Philadelphia, PA

Cardiologist Perspective
*Allan Jaffe, MD
Mayo Clinic, Rochester, MN

Monday | **10:30am - Noon**

Using Flow Cytometry to Identify Cellular Biomarkers for Cancer Immunotherapy

32104
Pennsylvania Convention Center - 108AB

Level: Basic
CE Credit: 1.5

MODERATOR
#Andrew Hoofnagle, MD, PhD
University of Washington, Seattle, WA

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

SESSION OVERVIEW: This session will introduce current flow cytometric methods, and describe how they can be applied to the discovery of novel biomarkers for cancer immunotherapy and other immune-related diseases. The challenges associated with developing flow cytometry-based biomarkers in these settings will be described, along with the potential and power of such efforts.

EXPECTED OUTCOME: After attending this session, participants will be able to: 1) describe at least two new types of cancer immunotherapies that have recently been shown to have efficacy in humans; 2) explain why new biomarkers are needed in this setting; and 3) demonstrate an understanding of the basic principles of flow cytometric analyses.

SPEAKERS

Harnessing the Power of the Immune Response to Target Cancer
#Chihiro Morishima, MD
University of Washington, Laboratory Medicine, Seattle, WA

Precision Immunology: A New Paradigm for Biomarker Research In the Immunotherapy Age
#Pratip Chattopadhyay, PhD
Vaccine Research Center, NIH, Elkridge, MD

Part 1: Hepatitis C Virus (HCV)—Research in Treatment and Prevention

32105
Pennsylvania Convention Center - 103AB

Level: Basic
CE Credit: 1.5

MODERATOR
***William Osburn, PhD**
Johns Hopkins University School of Medicine, Baltimore, MD

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

SESSION OVERVIEW: This session will provide an overview of issues related to the hepatitis C virus (HCV), including challenges in treatment, global health implications, and opportunities for research. Additional focus will be given in particular to research in HCV vaccines, and how that may impact the spread of HCV as well as current treatment paradigms. Attendees will hear about recent scientific advances for detection and treatment of HCV. This is Part 1 of a three-part scientific track invited by the Annual Meeting Organizing Committee.

EXPECTED OUTCOME: After attending this session, participants will be able to: 1) discuss the impact of HCV on global health; 2) list successes in development of HCV treatment; 3) describe the challenges and opportunities in HCV research; and 4) discuss the role of vaccines in preventing HCV infection.

SPEAKERS

Hepatitis C: Unique Challenges, Successes, and Opportunities
*Stuart Ray, MD
Johns Hopkins University School of Medicine, Baltimore, MD

HCV Vaccines: Current Status and Future Directions
#Justin Bailey
Johns Hopkins University School of Medicine, Baltimore, MD

Monday | **10:30am - Noon**

Building New or Adding On: Fundamentals for Overcoming Challenges in Operationalizing Clinical Mass Spectrometry

72106

Pennsylvania Convention Center - 204B

Level: Basic
CE Credit: 1.5

MODERATOR
#Y. Victoria Zhang
University of Rochester Medical Center, Rochester, NY

Developed in cooperation with Mass Spectrometry and Separation Sciences Division, Proteomics & Metabolomics Division, and Clinical Translational Science Division.

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

SESSION OVERVIEW: This session aims to assist clinical laboratorians interested in implementing mass spectrometry for the first time and those wanting to expand their existing mass spectrometry operations. It will cover essential considerations and effective approaches needed to overcome common hurdles experienced when contemplating or utilizing mass spectrometry.

EXPECTED OUTCOME: After this session, participants will be able to: 1) explain the fundamental principles of clinical mass spectrometry; 2) discuss the essential considerations to bring mass spectrometry to clinical laboratories; and 3) develop a continuous training program and competency assessment for lab staff.

SPEAKERS

Closing the Technology Gap to Bring LC-MS/MS to Your Clinical Lab
#Deborah French, PhD, DABCC, FACB
University of California San Francisco, San Francisco, CA

Steps to Success in LC-MS/MS Staff Training and Competence
#Shannon Haymond, PhD, DABCC
Ann & Robert H. Lurie Children's Hospital of Chicago, Chicago, IL

What are Disorders of Sexual Development?

72107

Pennsylvania Convention Center - 204A

Level: Advanced
CE Credit: 1.5

MODERATOR/SPEAKER
#William Winter, MD, FCAP, FACB, DABCC
University of Florida, Gainesville, FL

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

SESSION OVERVIEW: This session will describe the classification, biology, and diagnosis of disorders of sexual development (DSD). This short course will provide the laboratorian with the essential knowledge required to assist clinicians in the evaluation of such complex cases.

EXPECTED OUTCOME: After attending this session, participants will be able to: 1) classify disorders of sexual development (DSD); 2) explain the biology of DSDs; and 3) provide expert consultation to clinicians in the laboratory evaluation of DSDs.

SPEAKER

What Are "Disorders of Sexual Development?"
#William Winter, MD, FCAP, FACB, DABCC
University of Florida, Gainesville, FL

Monday | 10:30am - Noon

Biomarkers of the Brain: Past Failures and Future Promise

72108

Pennsylvania Convention Center - 204C

Level: Intermediate
CE Credit: 1.5

MODERATOR
#Frederick Strathmann, PhD, DABCC
University of Utah and ARUP Laboratories, Inc., Salt Lake City, UT

INTENDED AUDIENCE: This session is intended for: pathologist, laboratory directors, technologists, IVD scientists, and research scientists.

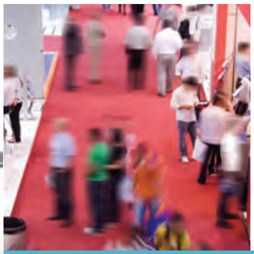
SESSION OVERVIEW: This session will begin with a focus on the methods currently available for the diagnosis and management of several neurological diseases. A review of the underlying pathophysiology will provide a background for an in-depth discussion of the current state of biomarkers and future needs for translating research findings into clinical practice.

EXPECTED OUTCOME: After attending this session, participants will be able to: 1) list several clinical tools currently used in the diagnosis and prognosis of neurological diseases; 2) describe the roles that several cell types are known to play in the development of neurological disease; 3) outline the shortcomings of past research approaches that have inhibited the translation of research findings into the clinical laboratory; and 4) compare the classification of biomarkers for diagnosis with biomarkers for prognosis.

SPEAKERS

Learning from Past Failures with Traumatic Brain Injury Biomarkers and How to Repair the Damage
#Frederick Strathmann, PhD, DABCC
University of Utah and ARUP Laboratories, Inc., Salt Lake City, UT

Incorporation of CSF Biomarkers of Alzheimer's Disease Neuropathology into Clinical Trials: Progress and Challenges
*Leslie Shaw, PhD, DABCC
Hospital of University of Pennsylvania, Philadelphia, PA



JOIN THE CONVERSATION

Follow AACC @_AACC and use the hashtag #2016AACC to join the conversation.

Monday | 12:30pm - 2:00pm

Part 2: Debate: Is Hepatitis C of Continuing Concern, or is it Going Away?

32409

Pennsylvania Convention Center - 103AB

Level: Intermediate
CE Credit: 1.5

MODERATOR

***William Osburn, PhD**
Johns Hopkins University School of Medicine, Baltimore, MD

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

SESSION OVERVIEW: This session will provide a discussion of the impact of current treatment modalities on the efforts to eradicate HCV. This issue of whether these strategies will be effective, and whether HCV will continue to be a global health problem will be debated by the speakers in this session. After presenting each side of the issue, there will be a Q&A session including the audience and an open discussion based upon the points presented by each of the speakers. This is Part 2 of a three-part scientific track invited by the Annual Meeting Organizing Committee.

EXPECTED OUTCOME: After attending this session, participants will be able to:
1) discuss the reasons why (or why not) HCV is on the path to eradication; and
2) list different therapeutic approaches for eradication of HCV.

SPEAKERS

In the Modern Era of DAAs, HCV is a Vanishing Problem—Pro
#Kimberly Page, PhD, MPH, MS
University of New Mexico Health Sciences Center, Albuquerque, NM

In the Modern Era of DAAs, HCV is Not a Vanishing Problem—Con
*Camilla Graham, MD
Harvard Medical School, Boston, MA

Monday | 12:30pm - 2:00pm

ORAL ABSTRACT SESSION

Cardiovascular Disease, Chronic Kidney Disease and Obesity: Diagnostic Paradigms

32410

Pennsylvania Convention Center - 108AB

Level: Intermediate
CE Credit: 1.5

MODERATOR

#Octavia M. Peck-Palmer, PhD
University of Pittsburgh Medical Center, Pittsburgh, PA

INTENDED AUDIENCE: This session is intended for: clinical chemists, clinical laboratorians, physicians, pathologists, clinicians, medical technologists, industry scientists and post-doctoral fellows.

SESSION OVERVIEW: AACC is dedicated to advancing the science and practice of laboratory medicine. A select group of members have reviewed and ranked the abstracts submitted for the AACC annual meeting for acceptance. The Annual Meeting Organizing Committee (AMOC) has reviewed the accepted abstracts in the area of Cardiovascular Disease, Chronic Kidney Disease and Obesity: Diagnostic Paradigms and have chosen four authors to present their research as oral presentations in a symposium. Each 15-minute presentation will be followed by a 5-minute question-and-answer session.

EXPECTED OUTCOME: After attending this session, participants will be able to: 1) describe and evaluate the latest advances in Cardiovascular Disease, Chronic Kidney Disease and Obesity: Diagnostic Paradigms; 2) relate the research in Cardiovascular Disease, Chronic Kidney Disease and Obesity to the practice of pathology and laboratory medicine; and 3) integrate and translate state of the art knowledge in Cardiovascular Disease, Chronic Kidney Disease and Obesity into the roles and responsibilities of the clinical laboratory professional.

SPEAKERS

Development and Validation of a Dried Blood Spot Method for Leptin
*Jack A. Maggiore, BS, PhD, MS, MT(ASCP)
Doctors's Data Inc., St. Charlies, IL

Development of a Risk Model to Predict Urgent Dialysis among Advanced Chronic Kidney Disease (CKD) Patients
#Christopher McCudden
Harvard Medical School, Boston, MA

Clinical Value of Bioactive Hepcidin-25, Soluble Transferrin Receptor and Their Ratio in Predialysis Patients Chronic Kidney Disease: Correlation with the Response to Intravenous Ferric Carboxymaltose
#Ioannis Papassotiriou, PhD
Aghia Sophia Children's Hospital, Athens, Greece

Circulating Dickkopf-1 Protein Levels in Normal-Weight and Obese Children: Evidence of Involvement of Canonical Wnt Signaling
#Ioannis Papassotiriou, PhD
Aghia Sophia Children's Hospital, Athens, Greece

Monday | 12:30pm - 2:00pm

Measurement of Free Hormones in Blood: Technical and Clinical Challenges

32411
Pennsylvania Convention Center - 118AB

Level: Intermediate
CE Credit: 1.5

MODERATOR
***David Sacks, MB, ChB, FRCPath**
NIH, Bethesda, MD

Developed in cooperation with Endocrine Society, Clinical Societies Collaboration Committee.

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

SESSION OVERVIEW: Measurement and interpretation of free hormones in blood are among the most challenging problems in clinical endocrinology and clinical chemistry. The reliability of the measurement of serum free thyroid hormone has been called into question in several common clinical conditions including pregnancy and monitoring patients on thyroid hormone replacement. Interpretation of free plasma steroid measurements such as cortisol is also very challenging, and the use of salivary steroid measurements as a surrogate has been proposed. This symposium will discuss the general problem, and then focus on free thyroid hormone and free cortisol measurements.

EXPECTED OUTCOME: After this session, participants will be able to: 1) list the methods available to measure free thyroid and steroid hormones and the advantages of each; 2) describe the advantages and limitations of free thyroid hormone; and 3) summarize the advantages of free steroid hormones in evaluating adrenal function.

SPEAKERS

Free Hormones in the Blood—Technical Issues Influencing Clinical Interpretation
#Steven Soldin, PhD, ABCC
NIH, Bethesda, MD

Clinical Experiences with Free Thyroid Hormones
#Jacquie Jonklaas, MD, PhD
Georgetown University, Washington, DC

Free Steroid Hormones
#Jean-Benoit Corcuff, MD, PhD
University of Bordeaux, Pessac, France

Monday | 12:30pm - 2:00pm

CHAIR'S INVITED SESSION

mHealth and the Continuum of Patient Care

32412

Pennsylvania Convention Center - 114 Lecture Hall

Level: Intermediate
CE Credit: 1.5

MODERATOR

#William Clarke, PhD, MBA, DABCC
Johns Hopkins University School of Medicine, Baltimore, MD

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

SESSION OVERVIEW: This session will provide a discussion of mHealth and associated technologies in the delivery of medical care outside of the hospital setting. Attendees will hear how about different tools for implementation of mHealth concepts and their potential impact on patient care and outcomes.

EXPECTED OUTCOME: After his session, participants will be able to: 1) define mHealth and its role in the delivery of medical care; 2) describe available tools for utilization of mHealth for patient care; and 3) discuss challenges to implementation of mHealth related to transmission of patient information.

SPEAKERS

mHealth x3
#William Clarke, PhD, MBA, DABCC
Johns Hopkins University School of Medicine, Baltimore, MD

The Role of Mobile Health in Secure Communication and Management of Lab Results: Actionable, Faster Data
*Sebastian Seiguer
emocha Mobile Health Inc., Baltimore, MD

Catalyzing Technology Innovation to Support Health Providers
#Craig Lehmann, PhD, CC(NRCC), FACB
State University of New York at Stony Brook, Stony Brook, NY

Using a Patient Centered App to Help Improve Care, Satisfaction, and Outcomes
*Asad Latif
Johns Hopkins University School of Medicine, Baltimore, MD

Technologies That Could Change the Future of the Clinical Laboratory: Part 1

32421

Pennsylvania Convention Center - 113AB

Level: Advanced
CE Credit: 1.5

MODERATOR

***Timothy Amukele, PhD, MD**
Johns Hopkins University, Baltimore, MD

INTENDED AUDIENCE: This session is intended for: pathologists, lab directors, clinical chemists, technologists, IVD industry scientists, members of the press, and anyone who thinks disruption in the laboratory can be positive.

SESSION OVERVIEW: This session focuses on technologies that are likely to positively disrupt the way diagnostic tests in the clinical laboratory are performed and transported. The topics will include, emerging RT-PCR technology that will allow analyses in less than one minute to enable of point-of-care nucleic acid testing; microfluidic sample processing integrated to high pressure mass spectrometry for chip-based analyses; alternative sampling techniques for analysis of blood that will challenge the existing phlebotomy paradigm; and drone transportation of laboratory samples to allow access to clinical laboratory testing in remote areas.

EXPECTED OUTCOME: After this session, participants will be able to: 1) identify what reagent and instrument changes are necessary to perform RT-PCR in less than one minute; 2) describe high-pressure mass spectrometry (HPMS) systems that enable handheld (less than 4 lbs) mass spectrometers coupled to microfabricated fluidic systems able to process samples in less than 4 minutes; 3) discuss alternate sample collection approaches for clinical testing relative to traditional venous phlebotomy; and 4) describe the promise and limitations of drone transport of diagnostic laboratory specimens.

SPEAKERS

Technologies That Could Change the Future of the Clinical Laboratory
*Carl Wittwer, MD, PhD
University of Utah, Salt Lake City, UT

Technologies That Could Change the Future of the Clinical Laboratory
*J. Michael Ramsey
The University of North Carolina at Chapel Hill, Chapel Hill, NC

Monday | 12:30pm - 2:00pm

When Gender Doesn't Equal Sex: Providing Effective Healthcare and Laboratory Testing to the Transgender Community

72413

Pennsylvania Convention Center - 204A

Level: Basic
CE Credit: 1.5

MODERATOR

#**Dina Greene, PhD, DABCC**
University of Washington, Seattle, WA

Developed in cooperation with Endocrinology Division, Personalized Medicine Division.

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

SESSION OVERVIEW: System barriers, lack of education, and social prejudices can influence the medical services received by transgender patients, often leading to the oppression of this population when they seek medical care. By integrating experiences of two individuals (a transgender patient and a physician) this session explores the laboratory's role in providing transgender patients basic medical care.

EXPECTED OUTCOME: After attending this session, participants will be able to: 1) outline the differences between gender and sex; 2) give an example of healthcare discrimination towards transgender individuals; 3) list the barriers involved in providing adequate laboratory medicine to the transgender population; and 4) highlight the standards of care for treating transgender individuals with gender dysphoria.

SPEAKERS

What it Means to be Transgender
#Shayle Matsuda, MSc
University of Hawaii Manoa, Honolulu, HI

Sex-Dependent Laboratory Results
#Dina Greene, PhD, DABCC
University of Washington, Seattle, WA

A Clinician's Perspective on Interpreting Laboratory Results from Transgender Patients
#Trevor Corneil, MD, MHSc, FRFP, FRCPC
University of British Columbia, Kelowna, BC, Canada

Be Prepared! Sample Preparation Strategies for Multiple Matrices in the LC-MS/MS Clinical Toxicology Laboratory

72414

Pennsylvania Convention Center - 204B

Level: Intermediate
CE Credit: 1.5

MODERATOR

#**Stephanie Marin, PhD**
ARUP Institute for Clinical and Experimental Pathology, Salt Lake City, UT

INTENDED AUDIENCE: This session is intended for: clinical scientists, clinical toxicologists, lab supervisors, managers, and directors who want to increase their knowledge of how sample preparation for LC-MS/MS analysis of drugs and metabolites is affected by specimen type and compounds of interest, and want to use this information to develop new, or improve their existing LC-MS/MS assays. Attendees should have a working knowledge of LC-MS/MS and an understanding of common sample preparation techniques (e.g. liquid-liquid extraction, solid phase extraction, protein/lipid removal).

SESSION OVERVIEW: This session will describe the differences in composition among urine, blood, oral fluid, meconium, and umbilical cord tissue and the relevance of each specimen to drug testing. The differences in concentrations and distribution of drugs and metabolites and matrix challenges will be discussed. Methods for individual drug analytes will be presented for each specimen to demonstrate strategies and solutions for successful LC-MS/MS analyses.

EXPECTED OUTCOME: After this session, participants will be able to: 1) explain differences in the composition of urine, blood, oral fluid, meconium and umbilical cord tissue and how that affects sample preparation and LC-MS/MS analysis; 2) identify differences in the concentration and distribution of drugs and metabolites in the different specimen types for representative compounds; and 3) define sample preparation strategies based on specimen type, and drugs and metabolites that are present and of clinical significance.

SPEAKERS

Sample Preparation Techniques for Detection of Drugs and Metabolites in Blood and Oral Fluid by LC-MS/MS
*Christine Moore, PhD, DSc, DABCC
Immunalysis Corporation, Pomona, CA

Optimizing Sample Preparation for Analysis of Drug Analytes in Urine, Meconium and Umbilical Cord Tissue by LC-MS/MS
#Stephanie Marin, PhD
ARUP Institute for Clinical and Experimental Pathology, Salt Lake City, UT

Monday | 12:30pm - 2:00pm

NACB LMPG on Laboratory Testing to Support Pain Management

72415

Pennsylvania Convention Center - 204C

Level: Intermediate
CE Credit: 1.5

MODERATOR
#Loralie Langman, PhD
Mayo Clinic, Rochester, MN

Developed in cooperation with NACB.

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

SESSION OVERVIEW: Pain is one of the most common reasons people seek care and an estimated 50 million Americans live with chronic pain. Physicians use various laboratory tests to provide objective measures to effectively manage pain patients, assess compliance, and detect diversion. This session will discuss the scientific evidence supporting the use of these assays and present the first draft of the NACB LMPG recommendations for the use of laboratory testing in the management of pain patients. Members of the LMPG committee will present the recommendations with the intent of capturing all public comments.

EXPECTED OUTCOME: After attending this session, participants will be able to: 1) list the committee's recommendations for laboratory testing in supporting the treatment of chronic pain patients; 2) outline the evidence used to develop these recommendations; and 3) analyze and provide comments related to the proposed recommendations and their application for pain management.

SPEAKERS

Recommendations for Adulterant Testing and Appropriate Reporting and Interpretation of Laboratory Results
#Loralie Langman, PhD
Director Clinical and Forensic Toxicology Laboratory, Mayo Clinic, Rochester, MN

Clinical Utility of Pharmacogenomics for Pain Management and Current Regulatory Guidelines for Monitoring Pain Patients
*Nancy Bratanow, MD
Medical Director, Midwest Comprehensive Pain Care, Wauwatosa, WI

Common Classes of Medications Used and Abused by Pain Management Patients and the Appropriate Specimen Types Required To Detect Them
*Robin Hamill-Ruth, MD
Co-Director, Clinical Pain Research University of Virginia Health System, Charlottesville, VA

SPEAKER DISCLOSURE (*) (+) (#)

* Speakers whose names are preceded by an asterisk (*) have disclosed, in accordance with ACCME Standards and the policy of the AACC, that they have a relationship that, in the context of their presentation, could be perceived by some people as a real or potential conflict of interest (e.g., ownership of stock, research grants, or consulting fees). The speakers do not consider their presentations to be influenced by these relationships.

Speakers who disclose that they have no relationships that could be perceived as a conflict of interest are noted with a (#). Disclosure forms are on file in the AACC office.

+ Speakers who had not returned a disclosure form by the time of printing are noted with a (+).

All speakers will have completed forms prior to the start of the Annual Scientific Meeting. A detailed handout on speaker disclosure will be distributed at the Annual Scientific Meeting.

Monday | 2:30pm - 4:00pm

ORAL ABSTRACT SESSION

POCT- Utilization, QA/QC and Advances in Technologies

32216

Pennsylvania Convention Center - 108AB

Level: Intermediate
CE Credit: 1.5

MODERATOR

#Donald LeGatt, PhD, FCACB
University of Alberta Hospital, Edmonton, AB, Canada

INTENDED AUDIENCE: This session is intended for: clinical laboratorians, physicians, pathologists, clinicians, industry scientists, post-doctoral fellows, laboratory directors and laboratory supervisors/managers.

SESSION OVERVIEW: AACC is dedicated to advancing the science and practice of laboratory medicine. A select group of members have reviewed the abstracts submitted for the AACC annual meeting. The Annual Meeting Organizing Committee (AMOC) has reviewed the abstracts in the area of POCT (Point-of-Care Testing) and have chosen several of the authors to present their findings as oral presentations. Each 15-minute presentation will be followed by a 5-minute question-and-answer session.

EXPECTED OUTCOME: After attending this session, participants will be able to: 1) describe the latest advances in POCT, to include utilization and QA/QC aspects in addition to technology developments; 2) relate research in POCT to the practice of pathology and laboratory medicine; and 3) integrate state of the art knowledge about POCT into the roles and responsibilities of the clinical laboratory professional.

SPEAKERS

Analytical Evaluation of the Roche CARDIAC Troponin T Assay Performed on the POC Cobas® h232 Instrument
#Mary Rozmanc, BHA, ART, MLT
Sunnybrook Health Sciences Center, Toronto, ON, Canada

Point-of-Care PT and PTT in Patients with Suspected Deficiencies of Coagulation Factors
*Rainer Zerback, PhD
Roche Diagnostics GmbH, Mannheim, Germany

Design and Evaluation of a Mobile Nucleic Acid Amplification Testing System in a Hospital Emergency Setting
*Dong Jin Shin, BS
Johns Hopkins University, Baltimore, MD

Eliminating i-STAT Invalid Patient and Operator Identification Errors: How Collaborating with Anesthesia Improved Point-of-Care Compliance
#Brenda Suh-Lailam, PhD, BS, DABCC, FACB
Ann & Robert H. Lurie Children's Hospital of Chicago, Chicago, IL

Monday | **2:30pm - 4:00pm**

PRESIDENT'S INVITED SESSION

Leveraging the Laboratory Medicine Value Proposition: Demonstrating the Value of the Laboratory as an Integral Part of the Healthcare Team

32217

Pennsylvania Convention Center - 114 Lecture Hall

Level: Basic
CE Credit: 1.5

MODERATOR
#Patricia Jones, PhD, DABCC, FACB
Children's Medical Center, Dallas, TX

INTENDED AUDIENCE: This session is intended for: practicing laboratory professionals at all levels of training, pathologists, laboratory directors, administrative directors, hospital managers, Chief Medical Officers, insurers, regulators, policy makers, researchers in the diagnostic field and industry.

SESSION OVERVIEW: Laboratory medicine's value is directly related to its impact on clinical, resource and financial decision making. This session aims to provide attendees with an enhanced understanding of how laboratory output can be leveraged to optimize patient outcomes, address health delivery challenges, enhance resource utilization and improve institutional processes.

EXPECTED OUTCOME: After this session, participants will be able to: 1) explain the concept of the value proposition as applied to laboratory medicine in the context of healthcare goals; 2) describe the current healthcare environment and the need for laboratory professionals to position the laboratory as a value proposition; 3) list opportunities for leveraging laboratory output to add value to the healthcare and management team; and 4) list and discuss three tools that can be used to position the laboratory and demonstrate value.

SPEAKERS

The Concept of a Value Proposition in Laboratory Medicine
*Christopher Price, PhD, FACB
University of Oxford, Oxford, United Kingdom

Demonstrating the Value of Laboratory Medicine
#Robert Christenson, PhD, DABCC, FACB
University of Maryland School of Medicine, Baltimore, MD

Monday | **2:30pm - 4:30pm**

Part 3: HCV and Laboratory Medicine: Testing in Support of Screening and Diagnosis

32218

Pennsylvania Convention Center - 103AB

Level: Intermediate
CE Credit: 1.5

MODERATOR
***William Osburn, PhD**
Johns Hopkins University School of Medicine, Baltimore, MD

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

SESSION OVERVIEW: This session will provide a discussion of the various tools available for in vitro diagnostic HICV testing for use in patient care. The speakers will address testing for both screening and confirmation of diagnosis, as well as testing in support of therapeutic interventions. Attendees will hear about pertinent issues for laboratory medicine in the context of HCV infected patients. This is Part 3 of a three-part scientific track invited by the Annual Meeting Organizing Committee.

EXPECTED OUTCOME: After attending this session participants will be able to: 1) list diagnostic tests available for screening and confirmation of HCV infection; 2) discuss various technologies that form the basis for HCV diagnostic testing; and 3) describe the challenges for the clinical laboratory in the context of HCV testing.

SPEAKERS

The HCV Diagnostic Toolbox
*William Osburn, PhD
Johns Hopkins University School of Medicine, Baltimore, MD

The Changing Landscape of Testing for HCV
#Arthur Kim, MD
Harvard Medical School, Department of Medicine, Division of Infectious Diseases, Boston, MA

Monday | 2:30pm - 4:00pm

Beyond Single-Gene Analysis: Paving the Way to Comprehensive Tumor Genomic Profiling

32219

Pennsylvania Convention Center - 118AB

Level: Intermediate
CE Credit: 1.5

MODERATOR
#Neal Lindeman
Brigham and Women's Hospital, Boston, MA

Developed in cooperation with College of American Pathologists, Molecular Pathology Division.

INTENDED AUDIENCE: This session is intended for: pathologists, residents, PhDs, and medical technologists.

SESSION OVERVIEW: The design and implementation of multitargeted molecular testing in clinical practice is an area of great interest, with consideration of both sequential single-gene testing algorithms and parallel multiplexed assays. This course is ideal for practitioners within the field of cancer pathology, with an emphasis on molecular diagnostics. Presenters will share their experiences with targeted genotyping assays in lung cancer, colon cancer, thyroid cancer, and melanoma, as well as with the PROFILE™ initiative, an effort to provide multiplexed genetic analysis of all cancer samples. Additionally, faculty will offer insight into the keys to success and potential pitfalls to avoid in establishing a broad tumor-genotyping platform in an academic center.

EXPECTED OUTCOME: After this session, participants will be able to: 1) select appropriate genetic targets for molecular diagnostic testing; 2) identify appropriate technical platforms for multiplexed genetic analysis based on sensitivity, flexibility, cost, and turnaround time; 3) validate and report multiplexed genetic analyses; and 4) integrate molecular analysis with surgical pathology and cytology workups.

SPEAKERS

Method/Platform Selection and Integration with Core Pathology
#Lynette Sholl, MD
Brigham and Women's Hospital, Boston, MA

Primary and Secondary Germline Cancer Susceptibility Testing Using MSK-IMPACT
#Diana Mandelker, MD, PhD
Memorial Sloan Kettering Cancer Center, New York, NY

Technologies That Could Change the Future of the Clinical Laboratory: Part 2

32220

Pennsylvania Convention Center - 113AB

Level: Intermediate
CE Credit: 1.5

MODERATOR
***Timothy Amukele, PhD, MD**
Johns Hopkins University, Baltimore, MD

INTENDED AUDIENCE: This session is intended for: pathologists, lab directors, clinical chemists, technologists, IVD industry scientists, members of the press, and anyone who thinks disruption in the laboratory can be positive.

SESSION OVERVIEW: This 2-part session focuses on technologies that are likely to positively disrupt the way diagnostic tests in the clinical laboratory are performed and transported. The topics will include emerging RT-PCR technology that will allow analyses in less than one minute to enable of point-of-care nucleic acid testing; microfluidic sample processing integrated to high pressure mass spectrometry for chip-based analyses; alternative sampling techniques for analysis of blood that will challenge the existing phlebotomy paradigm; and drone transportation of laboratory samples to allow access to clinical laboratory testing in remote areas.

EXPECTED OUTCOME: After this session, participants will be able to: 1) identify what reagent and instrument changes are necessary to perform RT-PCR in less than one minute; 2) describe high-pressure mass spectrometry (HPMS) systems that enable handheld (less than 4 lbs) mass spectrometers coupled to microfabricated fluidic systems able to process samples in less than 4 minutes; 3) discuss alternate sample collection approaches for clinical testing relative to traditional venous phlebotomy; and 4) describe the promise and limitations of drone transport of diagnostic laboratory specimens.

SPEAKERS

Drone Transportation of Chemistry, Hematology, Coagulation, and Microbiological Samples: Promises and Possibilities
*Timothy Amukele, PhD, MD
Johns Hopkins University, Baltimore, MD

Alternative Sampling Technologies: Beyond Venous Phlebotomy
#James Nichols, PhD, DABCC, FACB
Vanderbilt University Medical Center, Nashville, TN

Monday | 2:30pm - 4:00pm

Analytical Challenges and Clinical Controversies in Body Fluid Testing

72221

Pennsylvania Convention Center - 204A

Level: Basic
CE Credit: 1.5

MODERATOR
#Neal Lindeman
Brigham and Women's Hospital, Boston, MA

Developed in cooperation with National Academy of Clinical Biochemistry.

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

SESSION OVERVIEW: This session will focus on the challenges of validating chemistry analytes in body fluids other than blood or urine. The session will also discuss the strategies for rational utilization, standardized reporting and clinical interpretation of body fluid tests by using various clinical case studies.

EXPECTED OUTCOME: After attending this session, participants will be able to: 1) compare and contrast studies intended to validate body fluid tests; 2) analyze the current state of body fluid testing in your lab to identify areas for improvement; and 3) identify advisory services/consultation that may be provided to clinicians regarding test selection and interpretation of body fluid analytes.

SPEAKERS

The Dos and Don'ts of Body Fluid Validation
*Darci Block, PhD, BS
Mayo Clinic, Rochester, MN

How Do We Report and Clinically Interpret Body Fluid Tests?
#Sutirtha Chakraborty, MBBS, MD, FACB
Peerless Hospital, Kolkata, India

When Toxicology Results and Clinical Presentation Do Not Correlate: How to Communicate with Clinicians and Guide Further Testing Decisions

72222

Pennsylvania Convention Center - 204B

Level: Basic
CE Credit: 1.5

MODERATOR
***Amitava Dasgupta, PhD, DABCC, NRCC**
University of Texas at Houston Medical School, Houston, TX

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

SESSION OVERVIEW: Clinicians often question negative toxicology results when patients clinically appear to have overdosed on a drug or had a toxic response to a pharmaceutical agent. Certain benzodiazepines, date-rape drugs, gamma hydroxybyteric acid, and ketamine, as well as novel psychoactive substances, including bath salts and synthetic cannabinoids, may not be detected by routine toxicology analysis in a clinical laboratory. Academic medical centers and regional medical centers may have the capability to do further testing but smaller hospital laboratories may not have instrumentation for further analysis. This short course will emphasize how to effectively communicate with clinicians regarding which drug(s) may be present so that the specimen can be tested further or sent to an outside laboratory, if needed. Moreover, an algorithm of further testing based on clinical symptoms will be presented.

EXPECTED OUTCOME: After attending this session, participants will be able to: 1) evaluate circumstances in which routine toxicology testing may fail to identify certain drugs, including designer drugs, in the poisoned patient; 2) communicate effectively with ordering physicians to identify the potential causes of negative toxicology results and decide if further testing is warranted; 3) identify the analytical challenges in detecting novel psychoactive substances; and 4) implement new drug testing in the laboratory if necessary.

SPEAKERS

False Negative Toxicology Results: How to Communicate with Clinicians and Plan for Further Testing
*Amitava Dasgupta, PhD, DABCC, NRCC
University of Texas at Houston Medical School, Houston, TX

The Poisoned Patient: Cases and Testing Strategies
*Kara Lynch, PhD, DABCC
University of California/San Francisco General Hospital, San Francisco, CA

Monday | **2:30pm - 4:00pm**

Obesity and Cancer

72223

Pennsylvania Convention Center - 204C

Level: Advanced
CE Credit: 1.5

MODERATOR

#Manjula Gupta, PhD
Cleveland Clinic Foundation, Cleveland, OH

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

SESSION OVERVIEW: About 30-35% adults in the US are obese. Obesity carries a significant risk for cancer development and progression. Recent studies suggest that dysregulated hormones from adipose tissue lead to insulin resistance via secretion of pro-inflammatory cytokines and adipokines. One of the major adipokines, leptin, is known to play a central role in obesity-related cancer. Recent findings on molecular mechanisms of leptin and adiponectin will be discussed.

EXPECTED OUTCOME: After attending this session, participants will be able to: 1) identify the prevalence of obesity and its association with cancer; 2) outline the mechanisms of hormone dysregulation in obesity; 3) identify the markers of insulin resistance and their role in increased risk of cancer; 4) define adipokines; and 5) list the pro-carcinogenic effects and molecular mechanisms of leptin.

SPEAKERS

Epidemiology and Proposed Mechanisms (Insulin Resistance) in Obesity and Cancer
#Manjula Gupta, PhD
Cleveland Clinic Foundation, Cleveland, OH

Role of Leptin Signaling in Cancer Development and Progression
#Ofer Reizes, PhD
Cleveland Clinic, Cleveland, OH

TWITTER-ENHANCED SESSION

In the Era of Digital Medicine, Patients Are Connected and in Control—What Does This Mean for Laboratorians?

72224

Pennsylvania Convention Center - 113C

Level: Basic
CE Credit: 1.5

MODERATOR

#Stephen Master, MD, PhD, FCAP, FACB
Weill Cornell Medical College, New York, NY

Developed in cooperation with Informatics Division.

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

SESSION OVERVIEW: This session will focus on various aspects of digital medicine and aims to stimulate active discussion regarding the roles of patients in generating, owning, and curating healthcare data. To increase audience participation and engagement and expand reach, the format will encourage attendees' participation on Twitter.

EXPECTED OUTCOME: After this presentation, participants will be able to: 1) list the trends resulting from the emergence of digital medicine; 2) discuss challenges and opportunities for laboratorians in the era of digital medicine; and 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
Ann & Robert H. 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, MT(ASCP), DABCC, FACB
University of Utah & ARUP Laboratories, Salt Lake City, UT

Disrupting Biomedicine in the Era of Precision Medicine: How I'm Hacking the System to Save My Life
#Emily Kramer-Golinkoff, MBE
Emily's Entourage, Bala Cynwyd, PA

Monday | 2:30pm - 4:00pm

***Clinical Chemistry's* Inspiring Minds… Live!**

62203

Pennsylvania Convention Center - 106AB

Level: Basic

CE Credit: 1.5

MODERATOR

#Misia Landau

Independent Science Writer, Livermore, CA

Developed in cooperation with Clinical Chemistry, SYCL.

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

SESSION OVERVIEW: In this session, *Clinical Chemistry's* popular 'Inspiring Minds' series will come to life. A panel discussion, featuring three of the journal's 'Inspiring Minds' and moderated by the series' interviewer and author, will focus on further elucidating each panelist's internal motivations and personal stories that helped to shape their successful scientific careers.

EXPECTED OUTCOME: After this session, participants will be able to: 1) identify opportunities and activities that may broaden one's career goals; 2) describe different approaches to self-motivation; 3) recognize how one's personal experience may influence their career; and 4) recognize what is involved in the creation of an effective leader.

SPEAKERS

Clinical Chemistry's Inspiring Minds… Live!

#Steven Soldin, PhD, ABCC

NIH, Bethesda, MD

Clinical Chemistry's Inspiring Minds… Live!

*Fred Apple, PhD, DABCC

Hennepin County Medical Center, Minneapolis, MN

Clinical Chemistry's Inspiring Minds… Live!

*Carl Wittwer, MD, PhD

University of Utah, Salt Lake City, UT

SPECIAL SESSION

Monday | 4:30pm - 6:00pm

Theranos Science & Technology: The Miniaturization of Lab Testing

12002

Pennsylvania Convention Center - Grand Ballroom

MODERATORS

Patricia Jones, PhD, DABCC, FACB

Children's Medical Center, Dallas, TX

Yuk Ming Dennis Lo, MD, PhD

Prince of Wales Hospital, Shatin, Hong Kong, China

Stephen Master, MD, PhD, FCAP, FACB

Weill Cornell Medical College, New York, NY

Theranos' mission is to deliver affordable and easily accessible clinical diagnostic testing. To achieve this objective, the company has developed a family of novel clinical diagnostic methods with the aim to simplify sample collection and reduce sample volume requirements, while performing a wide range of diagnostic tests in both centralized and decentralized settings. This presentation will describe the Theranos lab testing framework, which consists of a finger-stick blood collection and storage device, technologies for processing small volume samples in a centralized setting, and a compact fully-integrated and automated field-deployable diagnostic testing platform. Ms. Holmes will present reproducibility and correlation data for various tests comparing Theranos' capillary collection and storage device with traditional venipuncture methods. She will also discuss methodology employed for their diagnostic testing platform, and share data to demonstrate the precision and accuracy of these chemistry, immunochemistry, hematology, and molecular assays (traditionally performed on separate instruments) using their analytical testing platform, including a novel molecular test for the Zika virus.

Following the presentation by Ms. Holmes, there will be a moderator-led Q&A session featuring questions submitted in real-time by members of the audience. The moderator panel will include Drs. Patti Jones, PhD; Y.M. Dennis Lo, DM, DPhil, FRCP, FRCPath; and Stephen Master, MD, PhD. This interactive session is not part of the accredited educational program, and as such will not receive Continuing Medical Education or ACCENT® credit.

SPEAKER

Elizabeth Holmes, CEO

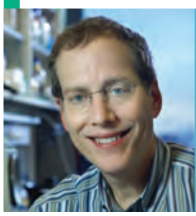
Theranos

TUESDAY, AUGUST 2

PLENARY & EDUCATION SESSIONS

PLENARY SESSION 13001

THE EPIGENETIC BASIS OF COMMON HUMAN DISEASE



#ANDREW P. FEINBERG, MD, MPH
Johns Hopkins University, Baltimore, MD

TUESDAY, AUGUST 2 | 8:45am - 10:15am | LEVEL: BASIC | CE CREDIT: 1

Pennsylvania Convention Center – Grand Ballroom

INTENDED AUDIENCE

This session is intended for: pathologists, lab directors, clinical chemists, immunologists, molecular biologists, technologists, and IVD industry scientists.

SESSION OVERVIEW

Epigenetics is a branch of science that studies the biochemical modifications of the genome. Dr. Andrew Feinberg, from Johns Hopkins University School of Medicine, has made fundamental discoveries in the field of epigenetics, impacting diverse fields ranging from cancer, stem cells, molecular diagnostics and novel therapeutics. He was the first to uncover evidence for methylation-mediated reversible behavior in a whole organism. He has also made important discoveries of altered DNA methylation in human cancer, human imprinted genes and loss of imprinting (LOI) in cancer, and the molecular basis of Beckwith-Wiedemann syndrome and epigenetic risk of cancer. Most recently, Dr. Feinberg pioneered genome-scale epigenetics (epigenomics), with the first whole genome bisulfite sequencing analysis of human cancer, and the discovery of large hypomethylated blocks, as well as a mechanism for disruption of these blocks in epithelial-mesenchymal transition. He has shown the close relationship between epigenomics changes in normal development, cancer, and stem cell reprogramming. This lecture will explore epigenetic mechanisms on normal development, cancer, and stem cell reprogramming and discuss its exciting implications to molecular diagnostics and novel forms of therapy.

EXPECTED OUTCOME

After this session, participants will be able to: 1) explain the core characteristics of epigenetic phenomena and laboratory approaches for analyzing them; 2) outline the impact of epigenetics on cancer and development; and 3) discuss diagnostic and therapeutic applications of epigenetics.

PLEASE REFER TO THIS GUIDE WHEN MAKING YOUR SESSION SELECTIONS

Each session is identified by a five- or six-digit session number.

EXAMPLE
Session **72105** is a:
A. Short Course
B. On Monday
C. In the Morning

SESSION TYPE
A. FIRST DIGIT
1 = Plenary Sessions
3 = Symposia
4 = AM Brown Bag Sessions
5 = PM Brown Bag Sessions
6 = Meet the Expert Session
7 = Short Courses
19 = Sunday AACC University Sessions

SESSION DAY
B. SECOND DIGIT
1 = Sunday
2 = Monday
3 = Tuesday
4 = Wednesday
5 = Thursday

SESSION TIME
C. THIRD DIGIT
1 = am
2 = pm
4 = Mid-day

The last two digits are AACC internal numbers.

Tuesday | **7:30am - 8:30am & 12:30pm - 1:30pm**

T TICKET Brown Bag 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 food in the Convention Center prior to the session.

CE Credit: 1.0 (per Brown Bag Session) unless otherwise noted

TITLE	SESSION NUMBER AM	PM	LEVEL	SPEAKERS
Value Focus: Middleware Can Be a Powerful Director's Tool	**43101**	**53201**	Intermediate	**#Danyel Tacker, PhD, FACB, DABCC** West Virginia University, Morgantown, WV
Parathyroid Hormone Assay Challenges and Harmonization Progress	**43102**	**53202**	Intermediate	**#Asmita Hazra, MBBS, MD** Kolkata, India
Optimizing Accuracy and Precision for POCT in Specific Clinical Settings	**43103**	**53203**	Intermediate	**#Anthony Okorodudu, PhD, MBA, DABCC** University of Texas Medical Branch, Galveston, TX
Therapeutic Drug Management in Pregnant Patients	**43104**	**53204**	Intermediate	**#Kamisha Johnson-Davis, PhD, DABCC, FACB** University of Utah/ARUP Laboratories, Salt Lake City, UT
Diagnosing Diabetes with HbA1c in Sickle Cell Trait Patients	**43105**	**53205**	Intermediate	**#Chesinta Voma, PhD, NRCC, MT(ASCP), MT(ASCP)SC** University of Louisville, Louisville, KY
Adoption Trends of Liquid Biopsy Technologies	**43106**	**53206**	Intermediate	**#Divyaa Ravishankar** Frost & Sullivan, San Antonio, TX
How People Try to Beat Drug Testing and Defend Positive Results	**43107**	**53207**	Basic	**#Amitava Dasgupta, PhD, DABCC, NRCC** University of Texas at Houston, Medical School, Houston, TX
Thyroglobulin and Anti-Thyroglobulin Autoantibodies Assays in the Management of Thyroid Cancer Patients: Which Assay Should I Offer?	**43108**	**53208**	Intermediate	**#Alicia Algeciras-Schimnich, PhD, DABCC** Mayo Clinic, Rochester, MN
How Statistics Influence Our Clinical Decisions	**43109**	**53209**	Basic	***Oswald Sonntag, PhD** Bio-Rad Laboratories, Munich, Germany
Screening for Cancer: Recommendations and Controversies *Developed in cooperation with US Centers for Disease Control and Prevention (CDC).*	**43110**	**53210**	Intermediate	**#Shahram Shahangian, PhD, MS, DABCC, FACB** US Centers for Disease Control and Prevention (CDC), Atlanta, GA
Smart LCMS: The Key to Worry Free Method Development and Implementation	**43111**	**53211**	Basic	***Lorin Bachmann, PhD, DABCC** Virginia Commonwealth University, Richmond, VA
The Test Life Cycle: A Framework for Utilizing CLSI Guidelines to Evaluate Clinical Laboratory Measurement Procedures	**43112**	**53212**	Basic	**#Paula Ladwig, MS, MT(ASCP)** Mayo Clinic, Rochester, MN
Increasing Laboratory Efficiency Though Optimizing Dilution Workflow of Automated Analyzers	**43113**	**53213**	Basic	**#Sheng-Ying Lo** University of Washington, Seattle, WA

TITLE	SESSION NUMBER AM	PM	LEVEL	SPEAKERS
Quality Performance Indicators: How to Use Key Processes Metrics to Add Value to the Clinical Laboratory Services Provided to Patients	**43114**	**53214**	Basic	**#Fernando Berlitz, MBA, MBB** Grupo Ghanem, Joinville, Brazil
Utility of CSF Analysis for the Diagnosis of Traumatic Brain Injury and Neurologic Disease	**43115**	**53215**	Intermediate	***Alina Sofronescu, MSc, PhD, NRCC-CC; FACB** University of Nebraska Medical Center, Omaha, NE
The Art of Implementing and Maintaining LOINC and SNOMED CT in a Laboratory Setting	**43116**	**53216**	Basic	**#Pamela Banning, BS, MLS CM (ASCP)** 3M HIS, West Linn, OR
Laboratory Tests Related to Calcium and Bone Metabolism	**43117**	**53217**	Intermediate	**#Lu Song, PhD, DABCC** UCLA Medical Center, Los Angeles, CA
Pharmacogenetics in the Clinical Laboratory: Opportunities and Challenges	**43118**	**53218**	Basic	**#Allison Chambliss, PhD** Johns Hopkins University School of Medicine, Baltimore, MD
Hepatitis C Virus: Epidemiology, Testing and Management of Adult Patients	**43119**	**53219**	Intermediate	***Annette Adelmann, BS, MBA** Beckman Coulter, Inc., Chaska, MN
Getting That New Job: A Guide to Applying, Interviewing and Negotiating *Developed in cooperation with SYCL.* *(ACCENT® Credit only)*	**43120**	**53220**	Basic	**#Joe El-Khoury, PhD, DABCC, FACB** Yale University, New Haven, CT
How to Improve Efficiency and Save on Costs Through Standardization of Blood Gas Equipment *Developed in cooperation with Critical and Point-of-Care Testing Division.*	**43121**	**53221**	Basic	**#Brenda Suh-Lailam, PhD, DABCC** Ann & Robert H. Lurie Children's Hospital of Chicago, Chicago, IL
Macroenzymes: Overview and Identification	**43122**	**53222**	Basic	**#Jennifer Powers, PhD** University of Utah and ARUP Laboratories, Salt Lake City, UT
Case Study Based Approach of Prenatal Maternal Double Marker Screening: Save the Precious Little Foot Prints in Mother's Womb	**43123**	**53223**	Basic	**#Barnali Das, MD, DNB, PGDM** Kokilaben Dhirubhai Ambani Hospital, Mumbai, India
Laboratory Contracts and Negotiation: General Principles	**43124**	**53224**	Basic	**#Juan David Garcia, MBA, BSMT, MBA** NYP Weill Cornell Medical Center, New York, NY
NIST Standard Reference Materials: Tools to Improve Accuracy in the Clinical Lab	**43125**	**53225**	Basic	**#Mary Bedner, PhD** NIST, Gaithersburg, MD
Interference of Hemoglobin Variants in Cation-Exchange HPLC HbA1c Assay	**43126**	**53226**	Intermediate	**#Yusheng Zhu, PhD, DABCC, FACB** Medical University of South Carolina, Charleston, SC
Social Media 101 for Lab Professionals: Leveraging Digital Resources and Developing Your Online IQ *Developed in cooperation with SYCL.*	**43127**	**53227**	Basic	**#M. Laura Parnas, PhD, DABCC** Sutter Health, Livermore, CA
How Can Vendors Help POC Coordinators and How Can Coordinators Help Vendors? *(ACCENT® Credit only)*	**43128**	**53228**	Basic	***Karen Jenkins, MT(ASCP)** Emory University Hospital Midtown, Atlanta, GA
Putting the Pieces Together—Lab Safety Regulations and Guidelines	**43129**	**53229**	Intermediate	***Daniel Scungio, MT(ASCP), SLS, CQA (ASQ)** Sentara Healthcare, Norfolk, VA

Tuesday | 10:30am - 11:30am

The Epigenetic Basis of Common Human Disease

63101
Pennsylvania Convention Center - 106AB

Level: Basic
CE Credit: 1

MODERATOR
#Yuk Ming Dennis Lo, MD, PhD
Prince of Wales Hospital, Shatin, Hong Kong, China

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

SESSION OVERVIEW: This session provides an excellent opportunity for a limited number of attendees to meet with Dr. Andrew Feinberg, a world authority of epigenetics. Dr. Feinberg has made fundamental discoveries in epigenetics, impacting multiple fields. Dr. Feinberg will discuss epigenetic changes in normal development, cancer, and stem cell reprogramming, and their implications in molecular diagnostics and novel forms of therapy.

EXPECTED OUTCOME: After this session, participants will be able to: 1) explain the core characteristics of epigenetic phenomena and laboratory approaches for analyzing them; 2) outline the impact of epigenetics on cancer and development; and 3) discuss diagnostic and therapeutic applications of epigenetics.

SPEAKER
Meet the Expert: The Epigenetic Basis of Common Human Disease
#Andrew Feinberg, MD, MPH
Johns Hopkins University, Baltimore, MD

MORNING SYMPOSIA

Tuesday | 10:30am - Noon

ORAL ABSTRACT SESSION

Breakthroughs in Maternal, Fetal and Pediatric Medicine

33101
Pennsylvania Convention Center - 105AB

Level: Intermediate
CE Credit: 1

MODERATOR
#Octavia Palmer, PhD
University of Pittsburgh Medical Center, Pittsburgh, PA

INTENDED AUDIENCE: This session is intended for: clinical chemists, clinical laboratorians, physicians, pathologists, clinicians, medical technologists, industry scientists and post-doctoral fellows.

SESSION OVERVIEW: AACC is dedicated to advancing the science and practice of laboratory medicine. A select group of members have reviewed and ranked the abstracts submitted for the AACC annual meeting for acceptance. The Annual Meeting Organizing Committee (AMOC) has reviewed the accepted abstracts in the area of Maternal, Fetal and Pediatric Medicine and have chosen four authors to present their research as oral presentations in a symposium. Each 15-minute presentation will be followed by a 5-minute question-and-answer session.

EXPECTED OUTCOME: After attending this session, participants will be able to: 1) describe the latest advances in Maternal, Fetal and Pediatric Medicine; 2) relate research in Maternal, Fetal and Pediatric Medicine to the practice of pathology and laboratory medicine; and 3) integrate state of the art knowledge in Maternal, Fetal and Pediatric Medicine into the roles and responsibilities of the clinical laboratory professional.

SPEAKERS
Marked Influence of Body Mass Index (BMI) on Biochemical Markers of the Metabolic Syndrome in the CALIPER Cohort of Healthy Children and Adolescents
#Victoria Higgins
Hospital for Sick Children, Toronto, ON, Canada

Free Thyroid Hormone Measurements in Pregnancy: Comparisons of Immunoassays and Mass Spectrometry
#Sonia La'ulu
ARUP Laboratories, Salt Lake City, UT

Evaluation of GDF-15 and YKL 40 as Early Markers of Subclinical Diabetic Nephropathy and Cardiovascular Morbidity in Young Patients with Type 1 Diabetes Mellitus
#Ioannis Papassotiriou, PhD
Aghia Sophia Children's Hospital, Athens, Greece

Tanner Stage—Stratified Pediatric Reference Intervals for Dihydrotestosterone
#David Lin, PhD
ARUP Laboratories, Salt Lake City, UT

Establishing Reference Intervals for hCG in Postmenopausal Women
#Khushbu Patel, PhD, BS
Washington University, St. Louis, MO

Tuesday | 10:30am - Noon

Recently Revised CLSI Protocol C52; "Toxicology and Drug Testing in the Clinical Laboratory—Approved Guideline"

33102

Pennsylvania Convention Center - 103AB

Level: Basic
CE Credit: 1.5

MODERATOR
#Patrick Kyle, BS, PhD, NRCC, DABCC, FACB
University of Mississippi Medical Center, Jackson, MS

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

SESSION OVERVIEW: During this symposium the changes incorporated into the latest revision of the CLSI document C52 "Toxicology and Drug Testing in the Clinical Laboratory; Approved Guideline 3rd Edition" will be reviewed. Changes include elimination of forensic testing, recommendations on current analytical methodologies, and new sample matrices. The benefits and limitations of various instruments and sample matrices will be addressed.

EXPECTED OUTCOME: After this session, participants will be able to: 1) describe analytical methodologies recommended for toxicology testing; 2) list advantages and disadvantages of various sample types; and 3) identify recommendations for results interpretation and reporting.

SPEAKERS

Changes in the Recently Revised CLSI protocol C52 "Toxicology and Drug Testing in the Clinical Laboratory—Approved Guideline"
#Patrick Kyle, BS, PhD, NRCC, DABCC, FACB
University of Mississippi Medical Center, Jackson, MS

Changes in the Recently Revised CLSI Protocol C52 "Toxicology and Drug Testing in the Clinical Laboratory—Approved Guideline"
#Loralie Langman, PhD
Mayo Clinic, Rochester, MN

Clinical Chemistry's Hot Topics of 2016

33103

Pennsylvania Convention Center - 114 Lecture Hall

Level: Intermediate
CE Credit: 1.5

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

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

SESSION OVERVIEW: Liquid biopsy and point-of-care diagnostics are the subjects of numerous highly cited articles published in *Clinical Chemistry* and will be discussed in this session.

EXPECTED OUTCOME: After attending this session, participants will be able to: 1) explain and contrast the advantages and challenges of three tools for the diagnosis of cancer, CTCs, cfDNA and miRNA; and 2) describe the steps towards and challenges of taking a bench-top analytical technique through the development process to create a viable handheld device that can be used at the point-of-care.

SPEAKERS

Cell-Free DNA, Circulating Tumor Cells, Circulating RNA, MicroRNA, Exosomes—Which Ones Are the Gems in a Liquid Biopsy
*Rossa Chiu, MBBS, PhD
Chinese University of Hong Kong, Shatin, Hong Kong, China

Microfluidics for Personal Mobile Diagnostics
#Samuel Sia
Columbia University, New York, NY

Tuesday | **10:30am - Noon**

The Emerging Role of Mass Spectrometry in the Measurement of Monoclonal Immunoglobulins

33104

Pennsylvania Convention Center - 113AB

Level: Intermediate
CE Credit: 1.5

MODERATOR
***John Mills, PhD**
Mayo Clinic, Rochester, MN

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

SESSION OVERVIEW: Mass spectrometry is an emerging analytical tool for measuring monoclonal immunoglobulins with the potential to impact how monoclonal gammopathies are diagnosed and managed. This session will explore the rationale and utility of mass spectrometry-based methods in the context of current clinical assays used to detect, measure and characterize monoclonal gammopathies.

EXPECTED OUTCOME: After this session, participants will be able to: 1) describe current methods of detecting M-proteins and their limitations; 2) explain why new therapies require the use of more sensitive methods for assessing treatment response; 3) summarize the differences in methods aimed at measuring minimal residual disease; and 4) evaluate the ability of mass spectrometry-based approaches to overcome current assay limitations.

SPEAKERS

The Principles of M-Protein Detection: The Need for More Sensitive Serum-based Methods
*David Murray
Mayo Clinic, Rochester, MN

Development and Application of Mass Spectrometry-Based Methods for Measuring M-proteins
*John Mills, PhD
Mayo Clinic, Rochester, MN

Zika Virus – Global Impact and the Role of Diagnostic Testing

33122

Pennsylvania Convention Center - 108AB

Level: Basic
CE Credit: 1.5

MODERATOR
#William Clarke, PhD, MBA, DABCC
Johns Hopkins University School of Medicine, Baltimore, MD

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

SESSION OVERVIEW: This session will provide an overview of Zika virus, its disease manifestations and appropriate diagnostic tests. Treatment and detection strategies will be discussed, along with important issues related to diagnostic testing. Additionally, important regulatory issues regarding accelerated review for Emergency Use Authorization (EUA) by the FDA will be discussed.

EXPECTED OUTCOME: After attending this session, participants will be able to: 1) discuss Zika virus and the impact on patients; 2) describe available tools for detection of Zika virus in blood; and 3) discuss regulatory considerations and challenges relative to diagnostic tests for Zika virus.

SPEAKERS

Diagnostics for Zika in the Americas: Unique Challenges and Considerations
#Randall Kincaid, PhD
National Institute of Allergy and Infectious Diseases, NIH, Bethesda, MD

US FDA Emergency Use Authorization: Submission Requirements for Zika Assays
#Stephen Lovell, PhD
FDA/CDRH, Silver Spring, MD

Rapid, Low-Cost Detection of Zika Virus Using Programmable Biomolecular Components
#Keith Pardee, PhD
University of Toronto, Toronto, ON, Canada

Tuesday | 10:30am - Noon

The Complement System: Overview and Laboratory Testing

73105

Pennsylvania Convention Center - 201A

Level: Basic
CE Credit: 1.5

MODERATOR
#Maria Alice Willrich, PhD, DABCC, FACB
Mayo Clinic, Rochester, MN

Developed in cooperation with Clinical & Diagnostic Immunology Division.

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

SESSION OVERVIEW: Complement testing has gained significant interest recently as its role in infectious, autoimmune, and inflammatory diseases is better understood and as complement is increasingly recognized as a potential target for therapeutics. An overview of the complement system, pre-analytical challenges, modern laboratory testing and cases of deficiency/dysregulation will be presented.

EXPECTED OUTCOME: After this session, participants will be able to: 1) chart the different pathways of complement activation and regulation; 2) define the challenges of clinical testing for the complement system; and 3) identify the most commonly used biomarkers and their patterns that indicate complement dysfunction in several diseases.

SPEAKERS

Complement Testing Overview and Interpretation for the Clinical Laboratorian
#Maria Alice Willrich, PhD, DABCC, FACB
Mayo Clinic, Rochester, MN

Understanding Complement in the Clinical Laboratory
*Ashley Frazer-Abel, PhD, DABMLI
National Jewish Health, Denver, CO

Established and Novel Biomarkers of Heart Failure in the Era of Neprilysin Inhibition

73106

Pennsylvania Convention Center - 201B

Level: Intermediate
CE Credit: 1.5

MODERATOR
***Petr Jarolim, MD, PhD**
Brigham and Women's Hospital, Boston, MA

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

SESSION OVERVIEW: The session will review new aspects natriuretic peptide biology and effects of novel therapies such as neprilysin inhibition on natriuretic peptide levels, the use of natriuretic peptides in heart failure management, and novel heart failure biomarkers such as galectin-3, soluble ST2, hsTn, GDF-15, and IGFBP7 and their clinical applications.

EXPECTED OUTCOME: After this presentation, participants will be able to: 1) interpret natriuretic peptide concentrations in the setting of neprilysin inhibition and other novel therapies of heart failure; 2) prepare for future strategies around natriuretic peptide guided heart failure care; and 3) list the potential value of novel biomarkers of heart failure such as Soluble ST2, Galectin-3, GDF15, and insulin-like growth factor-binding protein 7.

SPEAKERS

Interpreting Natriuretic Peptide Levels in Patients Treated with Neprilysin Inhibitors
*Petr Jarolim, MD, PhD
Brigham and Women's Hospital, Boston, MA

Novel Biomarkers of Heart Failure
*Hanna Gaggin, MD, MPH
Massachusetts General Hospital, Boston, MA

Tuesday | 10:30am - Noon

Next Generation Sequencing for Microbiological Diagnostics—The University of Chicago Experience

73108
Pennsylvania Convention Center - 204A

Level: Intermediate
CE Credit: 1.5

MODERATOR
#Vera Tesic, MD
University of Chicago, Chicago, IL

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

SESSION OVERVIEW: This session will discuss the use of NGS and provide a tool set for development and implementation strategies. Assay development, analytical validation, bio-informatics analysis, and regulatory considerations will be reviewed. Clinical opportunities for integration of NGS in the clinical microbiology laboratory will also be discussed.

EXPECTED OUTCOME: After attending this session, participants will be able to: 1) outline the technologies available for the next generation sequencing (NGS); 2) list the challenges surrounding their utilization in clinical laboratories for microbial diagnostics; and 3) provide tools to guide laboratory implementation of next generation sequencing for diagnostic of infectious disease pathogens.

SPEAKERS

Utilization and Integration of NGS in the Laboratory and Impact on Patient Care
#Vera Tesic, MD
University of Chicago, Chicago, IL

Validation, Implementation, Bio-Informatics Analysis, Challenges and Obstacles
#Larissa Furtado, MD
University of Chicago, Chicago, IL

Customer Service Skills from the Customer's Perspective

73109
Pennsylvania Convention Center - 201C

Level: Basic
CE Credit: 1.5

MODERATOR/SPEAKER
#Cherie Petersen, BA
ARUP Laboratories, Salt Lake City, UT

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

SESSION OVERVIEW: The laboratory's ability to be a contributing partner in quality patient care rests not just on our technical knowledge and expertise, but also in our ability to deliver actionable information with excellent customer service. This session will provide an opportunity for self-assessment utilizing a customer service skills preferred profile and an interactive discussion regarding the dos and don'ts for outstanding customer service.

EXPECTED OUTCOME: After attending this session, participants will be able to:
1) utilize a self-assessment tool in order to benchmark themselves against a customer service preferred profile while also identifying the skills and activities where personal improvement would yield better customer service and quality patient care outcomes; 2) recognize what happens during customer service interactions that can cause poor outcomes and a negative experience for customers (i.e., co-workers, other healthcare providers, patients, and patients' families); and 3) determine the skills and activities that promote outstanding customer service.

SPEAKER

Customer Service Skills from the Customer's Perspective
#Cherie Petersen, BA
ARUP Laboratories, Salt Lake City, UT

Tuesday | 10:30am - Noon

Little Steps with Big Data Part 1: An Introduction to the R Programming Language

73120

Pennsylvania Convention Center - 204B

Level: Basic
CE Credit: 1.5

MODERATOR
#Stephen Master, MD, PhD, FCAP, FACB
Weill Cornell Medical College, New York, NY

INTENDED AUDIENCE: The session is intended for: clinical pathologists, residents, clinical chemists and fellows, medical laboratory technologists and lab scientists. No programming experience is assumed, but students should be prepared to learn new ways of thinking about data analysis and management. Being a nerd is not a prerequisite, but is advantageous.

SESSION OVERVIEW: This session will provide an introduction to the open-source statistical programming language R and will focus on statistical analysis relevant to clinical chemistry—it is Part 1 of a two-part course. Students will learn how to perform common clinical chemistry related computational tasks, produce high quality, publication-ready figures and will learn about a host of other potential applications. The session will allow students to embark on further self-directed learning. This session is continued in "Little Steps with Big Data Part 2, and attendees should plan on going to both sessions to receive the full benefit of the course.

EXPECTED OUTCOME: After this session, participants will be able to: 1) import data into R from a spreadsheet program to clean, subset, and manipulate numerical and non-numerical data; 2) describe and create R data types (vectors, matrices, dataframes, lists and factors); 3) perform routine statistical tasks, such as calculating median, quantiles, t-tests, and Wilcoxon signed rank; and 4) perform regression analysis in R (ordinary least squares, Deming, weighted regression, Passing Bablok regression, non-linear regression).

SPEAKERS

Little Steps with Big Data Part 1: The First Step Toward R
#Stephen Master, MD, PhD, FCAP, FACB
Weill Cornell Medical College, New York, NY

Little Steps with Big Data Part 2: Data Handling and Processing
*Daniel Holmes, BSc, MD, FRCPC
St Paul's Hospital, Vancouver, BC, Canada

Laboratory Management Essentials

73121

Pennsylvania Convention Center - 204C

Level: Basic
CE Credit: 1.5

MODERATOR/SPEAKER
#Rodney Forsman, BS
Mayo Clinic, Eyota, MN

Developed in cooperation with CLMA.

INTENDED AUDIENCE: This session is intended for: laboratory directors, managers, scientists, supervisors and all who have a role in decision making.

SESSION OVERVIEW: Your effectiveness as a laboratorian is dependent on your ability to influence your leadership team. It is important for you to recognize your role in contributing to a healthy leadership team and recognizing each individual member's perspectives. You can then tap into various approach styles to successfully influence decision making. The presentation will draw from more than 35 years of experience as a laboratory manager and working with C-level health care teams in all 50 states.

EXPECTED OUTCOME: After attending this session, participants will be able to: 1) identify the key attributes of healthy leadership teams; 2) recognize the perspectives of individual team members; and 3) employ proven techniques to enhance their influence.

SPEAKER

Influencing Your Leadership Team
#Rodney Forsman, BS
Mayo Clinic, Eyota, MN

Tuesday | 2:30pm - 5:00pm

Advanced Applications of Next Generation Sequencing

33210

Pennsylvania Convention Center - 105AB

Level: Intermediate
CE Credit: 2.5

MODERATOR
***Steven Wong, PhD, DABCC (TC), FACB**
Wake Forest University School of Medicine, Winston-Salem, NC

Developed in cooperation with Molecular Pathology Division.

INTENDED AUDIENCE: This session is intended for: clinical and molecular pathologists, lab directors, clinical chemists, clinical and forensic toxicologists, trainee residents and fellows, technologists, IVD industry scientists, and regulatory agency personnel.

SESSION OVERVIEW: Molecular and personalized genetic tests are expanding in the routine laboratory. Circulating nucleic acids, namely extra-cellular DNA or RNA molecules present in human circulation, serve as versatile biomarkers for achieving blood-based molecular diagnostics for the investigation of fetal health, cancers, other pathologies, and post-transplantation complications. Recently, there have been some exciting advances made in relation to circulating cell-free nucleic acid analysis, resulting in cutting-edge noninvasive applications for personalized diagnostics. In this session, the participant will learn about the recent updates in noninvasive prenatal testing and the latest applications of circulating nucleic acid analysis, including approaches for organ transplantation monitoring, approaches to determine the anatomical location of cancers and other diseases, as well as the advances in analytical approaches available, including droplet digital PCR, nanopore sequencing and methylome analysis.

EXPECTED OUTCOME: After this session, participants will be able to: 1) describe factors that govern the performance profile of noninvasive prenatal tests; 2) describe the new technology platforms and protocols for circulating cell-free DNA analysis; 3) describe the utility of circulating cell-free DNA analysis for organ transplantation monitoring; 4) explain the methodology and applications of plasma methylome analysis; 5) explain how anatomical information could be derived from circulating DNA analysis; and 6) explain the utility of circulating cell-free DNA analysis for cancer assessment.

SPEAKERS

Application of Next Generation Sequencing in Clinical Practice
#Andrea Ferreira-Gonzalez, PhD
Virginia Commonwealth University, Richmond, VA

Added Value of NGS-Based Approaches in the Analysis of Solid Tumors
*Helen Fernandes, PhD
Weill Cornell Medicine, New York, NY

Molecular Profiling Hematological Malignancies: Current Status and Case Studies
#John Howe, PhD, DABCC
Yale University School of Medicine, New Haven, CT

Tuesday | 2:30pm - 5:00pm

Diabetic Nephropathy: Where Are We Now?

33211

Pennsylvania Convention Center - 114 Lecture Hall

Level: Intermediate
CE Credit: 2.5

MODERATOR
***David Sacks, MB, ChB, FRCPath**
NIH, Bethesda, MD

Developed in cooperation with Committee on Clinical Collaborations, American Diabetes Association.

SESSION OVERVIEW

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

SESSION OVERVIEW: This session will address key biomarkers for diabetic kidney disease (creatinine, eGFR, cystatin C, urine albumin) in the context of physiologic and laboratory limitations that influence interpretation of results, how eGFR is used to make treatment decisions, and whether the biomarkers are adequate for assessing renal function in diabetes.

EXPECTED OUTCOME: After this session, participants will be able to: 1) advise clinicians on physiologic or measurement conditions that may affect interpretation of laboratory tests for diabetic nephropathy; 2) explain the appropriate interpretation of biomarkers for diabetic kidney disease; and 3) determine which analytes should be measured in the evaluation of diabetic kidney disease.

SPEAKERS

How Accurately Can We Measure Renal Function in Diabetes?
*Greg Miller, PhD
Virginia Commonwealth University, Richmond, VA

Reporting eGFR from Creatinine: Progress and Lessons Learned
#Andrew Narva, MD, FACP, FASN
National Kidney Disease Education Program, Bethesda, MD

Assessing Prognosis in Diabetic Kidney Disease: Are Urine Albumin and eGFR Enough?
*Katherine Tuttle, MD, FASN, FACP
Providence Health Care, University of Washington, Institute of Translational Health Sciences, Spokane, WA

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Tuesday | 2:30pm - 5:00pm

The Next Frontier in Precision Medicine—Targeted Peptide Diagnostic Mass Spectrometry Assays

33212
Pennsylvania Convention Center - 113AB

Level: Basic
CE Credit: 2.5

MODERATORS

#Henry Rodriguez, PhD, MBA
National Cancer Institute, Bethesda, MD

#Y. Victoria Zhang
University of Rochester Medical Center, Rochester, NY

Developed in cooperation with Clinical Translational Science Division, Mass Spectrometry and Separation Sciences Division, Proteomics & Metabolomics Division, National Cancer Institute.

INTENDED AUDIENCE: This session is intended for: clinical laboratory scientists, clinical chemists, IVD industry scientists, lab directors, pathologists, device/instrument manufacturers and regulatory agencies.

SESSION OVERVIEW: Diagnostic biomarkers are essential for the success of precision medicine and translational research. Yet, currently there are only 600 proteins for which biomarker diagnostic assays (laboratory-developed or FDA-approved) exist (1-2% of the total number of proteins encoded by the human genome). Targeted mass spectrometry peptide-based assays (multiple reaction monitoring (MRM), also referred to as selected reaction monitoring) have emerged as a viable platform for biomarker assays in modern disease management. This symposium will present real-world examples that showcase this methodology, including its deployment at clinical reference labs and clinical utility in thyroid cancer. Practical instructions (methods development) on how to design and deploy mass spectrometry peptide assays in labs and develop highly validated off-the-shelf immuno-MRM assays (through a public-private partnership) will be provided. To further adopt these assays in clinical practice best practices for the generation, quantification, storage, and handling of peptide, reference standards will also be discussed.

EXPECTED OUTCOME: After this session, participants will be able to: 1) describe the major strengths of the current targeted peptide mass spectrometry assays as well as areas for improvement; 2) explain the connection between biomarker development and companion diagnostics and its importance; 3) create a step-wise approach for the implementation of targeted peptide diagnostic mass spectrometry assays; 4) develop a process for selecting and utilizing appropriate peptide reference materials; and 5) determine which targeted peptide diagnostic mass spectrometry assays, if any, should be implemented in their clinical research labs.

SPEAKERS

Using Standardized, Targeted Mass Spectrometry Assays to Harmonize Protein Quantification
#Amanda Paulovich, MD, PhD
Fred Hutchinson Cancer Research Center, Seattle, WA

Clinical Laboratory Thyroglobulin (Tg) Function Test Revisited: Tg Peptide MS Assays, TgAb Assays, and Correlation of Results with Clinical Outcomes
#Stefan Grebe, MD, PhD
Mayo Clinic, Rochester, MN

Development, Hardening and Dissemination of Targeted Peptide Assays by Mass Spectrometry
*Mike MacCoss, PhD
Professor of Genome Sciences, University of Washington, Seattle, WA

Tuesday | 2:30pm - 5:00pm

Antiplatelet Agents and Anticoagulants: Laboratory Monitoring

33213
Pennsylvania Convention Center - 103AB

Level: Intermediate
CE Credit: 2.5

MODERATOR
***Michael Laposata, MD, PhD**
University of Texas Medical Branch, Galveston, TX

Developed in cooperation with College of American Pathologists.
Supported by an educational grant from Roche Point of Care.

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

SESSION OVERVIEW: Several anticoagulant and antiplatelet agents are available for clinical use. Testing used for monitoring these agents in the laboratory and at point of care is evolving. In addition, specialized coagulation testing for unusual disorders of hemostasis including inherited disorders of platelet function, factor inhibitors and the anti-phospholipid syndrome may be necessary. This session will describe antiplatelet agents and anticoagulants that are currently in use, including aspirin, clopidogrel, prasugrel, glycoprotein IIb/IIIa antagonists, warfarin, heparin, low-molecular-weight heparin, fondaparinux, argatroban, lepirudin, dabigatran, rivaroxaban, and apixaban. This session will cover the actions and indications of each drug and will provide a more detailed description of options for monitoring the concentration and/or effect of the compound. The utility of point-of-care monitoring of anti-coagulation will also be discussed. Lastly, the options for assessment of platelet function and factor deficiencies and their clinical utility will be covered.

EXPECTED OUTCOME: After this session, participants will be able to: 1) describe the mechanisms of action of the antiplatelet agents and anticoagulants in current clinical use; 2) state the clinical circumstances in which antiplatelet agents and anticoagulants require monitoring; 3) identify the laboratory and point-of-care methodologies used in the monitoring of antiplatelet agents and anticoagulants; 4) discuss approaches to the assessment of platelet function; and 5) describe methods used to differentiate inhibitors of coagulation factor activity from factor deficiencies.

SPEAKERS

Antiplatelet Agents and Anticoagulants: Laboratory Monitoring
*Michael Laposata, MD, PhD
University of Texas Medical Branch, Galveston, TX

Anti-Platelet Agents
#Neil Harris, MBChB, MD, DABCC, FCAP, FACB
University of Florida College of Medicine, Gainesville, FL

Platelet Function Testing
#John Mitsios
Weill Cornell Medical College/New York Presbyterian Hospital, New York, NY

Tuesday | 2:30pm - 5:00pm

Diagnosing Diarrheal Disease Around the Globe

73214

Pennsylvania Convention Center - 201A

Level: Intermediate
CE Credit: 2.5

MODERATOR
#Sarah Brown, PhD
Washington University School of Medicine, St. Louis, MO

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

SESSION OVERVIEW: Diarrheal illness is a major cause of morbidity and mortality worldwide. This session will provide a multidisciplinary view of diarrheal illness in two settings: industrialized and developing nations. A microbiologist, clinical chemist, and physician will present clinical and laboratory challenges in the diagnosis and management of gastroenteritis in each setting.

EXPECTED OUTCOME: After attending this session, participants will be able to: 1) explain the strengths and limitations of molecular testing and toxin based testing for the diagnosis of Clostridium difficile infection; 2) identify the burden and clinical impact of diarrheal illnesses in the developing world; 3) define emerging methods for the diagnosis of gastrointestinal infections in both resource-rich and resource-limited settings; and 4) discuss the strengths and limitations of these new diagnostic technologies and their clinical utility.

SPEAKERS

Difficulties with Clostridium Difficile
*Carey-Ann Burnham, PhD
Washington University School of Medicine, St. Louis, MO

Diagnosing Diarrheal Disease Around the Globe
#Sarah Brown, PhD
Washington University School of Medicine, St. Louis, MO

A Clinician's Perspective on Diarrhea at Home and Abroad
#Indi Trehan, MD, MPH, DTM&H
Washington University School of Medicine, St. Louis, MO

Challenges and Clinical Impacts of Standardization of Immunoassays

73215

Pennsylvania Convention Center - 201B

Level: Intermediate
CE Credit: 2.5

MODERATOR
#Bernard Cook, PhD, DABCC, FACB
Henry Ford Hospital, Detroit, MI

Developed in cooperation with Clinical Laboratory Standards Institute, UK National External Quality Assessment Service (UK NEQAS).

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

SESSION OVERVIEW: This session will review the practical considerations of immunoassay standardization for laboratorians, manufacturers and clinicians, and provide guidance in identifying opportunities for validating reference materials and implementing global standardization of analytes measured by immunoassays. Specific emphasis will be placed on improving the quality of laboratory results and its impact on patient care.

EXPECTED OUTCOME: After attending this session, participants will be able to: 1) outline the rationale of immunoassay standardization efforts; 2) list effective standardization approaches and programs; and 3) identify the impact of immunoassay standardization on providing more consistent patient care.

SPEAKERS

Improving Endocrine Assays Through Standardization
#Catharine Sturgeon, PhD, FACB, FRCPath
The Royal Infirmary of Edinburgh, Edinburgh, United Kingdom

Challenges and Successes in Standardizing Cancer Antigen Assays
#Bernard Cook, PhD, DABCC, FACB
Henry Ford Hospital, Detroit, MI

Can We Harmonize Troponin and Natriuretic Peptide Assays Through Standardization?
*Dina Greene, PhD, DABCC
University of Washington, Seattle, WA

Tuesday | 2:30pm - 5:00pm

Current Guidelines for Establishment and Implementation of Laboratory Developed Tests: ISO 15189, CLSI EP19-A and Practical Guidance to FDA's Quality System Regulation for Laboratory Developed Tests

73216

Pennsylvania Convention Center - 201C

Level: Intermediate
CE Credit: 2.5

MODERATOR

#J. Rex Astles, PhD, FACB
Centers for Disease Control and Prevention, Atlanta, GA

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

SESSION OVERVIEW: This session will use examples and discussion to explain concepts helpful for creation of laboratory developed tests (LDTs) using current guidelines. Attendees are encouraged to bring real world examples of issues they have encountered with assay validation, ISO accreditation and/or reagent production. Attendees will receive EP19-A.

EXPECTED OUTCOME: After attending this session, participants will be able to: 1) list the various steps and stages of a test method's lifecycle as well as the critical elements of an assay validation; 2) explain how EP19-A and ISO 15189 can help users to demonstrate acceptable evaluations and performance of each test including LDTs during establishment and implementation; and 3) outline the importance of following FDA's Quality System Regulation for LDTs.

SPEAKERS

ISO Accreditation and Standard 15189 as Aid for Establishment and Implementation of Laboratory Developed Tests
*Lucia Berte, BS, MA, MT(ASCP)SBB,DLM; CQA(ASQ)CMQ/OE
Laboratories Made Better! PC, Broomfield, CO

Introduction to the Assay Lifecycle Model for Manufacturers and End-Users of Clinical Assays
#Paula Ladwig, MS, MT(ASCP)
Mayo Clinic, Rochester, MN

CLSI Practical Guidance for FDA's Quality System Regulation for Laboratory Developed Tests
#Luann Ochs, MS
Clinical and Laboratory Standards Institute, Wayne, PA

SPEAKER DISCLOSURE (*) (+) (#)

* Speakers whose names are preceded by an asterisk (*) have disclosed, in accordance with ACCME Standards and the policy of the AACC, that they have a relationship that, in the context of their presentation, could be perceived by some people as a real or potential conflict of interest (e.g., ownership of stock, research grants, or consulting fees). The speakers do not consider their presentations to be influenced by these relationships.

Speakers who disclose that they have no relationships that could be perceived as a conflict of interest are noted with a (#). Disclosure forms are on file in the AACC office.

+ Speakers who had not returned a disclosure form by the time of printing are noted with a (+).

All speakers will have completed forms prior to the start of the Annual Scientific Meeting. A detailed handout on speaker disclosure will be distributed at the Annual Scientific Meeting.

Tuesday | 2:30pm - 5:00pm

The Opportunity to Integrate the Laboratory into Patient Care Through Meaningful Use of Electronic Health Record (EHR)

73217

Pennsylvania Convention Center - 204A

Level: Basic
CE Credit: 2.5

MODERATOR
#Pamela Banning, BS, MLS CM(ASCP)
3M HIS, West Linn, OR

Developed in cooperation with Informatics Division.

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

SESSION OVERVIEW: In the changing landscape of our nation's healthcare, laboratorians have the unique opportunity to provide greater value to the patient in several healthcare settings through the meaningful use of Electronic Health Record (EHR). Laboratorians and laboratory data can enhance and/or improve individual patient care, patient safety, evidence-based medicine protocols development, and public health data exchange, to name a few. This session will address the federal mandates for EHR adoption from the perspectives of the industry, public health and the healthcare provider.

EXPECTED OUTCOME: After attending this session, participants will be able to: 1) identify barriers at their facility to preparing/maintaining vocabularies and outline useful steps to overcome them; 2) communicate issues with local healthcare provider systems and propose solutions address those issues; 3) explain how the laboratory can contribute to improved laboratory test utilization, improved patient safety, decreased error rates, reduced health care costs, and reduced lengths of stay through participation in Meaningful Use initiatives; and 4) justify laboratorians' inclusion and participation in Meaningful Use initiatives.

SPEAKERS

The Industry & Meaningful Use
#Pamela Banning, BS, MLS CM(ASCP)
3M HIS, West Linn, OR

Public Health & Meaningful Use
*Riki Merrick, MPH
Vernetzt, LLC, Sausalito, CA

The Clinical Laboratory & Meaningful Use
#Eugenio Zabaleta, PhD
Ohio Health Mansfield Hospital, Mansfield, OH

Little Steps with Big Data Part 2: An Introduction to the R Programming Language

73218

Pennsylvania Convention Center - 204B

Level: Intermediate
CE Credit: 2.5

MODERATOR
***Daniel Holmes, BSc, MD, FRCPC**
St. Paul's Hospital, Vancouver, BC, Canada

INTENDED AUDIENCE: The session is intended for: clinical pathologists, residents, clinical chemists and fellows, medical laboratory technologists and lab scientists. No programming experience is assumed but students should be prepared to learn new ways of thinking about data analysis and management. Being a nerd is not a prerequisite, but is advantageous.

SESSION OVERVIEW: This session will provide an introduction to the open-source statistical programming language R and will focus on statistical analysis relevant to clinical chemistry—it is Part 2 of a two-part course. Students will learn how to perform common clinical chemistry-related computational tasks, produce high quality, publication-ready figures and will learn about a host of other potential applications. This session builds on "Little Steps with Big Data Part 1," and should not be attended unless the first of the two sessions was attended.

EXPECTED OUTCOME: After this session, participants will be able to: 1) import data into R from a spreadsheet program to clean, subset, and manipulate numerical and non-numerical data; 2) describe and create R data types (vectors, matrices, dataframes, lists and factors); 3) perform routine statistical tasks, such as calculating median, quantiles, t-tests, and Wilcoxon signed rank; and 4) perform regression analysis in R (ordinary least squares, Deming, weighted regression, Passing Bablok regression, non-linear regression).

SPEAKERS

Little Steps with Big Data Part 4: Applied Examples and Using R
#Stephen Master, MD, PhD, FCAP, FACB
Weill Cornell Medical College, New York, NY

Little Steps with Big Data Part 3: Plots and Figures
*Daniel Holmes, BSc, MD, FRCPC
St. Paul's Hospital, Vancouver, BC, Canada

Tuesday | 2:30pm - 5:00pm

New Approaches to HIV: Recommendations on How to Test and Treat

73219

Pennsylvania Convention Center - 204C

Level: Intermediate
CE Credit: 2.5

MODERATOR

***Mark Marzinke, PhD, DABCC**
Johns Hopkins University School of Medicine, Baltimore, MD

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

SESSION OVERVIEW: Human immunodeficiency virus/acquired immune deficiency syndrome (HIV/AIDS) remains a significant public health concern, both in the United States as well as abroad. This session will present an overview of the updated CDC-recommended algorithm for HIV laboratory testing, which may facilitate the diagnosis of acute HIV-1 infection. Furthermore, this symposium will discuss antiretroviral therapeutic (ART) regimens utilized for the management of HIV, as well as studies illustrating the success of antiretroviral drugs as treatment-for-prevention in high-risk populations and the potential utility of therapeutic drug monitoring (TDM).

EXPECTED OUTCOME: After attending this session, participants will be able to: 1) list the recent changes to the CDC algorithm for HIV diagnosis; 2) identify the implications of updated HIV testing methodologies; and 3) compare different ART regimens used for the prevention and/or treatment of HIV-1.

SPEAKERS

Updated Guidelines for HIV Diagnosis: An Overview and Public Health Implications and Discussion of Testing Technologies for Implementation
#Bonny Van, PhD, FACB, HCLD
Marion County Public Health Department, Indianapolis, IN

The Use of Antiretroviral Therapies for the Prevention and/or Treatment of HIV-1 Infection: Issues from Bench to Bedside
*Mark Marzinke, PhD, DABCC
Johns Hopkins University School of Medicine, Baltimore, MD

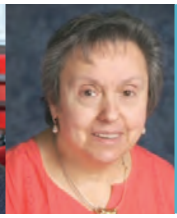
Updated Guidelines for HIV Testing and Treatment of Pregnant Women; and Approaches to Early Infant Diagnosis and Pediatric HIV Treatment, in the US and Internationally
#Mary Fowler, MD, MPH
Johns Hopkins University School of Medicine, Baltimore, MD

WEDNESDAY, AUGUST 3

PLENARY & EDUCATION SESSIONS

PLENARY SESSION 14001

DIRECT MASS SPECTROMETRIC PROFILING OF BIOLOGICAL TISSUES—A NEW PARADIGM IN HISTOLOGY

*ZOLTAN TAKATS, PhD
Imperial College London, London, United Kingdom

*VIRGINIA LIVOLSI, MD
Hospital of the University of Pennsylvania, Philadelphia, PA

WEDNESDAY, AUGUST 3 | 8:45am - 10:15am | LEVEL: BASIC | CE CREDIT: 1

Pennsylvania Convention Center – Grand Ballroom

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

SESSION OVERVIEW
This lecture will discuss the use of direct mass spectrometric profiling of biological tissues. One example is the 'intelligent knife' technology, in which smoke collected during surgery performed using electrosurgical knives is analyzed by a mass spectrometer. This technology provides rapid diagnostic information to surgeons, such as during tumor resection. Professor Zoltan Takats, is a pioneer in the field of ambient mass spectrometry and its application to clinical specimens near the surgical suite. He is the primary inventor of six mass spectrometric ionization techniques. With the invention of the intelligent knife, mass spectrometry is now being brought directly to patients undergoing surgery. His laboratory continues to investigate the application of this technology to other important clinical questions, including those in the microbiology laboratory. Professor Takats will explore the clinical implications and future developments of this technology. As part of the session, an experienced anatomic pathologist, Dr. Virginia LiVolsi from the Perelman School of Medicine at the University of Pennsylvania, will give her view of the technology and participate in the post-lecture Q&A.

EXPECTED OUTCOME
After this session, participants will be able to: 1) explain the principles of direct mass spectrometric profiling of biological tissues; 2) outline the development and applications of the 'intelligent knife' technology; and 3) discuss the future developments of ambient mass spectrometry.

PLEASE REFER TO THIS GUIDE WHEN MAKING YOUR SESSION SELECTIONS
Each session is identified by a five- or six-digit session number.

EXAMPLE
Session **72105** is a:
A. Short Course
B. On Monday
C. In the Morning

SESSION TYPE
A. FIRST DIGIT
1 = Plenary Sessions
3 = Symposia
4 = AM Brown Bag Sessions
5 = PM Brown Bag Sessions
6 = Meet the Expert Session
7 = Short Courses
19 = Sunday AACC University Sessions

SESSION DAY
B. SECOND DIGIT
1 = Sunday
2 = Monday
3 = Tuesday
4 = Wednesday
5 = Thursday

SESSION TIME
C. THIRD DIGIT
1 = am
2 = pm
4 = Mid-day

The last two digits are AACC internal numbers.

Wednesday | 7:30am - 8:30am & 12:30pm - 1:30pm

T TICKET Brown Bag 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 food in the Convention Center prior to the session.

CE Credit: 1.0 (per Brown Bag Session) unless otherwise noted

TITLE	SESSION NUMBER AM	PM	LEVEL	SPEAKERS
Drug Interference—The Unsolved Problem	**44101**	**54201**	Basic	***Oswald Sonntag, PhD** Bio-Rad Laboratories, Munich, Germany
Business Process Management: A Powerful Approach to Redesigning Processes That Create Value for Clinical Laboratories and its Patients	**44102**	**54202**	Basic	**#Fernando Berlitz, MBA, MBB** Grupo Ghanem, Joinville, Brazil
Mass Spectrometry in the Clinical Lab: Applications for Emergency Toxicology	**44103**	**54203**	Basic	**#Jennifer Colby, PhD, DABCC** Vanderbilt University, Nashville, TN
Three Sisters: Algorithms for Syphilis Testing	**44105**	**54205**	Basic	**#Vera Tesic, MD** University of Chicago, Chicago, IL
Patient Access Portal: The Patient's Window to Discover the Lab	**44106**	**54206**	Basic	**#Eugenio Zabaleta, PhD** Ohio Health Mansfield Hospital, Mansfield, OH
Monoclonal Antibodies as Therapeutic Agents	**44107**	**54207**	Intermediate	**#Melissa Snyder, PhD, DABCC** Mayo Clinic, Rochester, MN
Laboratory Assessment of Cystic Fibrosis	**44108**	**54208**	Intermediate	**#Neval Akbas, PhD** Baylor College of Medicine and Texas Children's Hospital, Houston, TX
Rule-Based Strategies for Taming Wasteful Testing	**44109**	**54209**	Intermediate	**#Ron Schifman, MD** Southern Arizona VA Healthcare System, Tucson, AZ
Evolving Use of Cardiac Troponins in the ED—Early Rule-In/Rule-Out Protocols and the Use of Significant Deltas *(ACCENT® Credit only)*	**44110**	**54210**	Basic	***Margot LeClair, BS (Chemistry), MBA** Beckman Coulter, Chaska, MN
Immunoglobulin Paraprotein Interference with Chemistry Assays	**44111**	**54211**	Advanced	**#Lu Song, PhD, DABCC** UCLA Medical Center, Los Angeles, CA
Emerging Biomarkers of Liver Injury and Disease	**44112**	**54212**	Intermediate	**#Mitchell McGill, PhD** Washington University School of Medicine, St. Louis, MO
Hair as a Long-Term Adherence Marker for HIV Medications	**44114**	**54214**	Intermediate	**#Howard Horng** University of California, San Francisco, San Francisco, CA

TITLE	SESSION NUMBER AM	PM	LEVEL	SPEAKERS
Can You Substitute Diesel with Gas in Your Car?: The Similar Story of Active Vitamin B12 and Total Vitamin B12	**44115**	**54215**	Basic	***Barnali Das, MD, DNB, PGDM** Kokilaben Dhirubhai Ambani Hospital, Mumbai, India
Measurement of TSH Receptor Auto-Antibodies: Clinical Value and Evolution of the Assays	**44116**	**54216**	Intermediate	**#Damien Gruson, PhD** Cliniques Universitaires Saint Luc, Brussels, Belgium
Adrenal Vein Sampling (AVS): A Diagnostic Procedure for Patients with Primary Hyperaldosteronism	**44117**	**54217**	Intermediate	**#Siaw Li Chan** University of Chicago, Chicago, IL
Total Laboratory Automation Systems: Implementation and Future Upgrades	**44119**	**54219**	Basic	**#Edward Leung, PhD, DABCC, FACB** University of Chicago, Chicago, IL
Critical Test Results Boot Camp *Developed in cooperation with Management Sciences and Patient Safety Division.*	**44120**	**54220**	Basic	**#Qian Sun, PhD** University of Pittsburgh, Pittsburgh, PA
The CDC Vitamin D Standardization-Certification Program (VDSCP)—Improving the Clinical Measurement of Total 25-Hydroxyvitamin D	**44121**	**54221**	Intermediate	**#Otoe Sugahara** Centers for Disease Control and Prevention, Atlanta, GA
Evaluation of Time-of-Flight High-Resolution Mass Spectrometry for Broad Spectrum Drug Screening in Urine	**44122**	**54222**	Basic	**#Imir Metushi** University of California San Diego-CALM, San Diego, CA
Optimizing PT/INR Testing for Patients Presenting to the Emergency Department with Stroke	**44123**	**54223**	Basic	**#Sarah Wheeler, PhD, NRCC** Meso Scale Diagnostics, Rockville, MD
Laboratory Diagnosis of Antiphospholipid Syndrome	**44124**	**54224**	Intermediate	**#Olajumoke Oladipo, MD, DABCC, FACB** University of Texas Medical Branch, Galveston, TX
Designing a Successful Point-of-Care Testing Program: Survival Guide for New Laboratory Directors	**44125**	**54225**	Basic	**#Rob Nerenz, PhD, DABCC** University of Kentucky, Lexington, KY
Strategies to Overcome Pre-Analytical Errors in Adrenal Vein Sampling Procedures	**44126**	**54226**	Basic	**#Pratistha Ranjitkar** University of Washington, Seattle, WA
OSHA's 2016 GHS Deadline—Chemical Management in Your Laboratory	**44127**	**54227**	Intermediate	***Daniel Scungio, MT(ASCP), SLS, CQA (ASQ)** Sentara Healthcare, Norfolk, VA
Common Pitfalls and Misinterpretations of Urine Drug Testing	**44128**	**54228**	Basic	**#Jill Warrington, MD, PhD** University of Vermont, Burlington, VT

Wednesday | 10:30am - 11:30am

Direct Mass Spectrometric Profiling of Biological Tissues—A New Paradigm in Histology

64101

Pennsylvania Convention Center - 106AB

Level: Basic

CE Credit: 1

MODERATOR

#Yuk Ming Dennis Lo, MD, PhD
Prince of Wales Hospital, Shatin, Hong Kong, China

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

SESSION OVERVIEW: This session provides an excellent opportunity for a limited number of attendees to meet with Professor Zoltan Takats and Dr. Virginia LiVolsi. Professor Takats is a pioneer in the field of 'Ambient Mass Spectrometry' and is an inventor of the 'intelligent knife' technology. This technology provides real-time and clinically important information to surgeons during the course of surgery. Dr. LiVolsi is an experienced anatomic pathologist who will give her view of the technology.

EXPECTED OUTCOME: After this session, participants will be able to: 1) explain the basis of direct mass spectrometric profiling of biological tissues; 2) outline the development and applications of the 'intelligent knife' technology; and 3) discuss the future developments of ambient mass spectrometry.

SPEAKERS

Meet the Expert: Direct Mass Spectrometric Profiling of Biological Tissues—A New Paradigm in Histology
*Zoltan Takats, PhD
Imperial College London, London, United Kingdom

Direct Mass Spectrometric Profiling of Biological Tissues—A New Paradigm in Histology
*Virginia LiVolsi, MD
Hospital of the University of Pennsylvania, Philadelphia, PA

MORNING SYMPOSIA

Wednesday | 10:30am - Noon

ORAL ABSTRACT SESSION

What's New in Toxicology and Therapeutic Drug Monitoring?

34101

Pennsylvania Convention Center - 114 Lecture Hall

Level: Intermediate

CE Credit: 1.5

MODERATOR

#Donald LeGatt, PhD, FCACB
University of Alberta Hospital, Edmonton, AB, Canada

INTENDED AUDIENCE: This session is intended for: clinical laboratorians, physicians, pathologists, clinicians, industry scientists, post-doctoral fellows, laboratory directors and laboratory supervisors/managers.

SESSION OVERVIEW: AACC is dedicated to advancing the science and practice of laboratory medicine. A select group of members have reviewed the abstracts submitted for the AACC annual meeting. The Annual Meeting Organizing Committee (AMOC) has reviewed the abstracts in the area of Toxicology and Therapeutic Drug Monitoring and have chosen several of these authors to present their findings as oral presentations. Each 15-minute presentation will be followed by a 5-minute question-and-answer session.

EXPECTED OUTCOME: After attending this session, participants will be able to: 1) describe the latest advances in toxicology and therapeutic drug monitoring; 2) relate research in toxicology and therapeutic drug monitoring to the practice of pathology and laboratory medicine; and 3) integrate state-of-the-art knowledge about toxicology and therapeutic drug monitoring into the roles and responsibilities of the clinical laboratory professional.

SPEAKERS

Drug Monitoring of Methotrexate in Breast Milk: Understanding Transport from Cells to Humans
#Sarah Delaney, MSc
University of Toronto/Hospital for Sick Children, Toronto, ON, Canada

Comparison of Paired Umbilical Cord Tissue and Meconium Samples for Detection of In Utero Drug Exposure
#Jennifer Colby, PhD, DABCC
Vanderbilt University, Nashville, TN

Prevalence of Gabapentin Abuse Among Clinical Patients
#Kelley Quigley
Aria Diagnostics, Indianapolis, IN

Validation of a Broad Spectrum Drug Screening Method Using High Resolution LC-TOF
#Imir Metushi
University of California San Diego-CALM, San Diego, CA

Wednesday | 10:30am - Noon

Trends in Allied Health Education: How Will We Educate the Laboratory Workforce of the Future?

34102

Pennsylvania Convention Center - 108AB

Level: Basic
CE Credit: 1.5

MODERATOR
#Brad Karon, MD, PhD, FCAP, FACB
Mayo Clinic, Rochester, MN

Developed in cooperation with Management Sciences and Patient Safety Division.

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

SESSION OVERVIEW: Online/distance and blending learning techniques are transforming allied health education. This transformation is being accelerated by a decrease in the number of available resources that can provide clinical hands-on training. In this session we will explore education trends and controversies such as conventional vs. distance/online vs. blended learning approaches as well as the growing importance of inter-professional education. We will also describe our experience with implementing an education program in Medical Laboratory Science and the success of a blended model of online e-learning and traditionally taught courses. This session will provide tools that all laboratory professionals can utilize to improve health education in their area.

EXPECTED OUTCOME: After this session, participants will be able to: 1) identify advantages and limitations to distance/online and blended learning approaches; 2) describe how healthcare resource limitations impact allied health education; 3) define how blended and distance learning strategies can be used to address use of faculty and institutional resources; and 4) explain the forces behind inter-professional education initiatives.

SPEAKERS

Trends in Allied Health Education
#Brad Karon, MD, PhD, FCAP, FACB
Mayo Clinic, Rochester, MN

Leveraging Distance (Online) and Blended Learning Strategies to Educate Medical Laboratory Scientists
#Sue Lehman , MA, MT(ASPC)SM
Mayo Clinic, Rochester, MN

Correcting Nature's Mistakes and Beyond: The Promise of Gene Therapy

34103

Pennsylvania Convention Center - 103AB

Level: Basic
CE Credit: 1.5

MODERATOR
***Michael Milone, MD, PhD**
Hospital of the University of Pennsylvania, Philadelphia, PA

INTENDED AUDIENCE: The session is intended for: clinical pathologists, residents, clinical chemists and fellows, medical laboratory technologists and laboratory scientists.

SESSION OVERVIEW: This session will provide a discussion of current research applications of gene editing and their potential for development of therapeutic interventions. Attendees will hear about different techniques for gene modification, and how these may be used for the treatment of disease.

EXPECTED OUTCOME: After this session, participants will be able to: 1) discuss the concept of gene editing; 2) list different techniques to accomplish gene editing in biological systems; and 3) describe the use of gene editing to develop therapeutic modalities.

SPEAKERS

Adeno-Associated Virus (AAV)-based Gene Therapy of Genetic Disease
#Valder Arruda, MD, PhD
Children's Hospital of Philadelphia, Philadelphia, PA

Immmunotherapy of Cancer Using Genetically-Enhanced T Cells
*Michael Milone, MD, PhD
Hospital of the University of Pennsylvania, Philadelphia, PA

Wednesday | 10:30am - Noon

Emerging Biomarkers of Acute Kidney Injury (AKI) and Chronic Kidney Disease (CKD)

34104

Pennsylvania Convention Center - 113AB

Level: Intermediate
CE Credit: 1.5

MODERATOR

***Joe El-Khoury, PhD, DABCC, FACB**
Yale University, New Haven, CT

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

SESSION OVERVIEW: This symposium will review emerging biomarkers of acute kidney injury (AKI) and of chronic kidney disease (CKD) by highlighting their clinical utility from recent human and animal studies. These biomarkers include NGAL, BRP-39, IL-6/IL-10, VEGF/EGF, SDMA, Clusterin, Cystatins and Inosine.

EXPECTED OUTCOME: After this session, participants will be able to: 1) identify emerging biomarkers of AKI and CKD; 2) evaluate the clinical utility of NGAL, Clusterin, Cystatins, Inosine, BRP-39, IL6/IL-10, VEGF/EGF and SDMA; and 3) describe the advantages and limitations of each biomarker.

SPEAKERS

Biomarkers of Injury, Repair and Inflammation in AKI
#Chirag Parikh, MD, PhD, FACP, FASN
Yale University, New Haven, CT

The Role of Symmetric Dimethylarginine (SDMA) as a Marker of Kidney Function
*Joe El-Khoury, PhD, DABCC, FACB
Yale University, New Haven, CT

SPEAKER DISCLOSURE (*) (+) (#)

* Speakers whose names are preceded by an asterisk (*) have disclosed, in accordance with ACCME Standards and the policy of the AACC, that they have a relationship that, in the context of their presentation, could be perceived by some people as a real or potential conflict of interest (e.g., ownership of stock, research grants, or consulting fees). The speakers do not consider their presentations to be influenced by these relationships.

Speakers who disclose that they have no relationships that could be perceived as a conflict of interest are noted with a (#). Disclosure forms are on file in the AACC office.

+ Speakers who had not returned a disclosure form by the time of printing are noted with a (+).

All speakers will have completed forms prior to the start of the Annual Scientific Meeting. A detailed handout on speaker disclosure will be distributed at the Annual Scientific Meeting.

Wednesday | 10:30am - Noon

Endogenous Antibody Interferences in the Chemistry Laboratory: Trouble from the Inside

74105
Pennsylvania Convention Center - 201A

Level: Intermediate
CE Credit: 1.5

MODERATOR
#Sutirtha Chakraborty, MBBS, MD, FACB
Peerless Hospital, Kolkata, India

Developed in cooperation with Clinical Laboratory Standards Institute, Clinical & Diagnostic Immunology Division.

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

SESSION OVERVIEW: This session will examine the biologic source and practical implications of endogenous interferences in chemistry assays used for patient management. It will also provide a detailed explanation of monoclonal protein/paraproteins and 'heterophilic' antibodies, including human anti-animal antibodies. Attendees will learn how to detect problematic interferences, how to use standardized techniques to demonstrate their presence, and how to properly report patient results. The impact on patient care and improvement of quality laboratory test results will be stressed.

EXPECTED OUTCOME: After this session, participants will be able to: 1) identify various types of endogenous antibody interferences that occur in chemistry and immunoassays; 2) describe the impact of antibody interferences on various assays and its impact on patient care; and 3) explain mechanisms of such interferences and implement troubleshooting procedures to detect and control them.

SPEAKERS

The How's and Why's of Endogenous Antibody Detection
#Bernard Cook, PhD, DABCC, FACB
Henry Ford Hospital, Detroit, MI

Identifying and Troubleshooting Monoclonal Protein Interferences in Clinical Chemistry
#Sutirtha Chakraborty, MBBS, MD, FACB
Peerless Hospital, Kolkata, India

Where the Rubber Hits the Road—The Importance of the Clinical/Analytical Interface in Interpreting Cardiac Troponin Testing

74106
Pennsylvania Convention Center - 201B

Level: Basic
CE Credit: 1.5

MODERATOR
***Dina Greene, PhD, DABCC**
University of Washington, Seattle, WA

Developed in cooperation with Biomarkers of Acute Cardiovascular Diseases.

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

SESSION OVERVIEW: Conventional cardiac troponin assays have limits of quantification at or near the diagnostic 99th percentile and clinically significant rates of analytic errors. This session summarizes how 99th percentiles are established, the challenges resulting from the lack of harmonization of cardiac troponin immunoassays, and how high sensitivity-cardiac troponin assays impact the upper reference limit for the analyte. Additionally, it addresses troponin analytic false-elevations, the frequency of occurrence, and automated strategies to detect/correct them.

EXPECTED OUTCOME: After attending this session, participants will be able to: 1) compare 99th percentiles from different cardiac troponin assays; 2) outline the importance and intricacies of implementing assay-specific cardiac troponin 99th percentiles; 3) discuss how low-end precision is key to defining abnormal cardiac troponin concentrations; 4) chart the frequency and impact of false-elevations of cardiac troponin; and 5) list strategies to detect and correct cardiac troponin errors.

SPEAKERS

cTn 99th Percentiles Are More Than Just a Single Number
*Dina Greene, PhD, DABCC
University of Washington, Seattle, WA

Dissecting and Correcting Errors in Cardiac Troponin Testing
#Daniel Herman, MD, PhD
University of Washington, Seattle, WA

Wednesday | 10:30am - Noon

Evaluating the Hypoxemic Patient: Oxygen and Oxygen-Related Parameters Used in Critical Care Settings

74107

Pennsylvania Convention Center - 201C

Level: Intermediate
CE Credit: 1.5

MODERATOR
***John Toffaletti, PhD, DABCC**
Duke University Health System, Durham, NC

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

INTENDED AUDIENCE: This course is intended for: pathologists, clinicians, laboratorians, and persons from industry who desire to develop or refine their understanding and clinical use of oxygen measurements and oxygen-related calculations.

SESSION OVERVIEW: Despite the frequency of measurement and physiologic importance of oxygen, laboratorians are often not familiar with how pO2, %O2Hb, Hb and other measurements are used to calculate oxygen-related parameters, such as O2 content, O2 delivery, A–a difference, paO2/FIO2 ratio, Oxygenation Index, and how the clinician uses them to evaluate and monitor hypoxemia, pulmonary ventilation, and perfusion in critically ill patients.

This session will be presented by a laboratory director and a practicing physician to provide clinical, pathophysiological, and practical information that will allow the participant to understand the important pre-analytical factors in these measurements, and how to interpret oxygen and oxygen-related calculations for diagnosing and managing patients in critical care settings.

EXPECTED OUTCOME: After attending this session, the participant will be able to: 1) outline how the conformational changes of Hb alter its oxygen binding and releasing functions; 2) evaluate pO2 and sO2 (%O2Hb) measurements in patients breathing room air or oxygen supplemented air, and on ventilators and ECMO (extracorporeal membrane oxygenation); 3) develop skill in evaluating pO2, pCO2, and oxygen-related calculations for determining the adequacy of arterial oxygenation and ventilation by the lungs; 4) utilize blood gas and co-oximetry results to calculate alveolar-arterial pO2 difference, pO2/FIO2 ratios, and evaluate pulmonary ventilation/perfusion (V/Q) balance; 5) list the potential pitfalls in handling samples for blood gas analysis; 6) explain how a clinician uses these oxygen and oxygen-related calculations to evaluate and monitor patients for possible hypoxemia and hypoxia in critical care settings; 7) list the situations in which a clinician would request an arterial blood gas test; and 8) employ oxygen measurements and oxygen-related calculations in determining when a patient should be placed on nasal cannula, non-invasive ventilation, mechanical ventilation, or ECMO.

SPEAKERS

Measuring and Calculating Oxygen and Oxygen-Related Parameters Used to Assess Hypoxemia and Oxygen Physiology
*John Toffaletti, PhD, DABCC
Duke University Health System, Durham, NC

Using Oxygen-Related Measurements and Calculations in the Care of the Critically Ill Patient
#Craig Rackley, MD
Duke University Medical Center, Durham, NC

Wednesday | 10:30am - Noon

Autoantibodies: A Case-Based Approach

74108

Pennsylvania Convention Center - 204A

Level: Intermediate
CE Credit: 1.5

MODERATOR
#James Faix, MD
Montefiore Medical Center, Bronx, NY

Developed in cooperation with College of American Pathologists, Clinical & Diagnostic Immunology Division.

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

SESSION OVERVIEW: This course will discuss a variety of organ-based and systemic autoimmune disorders including: thyroid disease, celiac disease, neuropathies, glomerulonephritis, rheumatoid arthritis, and progressive systemic sclerosis. The approach will be case-based, with a focus on how the laboratorian can help to advise providers regarding initial diagnostic testing and monitoring of treatment.

EXPECTED OUTCOME: After this session, participants will be able to: 1) recommend the most cost-effective diagnostic tests for autoimmune disorders; 2) select the appropriate methodologies for assay of autoantibodies; and 3) discuss new and emerging autoantibody markers.

SPEAKERS

Case Presentations
#James Faix, MD
Montefiore Medical Center, Bronx, NY

Case Presentations
*Stanley Naides, AB, MD, FACP, FACR
Quest Diagnostics Nichols Institute, San Juan Capistrano, CA

Towards Patient-Centered Laboratory Medicine—Using Lab Testing to Reduce Diagnostic Error and Improve Patient Outcomes

74109

Pennsylvania Convention Center - 204B

Level: Intermediate
CE Credit: 1.5

MODERATOR
***Mike Hallworth, MA, MSc, MCB, FRCPath**
United Kingdom

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

SESSION OVERVIEW: Overdiagnosis and misdiagnosis are increasingly emphasized as the focus of healthcare shifts from volume to value. The laboratory has a key role in ensuring that testing strategies add value and do not contribute to adverse patient outcomes. This session will review the ways in which laboratory medicine impacts patient outcomes, review practical strategies for increasing the added value of laboratory information, and offer a vision of a future state in which laboratory medicine is used effectively to support patient care and improve patient safety.

EXPECTED OUTCOME: After this session, participants will be able to: 1) outline and critically evaluate existing evidence on the impact of laboratory medicine on patient outcomes; 2) list the ways in which testing-related diagnostic errors arise and discuss how they may be reduced; 3) develop effective strategies for improving test utilization and result interpretation; and 4) discuss the findings of the IoM Report on Diagnostic Error in Health Care.

SPEAKERS

Towards Patient-Centered Laboratory Medicine
*Mike Hallworth, MA, MSc, MCB, FRCPath
United Kingdom

Working with Physicians—How to Improve Utilization and Ensure Effective Interpretation of Laboratory Tests
#Danielle Freedman, MB, ChB, FRCPath, (MD)
Luton & Dunstable Hospital NHS Trust, Luton, United Kingdom

Wednesday | 2:30pm - 5:00pm

Personalized, Genotype-Directed Treatment and Liquid Biopsy for Non-Small Cell Lung Cancer (NSCLC)

34210
Pennsylvania Convention Center - 103AB

Level: Basic
CE Credit: 2.5

MODERATOR
#Zhen Zhao, PhD
NIH Clinical Center, Bethesda, MD

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

SESSION OVERVIEW: Starting with the introduction of genotype-directed, targeted therapy in the management of NSCLC, this session will present contemporary molecular diagnostic technologies and emerging liquid biopsy platforms to detect actionable mutations in NSCLC. Dr. Kingshuk Das from UCLA David Geffen School of Medicine will describe the state of the art in the molecular diagnostics of NSCLC, with its current limitations as well as future directions, including emerging genetic targets and expanded panel testing. Dr. David Wong from University of California Los Angeles will give an update on emerging liquid biopsy platforms to detect actionable mutations in NSCLC. Dr. Udayan Guha from National Cancer Institute will describe ongoing clinical trials for patients with NSCLC at the NIH clinical center and discuss newer avenues of treatment of advanced NSCLC based on pre-clinical and clinical data generated at the NIH.

EXPECTED OUTCOME: After attending this session, participants will be able to: 1) explain the state-of-the-art in the molecular diagnostics and its limitations in the management of NSCLC; 2) state the utility of emerging liquid biopsy platforms to detect actionable mutations in NSCLC; and 3) outline ongoing clinical trials for patients with NSCLC at the NIH Clinical Center and identify newer avenues of treatment of advanced NSCLC.

SPEAKERS

Current Molecular Diagnostics for NSCLC
*Udayan Guha, MD, PhD
National Cancer Institute, Bethesda, MD

Emerging Liquid Biopsy Platforms to Detect Actionable Mutations in NSCLC
*David Wong, DMD, DMSc
UCLA, Los Angeles, CA

Ongoing Clinical Trials for Advanced NSCLC at the National Institutes of Health (NIH)
#Arun Rajan, MD
National Cancer Institute, Bethesda, MD

Wednesday | 2:30pm - 5:00pm

AACC/ASCLS Healthcare Forum

34211
Pennsylvania Convention Center - 114 Lecture Hall

Level: Intermediate
CE Credit: 2.5

MODERATOR
#Vince Stine, PhD
AACC, Washington, DC

INTENDED AUDIENCE: This session is intended for: laboratory directors, medical technologists, laboratory managers and other laboratory and industry personnel responsible for legislative, regulatory, payment and compliance issues.

SESSION OVERVIEW: The symposium will address: FDA efforts to regulate direct-to-consumer genetic testing; continuing activities to expand federal oversight of laboratory developed tests; CMS endeavors to implement a market-based clinical laboratory fee schedule; and a broad overview of current legislative and regulatory issues affecting the laboratory community.

EXPECTED OUTCOME: After this session, participants will be able to: 1) state the FDA's current policy pertaining to direct-to-consumer genetic testing; 2) describe ongoing government actions involving laboratory-developed tests; 3) explain forthcoming changes in the clinical laboratory fee schedule; and 4) communicate to their peers about current legislative and regulatory issues affecting clinical laboratories.

SPEAKERS

FDA Oversight of DTC Genetic Testing: Past, Present and Future
#Alberto Gutierrez, PhD
FDA/CDRH, Silver Spring, MD

Policy Discussions Involving LDT Regulation
#Joyce Gresko, JD
Alston & Bird, Washington, DC

The Changing Clinical Laboratory Fee Schedule
#Judy Davis, MA, MLS, DLM(ASCP)
Vanderbilt University Medical Center, Nashville, TN

Current Legislative and Regulatory Issues Affecting the Clinical Laboratory
#Elissa Passiment, EdM, CLS, ASCLS
Tysons Corner, VA

JOIN THE CONVERSATION

Follow AACC @_AACC and use the hashtag #2016AACC to join the conversation.

Wednesday | 2:30pm - 4:00pm

Precision Medicine Delivered by Advances in Circulating Cell-Free DNA Diagnostics

34212

Pennsylvania Convention Center - 113AB

Level: Intermediate
CE Credit: 2.5

MODERATOR

***Rossa Chiu, MBBS, PhD**
Chinese University of Hong Kong, Shatin, Hong Kong, China

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

SESSION OVERVIEW: Molecular and personalized genetic tests are expanding in the routine laboratory. Circulating nucleic acids, namely extra-cellular DNA or RNA molecules present in human circulation, serve as versatile biomarkers for achieving blood-based molecular diagnostics for the investigation of fetal health, cancers, other pathologies, and post-transplantation complications. Recently, there have been some exciting advances made in relation to circulating cell-free nucleic acid analysis, resulting in cutting-edge noninvasive applications for personalized diagnostics. In this session, the participant will learn about the latest applications of circulating nucleic acid analysis, including its utility in organ transplantation monitoring, and in determining the anatomical location of cancers and other diseases. Current strategies for the use of cell free DNA for prenatal screening will be discussed as well as barriers to implementation. The advances in analytical approaches, including droplet digital PCR, nanopore sequencing and methylome analysis will also be reviewed.

EXPECTED OUTCOME: After this session, participants will be able to: 1) describe the new technology platforms and protocols for circulating cell-free DNA analysis; 2) summarize the utility of circulating cell-free DNA analysis for organ transplantation monitoring; 3) explain the methodology and applications of plasma methylome analysis; 4) discuss how anatomical information could be derived from circulating DNA analysis; 5) state the utility of circulating cell-free DNA analysis for cancer assessment and 6) compare several different approaches to incorporate cell free DNA into routine prenatal screening protocols and their effectiveness and limitations.

SPEAKERS

Prospective cfDNA-based Prenatal Screening in the General Pregnancy Population Offered by Primary Obstetrical Care Providers in Rhode Island
*Glenn Palomaki, PhD
Women & Infants Hospital, Alpert Medical School of Brown University, Providence, RI

Graft-Derived Cell-Free DNA as a Biomarker in Organ Transplantation
*Michael Oellerich, MD
George-August University, Göettingen, Germany

Liquid Biopsy as a Total Body Scan: Unravelling the Sites of Cancer and Other Pathologies
*Rossa Chiu, MBBS, PhD
Chinese University of Hong Kong, Shatin, Hong Kong, China

Wednesday | 2:30pm - 5:00pm

Addressing Pre- and Post-Analytical Issues in Developing Countries

34213

Pennsylvania Convention Center - 108AB

Level: Intermediate
CE Credit: 2.5

MODERATOR
#Tony Badrick, PhD, FACB
RCPAQAP, Sydney, Australia

Developed in cooperation with Asia Pacific Federation of Clinical Biochemistry.

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

SESSION OVERVIEW: Pre- and post-analytical errors are a universal problem and targeted solutions are necessary to effectively reduce these errors. In this session we will describe three Asia Pacific strategies that have been utilized to minimize pre- and post-analytical errors. First, we will present an approach used in Indonesia to improve phlebotomy competency. Second, the Asia Pacific Federation of Clinical Biochemistry will discuss the Interpretative Comments QA program and their experience with the variation in result comments. Finally, the identification of sources of variation (e.g. ethnic, geographical) in common lab tests particularly between developed and developing countries and their impact on post-analytical errors will be reviewed.

EXPECTED OUTCOME: After attending this session, participants will be able to: 1) identify the unique pre- and post-analytical problems seen in developing countries; 2) explain how an organization like the American Pacific Federation of Clinical Biochemistry (APFCB) can educate laboratories and help develop solutions; 3) evaluate sources of variations for common lab tests, including ethnicity and geographical region-related changes; 4) explain the value of an Interpretative Comments QA program and how it reduces post-analytical errors; and 5) discuss different strategies to improve phlebotomy competency.

SPEAKERS

Driving Change in the Pre-Analytical Phase
#Endang Hoyaranda, DRA
President Director, Prodia Group, Jakarta, Indonesia

Improving Result Comments by Implementation of an External Quality Assessment Program
#Tony Badrick, PhD, FACB
RCPAQAP, Sydney, Australia

A Comparison of Sources of Variations in Common Laboratory Tests in Developing and Developed Countries
#Kiyoshi Ichihara, MD, PhD
Professor, Yamaguchi University Graduate School of Medicine, Ube, Japan

Wednesday | 2:30pm - 5:00pm

Sampling, the Next Generation: Emerging Clinical Mass Spec Applications in Alternative Matrices

74214

Pennsylvania Convention Center - 201A

Level: Intermediate
CE Credit: 2.5

MODERATOR

***Kara Lynch, PhD, DABCC**
University of California/San Francisco General Hospital, San Francisco, CA

Developed in cooperation with Mass Spectrometry and Separation Sciences Division.

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

SESSION OVERVIEW: This short course will interrogate the use of emerging alternative specimens for mass spectrometry in the clinical lab. Applications and challenges related to the use of alternative matrices such as dried blood spots, meconium, cord tissue, and luminal fluids will be discussed. Performance of conventional specimens for immunosuppressants, drugs of abuse, and therapeutic drug monitoring will be compared to these emerging alternative matrices to support research trials and clinical diagnostics.

EXPECTED OUTCOME: After attending this session, participants will be able to: 1) define pre-analytical considerations associated with alternative matrix sampling; 2) identify the benefits of using non-traditional specimen sources in laboratory testing; and 3) design a quality-control plan that accounts for the total testing process as it relates to alternative matrix testing.

SPEAKERS

Spotting Spotty Spots: Considerations in Monitoring Immunosuppressants in Dried Blood Spots
#Jane Dickerson, PhD, DBACC
University of Washington and Seattle Children's Hospital, Seattle, WA

You're Testing in What? Antiviral Drug Measurements in Luminal Fluids To Support Clinical Trials
*Mark Marzinke, PhD, DABCC
Johns Hopkins University School of Medicine, Baltimore, MD

Beyond Urine and Serum: Meconium and Umbilical Cord Tissue as Specimen Types
#Steven Cotten, PhD, DABCC
Ohio State University Wexner Medical Center, Columbus, OH

Wednesday | 2:30pm - 5:00pm

The Genomic Testing Revolution: An Interactive Workshop with Case Examples

74215
Pennsylvania Convention Center - 201B

Level: Basic
CE Credit: 2.5

MODERATOR
***Kara Lynch, PhD, DABCC**
University of California/San Francisco General Hospital, San Francisco, CA

Developed in cooperation with the multi-society Training Residents in Genomics (TRIG) working group, SYCL, Molecular Pathology Division, Personalized Medicine Division.

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

SESSION OVERVIEW: Genomic medicine is transforming healthcare. Using a case-based, interactive small-group approach, participants will learn introductory principles related to developing genomic oncology assays and interpreting results. The workshop includes practical hands-on instruction with online genomics tools. Workshop material is based on the Training Residents in Genomics (TRIG) curriculum (www.pathologylearning.org/trig). Workshop requirements: You must bring a laptop for this course.

EXPECTED OUTCOME: After this session, participants will be able to: 1) identify central applications and interpretive considerations of genomic oncology tests; 2) determine a variant's clinical significance using online tools; 3) evaluate the benefits and limitations of genomic testing in the context of patient care; and 4) explain the significance of incidental findings that may arise from genomic testing.

SPEAKERS

An Innovative Approach to Teaching Genomic Medicine
#Richard Haspel, MD, PhD
Beth Israel Deaconess Medical Center, Boston, MA

Designing a Multi-Gene Oncology Assay Case Example
#Christina Lockwood, BS, PhD, DABCC
University of Washington, Seattle, WA

Exploring Exome Sequencing with a Case Example
*Jason Park, MD, PhD
UT Southwestern and Children's Medical Center, Dallas, TX

Oral Fluid in the Clinical Toxicology Laboratory: Ready for Prime Time?

74217
Pennsylvania Convention Center - 204A

Level: Intermediate
CE Credit: 2.5

MODERATOR
***Christine Moore, PhD, DSc, DABCC**
Immunalysis Corporation, Pomona, CA

INTENDED AUDIENCE: This session is intended for: physicians, laboratory managers and directors who are likely to be involved in the analysis of oral fluid in the near future; it is also directly beneficial for medical personnel who may be interested in using oral fluid as a convenient drug-testing matrix in a physicians' office laboratory environment.

SESSION OVERVIEW: This session will present advantages and drawbacks on the utility of oral fluid as a drug testing matrix in a clinical laboratory. The potential for interpretation of oral fluid drug concentrations will be discussed.

EXPECTED OUTCOME: After attending this session, participants will be able to: 1) identify the advantages of oral fluid analysis for drug testing in a clinical setting; 2) explain the relationship between drugs in blood and concentration in oral fluid; and 3) evaluate the utility of oral fluid in a given drug testing situation by assessing collection, analytes, cutoffs and interpretative value.

SPEAKERS

Importance of Specimen Collection, Analytes and Cutoffs
*Christine Moore, PhD, DSc, DABCC
Immunalysis Corporation, Pomona, CA

Testing Oral Fluid in the Office: Advantages and Drawbacks
#Gary Reisfield, MD
University of Florida College of Medicine, Gainesville, FL

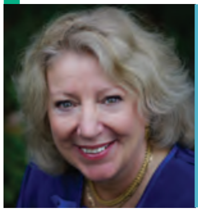
Comparison of Blood and Oral Fluid Drug Concentrations and Potential for Interpretation
#Andrea Terrell, PhD, DABCC
Indianapolis, IN

THURSDAY, AUGUST 4

PLENARY & EDUCATION SESSIONS

PLENARY SESSION 15001

THE GREAT CANNABIS EXPERIMENT: MEDICAL MIRACLE? HARMLESS HIGH? CIVIL CONSEQUENCES?



*MARILYN HUESTIS, PhD
University of Maryland School of Medicine, Baltimore, MD

THURSDAY, AUGUST 4 | 8:45am - 10:15am | LEVEL: BASIC | CE CREDIT: 1

Pennsylvania Convention Center – Grand Ballroom

INTENDED AUDIENCE

This session is intended for: pathologists, lab directors, clinical chemists, immunologists, molecular biologists, technologists, and IVD industry scientists.

SESSION OVERVIEW

This lecture will explore recent developments in the science and use of cannabis, including effects of acute and chronic cannabis exposure, cannabis use and the impact on driving, measurement of cannabinoids in blood and oral fluid, as well as the detection of these compounds and their effects after sustained abstinence. Professor Huestis and her group conduct important research into the mechanisms of action of cannabinoid agonists and antagonists, the effects of in utero drug exposure, and the neurobiology and pharmacokinetics of novel psychoactive substances. Recently, Professor Huestis and colleagues documented that CB1-cannabinoid receptors are significantly down regulated in specific brain regions in chronic daily cannabis smokers, but these receptors significantly increased with sustained cannabis abstinence.

EXPECTED OUTCOME

After this session, participants will be able to: 1) outline recent developments in the science and use of cannabis; 2) list the clinical effects of acute and chronic cannabis exposure; and 3) explain the science of detecting and measuring cannabinoids in biological samples.

PLEASE REFER TO THIS GUIDE WHEN MAKING YOUR SESSION SELECTIONS

Each session is identified by a five- or six-digit session number.

EXAMPLE

Session **72105** is a:
A. Short Course
B. On Monday
C. In the Morning

SESSION TYPE

A. FIRST DIGIT
1 = Plenary Sessions
3 = Symposia
4 = AM Brown Bag Sessions
5 = PM Brown Bag Sessions
6 = Meet the Expert Session
7 = Short Courses
19 = Sunday AACC University Sessions

SESSION DAY

B. SECOND DIGIT
1 = Sunday
2 = Monday
3 = Tuesday
4 = Wednesday
5 = Thursday

SESSION TIME

C. THIRD DIGIT
1 = am
2 = pm
4 = Mid-day

The last two digits are AACC internal numbers.

Thursday | 10:30am - Noon

ORAL ABSTRACT SESSION

Emerging Topics in Laboratory Medicine

35101

Pennsylvania Convention Center - 201AB

Level: Intermediate
CE Credit: 1.5

MODERATOR

#Octavia M. Peck-Palmer, PhD
University of Pittsburgh Medical Center, Pittsburgh, PA

INTENDED AUDIENCE: This session is intended for: clinical chemists, clinical laboratorians, physicians, pathologists, clinicians, medical technologists, industry scientists and post-doctoral fellows.

SESSION OVERVIEW: AACC is dedicated to advancing the science and practice of laboratory medicine. A select group of members have reviewed and ranked the abstracts submitted for the AACC annual meeting for acceptance. The Annual Meeting Organizing Committee (AMOC) has reviewed the accepted abstracts in the area of Emerging Topics in Laboratory Medicine and have chosen four authors to present their research as oral presentations in a symposium. Each 30-minute presentation will be followed by a 5-minute question-and-answer session.

EXPECTED OUTCOME: After attending this session, participants will be able to: 1) describe and evaluate the Emerging Topics in Laboratory Medicine research; 2) relate the emerging Topics in Laboratory Medicine to the practice of laboratory medicine and pathology; and 3) integrate and translate the state of the art knowledge in emerging Topics in Laboratory Medicine into the roles and responsibilities of the clinical laboratory professional.

SPEAKERS

Simultaneous Detection of Zika, Chikungunya and Dengue Viruses in EDTA-Plasma Samples by RT-qPCR: If Their Vector is Versatile Their Detection Assays Also Should Be
*Gustavo Barra, PhD
Laboratório Sabin, Guara II, Brazil

Serum MicroRNA Expression Signatures Identified from Genome-Wide MicroRNA Profiling Serve as Novel Noninvasive Biomarkers for Diagnosis and Recurrence of Bladder Cancer
#Chuan-Xin Wang
Qilu Hospital, Shandong University, Jinan, China

Analytical Validation of a Clinical-Grade Next Generation Sequencing Assay for Assessing Allograft Injury in Solid Organ Transplant Recipients
#Robert Woodward, PhD
CareDx, Brisbane, CA

Thursday | 10:30am - Noon

Marijuana from the Street to the Clinic: Medicalization, Legalization and Unintended Consequences

35102
Pennsylvania Convention Center - Grand Ballroom

Level: Basic
CE Credit: 1.5

MODERATOR
#Gwendolyn McMillin, PhD, DABCC
University of Utah & ARUP Laboratories, Salt Lake City, UT

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

SESSION OVERVIEW: This session will provide a discussion of the impact of cannabis use in various populations. Particular attention will be paid to prenatal and perinatal use of marijuana, the impact of marijuana on neurodevelopment in different populations, and challenges for the clinical laboratory in the context of cannabis testing. Attendees will hear about these issues in the context of legalization of marijuana and its unintended consequences.

EXPECTED OUTCOME: After this session, participants will be able to: 1) discuss the impact of marijuana use on pregnant women and the developing fetus; 2) list different analytes that can be observed when testing for marijuana exposure; and 3) describe the challenges for the clinical laboratory in the context of legalized marijuana.

SPEAKERS

Counseling Women about Prenatal Marijuana Use: Weeding through the Data
#Torri Metz, MD
Denver Health Medical Center, Denver, CO

The Great Marijuana Experiment, the Developing Adolescent Brain and Challenges for the Clinical Laboratory
*Marilyn Huestis, PhD
University of Maryland School of Medicine, Baltimore, MD

Diagnostic Errors and Clinical Laboratories

35103
Pennsylvania Convention Center - 204AB

Level: Intermediate
CE Credit: 1.5

MODERATOR
#Mario Plebani, MD, FRCPath, FNACB
University Hospital of Padova, Padua, Italy

Supported by an educational grant from The Joint Commission.

INTENDED AUDIENCE: This session is intended for: laboratory professionals, lab directors, medical technologists, pathologists, clinicians and IVD scientists.

SESSION OVERVIEW: The session discusses diagnostic errors; the most common and dangerous errors in medicine, and the role the clinical laboratory plays in reducing the risk of laboratory-associated errors. Solutions to avoid errors in measures test ordering and interpretation will be provided. The use of process and measures to reduce the risk of errors in the total testing process will also be discussed.

EXPECTED OUTCOME: After attending this session, participants will be able to: 1) define diagnostic errors in medicine and discuss their importance; 2) outline the steps of the total testing process and identify those that are more vulnerable to errors; 3) describe how errors in test requesting and result interpretation can be prevented; and 4) utilize process and outcome measures to reduce laboratory-associated errors.

SPEAKERS

Diagnostic Errors: The Clinician Viewpoint
#Mark Graber, MD
Society to Improve Diagnosis Medicine (SIDM), Plymouth, MA

Diagnostic Errors: The Laboratory Viewpoint
#Michael Laposata, MD, PhD
University of Texas Medical Branch, Galveston, TX

Process and Outcome Measures to Reduce Laboratory-Associated Errors
#Mario Plebani, MD, FRCPath, FNACB
University Hospital of Padova, Padua, Italy

AACC BOOTH & STORE

STOP BY AND VISIT THE AACC BOOTH #2627

Stop by and visit booth #2627 to learn how AACC is at the forefront of new approaches in laboratory medicine, and how AACC is addressing the complexity of an evolving healthcare landscape and promoting new thinking and new skills. And while you're visiting, take a picture in AACC's photo booth.

AACC Booth Hours

Tuesday, August 2	9:30am - 5:00pm
Wednesday, August 3	9:30am - 5:00pm
Thursday, August 4	9:30am - 1:00pm

AACC Store Hours

Monday, August 1	9:00am - 5:00pm
Tuesday, August 2	9:00am - 5:00pm
Wednesday, August 3	9:00am - 5:00pm
Thursday, August 4	9:00am - 1:00pm

New AACC Store Releases Featured at the Annual Scientific Meeting

Three new releases from AACC Press are expected to be available at the meeting:

- *Contemporary Practice in Clinical Chemistry, Third Edition*
- *Understanding and Applying Clinical Laboratory Statistics*
- *Quick Guide to Blood Collection, Second Edition*

HELP THE NEXT GENERATION OF LABORATORY MEDICINE SCIENTISTS

AACC's **access** Program is a way for you to give back to the clinical chemistry profession. Initiatives such as international travel, student travel and membership grants support and encourage emerging laboratory scientists to excel in their profession and contribute to excellence in laboratory medicine. These grants bring laboratorians from all over the world to the AACC Annual Scientific Meeting, allowing them to network with other colleagues, attend cutting-edge scientific sessions and tour the AACC Clinical Lab Expo.

DONATE TODAY. HERE'S HOW:

- Go to www.aacc.org/about-aacc/access/contribute
- Call Stefanie Kleinman at +1 800.892.1400, ext. 1712, or at +1 202.835.8712
- Email Stefanie Kleinman at skleinman@aacc.org
- Ask an AACC rep at Conference Registration or the AACC Booth

Thank you to all donors who made the access Program's good works possible this year. A list of recent donors is found at www.aacc.org/about-aacc/access/donors.

As one past international travel grantee describes her experience:

"It was a great challenge for my future development as a laboratory specialist to visit this meeting. I acquired new ideas for diagnostics, learned new basic guidelines for quality assurance in the laboratory and created friendships with many colleagues."

– Dr. Rozaliya Todorova

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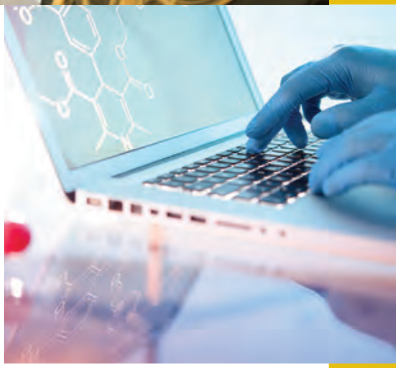
CONTINUING EDUCATION CREDIT INFORMATION



The American Association for Clinical Chemistry, Inc. (AACC) is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to provide continuing medical education for physicians. The AACC designates the following sessions for *AMA PRA Category 1 Credit*™ (refer to individual session descriptions to see number of designated credits):

- Plenary Sessions
- Short Courses
- Symposia
- Brown Bag Sessions
- Meet the Experts

AACC also designates the sessions listed for ACCENT® credit. AACC is an approved provider of continuing education (CE) for clinical laboratory scientists licensed in states that require documentation of CE, including California, Florida, Louisiana, Montana, Nevada, 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.

Important Note: Please read session descriptions to check if both type of credit ACCENT® and AMA PRA Category 1 Credit™ are available (indicated as "CE Credit" in this guide), or if only ACCENT® credit is available.

Attendees should only claim credit commensurate with the extent of their participation in activities.

CE CREDIT INFORMATION

PLEASE READ THESE NEW INSTRUCTIONS FOR OBTAINING YOUR CONTINUING EDUCATION CREDITS!

1. Locate the CONTINUING EDUCATION SESSION RECORDING FORM in the back of this Program Guide.
2. As you attend sessions, write the details on this form. **(Note: You will no longer be required to record a Continuing Education Code or "CE" Code to claim credit.)**
3. At the end of each day, go to **www.aacc.org/AMcredits,** where you will be instructed to evaluate each session attended that day; print (or save) your Verification of Participation (credit) certificate.

It is highly recommended that you claim your credits at the end of each day instead of after the meeting ends!

You may claim your credits on-site at the computer located at the ACCENT/CME booth (near the Registration area) or on your own computer, laptop, tablet, or other electronic device.

Special Notice for Florida Laboratory Professionals Receiving ACCENT® Credit

If you would like AACC to report your credits to CE BROKER, you must claim your credits within 30 days of the AACC Annual Meeting and provide your Florida license number when you go on-line to claim your ACCENT® credits.

Special Notice for California Clinical Laboratory Scientists Receiving ACCENT® Credit

When submitting your ACCENT® Verification of Participation certificate(s) to the California state licensing agency, be sure to add your signature in the designated space.

Eligibility to Earn Continuing Education Credit

You must be registered for the Annual 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 Meeting: Plenary, Symposia, Short Courses, Brown Bag Sessions, Meet the Experts, and the Poster Sessions. Individuals registered as Guest/Spouse or Expo Only are not eligible to earn credit for these sessions.

Certificate of Attendance

To obtain a certificate of attendance for the 68th AACC Annual Scientific Meeting, go to **www.aacc.org/AMcredits** and follow the instructions to obtain your Certificate of Attendance.

**QUESTIONS?
CONTACT THE AACC
PROFESSIONAL EDUCATION
DEPARTMENT AT
EDUCATION@AACC.ORG.**

FREQUENTLY ASKED QUESTIONS ABOUT OBTAINING CONTINUING EDUCATION CREDIT AND YOUR CERTIFICATE OF ATTENDANCE

How do I get credit for the scientific sessions (Plenary, Symposia, Short Courses, Meet the Experts, Brown Bag, and Poster Sessions)?
As you attend sessions, write them down in the Continuing Education Session Recording Form (found at the back of the Program Guide). At the end of each day, go online to: **www.aacc.org/AMcredits** and follow the instructions to evaluate each session you attended and then print (or save) your Verification of Participation (credit) certificate.

Will I need to record the CE code at the end of each session?
No, continuing education (CE) codes are no longer being used for continuing education credit.

Do I need to take any additional steps for my ACCENT® credit if I am a clinical laboratory scientist in Florida?
Yes, if you would like AACC to report your credits to CE BROKER, enter your Florida Department of Health license number when you go online to obtain your ACCENT® credits. You must obtain your credits within 30 days of the AACC Annual Scientific Meeting.

Do I need to take any additional steps for my ACCENT® credit if I am a clinical laboratory scientist in California?
Yes, you must sign your ACCENT® Verification of Participation certificate(s) before submitting to the California state licensing agency.

How do I get ACCENT® credit for Poster Sessions?
To obtain ACCENT® credit for Poster Sessions, go to **www.aacc.org/AMcredits** and follow the same steps as you would for claiming credits for other scientific sessions. There will be two poster sessions (Tuesday and Wednesday). Each session will offer 2.0 ACCENT® credits.

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.

Is ACCENT® credit available for the Clinical Expo?
No, ACCENT® credit is not awarded for the AACC Clinical Lab Expo attendance.

Can I obtain my continuing education credits on-site at the Annual Meeting?
Yes, there will be a computer at the ACCENT/CME booth, located near the Registration area. Or you may use your own computer, laptop, tablet, or other electronic device.

How do I get my Certificate of Attendance for the 68th AACC Annual Scientific Meeting?
Go to **www.aacc.org/AMcredits** and follow the instructions to obtain your Certificate of Attendance.

Who can answer additional questions about continuing education credit?
The AACC staff at the ACCENT/CME booth (located near the Registration area) will be glad to answer your questions, or you may send an email to education@aacc.org.

CONTINUING EDUCATION SESSION RECORDING FORM

OBTAINING YOUR CONTINUING EDUCATION CREDITS FOR THE SCIENTIFIC SESSIONS OF THE 68TH AACC ANNUAL SCIENTIFIC MEETING - JULY 31 THROUGH AUGUST 4, 2016

This form is for recording the scientific sessions you attended, i.e., Plenary Sessions, Symposia, Short Courses, Meet the Experts, Brown Bag, and Poster Sessions. All sessions, with the exception of the Poster Sessions, qualify for ACCENT® Credit and *AMA PRA Category 1 Credit*™, unless otherwise noted in the Program Guide. The Poster Sessions qualify for ACCENT® Credit only.

- As you attend sessions, write down the session information on this form (Note: You are no longer required to record a Continuing Education Code or "CE" Code).
- At the end of each day, go to **www.aacc.org/AMcredits** where you will be instructed to evaluate each session you attended and then to print (or save) your Verification of Participation (credit) certificate.
- You may claim your credits on-site at the computer located at the ACCENT/CME booth (near the Registration area) or on your own computer, laptop, tablet, or other electronic device.
- It is highly recommended that you claim your credits at the end of each day instead of after the meeting ends!
- Continuing education credits must be obtained within one year of the annual meeting (with the exception of Florida licensed laboratory professionals – see important note below).

Questions? Visit the ACCENT/CME booth (located near the Registration area), or contact the AACC Professional Education department at education@aacc.org.

IMPORTANT NOTE to Florida clinical laboratory scientists: If you have a Florida license and would like AACC to report your ACCENT credits to CE BROKER, you must go online and obtain your credits within 30 days of the AACC Annual Meeting. Credits claimed after 30 days will have to be self-reported to CE Broker.

Session Date	**Session Type** (Plenary, Symposia, Short Courses, Meet the Experts, Brown Bag, and Poster Sessions only).	**Session Number** (Note: Poster Sessions do not have session numbers.)	**Session Title**	**Credit Amount**

(Additional spaces for recording sessions are provided on other side.)

Session Date	Session Type (Plenary, Symposia, Short Courses, Meet the Experts, Brown Bag, and Poster Sessions only).	Session Number (Note: Poster Sessions do not have session numbers.)	Session Title	Credit Amount

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