PROGRAM GUIDE

AACC | Better health through laboratory medicine.

70TH AACC ANNUAL SCIENTIFIC MEETING & CLINICAL LAB EXPO

JOIN THE GLOBAL LABORATORY MEDICINE COMMUNITY

July 29–August 2, 2018
Chicago, IL USA

CONTENTS

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

OFFICES & MEETING SERVICES

REGISTRATION

LOCATION: South Exhibit Hall

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

AACC STORE

LOCATION: South Exhibit Hall

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

AACC Store Hours

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

HOUSING

LOCATION: South Exhibit Hall

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

INTERNATIONAL TRADE CENTER

Location: North Concourse Lobby

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

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

AACC MEMBERSHIP

Membership information and applications are available in the AACC Store, the AACC booth #2231, and at the AACC Conference Registration Desk. One-year Professional Member dues are $234, Professional Affiliate dues are $138, Transitional Dues are $79 and Trainee dues are $38. 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 EDUCATION AND ACCENT/CME

See page 111 for detailed instructions on obtaining ACCENT®/CME credit for attending the meeting and getting a certificate of attendance. This information can also be found at www.aacc.org/AMCredits18. If you have additional questions, visit the AACC booth #2231 or send an email to education@aacc.org.

AACC HEADQUARTERS OFFICE

LOCATION: Room N426A
Phone: 312.791.6600

Contact the AACC Office if you have general questions at the meeting.

Also use this number if you have an emergency situation.

AACC Headquarters Office Hours

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

Nursing Room Access — Visit the AACC Office for access to the designated nursing room facilities on site.

BAGGAGE CHECK

LOCATION: Bar South, Level 1

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

CLINICAL LAB EXPO

LOCATION: South Hall

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

Note: AACC permits individuals age 16 and 17 with a photo ID to register for and attend the 70th 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 6060 from any telephone in the convention center.
In hotels, dial 0 from any phone.

PRESS ROOM

LOCATION: N427BC
Phone: 312.791.6623 and 312.791.6624

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 are also 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 N139 to conduct interviews. Use of this room is by appointment only and subject to availability.

Press Conferences

Press conferences take place in Room N427A or N427D. Details of scheduled press conferences are available from the press room. Press conferences are open to all registered journalists.

PHOTOGRAPHY

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

LOCATION OF ACTIVITIES

McCormick Place

- Scientific Sessions, Plenary Sessions, Meet the Expert Sessions, Brown Bag Sessions, AACC University, Oral Abstract Sessions, President's Invited Sessions, Chair's Invited Session
- Special Sessions
  11002 John Carreyrou Discusses Bad Blood
  32229 Disruptive Technology Award Competition
- AACC Clinical Lab Expo
- Product Showcase
- Poster Sessions
- Registration
- Industry Workshop Theater Presentations
- Lecture Series Presentations

Hyatt Regency McCormick Place and/or Marriott Marquis Chicago

- AACC Opening Mixer & Division Networking Event
- AACC Governance Activities
- Affiliated Organization Meetings
- Industry Workshops
- Pre-registered Badge Pick-up

DOWNLOAD THE 2018 MOBILE APP

With hundreds of exhibitors to navigate and dozens of educational sessions to attend, planning your busy days at the 70th AACC Annual Scientific Meeting & Clinical Lab Expo is essential to making the most of this dynamic event.

Now you can do all that and more with the FREE 2018 AACC Annual Scientific Meeting & Clinical Lab Expo app. Available for smartphones, tablets and desktops (NEW) from the Apple App Store and on Google Play for Android devices.

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

To Download:

- Visit www.aacc.org/2018app.
- Search for the app on the Apple App Store or on Google Play.

SHUTTLE SCHEDULE

SHUTTLE BUS SERVICE TO MCCORMICK PLACE		
Date	**Service Hours**	**Frequency**
Saturday, July 28	11:30am–5:30pm*	Departures every 20 minutes
Sunday, July 29	7:00am–10:00am	Departures every 15 minutes
	10:00am–4:00pm	Departures every 30 minutes
	4:00pm–6:30pm*	Departures every 15 minutes
	7:00pm–8:30pm	Departures from Opening Mixer/ MPCC to route hotels
Monday, July 30	6:00am–10:00am	Departures every 15 minutes
	10:00am–3:30pm	Departures every 30 minutes
	3:30pm–6:30pm*	Departures every 15 minutes
Tuesday, July 31	6:00am–10:00am	Departures every 15 minutes
	10:00am–3:30pm	Departures every 30 minutes
	3:30pm–6:30pm*	Departures every 15 minutes
Wednesday, August 1	6:00am–10:00am	Departures every 15 minutes
	10:00am–3:30pm	Departures every 30 minutes
	3:30pm–6:30pm*	Departures every 15 minutes
Thursday, August 2	8:00am–10:00am	Departures every 15 minutes
	10:00am–12:00pm	Departures every 30 minutes
	12:00pm–3:00pm	Departures every 15 minutes
	3:00pm–6:00pm*	Departures every 30 minutes

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

Shuttle schedule may vary due to traffic and weather conditions.

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

ROUTES & BOARDING LOCATIONS

HOTELS IN WALKING DISTANCE TO/FROM THE CONVENTION CENTER

Marriott Marquis Chicago

Hyatt Regency McCormick Place

SPECIAL TRANSPORTATION

AACC Opening Mixer & Division Networking Event *Supported by Sekisui Diagnostics LLC* **— Hyatt Regency McCormick Place, Sunday, July 29**

Return transportation from the convention center from 7:00pm–8:15pm, every 15 minutes.

Morning Industry Workshops, Tuesday, July 31, and Wednesday, August 1

Transportation provided from route hotels to the Hyatt Regency McCormick Place and Marriott Marquis Chicago from 6:30am–8:30am, every 15–20 minutes.

Route #/Color	Hotel	Boarding Location
Route #1 — Red	Sheraton Chicago	Water St. across from lobby
	Loews Chicago	Walk to Sheraton Chicago on Water St.
	Embassy Suites Magnificent Mile	Walk to Sheraton Chicago on Water St.
	Intercontinental Magnificent Mile	Illinois St. entrance
	Courtyard Magnificent Mile	Across Ohio at St. Clair St.
Route #2 — Yellow	Hyatt Regency Chicago	Curbside lobby entrance
	Swissotel	Walk to Hyatt Regency on E. Wacker Dr.
	Fairmont Hotel	Walk to Hyatt Regency on E. Wacker Dr.
	Radisson Blu	Walk to Hyatt Regency on E. Wacker Dr.
Route #3 — Blue	Hilton Garden Inn Downtown	Lobby entrance
	Chicago Marriott	Walk to Hilton Garden Inn on Grand Ave.
	Embassy Suites Chicago Downtown	Walk to Hilton Garden Inn on Grand Ave.
	Omni Hotel	SW corner of Erie & Rush St.
Route #4 — Green	Courtyard River North	NW corner of Hubbard & Dearborn St.
	Westin River North	Across N. Clark St. at the driveway
	Renaissance Downtown	Lobby entrance on W. Wacker Dr.
	Cambria Hotel Chicago Loop — Theater District	Walk to Renaissance Downtown on W. Wacker Dr.
Route #5 — Orange	Hilton Chicago	8th St. entrance

HOTEL INFORMATION

Hotel	Address	Miles To Convention Center
Cambria Chicago Loop — Theater District	32 West Randolph Street	4
Chicago Marriott Downtown Magnificent Mile	540 North Michigan Avenue	4
Courtyard by Marriott Chicago Downtown/River North	30 East Hubbard Street	4
Courtyard by Marriott Magnificent Mile Chicago Downtown	165 East Ontario Street	4
Embassy Suites Chicago Downtown	600 North State Street	3
Embassy Suites Chicago Downtown Magnificent Mile	511 North Columbus Drive	5
Fairmont Chicago	200 North Columbus Drive	3
Hilton Chicago	720 South Michigan Avenue	2
Hilton Garden Inn Magnificent Mile	10 East Grand Avenue	4
Hyatt Regency Chicago	151 East Wacker Drive	3
Hyatt Regency McCormick Place — Co-Headquarters Hotel	2233 South Martin Luther King Drive	Adjacent
Intercontinental Chicago Magnicifent Mile	505 North Michigan Avenue	3.5
Loews Chicago	455 North Park Drive	3
Marriott Marquis Chicago — Co-Headquarters Hotel	2121 South Prairie Avenue	Adjacent
Radisson Blu Aqua Hotel	221 North Columbus Drive	5
Renaissance Chicago Downtown	1 West Wacker Drive	3.5
Sheraton Grand Chicago	301 East North Water Street	3
Swissotel	323 East Wacker Drive	3
Westin River North	320 North Dearborn Street	4

CHOOSE CHICAGO

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As of 5/22/2018

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GOVERNANCE & SPECIAL EVENTS

All conference sessions and the Expo will take place at the McCormick Place Convention Center (MCC).

TIME	MEETING NAME	HYATT	MARRIOTT	ROOM
SATURDAY, JULY 28, 2018				
1:00pm–5:30pm	SYCL Workshop		●	Great Lakes Ballroom A
6:00pm–8:00pm	SYCL Mixer		●	Great Lakes Ballroom C
SUNDAY, JULY 29, 2018				
11:30am–1:00pm	Critical and Point-of-Care Testing Division Executive Committee Meeting		●	Shedd A
12:00pm–1:30pm	23rd Annual Management Sciences and Patient Safety Division Leadership Symposium		●	Glessner House B
12:00pm–2:00pm	International Travel Grant Luncheon	●		Burnham BC
1:00pm–2:00pm	Pediatric and Maternal-Fetal Division Board Meeting		●	Astronomy
1:00pm–3:00pm	ABCC Clinical Chemistry Committee Meeting	●		Boardroom 4
1:00pm–3:00pm	ABCC Toxicology Committee Meeting	●		Boardroom 2
1:00pm–3:15pm	Proteomics and Metabolomics Division Mixer	●		Adler C
1:00pm–4:00pm	New Jersey/Philadelphia Local Sections Mini-Symposium		●	Great Lakes Ballroom E
1:30pm–4:30pm	Management Sciences and Patient Safety Division Executive Leadership Meeting		●	Glessner A
6:45pm–8:00pm	AACC Opening Mixer & Division Networking Event Supported by Sekisui Diagnostics LLC	●		Regency Ballroom A-E
7:45pm–10:30pm	AACC Awards Recognition Dinner	●		Prairie A
MONDAY, JULY 30, 2018				
6:30am–8:00am	NEO/Ohio Valley/Michigan Local Sections Breakfast		●	Glessner House B
7:00am–8:30am	AACC Southeast Local Section Breakfast		●	Glessner House C
7:30am–8:30am	Molecular Pathology Division Executive Board Meeting	●		Boardroom 2
8:00am–10:00am	NGSP/IFCC Manufacturer Forum		●	Daniel Burnham AB
8:00am–12:00pm	ABCC Board of Directors Meeting	●		Field ABC
12:00pm–1:30pm	Biomarkers of Acute Cardiovascular Disease Division Meeting		●	Anthropology
12:00pm–1:30pm	Endocrinology Division Luncheon Mixer	●		Grant Park A
12:00pm–2:00pm	Molecular Pathology Division Awards Judging	●		DuSable A
12:00pm–2:00pm	Therapeutic Drug Management and Toxicology Division Annual Meeting	●		Burnham AB
12:00pm–2:00pm	ABCC Molecular Diagnostics Committee Meeting	●		DuSable C
12:00pm–2:30pm	Clinical Translational Science Division Lunch and Learn		●	Water Tower AB
1:00pm–2:00pm	Student Oral Poster Contest			McCormick Place N228
1:00pm–5:00pm	Industry Division Membership Meeting	●		Hyde Park AB
2:15pm–3:30pm	Student Poster Contest			McCormick Place N227AB
5:30pm–6:30pm	Lipoproteins and Vascular Diseases Division Membership Reception and Poster Viewing		●	Grand Horizon Ballroom A

TIME	MEETING NAME	HYATT	MARRIOTT	ROOM
MONDAY, JULY 30, 2018 cont.				
5:00pm–7:00pm	CLSI U.S. TAG for ISO/TC212		●	Geography
5:30pm–7:00pm	CLSI Member Open House		●	Culture
5:30pm–7:30pm	IFCC C-STFT Meeting	●		Erie
6:15pm–7:45pm	ABCC-SYCL Joint Reception		●	Chicago Water Tower AB
6:30pm–9:30pm	Lipoproteins and Vascular Diseases Division Dinner Lecture and Awards		●	Grand Horizon Ballroom B
7:30pm–9:00pm	Joint Mixer of the Clinical Translational Science, Informatics, and Pediatric and Maternal-Fetal Divisions		●	Architecture
TUESDAY, JULY 31, 2018				
7:00am–9:00am	AdvaMedDx DX Leaders Unplugged		●	Water Tower AB
7:30am–9:00am	Capital Local Section Breakfast		●	Marina City
9:00am–11:00am	Division of Animal Clinical Chemistry Business Meeting	●		Adler C
11:30am–3:00pm	History of Clinical Chemistry Division Luncheon	●		Burnham B
11:30am–3:30pm	Informatics Division Membership Meeting and Luncheon	●		Grant Park A
12:00pm–1:00pm	Lipoproteins and Vascular Diseases Division Executive Committee Meeting		●	Algebra Board Room
12:00pm–1:30pm	IFCC Corporate Members Meeting	●		Field AB
12:00pm–2:00pm	Joint Luncheon of the Molecular Pathology and Personalized Medicine Divisions	●		Prairie B
12:30pm–3:00pm	Division of Animal Clinical Chemistry Presentations	●		Grant Park A
1:00pm–2:30pm	Pediatric and Maternal-Fetal Meeting: Current and Future Activities of NHANES and Collaborative Opportunities for AACC Members	●		Regency Ballroom C
4:30pm–6:30pm	AACC Midwest Local Section Mixer		●	Glessner House A
5:30pm–7:00pm	Joint Mixer of the Clinical and Diagnostic Immunology and Tumor Markers and Cancer Diagnostics Divisions		●	Daniel Burnham AB
5:30pm–7:30pm	CDC Standarization Forum		●	Physiology
5:30pm–7:30pm	Strategically Transforming Molecular Testing Today: Centralization of Routine Testing and Decentralization of Urgent Testing		●	Great Lakes Ballroom ABC
5:30pm–11:00pm	Critical and Point-of-Care Testing Division Mixer, Meeting and AfterGlow Events	●		Regency Ballroom AB
6:00pm–7:30pm	Chicago Local Section Awards Dinner		●	Marina City
6:00pm–8:00pm	Mass Spectrometry and Separation Sciences Division Mass Spectacular		●	Great Lakes Ballroom FG
6:00pm–9:30pm	Nutrition Division Symposium		●	Water Tower A
WEDNESDAY, AUGUST 1, 2018				
7:00am–8:30am	New Clinical Laboratory Practice Recommendations for the Use of Cardiac Troponin in Acute Coronary Syndrome		●	Grand Horizon Ballroom
7:30am–9:30am	IFCC CPD Executive Meeting	●		Field AB
8:00am–10:00am	C-Peptide/Insulin Standardization Manufacturer Meeting		●	Daniel Burnham AB
12:00pm–1:30pm	IFCC ETD Executive Meeting	●		Boardroom 2
12:00pm–2:00pm	AACC Academy Annual Awards Luncheon and Membership Meeting	●		Prairie B
12:15pm–1:45pm	AACC Rocky Mountain Local Section Meeting	●		Adler AB
6:00pm–7:30pm	Hematology and Coagulation Mixer and Business Meeting		●	Water Tower B
THURSDAY, AUGUST 2, 2018				
7:30am–10:00am	16th Annual Point-of-Care Coordinators Forum			McCormick Place S106

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

SCIENTIFIC POSTER SESSIONS

Posters of accepted abstracts can be viewed on the Expo show floor of McCormick Place on Tuesday, July 31 and Wednesday, August 1. All posters will be displayed from 9:30am until 5:00pm. Presenting authors for all posters will be in attendance from 12:30pm until 1:30pm. Please refer to the onsite Abstracts Titles Guide for a complete schedule of posters.

TUESDAY, JULY 31

9:30am–5:00pm

Cancer/Tumor Markers	A-001 – A-064
Cardiac Markers	A-065 – A-113
Clinical Studies/Outcomes	A-114 – A-151
Electrolytes/Blood Gas/Metabolites	A-152 – A-165
Endocrinology/Hormones	A-166 – A-231
Factors Affecting Test Results	A-232 – A-293
Hematology/Coagulation	A-294 – A-328
Immunology	A-329 – A-391

WEDNESDAY, AUGUST 1

9:30am–5:00pm

Animal Clinical Chemistry	B-001 – B-011
Automation/Computer Applications	B-012 – B-045
Infectious Disease	B-046 – B-134
Lipids/Lipoproteins	B-135 – B-161
Management	B-162 – B-210
Mass Spectrometry Applications	B-211 – B-265
Molecular Pathology/Probes	B-266 – B-294
Nutrition/Trace Metals/Vitamins	B-295 – B-309
Maternal-Fetal, Pediatrics and Fetal Clinical Chemistry	B-310 – B-327
Point-of-Care Testing	B-328 – B-365
Proteins/Enzyme	B-366 – B-394
TDM/Toxicology/DAU	B-395 – B-444
Technology/Design Development	B-445 – B-500

DIVISION POSTER WALKS

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

TUESDAY, JULY 31

12:30pm–1:30pm

DIVISION	TOUR LEADER(S)
Biomarkers of Acute Cardiovascular Disease	David Gaze, MD, PhD
Clinical and Diagnostic Immunology	Evan Ntrivalas, MD, PhD
Clinical Translational Science	Octavia Palmer, PhD and Zhen Zhao, PhD
Endocrinology	James Faix, MD
Hematology and Coagulation	John V. Mitsios, PhD
Tumor Markers and Cancer Diagnostics	Martin Fleisher, PhD and Lakshmi Ramanathan, PhD

WEDNESDAY, AUGUST 1

12:30pm–1:30pm

DIVISION	TOUR LEADER(S)
Critical and Point-of-Care Testing	Sarah Riley, PhD
Informatics	Christopher McCudden, PhD
Management Sciences and Patient Safety	Christine Schmotzer, MD
Mass Spectrometry and Separation Sciences	Frederick Strathmann, PhD
Nutrition	Irina Kirpich, PhD
Pediatric and Maternal-Fetal	Mark Kellogg, PhD and Amy Pyle-Eilola, PhD
Proteomics and Metabolomics	Erin Kaleta, PhD

ALL POSTERS ARE LOCATED ON THE EXPO SHOW FLOOR, POSTER THEATER.

AACC STUDENT POSTER CONTEST

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 presentations on the basis of scientific content, originality/novelty and presentation (including slide appearance, verbal presentation, style and clarity). Four awards will be given: first place, second place and two honorable mentions.

The second session of the competition consists of poster presentations. Over 70 posters will be displayed and reviewed. Judges will evaluate each poster individually in timed rounds. Student presenters are rated on their ability to convey their work concisely. Posters are scored on scientific merit and oral and visual presentation. Four awards will be given: first place, second place and two honorable mentions.

MONDAY, JULY 30

McCormick Place

ORAL PRESENTATIONS

1:00pm–2:00pm

Room N228 — North Building, Level 2

POSTER PRESENTATIONS

2:15pm–3:30pm

Room N227AB — North Building, Level 2

STUDENT ORAL CONTEST PRESENTATIONS

De Novo Amino Acid Sequencing of M-proteins by 21 Tesla FT-ICR MS Using Top-Down and Middle-Down MS/MS Techniques

Lidong He, PhD, University of Virginia

Impact of Cross-Sex Hormone Therapy on Common Laboratory Tests in Transmen and Transwomen

Jeffrey SoRelle, University of Texas Southwestern Medical Center

Assay Development and Evaluation of Serum Aggrecan and Versican as Novel Biomarkers for Thoracic Aortic Aneurysm and Dissection

Christopher Koch, Cleveland State University, Cleveland Clinic Lerner Research Institute

Targeting Production of a Fast-Forming Proteotypic Peptide for Rapid Quantification of Apolipoprotein A1 in Plasma by LC-MS/MS

Junyan Shi, PhD, University of British Columbia

2018 STUDENT POSTER PRESENTERS

A-007 Blake Ebert
Towards Development of an Exosomal Protein Biomarker Signature to Monitor Cancer Progression in Uveal Melanoma

A-028 Dan-dan Li
Methylation of NFBP1 as a Novel Marker for the Detection of Plasma Cell-Free DNA in Breast Cancer Patients

A-044 Penn Muluhngwi
Identification of Oncogenic Driver Mutations in Non-Small-Cell Lung Cancer Patients

A-046 Stacy Kenyon
Clinical Correlation between Serum Biomarkers CA27.29 and CA15-3 and Disease Status in Patients with a History of Advanced Breast Cancer

A-069 Jieli Li
Early Detection of Doxorubicin-Induced Cardiotoxicity with High-Sensitivity Troponin T in Chemotherapy-Treated Patients

A-076 Ian Gunsolus
High-Sensitivity Cardiac Troponin I Whole Blood and Plasma Specimen Comparisons Measured by the ET Healthcare Pylon Point-of-Care Assay

A-086 Josko Ivica
Eart-Type Fatty Acid-Binding Protein Measurements to Aid in Interpreting Abnormal and Non-Changing Cardiac Troponin Concentrations

A-094 Dan-Dan Li
Serum Gamma-Glutamyltransferase Levels are Associated with Cardiovascular Risk Factors in China: A Nationwide Population-Based Study

A-103 Ian Gunsolus
Susceptibility of High Sensitivity Cardiac Troponin I and Gen 5 cTnT Assays to Biotin Interference

A-108 Christopher Farnsworth
Poor Correlation and Concordance Between NT-proBNP and BNP in Patients with Suspected Heart Failure

A-113 Christopher Koch
Assay Development and Evaluation of Serum Aggrecan and Versican as Novel Biomarkers for Thoracic Aortic Aneurysm and Dissection

A-139 Hiroaki Furuyama
An ELISA Serum Assay Using Monoclonal Antibodies Against Amyloid Beta Aggregates

A-145 Maryam Salehi
Combined Approach for Validation of the Pneumatic Tube Systems

A-161 Valentinas Gruzdys
Evaluation of a Serum Ammonia Assay for Urinary Ammonium Measurement to Assess Renal Acidification Impairment

A-162 Junyi Mei
Use of a New Data Mining Technique Demonstrates Highly Predictable Periods of Accurate and Less Accurate Point-of-Care Testing

A-163 Dan Wang
An Equation for Correction of Potassium in Hemolyzed Specimens

A-177 Junyi Mei
Derivation of Truer Metrics of Long Term Patient Variation of Three Contemporary Hemoglobin A1c Assays Demonstrates Both Borderline and Highly Acceptable Analytical Performance

A-192 Huang Hengjian
The Correlation Regression Model Between HbA1c and Glycated Albumin in Chinese Population

A-208 Erin Schuler
In Pursuit of an Optimal Vitamin D Assay in the Era of High Patient Volume and Complexity

A-224 Jason Robinson
Macroprolactin is Not Predicted by Prolactin Concentrations greater than 100 µg/L Above Validated Prolactin Reference Intervals

A-229 Kwabena Sarpong
Spironolactone Metabolite Causes Falsely Increased Progesterone in the Abbott Architect Immunoassay

A-254 Maximo Marin
Effect of Open Containers on Stability of Common Plasma Chemistries Measured on Total Automation Lines

A-263 Grace Williams
Assessment of Panhematin Interference in Commonly Ordered Chemistry Tests

A-281 Dustin Bunch
Comparison of Multiple Analytical Approaches for Determining Reference Intervals

A-288 Michelle Parker
HbA1c Platforms are Variably Affected by Increasing Lipemia

A-289 Nicola Rutherford
Interference of Acetone with the Alkaline-Picrate Method for Blood Creatinine Measurement on the Abbott Architect

A-293 Jeannie Stubblefield
Prevalence of Biotin Interference in Samples Received for Routine Thyroid Function Testing

A-351 Katherine Turner
Lowest is Not Always the Best: An International Serum Protein Electrophoresis Accuracy Study

A-384 Kornelia Galior
Retrospective Review of Infliximab Quantitation and Anti-Infliximab Test Results

B-004 Maria Almeida
Haematological Profile in Capuchin Monkey Females *Sapajus libidinosus* According to Ovarian Cycle

B-026 Jayson Pagaduan
Validation of Procalcitonin Assay on Abbott Architect i1000

B-034 Shivani Sivasankar
Use of National EHR Data Warehouse to Identify Inappropriate HbA1c Orders for Sickle-Cell Patients

B-083 Wondimu Ashgre
Awoke In Vitro Starvation Model for Assessing Phenotypic Drug Tolerance on Mycobacterium Tuberculosis Lineages in Ethiopia

B-088 Xuejiao Hu
Integrating Exosomal MicroRNA and Electronic Health Data to Promote Tuberculosis Diagnosis

B-106 Heather Robison
A Machine Learning Approach to Inflammatory Cytokine Profiling Reveals Diagnostic Signatures for Latent Tuberculosis Infection and Reactivation Risk Stratification

B-142 Victoria Higgins
Postprandial GLP-1 Response to a High-Fat Meal is Blunted in Obese Adolescents with Insulin Resistance and Metabolic Dyslipidemia

B-170 Yu-ping Zeng
Biological Variation of Serum Glycated Albumin in Chinese Healthy Population

B-173 Min Duan
Imprecision Investigation and Analysis of Internal Quality Control of Five Hepatic Function Tests in Clinical Laboratories of China

B-184 Yu-ping Zeng
Application of Sigma-Metric Run Size Nomogram to Establish Multistage Bracketed SQC of 8 Enzymes

B-189 Jeffrey SoRelle
Impact of Cross-Sex Hormone Therapy on Common Laboratory Tests in Transmen and Transwomen

B-190 Junyi Mei
Comparison of Rates of Nearly Simultaneous Identical Central Laboratory Testing Associated with Blood Gas/Electrolyte/Metabolite Point-of-Care Testing in Two Adult Intensive Care Units

B-193 Alexandra Budhai
Anchoring Method Performance Evaluations with the Sigma Calculation De-emphasizes the Question: Is the Assay Fit for Purpose?: How much better are 10 sigma than 5 sigma (or 5 versus 2) assays?

B-195 Wenbo Luo
Performance Comparisons Among Homogeneity and Two Kind Heterogeneity Systems Used in Laboratories

B-197 Mahesheema Ali
Utilization of Laboratory Testing Algorithm for Celiac Disease in a Pediatric Hospital

B-206 Kornelia Galior
Evaluation of Positive Frequency as a Quality Indicator for Assay Performance

B-208 Eric Xu
Derivation of Short Term Biologic Variation of Platelets in Inpatients with Thrombocytopenia

B-219 Stefani Thomas
Measurement of Thiopurine Metabolites in Erythrocytes to Optimize Thiopurine Therapy

B-224 Lillian Sturmer
Evaluation of a High Sensitivity Estrone and Estradiol Assay by LC-MS/MS

B-235 Rongrong Huang
Measurement of Serum Iohexol by LC-MS/MS to Assess Glomerular Filtration Rate in Kidney Transplant

B-244 Maryam Salehi
Investigating the Interferences of Lidocaine and its Primary Metabolites for Cocaine Metabolites using Liquid Chromatography Mass Spectrometry

B-250 Y. Ruben Luo
A Novel Derivatization-Based LC-MS/MS Method with High Sensitivity for Quantitation of Cannabinoids in Breath Samples

B-252 Lisa Johnson
Hydroxytyrosol Stability in Urine and Synthetic Urine Matrices

B-254 Lidong He
De Novo Amino Acid Sequencing of M-proteins by 21 Tesla FT-ICR MS Using Top-Down and Middle-Down MS/MS Techniques

B-263 Junyan Shi
Targeting Production of a Fast-Forming Proteotypic Peptide for Rapid Quantification of Apolipoprotein A1 in Plasma by LC-MS/MS

B-271 Maitê Kolarik
Frequency Distribution of p210 p190 and p230 Fusions Transcripts on a BCR-ABL1 Laboratory Routine

B-272 Camila Nobre
Whole-Exome Sequencing as First-tier Testing Approach for Identification of the Causal Mutations in Hereditary Spherocytosis Candidate Genes and the Use of Non-Sanger-based Methods for Validation of the Findings

B-275 Grace Williams
Analytical Validation of a MALDI-ToF Pharmacogenomic Assay

B-290 Gustavo Barra
The Serum Has a Higher Yield of Janus Kinase 2 V617F Somatic Mutation Compared to the Paired EDTA-whole Blood Sample

B-309 Lisa Johnson
Analysis of Biomarkers of Calcium Metabolism in Bariatric Surgery Patients

B-316 Houman Tahmasebi
CALIPER Pediatric Reference Intervals for Siemens Biochemical Assays on ADVIA XPT and Dimension EXL with LM Integrated Chemistry Systems

B-321 Lisa Johnson
Rapid Decline of Fetal Lung Maturity Testing at the University of Minnesota

B-342 Amanullah Zadran
Principles and Practice of Point-of-care Environmental Stress Testing: Static and Dynamic Robustness of a WBC-Differential Instrument and its Role in Detecting Highly Infectious Diseases

B-359 Kendall Cradic
Evaluation of a Point-of-Care Assay for Fecal Calprotectin

B-361 Ambalika Tanak
Electrochemical Detection of Parathyroid Hormone as a Point-of-care Testing Device Towards Clinical Applications

B-367 Ashraf Duzan
Targeting TMAO Biosynthesis. Discovery of New Novel TMA Lyase Inhibitors to Protect Atherosclerosis Lesion MI and Stroke

B-368 Álvaro Gragera-Martínez
Interference of Daratumumab in the Measurement of the Monoclonal Peak in Patients with Multiple Myeloma

B-402 Jieli Li
A Rapid Ultra-performance LC-MS/MS Assay for Determination of Serum Unbound Fraction of Voriconazole in Cancer Patients

B-414 Carmen Gherasim
Genotyping of Selected Alleles Involved in Tramadol Metabolism Provide Evidence for Additional Factors Beyond CYP2D6-inffered Phenotype that may contribute to Observed Metabolite Patterns

B-419 Jason Robinson
Therapeutic Drug Monitoring of Lipophilic Immunosuppressive Drugs during Hyperlipidemia

B-422 Anu Maharjan
Multiple Drug Classes and Metabolites: Qualitative Analysis in Serum/Plasma by LC-MS/MS

B-435 Claire Knezevic
General Unknown Screening of Urine Samples with LC-MS/MS

B-444 Laura Smy
Urine Buprenorphine and Metabolite Patterns in a Large Cohort of Patients

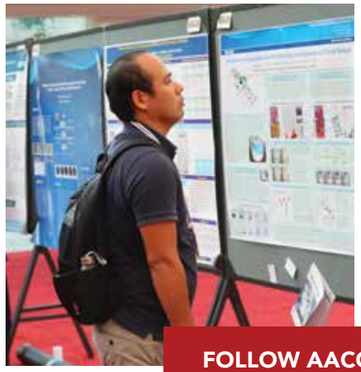
B-453 Jieli Li
Validation of High Sensitive Troponin T in Roche Cobas 8000 System

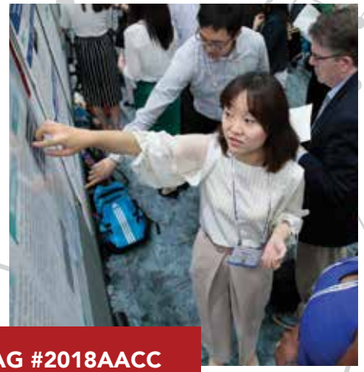
B-455 Michael Brody
Kinetics Study of Hemolysis: Evaluation of the Hemolytic Strength of Lytic Reagents

B-474 Jennifer Taher
A Global Multi-site Sigma-metric Assessment of 18 Measurands on the Abbott Alinity ci System

B-485 Jake Cosme
Evaluation of On-Board Storage and Method Performance for 8 Assays on the Abbott Alinity ci Integrated Analyzer

B-500 Yaling Zhao
Accurate and High-Throughput Targeted Quantification of CpG Methylation without DNA Extraction and Bisulfite Treatment





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AACC ACADEMY HONORS
NEW ACADEMY FELLOWS

AACC Academy is proud to announce its Academy Fellows. As members of AACC Academy, these distinguished scientists are all doctorate-level professionals dedicated to enhancing the scholarship and practice of laboratory medicine. New Fellows will be honored during the Academy Awards Luncheon on Wednesday, August 1, during the AACC Annual Meeting.

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

ACADEMY FELLOWS ACCEPTED SINCE JUNE 2017

Tim Cao, MD, PhD
Bolonghoge Dayanath, MD
James Fuller, PhD
Erin Kaleta, PhD
Thomas Kampfrath, PhD
Amy Karger, MD, PhD
Pierre-Luc Mallet, PhD
Chandrika Meegama, MD
Narasimhan Nagan, PhD
Jason Park, MD, PhD
Arpit Patel, PhD
Michael Piklski, PhD
Luz Antonia Silva, PhD
Steven Truscott, PhD
Alan Weir, MD
Yan Victoria Zhang, PhD

ASSOCIATE FELLOWS ACCEPTED SINCE JUNE 2017

Bodhraj Acharaya, PhD
Mahesheema Ali, PhD
Sultan Alouffi, PhD
Kin Fan Chau, PhD
Hema Ketha, PhD
Adam McShane, PhD
Mayowa Osundiji, PhD
Aurelian Udristioiu, MD, PhD
Yanhua Zhang, PhD

2018 AACC AWARD WINNERS

Wallace H. Coulter Lectureship Award
BRIAN DRUKER, MD
Oregon Health & Science University

Outstanding Lifetime Achievement Award in Clinical Chemistry and Laboratory Medicine
D. ROBERT DUFOUR, MD
George Washington University School of Medicine and Health Sciences

Outstanding Contributions in Education
THOMAS ANNESLEY, PhD
University of Michigan

Outstanding Contributions Through Service to the Profession of Clinical Chemistry
FRED APPLE, PhD
Hennepin County Medical Center

Outstanding Scientific Achievements by a Young Investigator
CHRISTINA LOCKWOOD, PhD
University of Washington

AACC Past President's Award
MICHAEL BENNETT, PhD
Children's Hospital of Philadelphia

AACC-AACC Academy Award for Outstanding Contributions to Clinical Chemistry in a Selected Area of Research
ALLAN JAFFE, MD
Mayo Clinic

AACC Academy Professor Alvin Dubin Award for Outstanding Contributions to the Profession and the Academy
LORALIE LANGMAN, PhD
Mayo Clinic

AACC Academy George Grannis Award for Excellence in Research and Scientific Publication
PHEDIAS DIAMANDIS, MD, PhD
University Health Network and Princess Margaret Cancer Centre

Outstanding Legislator Award
REPRESENTATIVE KEVIN YODER, JD
R-Kansas

2018 DISTINGUISHED
ABSTRACTS AWARDS

The AACC Academy is pleased to announce the winners of the 2018 Distinguished Abstracts Awards. A group of Fellows selected these 24 abstracts for their scientific excellence from a pool of 887 abstracts accepted for the AACC Annual Scientific Meeting. Winning abstracts will display the Academy blue ribbon during the poster sessions.

A-100 Ibrahim Hashim, Dallas, TX
The Implementation of the High Sensitivity Troponin T (hs-TnT) Generation Five Assay at a Large Teaching County Hospital. A multi-speciality effort.

A-103 Ian Gunsolus, Minneapolis, MN
Susceptibility of High Sensitivity Cardiac Troponin I and Gen 5 cTnT Assays to Biotin Interference

A-106 Ian Gunsolus, Minneapolis, MN
Baseline High-Sensitivity Cardiac Troponin I Aids in Risk Assessment in Patients with Diabetes, Hypertension, and Dyslipidemia without Myocardial Infarction

A-107 Karen Schulz, Minneapolis, MN
Sex-Specific 99th Percentiles Derived from the AACC Universal Sample Bank for 8 High-Sensitivity Cardiac Troponin Assays

A-211 Mark Kushnir, Salt Lake City, UT
Free 25 Hydroxy Vitamin D by LC-MS/MS: Reference Intervals in Healthy Adults and Observations in Pre-/Post-Menopausal Women

A-213 Hyosoon Park, Seoul, South Korea
Three Alternative Makers of Hyperglycemia for Early Detection of Diabetes: Glycated Albumin, 1,5-anhydroglucitol, and Fructosamine

A-281 Dustin Bunch, New Haven, CT
Comparison of Multiple Analytical Approaches for Determining Reference Intervals

A-283 Heather Stieglitz, Chapel Hill, NC
Biotin Interference in 21 Immunoassays Performed on the Vitros5600

A-321 Jamie Ashby, Birmingham, England, United Kingdom
QIP-MS: A Specific, Sensitive, Accurate, and Quantitative Alternative to Electrophoresis for the Identification of Intact Monoclonal Immunoglobulins

A-328 David Barnidge, Rochester, MN
Using QIP-MS to Distinguish a Therapeutic mAb from an Endogenous M-protein in Patients Being Treated for Multiple Myeloma

B-039 Ron Schifman, Tucson, AZ
Automated Laboratory-based Population Health System for Hepatitis C Birth Cohort Screening

B-041 Christopher McCudden, Ottawa, ON, Canada
A non-parametric quantile regression method to establish continuous reference intervals

B-117 Chiung-Guei Huang, Taoyuan, Taiwan
Transcriptome Differences in Normal Human Bronchial Epithelial Cells in Response to Influenza A pdmH1N1 or H7N9 Virus Infection

B-253 Yu Zhou, Cleveland, OH
An LC-MS/MS Assay with Online Extraction for Measurement of Testosterone in Serum or Plasma

B-254 Lidong He, Tallahassee, FL
De Novo Amino Acid Sequencing of M-proteins by 21 Tesla FT-ICR MS Using Top-Down and Middle-Down MS/MS Techniques

B-256 Danni Li, Minneapolis, MN
Association of Plasma Metabolites with Brain MRI Measures in the Atherosclerosis Risk in Communities-Neurocognitive Study (ARIC-NCS)

B-307 Uttam Garg, Kansas City, MO
Significant Loss of Blood Amino Acids and Free Carnitine in Newborns Receiving Continuous Renal Replacement Therapy (CRRT)

B-327 Victoria Higgins, Toronto, ON, Canada
CALIPER Continuous Reference Curves for Biochemical Markers: Advantages over Traditional Partitioned Reference Intervals

B-354 Martha Lyon, Saskatoon, SK, Canada
A Novel Tool to Relate Glucose Meter Performance to Clinical Outcome: The Insulin Dose Error Assessment (IDEA) Grid

B-355 Isabel Rodriguez Martin, Sevilla, Spain
Evaluation of Health Outcomes After the Implementation of Rotational Thromboelastometry in Patients Undergoing Cardiac Surgery

B-361 Ambalika Tanak, Richardson, TX
Electrochemical Detection of Parathyroid Hormone as a Point-Of-Care Testing Device Towards Clinical Applications

B-434 Youli Lu, Shanghai, China
A Liquid Chromatography Tandem Mass Spectrometry method for the Simultaneous Screening and Quantification of 10 Analgesics and Narcotics from Micro Plasma Collection Card

B-437 Adam Ptolemy, London, ON, Canada
Prevalence and Trends in Drug Use: Urine Drug Screening Positivity Rates for Community-based Patients in Ontario, Canada, from 2014 to 2017

B-493 C. Taylor, Crumlin, Northern Ireland, United Kingdom
Application of a Biochip Array to Simultaneously Measure Analytes Related to Metabolic Syndrome in Serum with the Use of the New Random Access, Fully Automated Evidence Evolution Analyzer

TOPIC TRACK SESSIONS

Eight topic tracks highlight different dynamic areas of clinical laboratory medicine. Check out the sessions that support your area of interest, and make the most of your educational experience in Chicago.

ENDOCRINOLOGY

	SESSION NUMBER	DAY
Refining Measurement of Hemoglobin A1c (HbA1c): Do We Know What It Means?	32130	Monday
Clinical Assay Issues: What Endocrinologists Will Ask You	33107	Tuesday
TICKET Current Challenges of PTH Testing and Approaches to Developing a Reference Measurement Procedure	43107/53207	Tuesday
A Team Approach to Reducing Diagnostic Error: Optimizing Care for Patients with Suspected Primary Aldosteronism	34102	Wednesday
Endocrine-Disrupting Chemicals in Children and Environmental Health—Emerging Opportunities for the Clinical Laboratory	34212	Wednesday
TICKET Measuring Low Estrone and Estradiol Levels in the Clinical Lab: Why, When and How?	44102/54202	Wednesday
TICKET Oxytocin Testing: Status and Clinical Applications	44103/54203	Wednesday
Toward Improving Parathyroid Hormone Measurements and Management of the Chronic Kidney Disease–Mineral and Bone Disorder (CKD-MBD)	35106	Thursday

GENOMICS/GENETICS

	SESSION NUMBER	DAY
TICKET Practical Next-Generation Sequencing: A Toolkit for Laboratorians	193006	Sunday
Quality Control and Quality Assurance in the Era of Next-Generation Sequencing	32103	Monday
Emerging Clinical Applications of Circulating DNA Analysis	32415	Monday
TDM and Pharmacogenomics: Complementary Tools for Precision Medicine	32222	Monday
Real-Time Next-Generation Sequencing for Infectious Diseases: Challenges and Opportunities	33111	Tuesday
Clinical Cardiovascular Genomics Bootcamp	33219	Tuesday
Sequence Gazing: Somatic Variant Calling and Interpretation for Next-Generation Sequencing	35104	Thursday

MASS SPECTROMETRY

	SESSION NUMBER	DAY
TICKET The Secrets to Success: Implementing Robust LC-MS/MS Methods in the Clinical Laboratory	193007	Sunday
Quantitative Protein Mass Spectrometry: A Step-by-Step Guide to Designing Your First Assay	32106	Monday
TICKET Quantitative Analysis of Low-Abundance Protein Targets by Immuno-Affinity Enrichment and Multiple Reaction Monitoring	42109/52209	Monday
TICKET Next-Generation Clinical Mass Spectrometry Here and Now	42110/52210	Monday
Liquid Chromatography Method Development to Enable High-Quality LC-MS Assays	33217	Tuesday
TICKET A Beginner's Guide to Developing Clinical Mass Spectrometry Assays	43114/53214	Tuesday
Mass Spectrometry Applications for Monoclonal Antibody Therapeutics: Which Road to Travel	34103	Wednesday
TICKET Liquid Chromatography Tandem Mass Spectrometry (LC-MS/MS) Analysis of Testosterone and Estradiol in Serum	44123/54223	Wednesday
ICP-MS: Essentials and Interactive Case Studies on Elemental Testing in Clinical Laboratories	35105	Thursday

PEDIATRIC/MATERNAL-FETAL

	SESSION NUMBER	DAY
Update on Thyroid Disease in Pregnancy	32102	Monday
TICKET Update on Gestational Diabetes Mellitus: Current National and International Diagnostic Criteria	42122/52222	Monday
TICKET Inborn Errors of Metabolism: From Newborn Screening to Diagnosis	43125/53225	Tuesday
New Approaches for Drug Screening in Pediatrics	34106	Wednesday
Accurate Measurement of Thyroid Hormones in Disease and Pregnancy	34107	Wednesday
Endocrine Disrupting Chemicals in Children and Environmental Health—Emerging Opportunities for the Clinical Laboratory	34212	Wednesday
Jumping the Pediatric Reference Interval Hurdles	35109	Thursday

POINT-OF-CARE TESTING

	SESSION NUMBER	DAY
TICKET Rise and Shine! The Essential Elements of a Point-of-Care Testing Boot Camp—Part 1	191003	Sunday
TICKET Afternoon Reveille! Continuing the Essential Elements of a Point-of-Care Testing Boot Camp—Part Two	192009	Sunday
TICKET Blood Gas Testing: Basics and Beyond	192012	Sunday
Challenges of Implementing Rapid HIV Testing into an HIV Testing Algorithm	32104	Monday
Enhancing Patient Care Using POCT: Tackling Current and Future Challenges	32418	Monday
Guidance for Evaluating the Hypoxemic Patient in the Critical Care Setting	33122	Tuesday
TICKET Emergency Department Workflows: Data-Driven Approaches to Common Questions	43106/53206	Tuesday
TICKET There's No Place Like Home: Exploring Hospital at Home Care Strategies	43108/53208	Tuesday
Innovations in Body Fluid Testing	34216	Wednesday

PRECISION MEDICINE & ONCOLOGY	SESSION NUMBER	DAY
Implementing a High(er) Sensitivity Cardiac Troponin Assay: Lessons Learned from One Institution about Analytical Validation and Clinical Protocol Development	32101	Monday
Implementation of a Multidisciplinary Cancer Precision Medicine Program: An Institutional Experience	32416	Monday
TDM and Pharmacogenomics: Complementary Tools for Precision Medicine	32222	Monday
Lipoprotein-Related Precision Medicine—Implications in Risk Stratification and Emerging Therapies of Coronary Heart Disease and Aortic Valve Disease	32226	Monday
Gaps in Knowledge and Controversies Surrounding Thyroglobulin Measurement and Interpretation	33103	Tuesday
Opportunities for Clinical Chemists in Precision Oncology Multi-Omic Clinical Trials (AACC-NCI Symposium)	33221	Tuesday
TICKET Pharmacogenomics in Laboratory Medicine: Moving to an Era of Precision Medicine	43110/53210	Tuesday
Real Global News: It's Time to Embrace High-Sensitivity Cardiac Troponin Assays with Cost-Benefit Strategies for Early Rule-Out and Rule-In of Myocardial Infarction and Injury	34218	Wednesday

TOXICOLOGY/TDM	SESSION NUMBER	DAY
President's Invited Session: A View from the Trenches of the Opioid Epidemic: How Do We Win the War?	32109	Monday
Real-Time Toxicology Testing and Case Discussion for Drugs of Abuse	32411	Monday
The Burden of Proof: Understanding Impacts of Laboratory Testing and Technology	32227	Monday
TICKET Therapeutic Drug Monitoring of Anticoagulant Agents by Coagulation Laboratory Tests	42107/52207	Monday
Urine Drug Testing: Debates over Best Practices to Assess Compliance and Manage the Opioid Crisis	33102	Tuesday
TICKET How People Try to Beat Drug Testing and Defend Positive Results	43102/53202	Tuesday
TICKET Implementing or Extending Toxicology Laboratory Services—What and How?	44105/54205	Wednesday
TICKET What Is My Patient Using? Facilitating the Accurate Interpretation of Urine Drug Screen Results	44113/54213	Wednesday

UTILIZATION & LAB MANAGEMENT	SESSION NUMBER	DAY
TICKET Trust, but Verify: Getting the Most Out of Verification Protocols for FDA-Approved Methods	191002	Sunday
The Role of the Clinical Laboratory in Transplantation	32412	Monday
Contributing Factors to Diagnostic Errors in the Clinical Laboratory Identified by Laboratorians: What Can We Fix Right Now?	32414	Monday
Clinical Lab 2.0: How Laboratories Can Support Value-Based Care, Optimize Patient Outcomes and Reduce Total Cost of Care in Acute and Chronic Conditions	32220	Monday
Speed Dating: Navigating Pain Points in the Clinical Laboratory	33110	Tuesday
Navigating through Go-Live "Hiccups" with Instrumentation, Automation and Informatics: An Application Showcase	33218	Tuesday
Are Your Lab Tests Viable under PAMA Medicare Reimbursements?	34104	Wednesday
Better Testing, Better Care—the Role of the Laboratory in Improving Patient Outcomes	34219	Wednesday
Harnessing the Power of Evidence-Based Medicine to Maximize Laboratory Cost Savings and Effective Test Utilization	35108	Thursday

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 preceded 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.
- (#) A pound sign – disclosed that they have had no relevant financial relationships with a commercial interest within the last 12 months.
- (+) 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

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

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

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

SESSION CREDITS

Credit amounts displayed in this program guide are subject to change. For the most up-to-date information on credits available by session, check the mobile app or visit www.aacc.org/2018AM and select "Conference Program."

SESSION DESCRIPTIONS

All of the following sessions are open to conference registrants.

PLENARY SESSIONS

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

SCIENTIFIC SESSIONS

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

MEET THE EXPERT SESSIONS

Attendance limited to 75 participants per session. Admission is first come, first served.

These sessions are intense interactive discussions with plenary speakers.

CHAIR'S INVITED SESSION

The Chair of the 2018 Annual Meeting Organizing Committee created this special session of particular importance to attendees. Details on page 52.

PRESIDENT'S INVITED SESSION

The AACC President has created this special session of particular importance to attendees. Details on page 44.

ORAL ABSTRACT PRESENTATIONS

Selected abstracts identified by the Annual Meeting Organizing Committee will be presented.

LATE BREAKING SESSIONS

This year's meeting features three sessions that focus on late breaking science. See pages 51, 89 and 106 for more details.

CONFERENCE RECORDING

The 70th AACC Annual Scientific Meeting will be recorded. Access to the streaming content is available for purchase as an 11-month subscription that will commence in August 2018 and close at the end of June 2019. The content is made available as streaming content only and is not available for download. The recording will include audio and presentation slides from most of the scientific sessions.

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

PRICE: $199 with registration or at the meeting/$299 after close of the meeting (August 2, 2018, 1:00pm CDT). To purchase, visit www.aacc.org/2018am.

REGISTRATION TYPES & EVENTS

Registration Type	Full Conference	Guest/ Spouse	Daily	Expo Only	No Registration
EVENTS	• AACC 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	✓	✓	✓	X	X
Scientific Sessions 30000 Series	✓	✓	✓	X	X
Meet the Experts 60000 Series	✓	✓	✓	X	X
AACC University 190000 Series	T TICKET $	⊘	$	⊘	⊘
Brown Bag Sessions 40000 Series morning 50000 Series afternoon	T TICKET $	⊘	$	⊘	⊘
Special Events	T TICKET $	$	$	$	$
AACC Opening Mixer & Division Networking Event Sunday, July 29	✓	✓	✓	X	X
Clinical Lab Expo Exhibit Hall, July 31–Aug 2	✓	✓	✓	✓	X
Poster Sessions Abstracts	✓	✓	✓	X	X
Industry Workshops	✓	✓	✓	✓	X
OEM Lectures	✓	✓	✓	✓	X

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

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Badge Number: Listed on left side of badge
Last Name: Exactly as entered when registering

SUNDAY

JULY 29

PLENARY & SCIENTIFIC SESSIONS

AACC UNIVERSITY

TICKET Ticket and fees required for each course.

MORNING

8:30am–11:30am

Hemoglobin Electrophoresis

191001
McCormick Place, S101A

Level: **BASIC**
CE Credit: 3.0

MODERATOR
#John Mitsios, PhD
BioReference Laboratories, Elmwood Park, NJ

Developed in cooperation with the Hematology and Coagulation Division

TICKET

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

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

EXPECTED OUTCOMES: After this course, participants will be able to:

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

SPEAKERS

The Pathophysiology of Hemoglobin; The Anatomy of a CBC; Laboratory Diagnosis of Hemoglobinopathies
#John Mitsios, PhD
BioReference Laboratories, Elmwood Park, NJ

Clinical Presentation; Interactive Clinical Cases
#Amy Chadburn, MD
Weill Cornell Medical College-NYPH, New York, NY

8:30am–11:30am

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

191002
McCormick Place, S101B

Level: **BASIC**
CE Credit: 3.0

MODERATOR
#Sten Westgard, MS
Westgard QC, Inc., Madison, WI

TRACK: Utilization & Lab Management

TICKET

INTENDED AUDIENCE: This course is intended for lab directors, lab supervisors, lab managers and laboratory technicians responsible to bringing new methods into routine operation.

COURSE OVERVIEW: Can laboratories assume that all methods are acceptable? Sadly, no. Labs are responsible for verifying that their methods perform as "advertised." Participants will learn how to implement and interpret the required verification studies performed when first using an FDA-approved method. It will focus on CLSI guidelines but include additional assessment tools such as Sigma-metrics. Participants will learn how to judge method performance objectively—to determine whether or not the test is providing results that meet the required quality for good patient care

EXPECTED OUTCOMES: After this course, participants will be able to:

1. Establish clinically relevant performance goals for laboratory methods.
2. Make use of CLSI guidelines to verify method performance.
3. Identify common pitfalls in the performance of the verification studies and how to avoid them.
4. Reach objective, sound decisions about the performance (and acceptability) of new methods.

SPEAKERS

Verified to What? Establishing Performance Specifications and Quality Goals for Laboratory Methods
#Sten Westgard, MS
Westgard QC, Inc., Madison, WI

Verification Studies: How the Study Methods Prevent Statistical Madness
*David Koch, PhD, DABCC
Grady Memorial Hospital and Emory University, Atlanta, GA

SUNDAY | JULY 29

AACC UNIVERSITY

TICKET Ticket and fees required for each course.

MORNING

8:30am–11:30am

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

191003
McCormick Place, S102A

Level: **BASIC**
CE Credit: 3.0

MODERATOR
*Lou Ann Wyer, MS, MT(ASCP), CQA(ASQ)
Sentara Healthcare, Norfolk, VA

Developed in cooperation with the Critical and Point-of-Care Testing Division Supported by Abbott

TRACK: Point-of-Care Testing

TICKET

INTENDED AUDIENCE: This course is intended for point-of-care coordinators, medical technologists, lab managers/supervisors, pathologists, lab directors, clinical chemists or IVD industry scientists who are involved with point-of-care testing and who desire to gain a basic understanding of important elements of POC program management.

COURSE OVERVIEW: The findings of a recent national survey show a demand for targeted POC education and application of skills. This morning course will focus on important elements of operator training techniques and device connectivity using interactive techniques and audience response. (See Part 2 for focus areas in the afternoon course.) Both courses will include the importance of building clinical partnerships for successful POCT program delivery.

EXPECTED OUTCOMES: After this course, participants will be able to:

1. Differentiate between education and training.
2. Construct a basic training program that includes competency assessment.
3. Describe components, tools and strategies for a successful training program.
4. Outline implementation steps for connectivity and review troubleshooting strategies.
5. Learn how to integrate connectivity into your routine.

SPEAKERS

On the Double: Strategies and Tools to Improve Training Programs
*Peggy Mann, MS, MT(ASCP)
University of Texas Medical Branch, Galveston, TX

Connectivity: Whoever Said the Pen Is Mightier Than the Sword Never Worked with a POCT Interface
*Jeanne Mumford, MT(ASCP)
Johns Hopkins Hospital, Monkton, MD

8:30am–11:30am

Protein Electrophoresis Interpretation and Reporting Workshop—Part I

191004
McCormick Place, S102BC

Level: **BASIC**
CE Credit: 3.0

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

TICKET

INTENDED AUDIENCE: This course is intended for clinical laboratory directors and pathologists, clinical technologists, IVD manufacturers and pharmaceutical scientists, as well as anyone who has worked with protein electrophoresis for at least six months, who are interested in learning about troubleshooting, interpretation of cases taking into account other laboratory assays and clinical picture, and standardized approaches to quantification and reporting of paraproteins, including commenting.

COURSE OVERVIEW: Protein electrophoresis has been available for over 40 years, and as a widespread technique, there are differences in the methodologies, applications and uses, interpretation and reporting. This course plans on covering four main areas of this staple testing in the clinical laboratory: testing, troubleshooting, case interpretation and reporting.

EXPECTED OUTCOMES: After this course, participants will be able to:

1. List characteristics of the methods used for protein electrophoresis and their clinical utility.
2. Describe patterns observed in protein electrophoresis as well as common interferents.
3. Discuss main challenges of the techniques and elaborate interpretive reports for real clinical cases.

SPEAKERS

Protein Electrophoresis: An Introduction
#Maria Alice Willrich, PhD, DABCC, FAACC
Mayo Clinic, Rochester, MN

Troubleshooting of Serum Protein Electrophoresis
#Christopher McCudden, PhD, DABCC, FCACB, FACB
The Ottawa Hospital, Ottawa, ON, Canada

Laboratory Work-Up and Reporting in Suspected Multiple Myeloma
#Ronald Booth, PhD, FCACB, FAACC
The Ottawa Hospital, Ottawa, ON, Canada

8:30am–11:30am

Seriously? You're Giving Me Heartburn!

191005
McCormick Place, S102D

Level: **INTERMEDIATE**
CE Credit: 3.0

MODERATOR
#Jean Ball, MBA, AAS, MT(HHS), MLT(ASCP)
College of American Pathologists, Northfield, IL

TICKET

INTENDED AUDIENCE: This course is intended for laboratory directors, managers, supervisors and medical technologists who are tasked with ensuring that the laboratory is in compliance with all of today's challenging regulatory requirements.

This course will be helpful to all who are tired of trying to invent their own "wheel" and will provide real and workable solutions for the worst "heartburn producers."

COURSE OVERVIEW: Utilizing QSEs to Organize Your Quality Management Program

Jean Ball, MBA, AAS, MT(HHS), MLT(ASCP), of the College of American Pathologists, and Pamela Melcher, MT(ASCP), of Carolinas Healthcare System, have collaborated on several CAP inspections. Implementing some regulatory requirements not only can be problematic for healthcare institutions and systems, but also can give one a downright bad case of heartburn! Helping laboratories marry up the requirements with real-life strategies for compliance could elevate the practice of laboratory medicine and, ultimately, patient care.

Jean will present the regulatory requirements that have proven to be problematic to laboratories. Pam will follow with proven strategies for compliance. The audience will be given scenarios to work through and encouraged to share their own strategies and challenges.

EXPECTED OUTCOMES: After this course, participants will be able to:

1. Identify the most common deficiencies in clinical laboratories.
2. Evaluate how these regulatory issues may impact their own laboratories.
3. Explain proven strategies for examining compliance with these requirements.
4. Develop strategies that fit their own laboratory to ensure compliance.

SPEAKERS

Build a Proactive QM Plan . . . without the Heartburn! Most Frequent Causes of Laboratory Heartburn; You Asked—We Answer!
#Jean Ball, MBA, AAS, MT(HHS), MLT(ASCP)
College of American Pathologists, Northfield, IL

Seriously? You're Giving Me Heartburn!
#Pamela Melcher, MT(ASCP)SC, LQMC
Carolinas Healthcare System, Charlotte, NC

AFTERNOON

12:30pm–3:30pm

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

192009
McCormick Place, S102A

Level: **BASIC**
CE Credit: 3.0

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

Developed in cooperation with the Critical and Point-of-Care Testing Division Supported by Abbott

TRACK: Point-of-Care Testing

TICKET

INTENDED AUDIENCE: This course is intended for point-of-care coordinators, medical technologists, lab managers/supervisors, pathologists, lab directors, clinical chemists or IVD industry scientists who are involved with point-of-care testing and who desire to gain a basic understanding of the important elements of POC program management.

COURSE OVERVIEW: The findings of a recent national survey show a demand for targeted POC education and application of skills. This afternoon course will focus on the important elements of quality indicators, analytics, and procedure writing using interactive techniques and audience response. (See Part I for focus areas in the morning course.) Both courses will include the importance of building clinical partnerships for successful POCT program delivery.

EXPECTED OUTCOMES: After this course, participants will be able to:

1. Describe a process for writing effective and efficient P&Ps.
2. Construct procedural documents that are understood by the non-laboratorian.
3. Compile and analyze a process map.
4. Assess documents for risk of potential error to ensure patient safety.
5. Develop meaningful indicators for a POCT quality program, including analytics.
6. Discuss options for improving quality and recognize available resources for POCCs to help meet accreditation requirements.

SPEAKERS

Policies and Procedures: It's Not OUR Fault That Nurses Won't Read Our SOPs! Tips for Making Documents User-Friendly
#Lou Ann Wyer, MS, MT(ASCP), CQA(ASQ)
Sentara Healthcare, Norfolk, VA

Quality Indicators and Analytics: I Don't Know but I've Been Told, Quality Indicators Can Be SMART and BOLD
*Kimberly Skala, MT(ASCP)
Instrumentation Laboratory, Bedford, MA

Ticket and fees required for each course.

AFTERNOON

12:30pm–3:30pm

Using CLSI Guidelines to Meet Quality Requirements Established by FDA, CLIA and ISO throughout the Laboratory Test Life Cycle: A Panel Presentation

192010
McCormick Place, S101B

Level: **INTERMEDIATE**
CE Credit: 3.0

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

Developed in cooperation with CLSI

TICKET

INTENDED AUDIENCE: This course is intended for anyone who works to develop new test methods or implement existing methods, particularly those in a laboratory environment. This course is also appropriate for laboratory staff that implement manufactured test methods, whether commercial or LDTs; thus, the target audience includes pathologists, laboratory directors, clinical chemists, researchers, medical technologists and other laboratorians.

COURSE OVERVIEW: This AACC University course will explain how to ensure quality through establishment, validation and verification of performance specifications for laboratory developed tests (LDTs). The test life cycle, related concepts and definitions will be introduced. For each step in the life cycle, speakers will present the FDA, CLIA and ISO requirements. A specific LDT will be used to show how CLSI documents can be used to meet the requirements.

EXPECTED OUTCOMES: After this course, participants will be able to:

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

SPEAKERS
Introduction to Steps in the Assay Life Cycle Model; How CLSI Guidelines Can Be Used to Meet Requirements Using a Real-Life Example
#Paula Ladwig, MS, MT(ASCP)
Mayo Clinic, Rochester, MN

ISO Requirements
*Lucia Berte, MA, MT(ASCP)SBB, DLM, CQA(ASQ)CMQ/OE
Laboratories Made Better! PC, Broomfield, CO

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

12:30pm–3:30pm

Protein Electrophoresis Interpretation and Reporting Workshop—Part 2

192011
McCormick Place, S102BC

Level: **INTERMEDIATE**
CE Credit: 3.0

MODERATOR
#Christopher McCudden, PhD, DABCC, FCACB, FACB
The Ottawa Hospital, Ottawa, ON, Canada

TICKET

INTENDED AUDIENCE: This course is intended for pathologists, lab directors, clinical chemists, medical technologists and laboratory administrators with an interest in developing or refining their interpretative skills for protein electrophoresis.

COURSE OVERVIEW: This course will provide an interactive set of serum and urine protein electrophoresis and immunofixation cases. Attendees will be provided approaches, examples and advice on how to interpret these results. Results will include capillary electrophoresis and agarose gels. Case examples will include clinical history and context, plus challenging interpretative aspects, such as monoclonal proteins that migrate in the alpha and beta region, as well as samples with interferences.

EXPECTED OUTCOMES: After this course, attendees should be able to:

1. Interpret serum and urine protein electrophoresis, immunofixation and immunosubtraction results.
2. Describe approaches to quantitation of monoclonal proteins and fractions.
3. Identify and resolve interferences that are encountered with protein electrophoresis.
4. Contrast advantages and disadvantages of different technologies for protein electrophoresis.

SPEAKERS
Capillary Electrophoresis and Immunosubtraction Interpretation
#David Keren, MD, NACB
The University of Michigan Medical School, Ann Arbor, MI

Quantitation of Monoclonal Proteins and Fractions
#Ronald Booth, PhD, FCACB, FAACC
The Ottawa Hospital, Ottawa, ON, Canada

Serum Protein Electrophoresis Reporting Perspectives and Case Examples
#Maria Alice Willrich, PhD, DABCC, FAACC
Mayo Clinic, Rochester, MN

Identifying and Managing Therapeutic and Rare Interferences with Protein Electrophoresis
#Christopher McCudden, PhD, DABCC, FCACB, FACB
The Ottawa Hospital, Ottawa, ON, Canada

12:30pm–3:30pm

Blood Gas Testing: Basics and Beyond

192012
McCormick Place, S101A

Level: **BASIC**
CE Credit: 3.0

MODERATOR
#Brenda Suh-Lailam, PhD, DABCC
Ann & Robert H. Lurie Children's Hospital of Chicago/Northwestern University, Chicago, IL

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

TRACK: Point-of-Care Testing

TICKET

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

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

EXPECTED OUTCOMES: After this course, participants will be able to:

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

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

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

Overcoming Challenges of Blood Gas Testing in Different Locations
#Brenda Suh-Lailam, PhD, DABCC
Ann & Robert H. Lurie Children's Hospital of Chicago/Northwestern University, Chicago, IL

SUNDAY | JULY 29

AACC UNIVERSITY

T TICKET Ticket and fees required for each course.

AFTERNOON

12:30pm–3:30pm

ANA IFA: A Workshop for Laboratory Leaders

192013

McCormick Place, S102D

Level: **INTERMEDIATE**

CE Credit: 3.0

MODERATOR

*Susan Copple, MS, MT(ASCP)SI
Inova Diagnostics, San Diego, CA

T TICKET

INTENDED AUDIENCE: This course is intended for laboratory directors, clinical chemists, technologists and anyone involved in or managing a lab performing ANA IFA testing.

COURSE OVERVIEW: This course will include an overview of ANA IFA recommendations, an introduction to the International Consensus on ANA Patterns (ICAP) and the organization's role in promoting consensus around ANA pattern nomenclature, an interactive audience course interpreting complex ANA IFA patterns, and management of the laboratory to meet the growing demand for ANA IFA testing.

EXPECTED OUTCOMES: After this course, participants will be able to:

1. Identify ICAP patterns for ANA IFA.
2. List three variables that cause a lack of consistent reporting of ANA IFA results.
3. Describe how laboratory leaders have addressed management and educational challenges due to increased demand for ANA IFA.

SPEAKERS

ANA IFA: Interpreting Complex Patterns
*Susan Copple, MS, MT(ASCP)SI
Inova Diagnostics, San Diego, CA

ANA IFA Testing from a Rheumatologist's Perspective
*Mark Wener, MD
University of Washington Medical Center, Seattle, WA

Introduction and Overview of the International Consensus on ANA Patterns (ICAP)
*Edward Chan, PhD
University of Florida, Gainesville, FL

Managing ANA IFA in the Autoimmune Laboratory
#Laurel Tria, MS
Northwell Health Laboratories, Lake Success, NY

FULL DAY COURSES

8:30am–11:30am and
12:30pm–3:30pm

Practical Next-Generation Sequencing:
A Toolkit for Laboratorians

193006

McCormick Place, S103BC

Level: **BASIC**

CE Credit: 6.0

MODERATOR

#Christina Lockwood, PhD, DABCC, DABMGG
University of Washington, Seattle, WA

TRACK: Genomics/Genetics

T TICKET

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

COURSE OVERVIEW: Genetic testing using next-generation sequencing is advancing precision medicine. This course will use interactive cases to describe (1) quality control, quality assurance and regulatory considerations for NGS; (2) the relative advantages and limitations of targeted versus comprehensive NGS tests; and (3) NGS data analysis and variant interpretation.

EXPECTED OUTCOMES: After this course, participants will be able to:

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

SPEAKERS

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

Choosing Wisely: Targeted versus Genomic Tests
#Linnea Baudhuin, PhD
Mayo Clinic, Rochester, MN

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

Clinical Exome Sequencing: Best Practices For Variant Interpretation
#Josh Deignan, PhD, FACMG
University of California, Los Angeles, Agoura Hills, CA

8:30am–11:30am and
12:30pm–3:30pm

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

193007

McCormick Place, S103A

Level: **BASIC**

CE Credit: 6.0

MODERATOR

#Deborah French, PhD, DABCC, FAACC
University of California, San Francisco, San Francisco, CA

Developed in cooperation with the Mass Spectrometry and Separation Sciences Division

TRACK: Mass Spectrometry

T TICKET

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

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

EXPECTED OUTCOMES: After this course, participants will be able to:

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

SPEAKERS

Basics of LC-MS/MS
#Deborah French, PhD, DABCC, FAACC
University of California, San Francisco, San Francisco, CA

LC-MS/MS Method Development and Pre-Validation
#Grace van der Gugten, MS
Provincial Health Services Authority, Vancouver, BC, Canada

Validation and Post-Implementation Monitoring for LC-MS/MS Methods
#Julianne Botelho, PhD
Centers for Disease Control and Prevention, Atlanta, GA

SUNDAY | JULY 29

AACC UNIVERSITY

TICKET Ticket and fees required for each course.

FULL DAY COURSE

8:30am–11:30am and
12:30pm–3:30pm

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

193008
McCormick Place, S104A

Level: **BASIC**
CE Credit: 6.0

MODERATOR
#Patrick Mathias, MD, PhD
University of Washington, Seattle, WA

TICKET

INTENDED AUDIENCE: This course is intended for pathologists, lab directors, clinical chemists, medical technologists, and industry scientists who perform data analysis activities as part of their job responsibilities and have minimal or no exposure to the R programming language.

COURSE OVERVIEW: R is a freely available statistical programming language that supports the complex data manipulation and analysis activities needed for efficient clinical laboratory practice. In this course, we will introduce basic concepts of R programming as well as more generalizable best practices in working with laboratory data.

EXPECTED OUTCOMES: In this course, we will cover some basic principles of using the R programming language. At the conclusion of this course, attendees will be able to:

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

SPEAKERS

Creating Clear Plots Using ggplot
#Patrick Mathias, MD, PhD
University of Washington, Seattle, WA

Making Statistics Look Easy
#Daniel Herman, MD, PhD
University of Pennsylvania Perelman School of Medicine, Philadelphia, PA

Importing and Manipulating Data in the Tidyverse
#Joseph Rudolf, MD
University of Minnesota Medical School, Minneapolis, MN

SPECIAL SESSION

3:30pm–4:30pm

Investigating Startups in the Medical Testing Space: Lessons Learned

11002
McCormick Place, S105
Level: **BASIC**

COURSE OVERVIEW: Since 2016, startups have become increasingly interested in breaking into the medical testing space but have found that doing so is more complex than they realized. This Q&A discussion with *The Wall Street Journal* investigative reporter John Carreyrou will center on his investigative reporting on Theranos and related actions by the Food and Drug Administration, Centers for Medicare & Medicaid Services, and other regulatory authorities, as well as why it is essential to move carefully when introducing new technologies so that the accuracy of clinical laboratory testing is not at risk.

SPEAKER:
#John Carreyrou, Investigative Reporter
The Wall Street Journal, New York, NY

2018 Wallace H. Coulter Lectureship Award

PLENARY SESSION

5:00pm–6:30pm
McCormick Place, Grand Ballroom/S100

Imatinib as a Paradigm of Targeted Cancer Therapies

SPEAKER: *Brian Druker, MD
Oregon Health & Science University Cancer Institute, Portland, OR

11001
Level: **BASIC** | CE Credit: 1.0

INTENDED AUDIENCE: This session is intended for pathologists, lab directors, clinical chemists, medical technologists and laboratory administrators with an interest in precision medicine and companion diagnostics.

SESSION OVERVIEW: This session shows how to translate knowledge of the molecular pathogenesis of cancer into specific therapies and investigate the optimal use of these molecularly targeted agents. Dr. Druker revolutionized the treatment of cancer through research that resulted in the first drug to target the molecular defect of a cancer while leaving healthy cells unharmed. Imatinib (marketed as Gleevec®) turned a once-fatal cancer, Chronic Myeloid Leukemia, into a manageable condition. Imatinib received FDA approval in record time and established Dr. Druker as a pioneer in the field of precision medicine. Most important, his discovery became a new proof of principle for targeted therapies, spurring the development of more than 50 similar precision therapies for other cancers

EXPECTED OUTCOMES: After this session, participants will be able to:

1. Describe the discovery of tyrosine kinase inhibitors (TKI) and their usefulness in Chronic Myeloid Leukemia (CML).
2. Extrapolate from TKI and CML to other targeted therapies and companion diagnostics.
3. Teach others how the TKI/CML discovery helped launch the precision medicine initiative.

WALLACE H. COULTER LECTURESHIP AWARD

The Wallace H. Coulter Lectureship Award recognizes an outstanding individual who has demonstrated a lifetime commitment and made important contributions to laboratory medicine and patient care, and who has significantly advanced education, practice or research.

This award honors Wallace H. Coulter, founder of Coulter Corporation and inventor of the Coulter Principle, a simple but elegant innovation that revolutionized hematology and the practice of laboratory medicine, pioneered the field of flow cytometry and defined particle characterization. AACC's most prestigious award—presented annually at the AACC Annual Scientific Meeting & Clinical Lab Expo—commemorates Coulter's outstanding contributions to diagnostics and his championship of research and innovation. It is fitting that his legacy will be celebrated with lectures by renowned leaders in healthcare.

MONDAY

JULY 30

PLENARY & SCIENTIFIC SESSIONS

PLENARY SESSION

8:45am–10:15am

McCormick Place, Grand Ballroom/S100

Genetic Defects in Bile Acid Synthesis Causing Liver Disease—Diagnosis and Treatment—Translational Medicine from Mass Spectrometry Discovery to the Bedside

SPEAKER: #Kenneth Setchell, PhD
Cincinnati Children's Hospital, Cincinnati, OH

12001
Level: **BASIC** | CE Credit: 1.0

INTENDED AUDIENCE: This session is intended for pathologists, lab directors, clinical chemists, medical laboratory scientists and laboratory administrators with an interest in mass spectrometry for discovery and clinical laboratory.

SESSION OVERVIEW: This session highlights how mass spectrometry was successfully applied to define new genetic defects in the bile acid biosynthetic pathway. Bile acid synthesis disorders caused by single enzyme defects often present in infancy or early childhood with a progressive cholestatic hepatitis that, unchecked, leads to cirrhosis, liver failure and death. Prior to the seminal work of Dr. Setchell and colleagues in identifying six genetic diseases as discrete entities, and conceiving of an effective therapy, children with these autosomal recessive diseases either underwent liver transplantation or, more commonly, were given supportive care until they died of liver failure of unknown origin. This session describes the use of mass spectrometry techniques that led to the elucidation of the biochemical basis of these diseases, the development of an international screening program, and the evaluation of therapeutic responses that served to ultimately gain regulatory approval from the FDA for a life-saving therapy based on oral administration of cholic acid. This application of mass spectrometry to clinical chemistry is a noteworthy example of the transition from bench to bedside.

EXPECTED OUTCOMES: After this session, participants will be able to:

1. Explain the role of mass spectrometry in the discovery of inherited bile acid synthesis disorders.
2. Recommend testing for infants and children with idiopathic cholestasis.
3. Describe the mechanism of cholic acid treatment for these disorders.

MONDAY | JULY 30

BROWN BAG SESSIONS T TICKET

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

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 your own food in the convention center prior to the session.

CE Credit: 1.0 (per session) unless otherwise noted in the mobile app, or at www.aacc.org/2018am | McCormick Place, Vista Ballroom/S406

TITLE	SESSION # AM	SESSION # PM	SPEAKER	LEVEL
The Use of Radio Frequency Identification (RFID) in In-Vitro Diagnostic Applications	42101	52201	**#Chuck Barber,** JADAK, Syracuse, NY	BASIC
The Pyramid and the Policies—Safety Controls in the Lab	42102	52202	***Dan Scungio,** MT(ASCP), SLS, CQA (ASQ), Sentara Healthcare, Hampton, VA	INTERMEDIATE
ANA Testing: The Renaissance of Indirect Immunofluorescence Assay (IFA)	42103	52203	**#Vincent Ricchiuti,** PhD, Laboratory Corporation of America Holdings, Dublin, OH	INTERMEDIATE
Practical Applications of Biological Variation Data from Clinical Diagnostic Tests *Developed in cooperation with Clinical Translational Science Division*	42104	52204	***Paul Johnson,** PhD, MBA, MT(ASCP), DABCC, Upstate Medical University, Syracuse, NY	INTERMEDIATE
Critical Test Results Boot Camp	42105	52205	**#Qian Sun,** PhD, National Institutes of Health, Bethesda, MD	BASIC
Therapeutic Drug Monitoring of Anticoagulant Agents by Coagulation Laboratory Tests **TRACK:** Toxicology/TDM	42107	52207	**#Yifei Yang,** PhD, DABCC, University of Chicago, Chicago, IL	INTERMEDIATE
What Does the Physician Need from the Laboratory?	42108	52208	**#Eugenio Zabaleta,** PhD, OhioHealth Mansfield Hospital, Mansfield, OH	INTERMEDIATE
Quantitative Analysis of Low-Abundance Protein Targets by Immuno-Affinity Enrichment and Multiple Reaction Monitoring **TRACK:** Mass Spectrometry	42109	52209	***Wenfang Wu,** PhD, Berg LLC, Wayland, MA	BASIC
Next-Generation Clinical Mass Spectrometry Here and Now **TRACK:** Mass Spectrometry	42110	52210	**#Steven Wong,** PhD, DABCC (TC), FAACC, Wake Forest University School of Medicine, Winston-Salem, NC	BASIC
CDC Exploration of Opportunities and Challenges in Supporting Clinical Laboratory Workforce Development	42112	52212	**#Renee Ned-Sykes,** MMSc, PhD, Centers for Disease Control and Prevention, Atlanta, GA	BASIC
Going beyond LDL Cholesterol: Clinical Indications and Methodologies for Advanced Lipid Testing	42113	52213	***Valentinas Gruzdys,** PhD, University of Utah, Salt Lake City, UT	INTERMEDIATE
Rule-Based Strategies for Improving Laboratory Utilization Management	42114	52214	**#Ron Schifman,** MD, Southern Arizona VA Healthcare System, Tucson, AZ	INTERMEDIATE
Integrating Moving Average of Normals and EQA	42115	52215	**#Tony Badrick,** PhD, FAACC, RCPA QAP, Sydney, New South Wales, Australia	INTERMEDIATE

Building Strong Communications between Laboratory and IT Staff	42116	52216	**#Abbey Vangeloff,** MS, Yahara Software, Madison, WI	BASIC
The CDC Lipids Standardization Programs—Ensuring the Quality of Cardiovascular Disease Biomarker Measurements	42117	52217	**#Uliana Danilenko,** PhD, Centers for Disease Control and Prevention, Atlanta, GA	INTERMEDIATE
Laboratory Assessment of Anemia	42118	52218	**#Jaime Noguez,** PhD, DABCC, University Hospitals Cleveland Medical Center and Case Western Reserve University, Cleveland, OH	BASIC
Discrepancies in Electrolyte Measurements between Direct and Indirect Ion-Selective Electrodes	42121	52221	**#Sudip Datta,** MBBS, MD, Dip Hosp Mgmt, All India Institute of Medical Sciences, New Delhi, Delhi, India	BASIC
Update on Gestational Diabetes Mellitus: Current National and International Diagnostic Criteria **TRACK:** Pediatric/Maternal-Fetal	42122	52222	**#Hans Guenther Wahl,** PhD, MD, MBA, Philipps University Marburg, UKGM Marburg, Marburg, Germany	INTERMEDIATE
What's beyond PSA: Novel Biomarkers for Detection of Prostate Cancer	42123	52223	***Bernard Cook,** PhD, DABCC, FAACC, Henry Ford Hospital, Detroit, MI	INTERMEDIATE
The Challenges of Distinguishing In Vivo from In Vitro Hemolysis	42124	52224	**#Merih Tesfazghi,** PhD, Washington University School of Medicine, St. Louis, MO	BASIC
The CDC Hormone Standardization (HoSt) Program—Improving Clinical Measurements of Testosterone and Estradiol	42125	52225	**#Krista Poynter,** Centers for Disease Control and Prevention, Atlanta, GA	INTERMEDIATE
The Impact of the Jaffe and Enzymatic Methods on Evaluation of Renal Function *Developed in cooperation with the Endocrinology Division*	42126	52226	**#Neval Akbas,** PhD, Medpace Reference Laboratories, Cincinnati, OH	INTERMEDIATE
Do You Trust Your Measurements? NIST's Health Assessment Measurement Quality Assurance Program (HAMQAP)	42127	52227	**#Carolyn Burdette,** National Institute of Standards and Technology, Gaithersburg, MD	BASIC
Strategies to Improve Rapid Diagnosis of Ethylene Glycol Poisoning in the Emergency Department	42128	52228	**#Sheng-Ying Lo,** PhD, Geisinger, Danville, PA	BASIC
Emerging Challenges in Protein Electrophoresis Interpretation	42129	52229	**#Kwabena Sarpong,** PhD, University of Virginia Health System, Charlottesville, VA	BASIC
Updates and Challenges Regarding Diagnostic Testing for and Utilization of Beta-lactam/Beta-lactamase Inhibitor Combinations	42130	52230	**#Amanda Harrington,** PhD, Loyola University Medical Center, Maywood, IL	INTERMEDIATE
Viral Hepatitis: Advances and Current Challenges	42131	52231	**#Patricia Slev,** PhD, DABCC, University of Utah/ ARUP Laboratories, Salt Lake City, UT	INTERMEDIATE
Ionized or Albumin-Adjusted Calcium?: A Debate	42132	52232	**#Tahir Pillay,** MD, PhD, University of Pretoria, Pretoria, Gauteng, South Africa **#Magdalena Turzyniecka,** MD, MD, FRCPath, Durban, South Africa	BASIC
High-Sensitivity Troponin I: Did Adam and Eve Bite into a Forbidden Apple?	42134	52234	**#Barnali Das,** MD, DNB, PGDHHM, Corresponding Member, IFCC C-RIDL, Kokilaben Dhirubhai Ambani Hospital, Mumbai, Maharashtra, India	BASIC
Ethnic Variation: A Challenge for Different Common Laboratory Parameters	43133	53233	**+Asmita Hazra,** MBBS, MD, Assistant Professor, Jodhpur, Rajasthan, India	BASIC

MONDAY | JULY 30

MEET THE EXPERT

10:30am–11:30am

Genetic Defects in Bile Acid Synthesis Causing Liver Disease—Diagnosis and Treatment—Translational Medicine from Mass Spectrometry Discovery to the Bedside

62102
McCormick Place, S103A

Level: **BASIC**
CE Credit: 1.0

MODERATOR
#Edward Ashwood, MD, ABP
University of Colorado Anschutz Medical Campus, Aurora, CO

TRACK: Precision Medicine & Oncology

SESSION OVERVIEW: This session will provide an excellent opportunity for a limited number of attendees to meet with Dr. Kenneth Setchell to discuss his discovery of six genetic defects that cause liver disease in infants and children and the development of a treatment for reversing what are otherwise fatal conditions. He demonstrated that oral bile acid therapy successfully reversed the biochemical and histological abnormalities and avoided the need for liver transplantation, the only alternative treatment. Dr. Setchell will discuss his application of mass spectrometry to clinical chemistry as a notable example of translational medicine.

SPEAKER
#Kenneth Setchell, PhD
Cincinnati Children's Hospital, Cincinnati, OH

MONDAY | JULY 30

SCIENTIFIC SESSIONS

MORNING

10:30am–12:00pm

Implementing a High(er) Sensitivity Cardiac Troponin Assay: Lessons Learned from One Institution about Analytical Validation and Clinical Protocol Development

32101
McCormick Place, S504

Level: **INTERMEDIATE**
CE Credit: 1.5

MODERATOR
*Leslie Donato, PhD
Mayo Clinic, Rochester, MN

TRACK: Precision Medicine & Oncology

INTENDED AUDIENCE: This session is intended for laboratory directors, physicians, clinical chemists, administrators, managers, supervisors and laboratory technologists interested in learning strategies for implementing high-sensitivity troponin tests.

SESSION OVERVIEW: Despite widespread use worldwide, high-sensitivity cardiac troponin tests are just now becoming approved for use in the U.S. This session will cover issues specific to analytical validation required for U.S. laboratories, as well as other topics such as clinical protocol development and analytical outliers and interferences that are applicable worldwide.

EXPECTED OUTCOMES: After this session, participants will be able to:

1. Describe unique aspects of required analytical validation for high-sensitivity troponin tests, and define approaches to address them.
2. Compare and contrast different high-sensitivity troponin tests for analytical interferences and outliers.
3. List the steps and challenges involved in developing clinical protocols for use of high-sensitivity troponin tests in evaluating acute coronary syndrome.

SPEAKERS
Validating Analytical Performance, Interferences and Outliers for High-Sensitivity Cardiac Troponin Assays: Why Is This Test Different from All the Others?
#Brad Karon, MD, PhD, FCAP, FAACC
Mayo Clinic, Rochester, MN

Developing a Clinical Protocol for Evaluation of Acute Coronary Syndrome Using High-Sensitivity Cardiac Troponin: First Do No Harm (To Your Cardiology and Emergency Medicine Staff)
*Allan Jaffe, MD
Mayo Clinic, Rochester, MN

10:30am–12:00pm

Update on Thyroid Disease in Pregnancy

32102
McCormick Place, S103BC

Level: **INTERMEDIATE**
CE Credit: 1.5

MODERATOR
*Ann Gronowski, PhD, DABCC
Washington University School of Medicine, St. Louis, MO

Developed in cooperation with Pediatric and Maternal-Fetal Division

TRACK: Pediatric/Maternal-Fetal

INTENDED AUDIENCE: This session is intended for clinical chemists, pathologists, physicians, laboratory directors, trainees and technologists involved or interested in endocrine disorders during pregnancy.

SESSION OVERVIEW: Pregnancy has profound effects on the thyroid gland and its function. As a result, assessment of thyroid status during pregnancy can be complicated, confusing and even controversial. This session will present information on the diagnosis and management of thyroid disease during pregnancy and postpartum, including important new published guidelines.

EXPECTED OUTCOMES: After this session, participants will be able to:

1. Describe how the pregnant state affects normal thyroid function and thyroid function tests.
2. Discuss the guidelines regarding screening for thyroid disease during pregnancy.
3. State the normal changes in thyroid function that occur postpartum.
4. Summarize the guideline recommendations for screening for thyroid disease in early pregnancy and diagnosing thyroid disease postpartum.

SPEAKERS
Thyroid Function Before, During and After Pregnancy
*Ann Gronowski, PhD, DABCC
Washington University School of Medicine, St. Louis, MO

Guidelines on Diagnosing Thyroid Disease Before, During and After Pregnancy
#Joely Straseski, PhD, DABCC, FAACC
ARUP Laboratories/University of Utah, Salt Lake City, UT

10:30am–12:00pm

Quality Control and Quality Assurance in the Era of Next-Generation Sequencing

32103
McCormick Place, S103D

Level: **INTERMEDIATE**
CE Credit: 1.5

MODERATOR
#Andrea Ferreira-Gonzalez, PhD
Virginia Commonwealth University, Richmond, VA

TRACK: Genomics/Genetics

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

SESSION OVERVIEW: This session will discuss quality control and quality assurance standards and practices for current clinical applications of next-generation sequencing (NGS), limitations, challenges and possible solutions. The first part will focus on current practices and challenges. The second part will discuss current limitations and emerging practices and technology to ensure quality of patient results.

EXPECTED OUTCOMES: At the completion of this session, participants will be able to:

1. Demonstrate knowledge of available quality control and quality assurance practices for NGS.
2. Describe advantages, limitations and challenges of quality control and quality assurance for NGS.
3. Describe emerging practices and technologies to ensure quality of patient results.

SPEAKERS
Validation of NGS-Based Somatic Mutation Assays for Routine Clinical Use
*Gregory Tsongalis, PhD, HCLD
Geisel School of Medicine at Dartmouth, Lebanon, NH

Implementation Of Optimal Qc/Qa to Ensure the Quality of Clinical Next-Generation Sequencing Assays
*Helen Fernandes, PhD
Columbia University Medical Center, New York, NY

MONDAY | JULY 30

SCIENTIFIC SESSIONS

MORNING

10:30am–12:00pm

Challenges of Implementing Rapid HIV Testing into an HIV Testing Algorithm

32104
McCormick Place, S405

Level: **BASIC**

CE Credit: 1.5

MODERATOR
#Vera Tesic, MD, MS, D(ABMM), M(ASCP)
River Forest, IL

TRACK: Point-of-Care Testing

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

SESSION OVERVIEW: New generations of HIV point-of-care and immunoassays for screening and confirmation are now available. This discussion will center on the challenges that we faced using HIV POC assays, and their integration in HIV testing algorithm in clinical situations where the turn-around time may be crucial for patient care.

EXPECTED OUTCOMES: After attending this session, participants will be able to:

1. Explain different generations of HIV POC, HIV screening assays, HIV supplemental assays, challenges and obstacles.
2. Asses their implementation in the reflex test algorithms in different clinical settings.
3. List specific tools that may be used to enable laboratorians to improve HIV testing.

SPEAKERS

HIV POC Testing: Challenges and Obstacles
#Edward Leung, PhD, DABCC, FAACC
The University of Chicago Medicine, Chicago, IL

Impact of Utilizing Different Generations of HIV Tests
#Vera Tesic, MD, MS, D(ABMM), M(ASCP)
University of Chicago Medicine, River Forest, IL

10:30am–12:00pm

Clinical Laboratory's Role in the Care of Transgender Patients

32105
McCormick Place, S403

Level: **BASIC**
CE Credit: 1.5

MODERATOR
#Khushbu Patel, PhD, DABCC
UT Southwestern Medical Center, Dallas, TX

INTENDED AUDIENCE: This session is intended for pathologists, laboratory directors, laboratory testing personnel, laboratory managers, and supervisors and clinicians treating transgender patients.

SESSION OVERVIEW: Proper care for transgender patients can be particularly difficult for hospitals and clinical laboratories at many levels. This session will provide an overview of hormone therapy for transgender adolescents and adults, its impact on laboratory values, and challenges in clinical informatics.

EXPECTED OUTCOMES: After this session, attendees will be able to:

1. Articulate definitions and terms describing transgender individuals, and intended effects of hormone therapy.
2. Summarize laboratory changes that may be seen in transgender individuals on hormone therapy.
3. Identify information system optimizations to care for transgender patients.

SPEAKERS

Clinical Treatment of Transgender Pediatric Patients: Considerations for the Laboratory
+Jason Jarin, MD
UT Southwestern Medical Center, Dallas, TX

Impact of Hormone Therapy on Laboratory Values in Transgender Adolescents and Adults
#Jeffrey SoRelle, MD
UT Southwestern Medical Center, Dallas, TX

Integrating Gender Identity into Electronic Medical Records and Laboratory Information Systems
#Andrew Quinn, MD
UT Southwestern Medical Center, Dallas, TX

10:30am–12:00pm

Quantitative Protein Mass Spectrometry: A Step-by-Step Guide to Designing Your First Assay

32106
McCormick Place, S104

Level: **BASIC**
CE Credit: 1.5

MODERATOR
#Mari DeMarco, PhD, DABCC, FAACC, FCACB
University of British Columbia and St. Paul's Hospital, Vancouver, BC, Canada

Developed in cooperation with the Mass Spectrometry and Separation Sciences Division, Proteomics and Metabolomics Division

TRACK: Mass Spectrometry

INTENDED AUDIENCE: This session is intended for a broad audience that includes students, clinical laboratory technicians, IVD industry scientists, pathologists, lab directors and technologists.

SESSION OVERVIEW: This session uses a participatory approach to introduce practical quantitative investigation of peptides and proteins by mass spectrometry. This session will focus on hands-on training (attendees must bring a WiFi-enabled laptop) in setting up a quantitative protein mass spectrometric method.

EXPECTED OUTCOMES: After attending this session, participants will be able to:

1. Describe the overall workflow for designing a targeted protein mass spectrometric assay.
2. Perform in silico digestion to generate protease-specific peptides.
3. Evaluate and select suitable proteotypic peptides for a multiple reaction monitoring assay.

SPEAKERS

A Step-by-Step Guide to Designing a Protein Mass Spec Assay: Part 1
#Mari DeMarco, PhD, DABCC, FAACC, FCACB
University of British Columbia and St. Paul's Hospital, Vancouver, BC, Canada

A Step-by-Step Guide to Designing a Protein Mass Spec Assay: Part 2
#Junyan Shi, PhD
University of British Columbia, Maple Ridge, BC, Canada

10:30pm–12:00pm

Developing Standards in Antinuclear Antibody Indirect Immunofluorescence (ANA IFA) Interpretation and Reporting

32107
McCormick Place, S101B

Level: **INTERMEDIATE**
CE Credit: 1.5

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

Developed in cooperation with the Clinical and Diagnostic Immunology Division

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

SESSION OVERVIEW: Laboratory practices in ANA IFA pattern interpretation and reporting are variable. The International Consensus of ANA Patterns (ICAP) group has defined criteria for identifying currently 30 defined ANA IFA patterns, and categorized patterns into those interpretable by competent or expert laboratories. This session will review the processes for consensus development, define nuclear patterns and introduce cytoplasmic pattern testing.

EXPECTED OUTCOMES: After this session, participants will be able to:

1. Recount the process by which consensus was developed, and the ongoing process for contributing pattern images and for introducing new patterns.
2. Define consensus nuclear IFA patterns.
3. Define consensus cytoplasmic IFA patterns.

SPEAKERS

A Brief History of ANA IFA Testing
*Stanley Naides, AB, MD, FACP, FACR
Quest Diagnostics Nichols Institute, San Juan Capistrano, CA

Developing Consensus on Antinuclear Antibody Indirect Fluorescence Pattern Interpretation and Reporting
*Edward Chan, PhD
University of Florida, Gainesville, FL

Nuclear ANA IFA Patterns: International Consensus on ANA Patterns, ICAP
*Marvin Fritzler, PhD, MD
University of Calgary, AB, Canada

Cytoplasmic ANA IFA Patterns: International Consensus on ANA Patterns, ICAP
*Carlos von Mühlen, MD, PhD
Rheuma Clinic, Porto Alegre, Brazil

MONDAY | JULY 30

SCIENTIFIC SESSIONS

MORNING

10:30am–12:00pm

The Quantified Self and Wellness Monitoring: Actionable Data or Harmful Information?

32108

McCormick Place, S102

Level: **INTERMEDIATE**

CE Credit: 1.5

MODERATOR

#Shannon Haymond, PhD, DABCC
Lurie Children's Hospital of Chicago, Chicago, IL

INTENDED AUDIENCE: This session is intended for pathologists, clinical chemists, lab directors, managers, technologists and anyone with an interest in the collection and use of longitudinal health data for the purpose of defining wellness and preventing and/or monitoring disease.

SESSION OVERVIEW: Quantifying what constitutes wellness, illness or a transition between the two is the goal of broad, large-scale efforts to map human health. Proponents believe that leveraging longitudinal health data will demystify disease. Opponents are concerned that frequent monitoring will cause harms. This session will present both perspectives and engage the audience in a robust dialogue of the issues.

EXPECTED OUTCOMES: After this session, participants will be able to:

1. Identify the most effective and targeted diagnostic work-up for symptomatic patients.
2. Define the appropriate applications and limitations of population screening for diagnosing disease, including positive and negative predictive value.
3. Explain the best use of available resources and avoid overtesting and overdiagnosis.
4. Realize the importance of reduced stress associated with health in the general population.

SPEAKERS

Being Healthy until Proven Sick or Being Sick until Proven Healthy? That Is the Question!
*Eleftherios Diamandis, MD, PhD, FRCPC
Mount Sinai Hospital and University Health Network, Toronto, ON, Canada

Systems Medicine, Big Data and Scientific Wellness Will Transform Healthcare
*Leroy Hood, MD, PhD
Institute for Systems Biology, Seattle, WA

10:30am–12:00pm

President's Invited Session: A View from the Trenches of the Opioid Epidemic: How Do We Win the War?

32109

McCormick Place, S106

Level: **INTERMEDIATE**

CE Credit: 1.5

MODERATOR

#Dennis Dietzen, PhD, DABCC
Washington University School of Medicine, St. Louis, MO

TRACK: Toxicology/TDM

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

SESSION OVERVIEW: Efforts to control acute and chronic pain in the late 20th century spurred rapid prescribing of potent synthetic analgesics. Presently, millions of individuals misuse and abuse prescription opioids. Although laboratory testing plays a key role in promoting proper use and detecting misuse of these drugs, it will not end this epidemic alone. This session will explore the tactics being deployed to combat an epidemic that is responsible for the first drop in U.S. life expectancy since early 1990s.

EXPECTED OUTCOMES: At the conclusion of this session, attendees will be able to:

1. Define the human toll and economic consequences precipitated by the abuse of opioids in the United States.
2. Explain the basis for medication-assisted treatment of substance use disorders.
3. Describe the attributes of effective substance abuse treatment by primary and emergency care providers.

SPEAKERS

Treatment Approaches to Attacking Opiate Addiction
#James Berry, DO
West Virginia University School of Medicine, Morgantown, WV

Effective Implementation and Assessment of Addiction Treatment in the Community
#Carissa Berk-Clark, PhD
St. Louis University School of Medicine, St. Louis, MO

10:30am–12:00pm

Invited Oral Abstracts: Global Health

32110

McCormick Place, S505

Level: **INTERMEDIATE**

CE Credit: 1.5

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

SESSION OVERVIEW: AACC is dedicated to advance the science and practice of laboratory medicine. A select group of members has reviewed and ranked the abstracts submitted for the AACC Annual Scientific Meeting. The Annual Meeting Organizing Committee has reviewed the accepted abstracts and has chosen five authors to present their research as oral presentations. Each 15-minute presentation will be followed by a 3-minute question-and-answer session.

EXPECTED OUTCOMES: After this session, participants will be able to:

1. Describe and evaluate the latest advances in laboratory medicine in this topic area.
2. Compare and contrast the research in this topic area.
3. Integrate and translate state-of-the-art knowledge in this topic area into the roles and responsibilities of the clinical laboratory professional.

SPEAKERS

Standardization of New Indirect ELISA Using a Highly-specific Egg Protein from Schistosoma Mansoni for Diagnosis of Different Clinical Forms in a Low Endemic Area in Brazil
#Vanessa Silva Moraes, MSc, Pharm
Instituto de Pesquisas René Rachou, Belo Horizonte, Brazil

Viability Assessment of In Vitro Fertilized Embryos Using a Novel Biomarker Candidate
#Gergely Montsko, PhD
University of Pecs, Pecs, Hungary

Molecular Analysis of MEN 1 Gene in Suspected Carriers of Multiple Endocrine Neoplasia Type 1 Born in Argentina
#Maria Viale, PhD
Hospital Italiano de Buenos Aires, Ciudad Autónoma de Buenos Aires, Argentina

Validation of Prostate Cancer Biomarkers and Inflammation: A Proteomics Study
#Tomris Ozben, PhD
Akdeniz University Medical Faculty Department of Clinical Biochemistry, Antalya, Turkey

Diagnostic Performance of Xpert MTB/RIF Assay in an Intermediate Tuberculosis Burden Setting
#Seung-Jung Kee, PhD
Chonnam National University Hospital, Gwangju, South Korea

10:30am–12:00pm

Refining Measurement of Hemoglobin A1c (HbA1c): Do We Know What It Means?

32130

McCormick Place, S402

Level: **INTERMEDIATE**

CE Credit: 1.5

MODERATOR

*David Sacks, MBChB
National Institutes of Health, Bethesda, MD

Developed in cooperation with the American Diabetes Association (ADA), Clinical Societies Collaboration Committee

TRACK: Endocrinology

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

SESSION OVERVIEW: The standardization of hemoglobin A1c (HbA1c) has substantially enhanced its clinical value. The improvement in analysis has resulted in identification by clinicians of a subset of patients in whom HbA1c results appear discordant with the clinical impression. The major concerns relate to the contribution of HbA1c to complications of diabetes and the effect of different lifespans of red blood cells and hemoglobin variants on HbA1c measurements.

EXPECTED OUTCOMES: After this session, participants will be able to:

1. Describe factors other than glycemia that alter HbA1c values.
2. Decide whether and how HbA1c values should be corrected for red blood cell lifespan.
3. List limitations to accurate measurement of HbA1c in individuals with variant hemoglobin.

SPEAKERS

Assessment of HbA1c in Patients with Hemoglobin Disorders
*Randie Little, PhD
University of Missouri at Columbia, Columbia, MO

What HbA1c Results Don't Tell You (About Risk for Complications and How to Personalize Management)
#Richard Bergenstal, MD
Park Nicollet Institute, Minneapolis, MN

Correcting HbA1c for Erythrocyte Lifespan: Problem Solved?
#John Higgins, MD
Massachusetts General Hospital, Boston, MA

MID-DAY

12:30pm–2:00pm

Real-Time Toxicology Testing and Case Discussion for Drugs of Abuse

32411
McCormick Place, S105

Level: **INTERMEDIATE**
CE Credit: 1.5

MODERATOR
#Alan Wu, PhD, DABCC, FAACC
University of California/San Francisco General Hospital, San Francisco, CA

Developed in cooperation with the TDM and Toxicology Division

TRACK: Toxicology/TDM

INTENDED AUDIENCE: This session is intended for all individuals who work in clinical laboratory science, including technologists who perform analyses, supervisors who must evaluate quality control data, lab scientists who perform biological variation studies, lab directors who provide toxicology data and clinical interpretation of laboratory data, and physicians who make management decisions based on lab test results. Manufacturers of LC-MS equipment should take special note as it demonstrates new applications of their analyzers.

SESSION OVERVIEW: This session will present a real toxicology case from Poison Center toxicologists and will include live comprehensive serum and urine testing. Both groups will be blinded to the drugs involved. Speakers will discuss tox needs and present the case while toxicologists will discuss a drug differential diagnosis as testing is being conducted and watched by the audience. When testing has been completed, the results will be discussed by the toxicology the panel. Moderators will then discuss the challenges in providing real-time testing (reporting, billing, regulatory approvals and sample delivery from outside hospitals).

EXPECTED OUTCOMES: After this session, participants will be able to:

1. Explain how LC-QTOF mass spectrometry is uniquely suitable for rapid toxicology testing.
2. Evaluate how the laboratory can interact with clinical toxicologists from a poison control center to enhance medical practices.
3. Explain how clinical toxicologists review clinical presentation, history and laboratory data to formulate a medical plan for patients who are poisoned, intoxicated or exposed to drugs.

SPEAKERS

Toxicology Testing Needs in the 21st Century
#Alan Wu, PhD, DABCC, FAACC
University of California/San Francisco General Hospital, San Francisco, CA

Real-Time Clinical Toxicology Testing by LC-MS
*Kara Lynch, PhD, DABCC
University of California/San Francisco General Hospital, San Francisco, CA

Discussion of Toxicology Case
#Craig Smollin, MD
University of California, San Francisco, San Francisco, CA

#Kathy Vo, MD
University of California, San Francisco, San Francisco, CA

12:30pm–2:00pm

The Role of the Clinical Laboratory in Transplantation

32412
McCormick Place, S103BC

Level: **BASIC**
CE Credit: 1.5

MODERATOR
*Tiffany Roberts, PhD, DABCC, DABHI
University of Louisville, Louisville, KY

TRACK: Utilization & Lab Management

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

SESSION OVERVIEW: Participants will be provided with a broad overview of the clinical laboratory testing performed to support the field of transplantation. Testing to evaluate donors and recipients pre-transplant, as well as to monitor recipients perioperatively and post-transplant, will be discussed. The critical role of the clinical laboratorian as a member of transplant team will be explored.

EXPECTED OUTCOMES: After this session, participants will be able to:

1. Discuss the overall role of the clinical laboratory in all phases of transplantation.
2. Describe the testing used to evaluate donors and recipients and its impact on outcomes.
3. Describe the testing used to monitor recipients and its impact on outcomes.
4. Discuss the role of the clinical laboratorian as a member of the transplant team.

SPEAKERS

The Role of the Clinical Laboratory Pre-Transplant
*John Lunz, PhD, DABHI
Gift of Hope Organ & Tissue Donor Network, Itasca, IL

The Role of the Clinical Laboratory Perioperatively
#Christopher Jones, MD
University of Louisville School of Medicine, Louisville, KY

The Role of the Clinical Laboratory Post-Transplant
*Tiffany Roberts, PhD, DABCC, DABHI
University of Louisville, Louisville, KY

12:30pm–2:00pm

AACC Goes Platinum: 70 Years of the AACC Annual Meeting

32413
McCormick Place, S106

Level: **BASIC**
CE Credit: 1.5

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

Developed in cooperation with the History of Clinical Chemistry Division, Industry Division

INTENDED AUDIENCE: This session is intended for IVD industry scientists, regulators of IVD's, laboratory directors, clinical chemists, technologists and anyone with an interest in the rich history of laboratory medicine over the past 70 years.

SESSION OVERVIEW: Presentations will highlight notable advances in the profession and its technology over the past 70 years, from the first AACC Annual Meeting in 1949 in Atlantic City to the present day. Key disruptive technologies central to the evolution of clinical laboratory testing from that 1949 meeting onward will be surveyed. Projections will also be made about the clinical laboratory 30 years in the future, at the time of the 100th AACC Annual Meeting in 2048.

EXPECTED OUTCOMES: After this session, participants will be able to:

1. Identify key paradigm or disruptive shifts in the evolution of clinical laboratory testing and automation over the past 70 years.
2. Understand the importance of the scientific and technologic innovations that led to the current state-of the-art in laboratory medicine and that may help shape the clinical laboratory of 2048, the year of the 100th Annual Meeting.
3. Identify the key role that the AACC and its Annual Meeting has played for 70 years—and continues to play—in modern clinical laboratory technologies.

SPEAKERS

How We Got Here from There: The AACC and Its Annual Meeting: 1949–2018
#Robert Rej, PhD
Wadsworth Center for Laboratory Research, New York State Department of Health, Albany, NY

One Hundred Years of Laboratory Medicine: 1949–2048
*Larry Kricka, PhD, DPhil, FAACC
Charlotte, NC

MID-DAY

12:30pm–2:00pm

Contributing Factors to Diagnostic Errors in the Clinical Laboratory Identified by Laboratorians: What Can We Fix Right Now?

32414
McCormick Place, S103D

Level: **BASIC**
CE Credit: 1.5

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

TRACK: Utilization & Lab Management

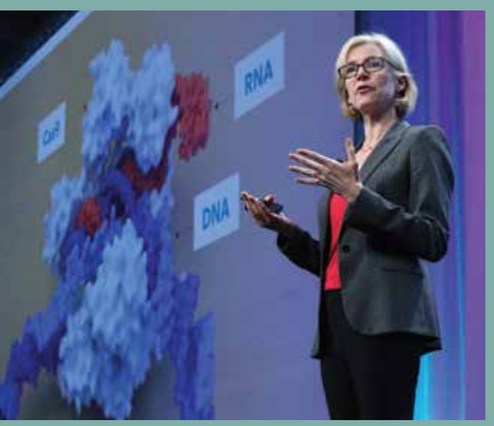
INTENDED AUDIENCE: This session is intended for pathologists, laboratory directors, clinical chemists, clinical laboratory scientists, scientists in the diagnostic industry, and all those interested in high-quality laboratory performance.

SESSION OVERVIEW: The goal of the session is to probe the audience (using an audience feedback system requiring only an iPhone) with questions to identify major sources of diagnostic error they have witnessed in the clinical laboratory. This will involve the presentation of responses to 40 to 60 questions that extend from the pre-pre-analytical steps to the post-post-analytical steps, which will follow a brief introduction of the topic. It is hoped that audience members will help quantify the number of times they, as individuals knowledgeable about diagnostic testing, have experienced a diagnostic error personally or have observed such a mistake in regard to a family member or loved one. The data obtained from these responses could provide the basis for a report in an AACC-sponsored newsletter.

EXPECTED OUTCOMES: After this session, participants will be able to:

1. Describe the most highly contributory factors to diagnostic errors that occur at any point between the correct selection of laboratory tests and the correct interpretation of test results.
2. Identify the likely number of diagnostic errors experienced by individuals receiving healthcare in the United States.
3. Partner effectively with colleagues in their home institution to reduce diagnostic errors locally when they learn about common contributing factors in the clinical laboratory.

SPEAKER
Contributing Factors to Diagnostic Errors in the Clinical Laboratory Identified by Laboratorians Using an Audience Response System: What Can We Fix Right Now?
#Michael Laposata, MD, PhD
University of Texas Medical Branch Galveston, Galveston, TX



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.

12:30pm–2:00pm

Emerging Clinical Applications of Circulating DNA Analysis

32415
McCormick Place, S102

Level: **INTERMEDIATE**
CE Credit: 1.5

MODERATOR
*Rossa Chiu, MBBS, PhD
The Chinese University of Hong Kong, Shatin, New Territories, Hong Kong, China

TRACK: Genomics/Genetics

INTENDED AUDIENCE: This session is intended for pathologists, lab directors, clinical chemists, technologists, IVD industry scientists and researchers, with an interest in emerging molecular diagnostic applications, especially in areas of cancer assessment and transplantation monitoring.

SESSION OVERVIEW: Much recent progress has been achieved in the analysis of circulating graft-derived and tumor-derived DNA. Some of these new applications have been or will soon be implemented clinically for organ transplantation monitoring and cancer screening/diagnosis. In this session, details of the clinical studies, technological and molecular approaches as well as new biological understanding of circulating DNA will be shared.

EXPECTED OUTCOMES: After this session, participants will be able to:

1. Describe the new technology platforms and protocols for circulating cell-free DNA analysis.
2. Describe the utilities of circulating cell-free DNA analysis for organ transplantation monitoring.
3. Explain the methodology and applications of plasma methylome analysis.
4. Describe the biological characteristics of circulating DNA.
5. Explain the clinical value of circulating cell-free DNA analysis for the detection of early cancers.

SPEAKERS
Graft-Derived Cell-Free DNA—a Promising Noninvasive Marker for Detection of Acute Rejection and Graft Injury after Solid Organ Transplantation
*Michael Oellerich, MD, FAACC, FAMM, FFPath (RCPI), FRCPath
George-August University, Goettingen, Germany

Cancer Screening by Circulating Tumor DNA Analysis Is Becoming a Clinical Reality
*Rossa Chiu, MBBS, PhD
The Chinese University of Hong Kong, Shatin, New Territories, Hong Kong, China

12:30pm–2:00pm

Implementation of a Multidisciplinary Cancer Precision Medicine Program: An Institutional Experience

32416
McCormick Place, S403

Level: **INTERMEDIATE**
CE Credit: 1.5

MODERATOR
#Helen Fernandes, PhD
Columbia University Medical Center, New York, NY

Developed in cooperation with the Molecular Pathology Division

TRACK: Precision Medicine & Oncology

INTENDED AUDIENCE: This session is intended for medical technologists, laboratory supervisors/managers, laboratory directors, and industry scientists and pathologists.

SESSION OVERVIEW: A viable precision medicine program addresses challenges from sample to answer, including impact on patient care. This session will present the Columbia experience in implementing a multidisciplinary precision medicine program, including assay choice, institutional workflows, billing, interpretation and reporting, molecular tumor boards, and utility review.

EXPECTED OUTCOMES: After this session, participants will be able to:

1. Identify the key developments in laboratory testing for precision cancer care.
2. Understand the processes implicated in the full circle of precision cancer care and the infrastructure demands in the laboratory.
3. Discuss the importance and role of multidisciplinary teams and tumor boards in precision cancer care.

SPEAKERS
Infrastructure Needs and Reimbursement Issues for Comprehensive Precision Cancer Testing
*Anthony Sireci, MD, MSc
Columbia University Medical Center, New York, NY

Bioinformatics Requisites for Identification and Interpretation of Genomic Alterations in Cancer
*Susan Hsiao, MD, PhD
Columbia University Medical Center, New York, NY

Selected Cases for Discussion of Utility at Multidisciplinary Molecular Tumor Boards
#Mahesh Mansukhani, MD
Columbia University Medical Center, New York, NY

MONDAY | JULY 30

SCIENTIFIC SESSIONS

MID-DAY

12:30pm–2:00pm

Harmonized Education: Use of Surrogate Samples in IVD Development and Regulatory Submission

32417
McCormick Place, S104

Level: **ADVANCED**
CE Credit: 1.5

MODERATOR
*Carolyn Hiller, MBA
Medical Device Innovation Consortium, Arlington, VA

INTENDED AUDIENCE: This session is intended for IVD industry scientists and laboratorians developing IVD tests and submitting them for regulatory approval.

SESSION OVERVIEW: Surrogate samples, when properly used, decrease time needed for analytical testing and reduce costs for test development and submission. A framework collaboratively developed by industry and the FDA establishes a foundation for surrogate use to support innovation and product submissions. Educational materials were developed to speed patient access to innovative technology.

EXPECTED OUTCOMES: After this session, participants will be able to:

1. Define surrogate samples.
2. Utilize a defined hierarchy and points of consideration when choosing an appropriate surrogate.
3. Use a study-specific hierarchy to guide the selection of the appropriate surrogate for a specific study.

SPEAKERS

Harmonized Education: Use of Surrogate Samples in IVD Development and Regulatory Submission
*Carolyn Hiller, MBA
Medical Device Innovation Consortium, Arlington, VA

Using MDIC's Surrogate Sample Framework: Basic Principles and using the Hierarchy
#April Veoukas, JD
Abbott Laboratories, Abbott Park, IL

Using MDIC's Surrogate Sample Framework: Case Studies for Qualitative, Semi-Quantitative and Quantitative Tests
#Marina Kondratovich, PhD
FDA, Silver Spring, MD

12:30pm–2:00pm

Enhancing Patient Care Using POCT: Tackling Current and Future Challenges

32418
McCormick Place, S101B

Level: **BASIC**
CE Credit: 1.5

MODERATOR
#Edward Leung, PhD, DABCC, FAACC
The University of Chicago Medicine, Chicago, IL

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

TRACK: Point-of-Care Testing

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

SESSION OVERVIEW: This session will focus on current and future challenges facing the clinical laboratory as a result of healthcare reform, and provide guidance on how to tackle current challenges and prepare for future challenges using POCT.

EXPECTED OUTCOMES: After this session, participants will be able to:

1. Identify challenges facing the clinical laboratory and laboratory testing as a result of healthcare reform.
2. List specific strategies to enhance overall patient care using POCT.
3. Explain metrics used for continuous assessment of the effectiveness of different interventions.
4. Propose POCT solutions to future challenges.

SPEAKERS

POCT and the Changing Landscape of Healthcare Delivery
#Rob Nerenz, PhD, DABCC
Dartmouth-Hitchcock Medical Center, Lebanon, NH

Using POCT to Improve Clinical Workflow
#Edward Leung, PhD, DABCC, FAACC
The University of Chicago Medicine, IL

Laboratory Medicine 2020: Using POCT to Get Ahead of Future Care Delivery Challenges
#Brenda Suh-Lailam, PhD, DABCC
Ann & Robert H. Lurie Children's Hospital of Chicago/Northwestern University, Chicago, IL

12:30pm–2:00pm

Late Breaking Session: Cervical Cancer Screening as an Example of a Global Health Strategy in Resource-Limited Countries

32431
McCormick Place, S505

Level: **INTERMEDIATE**
CE Credit: 1.5

MODERATOR
*Gregory Tsongalis, PhD, HCLD
Geisel School of Medicine at Dartmouth, Lebanon, NH

INTENDED AUDIENCE: This session is intended for laboratory directors, clinical chemists, pathologists, physicians, nurses, IVD industry and those interested in providing services in low- and middle-income countries.

SESSION OVERVIEW: This session will describe the challenges of implementing and sustaining a cervical cancer screening and HPV testing program in low- and middle-income countries. Lack of adequate facilities and trained staff, cost-prohibitive therapeutics, patient access to healthcare and remote practice will be discussed as will laboratory challenges regarding developing an operational testing process. Findings from HPV genotype studies will be presented that challenge the current strategies for vaccination programs in low- and middle-income countries.

EXPECTED OUTCOMES: After this session, participants will be able to:

1. Describe current limitations with practicing medicine in low- and middle-income countries.
2. Evaluate the feasibility of performing molecular laboratory testing in resource-limited settings.
3. Describe implementation of a cervical cancer screening program in low- and middle-income countries.

SPEAKERS

Practicing Oncology in an LMIC—Limitations and Challenges
*Suyapa Bejarano, MD
Liga Contra el Cancer Honduras, San Pedro Sula, Cortés, Honduras

Implementation of Cervical Cancer Screening: A Laboratory Perspective
*Gregory Tsongalis, PhD, HCLD
Geisel School of Medicine at Dartmouth, Lebanon, NH

AFTERNOON

2:30pm–4:00pm

Invited Oral Abstracts: Clinical Applications

32219
McCormick Place, S505

Level: **INTERMEDIATE**
CE Credit: 1.5

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

SESSION OVERVIEW: AACC is dedicated to advance the science and practice of laboratory medicine. A select group of members has reviewed and ranked the abstracts submitted for the AACC Annual Scientific Meeting. The Annual Meeting Organizing Committee has reviewed the accepted abstracts and has chosen five authors to present their research as oral presentations. Each 15-minute presentation will be followed by a 3-minute question-and-answer session.

EXPECTED OUTCOMES: After this session, participants will be able to:

1. Describe and evaluate the latest advances in laboratory medicine in this topic area.
2. Compare and contrast the research in this topic area.
3. Integrate and translate state-of-the-art knowledge in this topic area into the roles and responsibilities of the clinical laboratory professional.

SPEAKERS

Spironolactone Metabolite Causes Falsely Increased Progesterone in the Abbott Architect Immunoassay
#Kwabena Sarpong, PhD
University of Virginia, Charlottesville, VA

Calprotectin Antibodies with Different Binding Specificities Can Be Used as Tools to Detect Multiple Calprotectin Forms
#Laura-Leena Kiiskinen, PhD
Medix Biochemica, Espoo, Finland

Evaluation of Positive Frequency as a Quality Indicator for Assay Performance
#Kornelia Galior, PhD
Mayo Clinic, Rochester, MN

Poor Correlation and Concordance Between NT-proBNP and BNP in Patients with Suspected Heart Failure
#Christopher Farnsworth, PhD
Washington University, St. Louis, MO

Storage of Urine Specimens in POCT Cups Reduces Concentrations of Many Drugs Measured by Confirmatory Methods of Urine Drug Testing
#Mehran Haidari, PhD, DABCC, FAACC
Elite Medical Laboratory Solutions, Tomball, TX

AFTERNOON

2:30pm–5:00pm

Chair's Invited Session: Clinical Lab 2.0: How Laboratories Can Support Value-Based Care, Optimize Patient Outcomes, and Reduce Total Cost of Care in Acute and Chronic Conditions

32220
McCormick Place, S504

Level: **BASIC**
CE Credit: 2.5

MODERATOR
*Kathleen Swanson, MS, RPh
New Mexico, TriCore Reference Laboratories, Albuquerque, NM

TRACK: Utilization & Lab Management

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

SESSION OVERVIEW: Population health management is emerging as a method to aggregate clinical data and produce actionable insights. Laboratories can leverage historical and longitudinal test results to develop targeted population health management tools integrated into clinical workflows. Results of these efforts can lead to improved patient outcomes and reduced total cost of care for conditions such as prenatal care and diabetes.

EXPECTED OUTCOMES: After this session, participants will be able to:

1. Explain how labs can differentiate themselves now in an effort to mitigate the effect of PAMA while positioning themselves at the forefront of value-based care for the future.
2. Describe how historical and longitudinal clinical laboratory test results can be used to develop targeted disease state interventions for use in clinical workflows.
3. List at least three clinical outcomes associated with a laboratory-based disease management program for prenatal care.

SPEAKERS

Clinical Lab 2.0: How Laboratories Can Support Value-Based Care
#Michael Crossey, MD, PhD
TriCore Reference Laboratories, Albuquerque, NM

How Laboratories Can Support Value-Based Care for Chronic Conditions
*Kathleen Swanson, MS, RPh
TriCore Reference Laboratories, Albuquerque, NM

How Laboratories Can Support Value-Based Care for Acute Conditions
#Richard VanNess, MS
TriCore Reference Laboratories, Albuquerque, NM

2:30pm–5:00pm

Antibiotic Stewardship: Keeping Up with the Mandates

32221
McCormick Place, S103BC

Level: **INTERMEDIATE**
CE Credit: 2.5

MODERATOR
*Jamie Phillips, PhD
Roche Diagnostics, Fishers, IN

INTENDED AUDIENCE: This session is intended for hospital epidemiologists, lab directors, infectious disease pediatricians, infectious disease physicians, microbiologists, pharmacists, ED doctors and all healthcare providers who wish to create, implement or improve an antimicrobial stewardship program for their healthcare institution.

SESSION OVERVIEW: The Centers for Medicare & Medicaid Services and the Joint Commission have mandated that hospitals have infection prevention and control and antibiotic stewardship programs for the surveillance, prevention and control of healthcare-associated infections and other infectious diseases, and for the appropriate use of antibiotics. This session will clarify these mandates, discuss best practices, identify caveats in unique populations and discuss how diagnostics can be utilized by institutions to support these mandates.

EXPECTED OUTCOMES: At the conclusion of this session, participants will be able to:

1. Cite best practices for antimicrobial stewardship programs.
2. Describe the strategies for the implementation process and outcome measures.
3. Apply antimicrobial stewardship interventions for unique populations (immunocompromised, pediatrics, elderly).
4. Illustrate how diagnostics will aid with data needed to support antimicrobial stewardship in their institution.

SPEAKERS

Antibiotic Stewardship: Mandates and Best Practices
#Elia Mears, MS, MT(ASCP)SM
The Joint Commission, Houma, LA

Strategies for Implementing Antibiotic Stewardship Processes
#Edward Septimus, MD
Harvard Medical School/Harvard Pilgrim Health Care Institute, Houston, TX

Applying Antibiotic Stewardship Interventions for Unique Populations
#Lisa Saiman, MD, MPH
Columbia University Medical Center, New York, NY

How Diagnostics Can Support Antibiotic Stewardship Programs
*Larissa May, MD, MSPH, MSHS
University of California, Davis School of Medicine, Sacramento, CA

MONDAY | JULY 30

SCIENTIFIC SESSIONS

AFTERNOON

2:30pm–5:00pm

TDM and Pharmacogenomics: Complementary Tools for Precision Medicine

32222

McCormick Place, S103D

Level: **INTERMEDIATE**

CE Credit: 2.5

MODERATOR

*William Clarke, PhD, MBA, DABCC
Johns Hopkins Medical Institutions, Baltimore, MD

TRACKS: Genomics/Genetics; Precision Medicine & Oncology

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

SESSION OVERVIEW: This session will discuss how pharmacogenomics and TDM can be utilized to optimize treatment therapies. This session will focus on pre-emptive pharmacogenomics and well-established gene-drug pairs, as well as scenarios when genetic information may not predict therapeutic responses. Further, using case studies, drug-drug and drug-herb interactions will also be discussed, as well as strategies to combine different types of laboratory data to optimize clinical outcomes.

EXPECTED OUTCOMES: After attending the session participants will be able to:

1. Identify gene-drug pairs that can guide drug dosing and impact clinical outcomes.
2. Recognize gaps where genetic information may not predict phenotypic presentation.
3. Explain the impact of drug-drug or drug-herb interactions on therapeutic response.
4. Discuss strategies to integrate both genetic and drug concentration measurements in the clinical setting.

SPEAKERS

Pharmacogenetics in Precision Medicine: Where to Start?
*Mark Marzinke, PhD
Johns Hopkins University School of Medicine, Baltimore, MD

Where Traditional Therapeutic Drug Monitoring Provides Useful Information: Free Drug Monitoring and Identifying Clinically Significant Drug-Drug and Drug-Herb Interactions
*Amitava Dasgupta, PhD, DABCC, NRCC
University of Texas at Houston Medical School, Houston, TX

Leveraging Pharmacokinetics and Pharmacogenomics for Optimal Drug Management
*William Clarke, PhD, MBA, DABCC
Johns Hopkins Medical Institutions, Baltimore, MD

2:30pm–5:00pm

Hemostatic Disorders That Can Kill You

32223

McCormick Place, S105

Level: **BASIC**

CE Credit: 2.5

MODERATOR

#Neil Harris, MBChB, MD, DABCC, FCAP, FAACC
University of Florida College of Medicine, Gainesville, FL

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

SESSION OVERVIEW: Dangerous bleeding and thrombotic disorders will be covered in depth, including hemophilia, venous thromboembolism (large vessel thrombosis) and thrombotic thrombocytopenic purpura (TTP), which involves thrombosis of the microvasculature. These conditions should be recognized early because they are all amenable to treatment with a good chance of excellent recovery.

EXPECTED OUTCOMES: After this session, participants will be able to:

1. Explain the syndromes of the thrombotic microangiopathies (TMAs) especially TTP.
2. Create an awareness of the essential laboratory features of life-threatening thrombotic hemolytic anemias.
3. Evaluate the causes of a prolonged APTT, which can (paradoxically) signal both a life-threatening bleeding disorder and a thrombotic disorder.

SPEAKERS

Hemophilia and Venous Thromboembolism: Hemorrhage versus Thrombosis
#Neil Harris, MBChB, MD, DABCC, FCAP, FAACC
University of Florida College of Medicine, Gainesville, FL

Systemic versus Intrarenal Thrombosis: TTP versus HUS
#William Winter, MD, FCAP, FAACC, DABCC
University of Florida, Gainesville, FL

2:30pm–5:00pm

Using R for Method Validation Studies: The Good, the Great and the Beautiful

32224

McCormick Place, S102

Level: **INTERMEDIATE**

CE Credit: 2.5

MODERATOR

#Christopher McCudden, PhD, DABCC, FCACB, FAACC
The Ottawa Hospital, Ottawa, ON, Canada

INTENDED AUDIENCE: This session is intended for pathologists, lab directors, clinical chemists, medical technologists and laboratory administrators with an interest in learning how laboratorians can use the R programming language to solve diverse but commonly encountered problems

SESSION OVERVIEW: This session will demonstrate the versatility and power of the R statistical programming language in application to clinical laboratory medicine by showcasing tools that have been built and implemented by the speakers. Applications will cover topics of method evaluation, automated report generation and establishing reference intervals.

EXPECTED OUTCOMES: At the conclusion of this course, attendees should be able to:

1. Discuss features and benefits of using the R programming language in clinical laboratories.
2. Describe ways the R programming language can be used for routine method evaluation.
3. Evaluate and solve clinical laboratory problems using computational thinking.

SPEAKERS

Using R for Method Evaluation Studies
#Stephen Master, MD, PhD, FCAP, FAACC
Children's Hospital of Philadelphia, Philadelphia, PA

Using R Markdown for Method Evaluation Reports
#Matthew Henderson, PhD, BSc, FCACB
Newborn Screening Ontario, Ontario, ON, Canada

Establishing Simple, Partitioned and Continuous Reference Intervals Using R
#Christopher McCudden, PhD, DABCC, FCACB, FAACC
The Ottawa Hospital, Ottawa, ON, Canada

2:30pm–5:00pm

Overdiagnosis and Overmonitoring—Can We Do Better?

32225

McCormick Place, S403

Level: **INTERMEDIATE**

CE Credit: 2.5

MODERATOR

*Andrea Horvath, MD, PhD, EUSpLM, FRCPath, FRCPA
New South Wales Health Pathology, Prince of Wales Hospital, Sydney, New South Wales, Australia

Developed in cooperation with the Evidence-Based Laboratory Medicine Committee

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

SESSION OVERVIEW: This session, presented by laboratorians, clinicians and epidemiologists, focuses on what needs to be done to avoid patient harm related to overdiagnosis and overmonitoring. The drivers and solutions to overdiagnosis and overmonitoring and approaches to the redefinition of diseases due to the availability of new and more sensitive tests will be discussed.

EXPECTED OUTCOMES: After this session, participants will be able to:

1. Define the key drivers and potential solutions to overdiagnosis and overmonitoring.
2. Use evidence-based diagnostic criteria for re-definition of conditions based on laboratory testing, especially using more sensitive biomarkers.
3. Develop locally adaptable test ordering tools to reduce overmonitoring.

SPEAKERS

Overdiagnosis and Overmonitoring—Drivers and Solutions
#Alex Chin, PhD, DABCC, FAACC, FCACB
Calgary Laboratory Services/University of Calgary, Calgary, AB, Canada

Guidance for Modifying the Definition of Diseases: A Checklist
#Jenny Doust, MBBS, PhD
Bond University, Gold Coast, Queensland, Australia

Methodological Approaches to Evaluating New Highly Sensitive Tests to Avoid Overdiagnosis
#Hans Reitsma, MD, PhD
University Medical Center Utrecht, Utrecht, GA, Netherlands

Computerized Ordering Lock-Out based on Minimum Retest Intervals as a Tool to Reduce Overmonitoring
#Theo de Malmanche, MBChB, FRACP, FRCPA
New South Wales Health Pathology, Newcastle, New South Wales, Australia

AFTERNOON

2:30pm–5:00pm

Lipoprotein-Related Precision Medicine—Implications in Risk Stratification and Emerging Therapies of Coronary Heart Disease and Aortic Valve Disease

32226
McCormick Place, S106

Level: **INTERMEDIATE**
CE Credit: 2.5

MODERATOR
#Jing Cao, PhD, DABCC
Baylor College of Medicine, Texas Children's Hospital, Houston, TX

Developed in cooperation with the Lipoproteins and Vascular Diseases Division

TRACK: Precision Medicine & Oncology

INTENDED AUDIENCE: This session is intended for laboratory professionals including lab directors, lab managers or supervisors, scientists and technologists practicing in hospitals with large cardiovascular disease patient populations, as well as professionals from the IVD industry with an interest in lipoprotein assays.

SESSION OVERVIEW: Lipoproteins are becoming the focus of the precision medicine in the management of highly prevalent cardiovascular diseases in the U.S. population. This proposal covers the topics of apolipoprotein assay utilization, methodologies of lipoprotein(a) assays, and novel dyslipidemia treatment targeting lipoproteins, and will discuss the advances in the field of lipoproteins and vascular complications.

EXPECTED OUTCOMES: After this session, participants will be able to:

1. Compare the clinical utility of standardized apoB and apoA assays to LDL-C and non-HDL-C assays.
2. Describe methodologies used in currently available Lp(a) assays and summarize factors to be considered when choosing an assay and discuss clinical cases relevant to Lp(a).
3. Recognize novel dyslipidemia therapies and discuss how clinical laboratories would respond to these emerging pharmaceutical agents in the era of precision medicine.

SPEAKERS

Point/Counter Point Panel Debate, Introduction: Does Apolipoprotein Have Additional Clinical Utility over Standard Cholesterol Measurements in Cardiovascular Disease Risk Assessment?
#Jing Cao, PhD, DABCC
Baylor College of Medicine, Texas Children's Hospital, Houston, TX

Point/Counter Point Panel Debate, Point: Cholesterol Measurement Is Sufficient to Assess Cardiovascular Disease Risk
*Sridevi Devaraj, PhD, DABCC
Baylor College of Medicine, Texas Children's Hospital, Houston, TX

Point/Counter Point Panel Debate, Counter Point: Apolipoproteins When Measured in Conjunction with Cholesterol Improve Cardiovascular Disease Risk Prediction
*Michael Tsai, MS, PhD
University of Minnesota, Eden Prairie, MN

Case Studies: Varying Analytical Methods for the Size-Variable Lipoprotein(a)
*Santica Marcovina, PhD
University of Washington, Seattle, WA

No Longer Lonely—Emerging Dyslipidemia Treatment besides Statin in the Era of Precision Medicine
#Alan Remaley, MD, PhD
National Institutes of Health, Bethesda, MD

2:30pm–5:00pm

The Burden of Proof: Understanding Impacts of Laboratory Testing and Technology

32227
McCormick Place, S101B

Level: **INTERMEDIATE**
CE Credit: 2.5

MODERATOR
#Frederick Strathmann, PhD, MBA, DABCC (CC, TC)
NMS Labs, Willow Grove, PA

TRACK: Toxicology/TDM

INTENDED AUDIENCE: This session is intended for pathologists, lab directors, clinical chemists, technologists, IVD industry scientists, trainees, forensic scientists, quality assurance staff and legal professionals.

SESSION OVERVIEW: This session will compare numerous aspects of clinical and forensic testing. Topics will include similarities and differences between clinical and forensic toxicology laboratories, rigors and expertise behind scientific support in forensic matters, the use of NGS in forensic DNA cases, and numerous examples of forensic and clinical science where the scientific process has failed to support accepted and applied principles.

EXPECTED OUTCOMES: At the completion of this session, participants will be able to:

1. Demonstrate a basic understanding of available technologies presented and how they can be applied in both clinical and forensic settings.
2. Evaluate the requirements for expert testimony and potential gaps with those currently operating in this arena.
3. Summarize the key reasons why proposed scientific advances have failed to effectively translate into routine use.

SPEAKERS

Clinical versus Forensic Toxicology: Finding Our "Deferences"?
#Frederick Strathmann, PhD, MBA, DABCC (CC, TC)
NMS Labs, Willow Grove, PA

Lack of Scientific Rigor: Examples from the Worlds of Clinical and Forensic Science
#Laura Labay, PhD, F-ABFT
NMS Labs, Willow Grove, PA

Next-Generation Sequencing: Comparisons and Distinctions of Use in Clinical versus Forensic Science
#Richard Guerrieri, MS
Battelle Memorial Institute, Columbus, OH

Is Scientific Knowledge Enough in Forensic Opinions: Are Clinical Laboratory Scientists Prepared for Legal Matters?
#Jennifer Collins, PhD, F-ABFT
MedTox, St. Paul, MN

MONDAY | JULY 30

SCIENTIFIC SESSIONS

AFTERNOON

2:30pm–5:00pm

Validation of Laboratory-Developed Tests: Will You Be Ready?

32228
McCormick Place, S402

Level: **INTERMEDIATE**
CE Credit: 2.5

MODERATOR
*Y. Victoria Zhang, PhD, MBA, DABCC, FAACC
University of Rochester Medical Center, Rochester, NY

Developed in cooperation with the Mass Spectrometry and Separation Sciences Division, TDM and Toxicology Division

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

SESSION OVERVIEW: This session will help clinical laboratories understand the history, development and perspectives of validation for laboratory-developed tests. Speakers will present risk-based model for the validations and real-life examples based on the New York State reviews of LDTs to provide insights into proper validation processes for LDTs.

EXPECTED OUTCOMES: At the completion of this session, participants will be able to:

1. Describe the basic process for validation of laboratory-developed tests.
2. Discuss the essential and general considerations for the validation of LDTs.
3. List the common do's and don'ts for validation of LDTs in house.
4. Apply effective approaches in validating LC-MS/MS-based LDTs in house.

SPEAKERS

Laboratory-Developed Tests: Where We've Been and How Did We Get to Where We Are Today?
#Robert Rej, PhD
Wadsworth Center for Laboratory Research, New York State Department of Health, Albany, NY

Using a Risk-Based Evaluation of LDTs to Assure Analytical and Clinical Validity: The NYS Experience
#Erasmus Schneider
Wadsworth Center/New York State Department of Health, Albany, NY

Validation of Laboratory-Developed Tests: The Dos
*Y. Victoria Zhang, PhD, MBA, DABCC, FAACC
University of Rochester Medical Center, Rochester, NY

Validation of LC-MS/MS-Based Laboratory-Developed Tests: The Don'ts
#Zhimin (Tim) Cao, MD, PhD, DABCC, FAACC
Wadsworth Center, Albany, NY

SPECIAL SESSION

4:30pm–6:00pm
McCormick Place, Grand Ballroom/S100

AACC Disruptive Technology Award Competition

32229
Level: **BASIC** | CE Credit: 1.5

Supported by LabCorp, Northwestern INVO, Siemens Healthineers

SESSION OVERVIEW: AACC's Disruptive Technology Award recognizes innovative testing solutions that improve patient care through diagnostic performance or access to high-quality testing. Three diagnostic developer finalists will present their technology to a panel of expert judges who will evaluate all presented testing solutions based on feasibility and performance. The winner will be chosen by a combination of the judge's evaluation and audience response. Attendees will be able to meet all seven semifinalists teams to learn more about their technologies.

JUDGES:

#David Ledden, PhD
Principal Key Expert, Head of Point of Care Immunoassay, Siemens Healthcare Diagnostics

#Nicole Walker, MBA
Partner, Baird Capital

#Evan Norton, MBA
Divisional Vice President and Director of Abbott Ventures, Abbott Laboratories

#Ian Wright, CBiol, MRSB
Owner, Strategic Innovations LLC

#Anne Sissel, CFA
Vice President and Head of Baxter Ventures

PRESENTERS:

+David Deetz, *Founder and CTP, Ativa Medical*
Ativa has developed a revolutionary fluid processing engine that allows its MicroLAB to perform the full analytical processes utilized in large lab blood analyzers entirely on a low-cost disposable card. The significance of this breakthrough is that it enables the major test panels that form the backbone of blood testing to be performed by medical staff at the point of care. Clinics will be able to do real-time testing themselves rather than waiting for a day or more for the traditional blood send-out process.

+Lars Ullerich, PhD, MBR, *Managing Director, Business Development, GNA Biosolutions GmbH*
GNA Biosolutions has created a platform technology, Pulse Controlled Amplification (PCA), which enables 1,000,000 times faster temperature ramps in nucleic acid amplification. Faster temperature ramps allow amplification reaction times that are at least 10 times faster than conventional methods. Furthermore, PCA makes it possible to process clinical samples without additional DNA purification and extraction steps. Dangerous pathogens can be detected by PCA in non-traditional testing environments within minutes, with the sensitivity and specificity of laboratory-based molecular diagnostics.

+Trevor Morin, CSO, *Two Pore Guys*
2PG is developing a small (6 inch x 6 inch) diagnostic device that allows the detection of any molecule of interest, including nucleic acids, proteins, metabolites, drugs, and small molecules. The technology employs solid-state nanopores that allow single molecule counting using purely electrical sensing, obviating the need for optics, chemistries, or electrochemical sensors.

TUESDAY

JULY 31

PLENARY & SCIENTIFIC SESSIONS

PLENARY SESSION

8:45am–10:15am

McCormick Place, Grand Ballroom/S100

HPV-Associated Cancers and the HPV Vaccine

SPEAKER: #Denise Galloway, PhD
Fred Hutchinson Cancer Research Center, Seattle, WA

13001
Level: **BASIC** | CE Credit: 1.0

INTENDED AUDIENCE: This session is intended for pathologists, lab directors, clinical chemists, medical laboratory scientists and laboratory administrators with an interest in pathogen-associated cancer and development of protect vaccines.

SESSION OVERVIEW: This session highlights the discovery that human papillomaviruses (HPVs) cause cervical and other cancers. In just 25 years, this discovery led to the development of HPV vaccines (Gardasil 9® and Cervarix®). Dr. Galloway will review the history of HPV vaccine development, especially the work needed to meet U.S. FDA regulations and the importance of achieving herd immunity. Future work includes improving efficacy, assessing the adequacy of initial vaccination, vaccinating males, assessing need for boosters, reducing cost and improving international availability.

EXPECTED OUTCOMES: After this session, participants will be able to:

1. Explain the role of HPV in the development of cervical cancer.
2. Assess the work involved in obtaining FDA approval for the HPV vaccine.
3. Describe future work needed for HPV vaccine improvement.

TUESDAY | JULY 31

BROWN BAG SESSIONS T TICKET

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

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 your own food in the convention center prior to the session.

CE Credit: 1.0 (per session) unless otherwise noted in the mobile app, or at www.aacc.org/2018am | McCormick Place, Vista Ballroom/S406

TITLE	SESSION # AM	SESSION # PM	SPEAKER	LEVEL
OSHA Safety Programs You Need to Know	43101	53201	**#Dan Scungio,** MT(ASCP), SLS, CQA (ASQ), Sentara Healthcare, Hampton, VA	INTERMEDIATE
How People Try to Beat Drug Testing and Defend Positive Results **TRACK:** Toxicology/TDM	43102	53202	***Amitava Dasgupta,** PhD, DABCC, NRCC, University of Texas at Houston Medical School, Houston, TX	BASIC
Integrating Preanalytical Quality Indicators for Laboratory Testing Efficiency	43103	53203	***Aparna Ahuja,** MBBS, MD, PG, BD Diagnostics, Franklin Lakes, NJ	INTERMEDIATE
The Quest for Quality through Competency Assessment	43104	53204	**#Elia Mears,** MS, MT(ASCP)SM, The Joint Commission, Houma, LA	INTERMEDIATE
How to Select and Utilize an Appropriate Method for Testosterone Testing	43105	53205	**#Yusheng Zhu,** PhD, DABCC, FAACC, Pennsylvania State University Hershey Medical Center, Hershey, PA	INTERMEDIATE
Emergency Department Workflows: Data-Driven Approaches to Common Questions **TRACK:** Point-of-Care Testing	43106	53206	**#Christine Snozek,** PhD, DABCC, FAACC, Mayo Clinic, Scottsdale, AZ	BASIC
Current Challenges of PTH Testing and Approaches to Developing a Reference Measurement Procedure **TRACK:** Endocrinology	43107	53207	**#Candice Ulmer,** PhD, Centers for Disease Control and Prevention, Atlanta, GA	INTERMEDIATE
There's No Place Like Home: Exploring Hospital at Home Care Strategies **TRACK:** Point-of-Care Testing	43108	53208	**#Michelle Parker,** PhD, University of Toronto, Toronto, ON, Canada	BASIC
HIV Diagnostics: Past, Present and Future *Developed in cooperation with the Clinical Translational Science Division*	43109	53209	**#Vincent Ricchiuti,** PhD, Laboratory Corporation of America Holdings, Dublin, OH	INTERMEDIATE
Pharmacogenomics in Laboratory Medicine: Moving to an Era of Precision Medicine **TRACK:** Precision Medicine & Oncology	43110	53210	**#Mahesheema Ali,** PhD, Baylor College of Medicine/Texas Children's Hospital, Houston, TX	INTERMEDIATE
Method Validations: Plan Development and Data Evaluation	43111	53211	**#Stephanie Inman,** MLS(ASCP), Atrium Health, Matthews, NC	BASIC
Overview and Recent Recommendations for Bone Turnover Markers	43112	53212	**#Jennifer Powers,** PhD, ABCC-Clinical Chemistry, Core Lab for Clinical Studies, St. Louis, MO	BASIC
Emerging Trends in Autoimmune and Paraneoplastic Encephalopathy Testing	43113	53213	**#Christopher Farnsworth,** PhD, Washington University, St. Louis, MO	BASIC

A Beginner's Guide to Developing Clinical Mass Spectrometry Assays **TRACK:** Mass Spectrometry	43114	53214	**#Pratistha Ranjitkar,** PhD, DABCC, Medical College of Wisconsin, Milwaukee, WI	BASIC
Measurement of Steroid Hormones by Mass Spectrometry *Developed in cooperation with the Endocrinology Division, Mass Spectrometry and Separation Sciences Division*	43115	53215	**#Lumi Duke,** MS, Centers for Disease Control and Prevention, Atlanta, GA	INTERMEDIATE
Flow Cytometry for Beginners: Basic Principles and Applications in the Clinical Laboratory	43116	53216	**#Ashton Brock,** PhD, University of Virginia, Charlottesville, VA	BASIC
Designing a Successful Point-of-Care Testing Program: Survival Guide for New Laboratory Directors *Developed in cooperation with SYCL*	43117	53217	**#Rob Nerenz,** PhD, DABCC, Dartmouth-Hitchcock Medical Center, Lebanon, NH	BASIC
The PSA Screening Controversy: History, Guidelines and Future Outlook	43118	53218	**#Claire Knezevic,** PhD, Johns Hopkins Medical Institutes, Baltimore, MD	BASIC
Hemophagocytic Syndromes	43119	53219	**#Carlos Lemos,** MD, CHLN, Lisbon, Portugal	BASIC
Revving Up the Contact System: The Interface between Anaphylaxis, Complement Activation and Thrombosis	43120	53220	**#Neil Harris,** MBChB, MD, DABCC, FCAP, FAACC, University of Florida College of Medicine, Gainesville, FL	INTERMEDIATE
Topics in Coagulation—Clinical Case Vignettes	43121	53221	**#Lindsay Bazydlo,** PhD, DABCC, University of Virginia, Charlottesville, VA	INTERMEDIATE
Ferritin: Should We Use Reference Intervals or Medical Decision Thresholds?	43122	53222	***Paul Yip,** PhD, FCACB, DABCC, University Health Network, Toronto, ON, Canada	INTERMEDIATE
Heterophile Antibodies: An Interference You Can't Afford to Miss	43123	53223	**#Anu Maharjan,** PhD, University of Utah/ARUP Laboratories, Salt Lake City, UT	INTERMEDIATE
Setting and Evaluating Quality Metrics *Developed in cooperation with the Management Sciences and Patient Safety Division*	43124	53224	**#Joshua Bornhorst,** PhD, DABCC, Mayo Clinic, Rochester, MN	INTERMEDIATE
Inborn Errors of Metabolism: From Newborn Screening to Diagnosis **TRACK:** Pediatric/Maternal-Fetal	43125	53225	**#Khushbu Patel,** PhD, DABCC, UT Southwestern Medical Center, Dallas, TX	BASIC
Minimum Retesting Intervals: Importance, Determination, Advantages, Challenges of Enforcement	43127	53227	**#Asmita Hazra,** MBBS, MD, Govt. Medical College, Pali, Rajasthan, India	INTERMEDIATE
Common Auto-Verification Rules and Their Exceptions in an Automated Testing Laboratory	43128	53228	***Yifei Yang,** PhD, DABCC, University of Chicago, Chicago, IL	INTERMEDIATE
Can You Substitute Diesel with Gas in Your Car?: The Story of Active Vitamin B12 and Total Vitamin B12	43129	53229	**#Barnali Das,** MD, DNB, PGDHHM, Kokilaben Dhirubhai Ambani Hospital, Mumbai, Maharashtra, India	INTERMEDIATE
Common Pitfalls in Testing and Interpretation of D dimers	43131	53231	**+Saptarshi Mandal,** AIIMS, Jodhpur, Rajasthan, India	BASIC
Promoting the Clinical Laboratory to Patients, Students and the General Public	43132	53232	**#Alan Wu,** PhD, DABCC, FAACC, University of California/San Francisco General Hospital, San Francisco, CA	BASIC

TUESDAY | JULY 31

MEET THE EXPERT

10:30am–11:30am

HPV-Associated Cancers and the HPV Vaccine

63101

McCormick Place, S101A

Level: **BASIC**

CE Credit: 1.0

MODERATOR

#Edward Ashwood, MD, ABP
University of Colorado Anschutz Medical Campus, Aurora, CO

SESSION OVERVIEW: This session provides an excellent opportunity for a limited number of attendees to meet with Dr. Denise Galloway, an expert in pathogen-associated malignancies. Her fascination with the idea that a virus could lead to cancer by sparking changes within cells led her to study the human papillomavirus, or HPV, and to make breakthrough contributions to a vaccine that prevents HPV and averts tens of thousands of cervical cancer cases each year. Dr. Galloway will discuss her role in these discoveries and her ongoing efforts to understand, treat and prevent cancers caused by other pathogens.

SPEAKER

#Denise Galloway, PhD
Fred Hutchinson Cancer Research Center, Seattle, WA

TUESDAY | JULY 31

SCIENTIFIC SESSIONS

MORNING

10:30am–12:00pm

Urine Drug Testing: Debates over Best Practices to Assess Compliance and Manage the Opioid Crisis

33102

McCormick Place, S102

Level: **INTERMEDIATE**

CE Credit: 1.5

MODERATOR

#Stacy Melanson, MD, PhD
Brigham and Women's Hospital, Boston, MA

TRACK: Toxicology/TDM

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

SESSION OVERVIEW: Two ongoing debates on best practices for urine drug testing to determine compliance with prescribed medications and manage the opioid crisis will be discussed: (1) what the critical components of a definitive testing panel are, and (2) whether detecting drugs in urine is superior to oral fluid. First, the utility of quantitative definitive testing by mass spectrometry, the required components of the panel and necessary cutoffs will be debated using illustrative clinical cases. Recommendations on implementation of mass spectrometry in clinical laboratories and the role of interpretative comments will also be made. Second, there will be a debate on the clinical utility of urine and oral fluid matrices, and an optimal testing algorithm will be provided.

EXPECTED OUTCOMES: After this session, participants will be able to:

1. Describe the critical components of a definitive urine drug testing panel to assess compliance and manage the opioid crisis.
2. Outline some factors to consider when implementing definitive testing in your laboratory.
3. Discuss whether oral fluid or urine should be the preferred specimen type and which drugs are detected more reliably in each matrix.

SPEAKERS

What Are the Critical Components of a Definitive Testing Panel?
#Stacy Melanson, MD, PhD
Brigham and Women's Hospital, Boston, MA

Is Oral Fluid or Urine the Preferred Specimen Type?
#Athena Petrides, PhD
Brigham and Women's Hospital, Boston, MA

10:30am–12:00pm

Gaps in Knowledge and Controversies Surrounding Thyroglobulin Measurement and Interpretation

33103

McCormick Place, S101B

Level: **BASIC**

CE Credit: 1.5

MODERATOR

#Joely Straseski, PhD, DABCC, FAACC
ARUP Laboratories/University of Utah, Salt Lake City, UT

TRACK: Precision Medicine & Oncology

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

SESSION OVERVIEW: Thyroglobulin (Tg) and anti-Tg autoantibody (TgAb) measurements are central to long-term follow-up for thyroid cancer. The introduction of mass spectrometry-based methods has revealed limitations of current assays. This session will discuss pros and cons of Tg and TgAb methods. Clinical scenarios involving TgAb positive and negative patients will be discussed.

EXPECTED OUTCOMES: After this session, participants will be able to:

1. Describe how different thyroglobulin (Tg) assays are affected by the presence of anti-Tg autoantibodies (TgAb).
2. Discuss the analytical performance of various TgAb assays.
3. Compare the clinical performance of available Tg assays in the presence and absence of TgAb.

SPEAKERS

Thyroglobulin Measurement: Is There Really a Perfect Assay?
*Alicia Algeciras-Schimnich, PhD, DABCC
Mayo Clinic, Rochester, MN

What's TgAb Got to Do with It? The Role of Autoantibodies in Thyroglobulin Measurement
#Joely Straseski, PhD, DABCC, FAACC
ARUP Laboratories/University of Utah, Salt Lake City, UT

10:30am–12:00pm

Emerging Strategies for Value-Based Laboratory Stewardship Aimed at Improving Outcomes and Reducing Diagnostic Errors

33104

McCormick Place, S103BC

Level: **INTERMEDIATE**

CE Credit: 1.5

MODERATOR

#Ron Schifman, MD
Southern Arizona VA Healthcare System, Tucson, AZ

INTENDED AUDIENCE: This session is intended for laboratory managers, pathologists, laboratory directors, healthcare system administrators and health information managers.

SESSION OVERVIEW: This session will describe advanced concepts and emerging strategies that improve patient outcomes and reduce errors. Topics include benefits of forming partnerships to directly manage patient testing, the laboratory's role in population health, use of patient registries, value of inter-institutional benchmarking, cost-effective analysis, and techniques for designing utilization studies.

EXPECTED OUTCOMES: After this session, participants will be able to:

1. Understand emerging systems and strategies for achieving value-based utilization management.
2. Describe the benefit of forming partnerships with other healthcare providers to manage testing practices that improve outcomes and reduce diagnostic error.
3. Design utilization studies and know when and when not to conduct a study.
4. List an example of how the use of laboratory information systems improves diagnosis and evidence-based medical practice.

SPEAKERS

Emerging Laboratory Utilization Systems Aimed at Improving Outcomes
#Ron Schifman, MD
Southern Arizona VA Healthcare System, Tucson, AZ

Inter-Facility Benchmarking and Meaningful Design of Utilization Studies
*Robert Schmidt, MD, PhD, MBA
University of Utah, Salt Lake City, UT

TUESDAY | JULY 31

SCIENTIFIC SESSIONS

MORNING

10:30am–12:00pm

Standardization of Traditional and New Cardiovascular Disease Biomarkers—Addressing Cholesterol and Beyond

33105
McCormick Place, S103A

Level: **INTERMEDIATE**
CE Credit: 1.5

MODERATOR
#Uliana Danilenko, PhD
Centers for Disease Control and Prevention, Atlanta, GA

Developed in cooperation with the IFCC Scientific Division and IFCC Apolipoproteins by Mass Spectrometry Working Group

INTENDED AUDIENCE: This session is intended for clinical chemists, assay manufacturers, lab directors, industry scientists, and laboratory supervisors and managers.

SESSION OVERVIEW: This session will examine the current state of standardization of traditional and new cardiovascular disease biomarkers focusing at advanced lipoprotein testing.

EXPECTED OUTCOMES: After this session, participants will be able to:

1. Summarize the programs and materials available to improve total cholesterol, total glycerides, HDL-C and LDL-C measurements.
2. Identify the challenges in standardization of conventional and advanced lipoprotein testing and describe the outcome of recent cross-platform comparison studies.
3. Describe advancements in using mass spectrometry for apolipoproteins quantification and profiling, including update on development of reference measurement procedure.

SPEAKERS

Update on CDC Cardiovascular Disease Biomarker Standardization Programs
#Uliana Danilenko, PhD
Centers for Disease Control and Prevention, Atlanta, GA

Standardization of Advanced Lipoprotein Testing: The BioSITrace project
#Vincent Delatour, PhD
LNE, Paris, France

Mass Spectrometry-Based Approach for the Quantification and Profiling of Apolipoproteins
#Christa Cobbaert, PhD, EuSpLM
Leiden University Medical Center, Leiden, Netherlands

10:30am–12:00pm

Surviving the Regulatory and Accreditation Landscape: The "Must-Know" Secrets for Success!

33106
McCormick Place, S106

Level: **INTERMEDIATE**
CE Credit: 1.5

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

Developed in cooperation with the College of American Pathologists

INTENDED AUDIENCE: This session is intended for laboratory directors, administrators, managers, supervisors, quality personnel and others interested in learning more about contemporary regulatory and accreditation issues in the laboratory.

SESSION OVERVIEW: This session will be an interactive, case-based session for new and experienced laboratory directors, managers, supervisors and quality personnel focusing on regulatory and accreditation issues that put laboratories at risk. Participants will get practical tips to handling challenging issues such as proficiency testing, competency assessment, delegation of duties and others.

EXPECTED OUTCOMES:

1. List regulatory issues that can adversely impact the laboratory.
2. Explain how the laboratory's ordering, performing, resulting and investigation and response to proficiency testing can be optimized to avoid regulatory and compliance penalties.
3. Describe new regulatory/compliance trends related to competency assessment, personnel requirements and delegation of duties that have caused regulatory and compliance problems for laboratories.

SPEAKERS

What's New in Laboratory Accreditation and Regulation: Just When You Thought You Knew Where the Landmines Were
*Brad Karon, MD, PhD, FCAP, FAACC
Mayo Clinic, Rochester, MN

What Every New Laboratory Leader Needs to Know about Laboratory Accreditation and Regulation
*Heather Signorelli, DO
HCA, Denver, CO

10:30am–12:00pm

Clinical Assay Issues: What Endocrinologists Will Ask You

33107
McCormick Place, S503

Level: **INTERMEDIATE**
CE Credit: 1.5

MODERATOR
*David Sacks, MBChB
National Institutes of Health, Bethesda, MD

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

TRACK: Endocrinology

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

SESSION OVERVIEW: Endocrinologists frequently contact the clinical lab for guidance on test selection and interpretation. An informal survey of clinicians attending the 2017 Endocrine Society conference revealed their concerns as problems with interpretation of thyroid function tests, the increasing prevalence of biotin interference in immunoassays and factors that alter hemoglobin A1c independent of glycemia. This symposium will address these topics to enable clinical laboratorians to answer the questions.

EXPECTED OUTCOMES: After this session, participants will be able to:

1. Discuss causes of discordant thyroid function tests and how to resolve these.
2. List limitations to accurate measurement of analytes in individuals taking biotin supplements.
3. Describe factors other than glycemia that alter HbA1c values.

SPEAKERS

Pitfalls in the Measurement and Interpretation of Thyroid Function Tests
#Mark Gurnell, MBBS, PhD
University of Cambridge, Cambridge, England, United Kingdom

Biotin Interference in Assays Complicates Endocrine Diagnosis
*Nikola Baumann, PhD, DABCC
Mayo Clinic, Rochester, MN

Effect of Non-Glycemic Factors on Hemoglobin A1c Values
*David Sacks, MBChB
National Institutes of Health, Bethesda, MD

10:30am–12:00pm

***Clinical Chemistry's* Hot Topics of 2018**

33108
McCormick Place, S105

Level: **BASIC**
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: Cardiovascular disease (CVD) biomarkers for risk prediction and therapy optimization are the subjects of numerous highly cited articles published in *Clinical Chemistry* and will be discussed in this session.

EXPECTED OUTCOMES: After attending this session, participants will be able to:

1. Describe current strategies in using hs-CRP in risk prediction and in guiding therapy to reduce CVD risk.
2. Describe the needs for measuring Lp(a) in view of novel therapies.

SPEAKERS

Inflammation and Cardiovascular Disease: From Risk Prediction to Risk Reduction
#Paul Ridker, MD, MPH
Brigham and Women's Hospital, Boston, MA

Lipoprotein(a): Measurement, Association with Cardiovascular Disease and Diabetes, and New Therapies
#Børge Nordestgaard
Region Hovedstaden, Hillerod, Denmark

TUESDAY | JULY 31

SCIENTIFIC SESSIONS

MORNING

10:30am–12:00pm

Invited Oral Abstracts: Mass Spectrometry

33109

McCormick Place, S403

Level: **INTERMEDIATE**

CE Credit: 1.5

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

SESSION OVERVIEW: AACC is dedicated to advance the science and practice of laboratory medicine. A select group of members has reviewed and ranked the abstracts submitted for the AACC Annual Scientific Meeting. The Annual Meeting Organizing Committee has reviewed the accepted abstracts and has chosen five authors to present their research as oral presentations. Each 15-minute presentation will be followed by a 3-minute question-and-answer session.

EXPECTED OUTCOMES: After this session, participants will be able to:

1. Describe and evaluate the latest advances in laboratory medicine in this topic area.
2. Compare and contrast the research in this topic area.
3. Integrate and translate state-of-the-art knowledge in this topic area into the roles and responsibilities of the clinical laboratory professional.

SPEAKERS

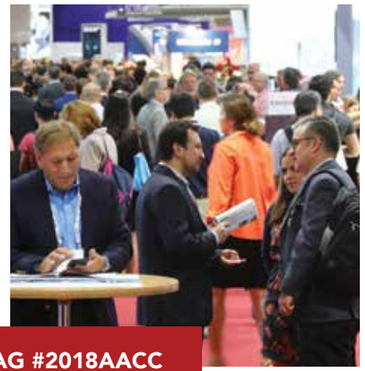
Association of Plasma Metabolites with Brain MRI Measures in the Atherosclerosis Risk in Communities-Neurocognitive Study (ARIC-NCS)
#Danni Li, PhD, DABCC
University of Minnesota, Minneapolis, MN

De Novo Amino Acid Sequencing of M-proteins by 21 Tesla FT-ICR MS Using Top-Down and Middle-Down MS/MS Techniques
#Liu He, PhD
University of Virginia, Charlottesville, VA

Automating a MALDI-TOF Mass Spectrometry Replacement of Gel Electrophoresis in the Clinical Laboratory
#Mindy Clark Kohlhagen, BS
Mayo Clinic, Rochester, MN

Development of an LC-MS/MS Method for Creatinine Measurement in Icteric Subjects
#David Chu, PhD
Covance Central Laboratory Services, Indianapolis, IN

Retrospective Review of Infliximab Quantitation and Anti-infliximab Test Results
#Kornelia Galior, PhD
Mayo Clinic, Rochester, MN



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10:30am–12:00pm

Speed Dating: Navigating Pain Points in the Clinical Laboratory

33110

McCormick Place, S405

Level: **BASIC**

CE Credit: 1.5

MODERATOR

#Jane Dickerson, PhD, DBACC
University of Washington and Seattle Children's Hospital, Seattle, WA

TRACK: Utilization & Lab Management

INTENDED AUDIENCE: This session is intended for pathologists, lab directors, clinical chemists, technologists, IVD industry scientists and others involved with managing laboratory operations.

SESSION OVERVIEW: This interactive session will provide a "speed-dating" format for discussing specific pain points related to technologies in the lab (POC, LDT, LIS and automation). Attendees will rotate between four tables every 20 minutes. While attendees are at each table, they will pair up and discuss two pre-defined scenarios, which will be followed by a high-level summary and further discussion.

EXPECTED OUTCOMES: After attending this session, participants will be able to:

1. Analyze lab to POC comparisons and effectively communicate the meaning to providers.
2. Identify integrated automation strategies to optimize intra-laboratory specimen management and transport.
3. Evaluate approaches for three common challenges in validation and maintenance of lab-developed tests.
4. Recognize common challenges with LIS and strategies to integrate middleware effectively.

SPEAKERS

Lab-Developed Test Validation: Tips to Avoid Major Roadblocks in Implementation
#Jane Dickerson, PhD, DBACC
University of Washington and Seattle Children's Hospital, Seattle, WA

Embracing Our Differences: Communicating and Managing the Diversity of Test Methods
*Corinne Fantz, PhD, DABCC
Roche Diagnostics Corporation, Indianapolis, IN

Move It Along: Within-Laboratory Specimen Management at the Preanalytical and Analytical Interface
*Mark Marzinke, PhD
Johns Hopkins University School of Medicine, Baltimore, MD

Making Meaningful Connections: Learning to Love Your Lis Despite Its Flaws
#Steven Cotten, PhD, DABCC
The University of North Carolina, Chapel Hill, NC

10:30am–12:00pm

Real-Time Next-Generation Sequencing for Infectious Diseases: Challenges and Opportunities

33111

McCormick Place, S505

Level: **INTERMEDIATE**

CE Credit: 1.5

MODERATOR

#Alex Greninger
University of Washington Medical Center, Seattle, WA

TRACK: Genomics/Genetics

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

SESSION OVERVIEW: There's a lot of excitement for real-time next-generation sequencing as the next big thing for the clinical microbiology. This session will separate the hype from the hope for these technologies for clinical infectious diseases with a focus on metagenomics and viral/bacterial WGS.

EXPECTED OUTCOMES: After this session, participants will be able to:

1. Define methods, opportunities and challenges for metagenomic detection of infectious diseases.
2. Define methods, opportunities and challenges for viral and bacterial whole-genome sequencing for transmission/infection control.
3. Define methods, opportunities and challenges for viral and bacterial whole-genome sequencing for antimicrobial resistance.

SPEAKERS

Metagenomics for Clinical Infectious Diseases
#Samia Naccache
Children's Hospital Los Angeles, Los Angeles, CA

Viral/Bacterial Whole-Genome Sequencing for Real-Time Transmission Detection
#Alex Greninger
University of Washington Medical Center, Seattle, WA

TUESDAY | JULY 31

SCIENTIFIC SESSIONS

MORNING

10:30am–12:00pm

Guidance for Evaluating the Hypoxemic Patient in the Critical Care Setting

33122
McCormick Place, S504

Level: **INTERMEDIATE**
CE Credit: 1.5

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

TRACK: Point-of-Care Testing

INTENDED AUDIENCE: This session 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 pO_2, $\%O_2Hb$, Hb and other measurements are used to calculate oxygen-related parameters, such as O_2 content, O_2 delivery, A–a difference, paO_2/FIO_2 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 critical care 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 calculate and interpret oxygen and oxygen-related parameters for diagnosing and managing patients in critical care settings.

EXPECTED OUTCOMES: After this session, participants will be able to:

1. Describe the conformational changes of Hb that alter its oxygen binding and releasing functions.
2. Evaluate pO_2 and sO_2 ($\%O_2Hb$) measurements in patients breathing room air and oxygen supplemented air, and in those patients on ventilators and ECMO (extracorporeal membrane oxygenation).
3. Develop skill in evaluating pO_2, pCO_2 and oxygen-related calculations for determining the adequacy of arterial oxygenation and ventilation by the lungs.
4. Use blood gas and cooximetry results to calculate alveolar-arterial pO_2 difference, pO_2/FIO_2 ratios, and evaluate pulmonary ventilation/perfusion (V/Q) balance.
5. Understand the pitfalls in handling samples for blood gas analysis.
6. Describe 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. Describe how oxygen measurements and oxygen-related calculations are used in determining when a patient should be placed on nasal cannula, non-invasive ventilation, mechanical ventilation or ECMO.

SPEAKERS

Providing Accurate Measurements of Oxygen and Oxygen-Related Parameters for Assessing Hypoxemia and Oxygen Physiology
*John Toffaletti, PhD, DABCC
Duke University Health System, Durham, NC

Clinical Use of Oxygen-Related Measurements and Calculations to Guide Patient Management
#Craig Rackley, MD, ABIM
Duke University Medical Center, Durham, NC

AFTERNOON

2:30pm–4:00pm

Invited Oral Abstracts: Molecular Diagnostics and Genomics

33212
McCormick Place, S402

Level: **INTERMEDIATE**
CE Credit: 1.5

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

SESSION OVERVIEW: AACC is dedicated to advance the science and practice of laboratory medicine. A select group of members has reviewed and ranked the abstracts submitted for the AACC Annual Scientific Meeting. The Annual Meeting Organizing Committee has reviewed the accepted abstracts and has chosen five authors to present their research as oral presentations. Each 15-minute presentation will be followed by a 3-minute question-and-answer session.

EXPECTED OUTCOMES: After this session, participants will be able to:

1. Describe and evaluate the latest advances in laboratory medicine in this topic area.
2. Compare and contrast the research in this topic area.
3. Integrate and translate state-of-the-art knowledge in this topic area into the roles and responsibilities of the clinical laboratory professional.

SPEAKERS

Absolute Quantification of Graft-Derived Cell-Free DNA as a Marker of Rejection and Graft Injury In Kidney Transplantation—Results From a Prospective Observational Trial
#Michael Oellerich, MD, FRCP, FAACC
University Medical Center Goettingen, Goettingen, Germany

Rapid Somatic Mutation Testing in Colorectal Cancer Using a Fully Automated System and Single-Use Cartridge: A Comparison with Next-Generation Sequencing
+Rabie Al-Turkmani, PhD, DABCC, FAACC
Dartmouth-Hitchcock Medical Center and Geisel School of Medicine at Dartmouth, Lebanon, NH

Exosomal Long Non-coding RNA HOTTIP as a Novel Serum-based Biomarker for Diagnosis and Prognosis of Gastric Cancer
+Xiang Zhang, PhD
Qilu Hospital of Shandong University, Jinan, China

Development of a Type I Diabetes Genetic Risk Array
*R. Yadef, PhD
Randox Laboratories Ltd, Crumlin, United Kingdom

Monitoring EGFR Mutations in cfDNA During Different Treatment Lines in Non-Small-Cell Lung-Cancer (NSCLC) Patients
#Alvaro Gonzalez, PhD
Clínica Universidad de Navarra, Pamplona, Spain

2:30pm–5:00pm

Leadership Strategies: Cultivating Engagement through Leadership

33213
McCormick Place, S101B

Level: **BASIC**
CE Credit: 2.5

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

INTENDED AUDIENCE: This session is intended for pathologists, PhDs, and laboratory professionals in leadership positions or those who aspire to be in a leadership role. Additionally, managers who want to move beyond tedious micro-managing into creating a committed and engaged workforce who will become our industry's future leaders should attend this short course.

SESSION OVERVIEW: Inherent in management positions is the responsibility to lead, but what are often lacking are the critical attributes of becoming a great leader. "Responsibility" without "ability" clearly distinguishes the not-so-good leaders from the exceptional ones. Session attendees will take away new leadership skills to unlock their employees' true engagement potential.

EXPECTED OUTCOMES: After this session, participants will be able to:

1. Define the responsibilities and abilities of great leaders.
2. Explain critical key attributes for leading and inspiring employees.
3. Identify strategies for developing engaged employees who perform meaningful work.

SPEAKER

Leadership Strategies: Cultivating Engagement through Leadership
#Cherie Petersen, BA
ARUP Laboratories, Salt Lake City, UT

AFTERNOON

2:30pm–5:00pm

Solving Laboratory Diagnostic Challenges with Technology, Automation and Innovation—Closing the "Brain-to-Brain" Loop

33214
McCormick Place, S102

Level: **INTERMEDIATE**
CE Credit: 2.5

MODERATOR
*Frederick Strathmann, PhD, MBA, DABCC (CC, TC)
NMS Labs, Willow Grove, PA

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

SESSION OVERVIEW: This scientific session will focus on the application of technologies throughout the testing process. Highlights include (1) heuristic and machine learning approaches to figuring out who to test; (2) applications of mass spectrometry in rapid analysis techniques, novel multiplexing strategies, untargeted analyses and the leveraging of resultant data; and 3) pre-analytical problems and emerging technologies applied to reduce the risk of erroneous results.

EXPECTED OUTCOMES: At the completion of this session, participants will be able to:

1. Demonstrate a basic understanding of available technologies presented (machine learning, mass spectrometry and clinical laboratory automation). and how they can be applied during critical phases of the test process.
2. Evaluate available solutions in order to compare and contrast current practices with potential and emerging technologies.
3. Summarize the key phases of the testing process where technological solutions are of benefit.

SPEAKERS

Identifying and Resolving Pre-Analytic Errors through Technology, Automation and Innovation
*Jonathan Genzen, MD, PhD
University of Utah/ARUP Laboratories, Salt Lake City, UT

How-To Guides for Greater Capacity, Higher Quality and Analytical Efficiency—Leveraging Novel Technologies and Quality Strategies
*Frederick Strathmann, PhD, MBA, DABCC (CC, TC)
NMS Labs, Willow Grove, PA

Data-Driven Approaches to Improve Test Interpretation and the Identification of Patients for Testing
#Daniel Herman, MD, PhD
University of Pennsylvania Perelman School of Medicine, Philadelphia, PA

2:30pm–5:00pm

Bridging the Gaps between Laboratory Medicine and Clinical Decision Making: Challenges and Conundrums

33215
McCormick Place, S103BC

Level: **INTERMEDIATE**
CE Credit: 2.5

MODERATOR
*Andrew Don-Wauchope, MBBCh, BScMed(Hons), MD, FRCP Edin, FCPath(SA), FRCPath
McMaster University, Toronto, ON, Canada

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

SESSION OVERVIEW: This session will present a mix of theory and practical case examples to illustrate a number of important laboratory topics and how we can communicate these to clinicians. Laboratory topics will include different types of interferences, clinical cut-points and reference intervals, standardization, traceability and uncertainty of measurement, and external quality control to establish bias and accuracy.

EXPECTED OUTCOMES: After this session, participants will be able to:

1. Describe concepts of traceability and uncertainty of measurement.
2. State how the laboratory establishes bias and accuracy.
3. Describe appropriate and inappropriate use of clinical cut-points and reference intervals.
4. Explain different types of interferences in general chemistry and endocrine immunoassay testing and how these can be circumvented or investigated.
5. Discuss these items in an informed way with physicians.

SPEAKERS

Clinical Cut-Points and Reference Intervals in the Clinical Laboratory: A Case-Based Perspective of Issues in Clinical Practice
*Patrick Twomey, BSc, MB BCh BAO, FRCPath, FFPath (RCPI)
St. Vincent's University Hospital, Dublin, Ireland

Standardization in the Clinical Laboratory: A Case-Based Perspective of Why We Should Aim for Standardization
*Andrew Don-Wauchope, MBBCh,BScMed(Hons), MD, FRCP Edin, FCPath(SA), FRCPath
McMaster University, Toronto, ON, Canada

Case-Based Investigation of Interferences in General Chemistry and Endocrine Testing
#Tahir Pillay, MD, PhD
University of Pretoria, Pretoria, Gauteng, South Africa

Communicating with Physicians: Case-Based Examples of Clinically Relevant Discussions
#Janet Simons, MD, FRCPC
University of British Columbia, Vancouver, BC, Canada

SCIENTIFIC SESSIONS

AFTERNOON

2:30pm–5:00pm

Why Are Harmonized Results Difficult to Achieve?

33216
McCormick Place, S103A

Level: **INTERMEDIATE**
CE Credit: 2.5

MODERATOR
*W. Greg Miller, PhD, DABCC
Virginia Commonwealth University, Richmond, VA

Developed in cooperation with the International Federation of Clinical Chemistry and Laboratory Medicine Working Group for Standardization of Albumin in Urine, International Consortium for Harmonization of Clinical Laboratory Results, Joint Committee for Traceability in Laboratory Medicine

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

SESSION OVERVIEW: Non-harmonized laboratory results can lead to misclassification of disease conditions and erroneous patient care decisions. Reference systems can be difficult to implement due to technical limitations of reference measurement procedures and reference materials, as well as to regulatory requirements. This session will address how to develop a reference system, the role of a harmonization protocol and how to address regulatory challenges.

EXPECTED OUTCOMES: At the completion of this session, participants will be able to:

1. Demonstrate how reference system components are used to achieve harmonized results.
2. Demonstrate how to implement a harmonization protocol to achieve harmonized results.
3. Demonstrate how to address regulatory requirements for modifying calibration to achieve harmonized results.
4. Demonstrate how to develop a plan to implement a calibration traceability process for a new measurand.

SPEAKERS

Regulatory Challenges in Achieving Harmonization of Results
#Gary Myers, PhD
Myers Consulting, Smyrna, GA

How to Implement a Harmonization Protocol in the Absence of Higher Order Reference System Components
*W. Greg Miller, PhD, DABCC
Virginia Commonwealth University, Richmond, VA

How to Develop a Reference System: The Example Urine Albumin
*Lorin Bachmann, PhD, DABCC
Virginia Commonwealth University, Richmond, VA

2:30pm–5:00pm

Liquid Chromatography Method Development to Enable High-Quality LC-MS Assays

33217
McCormick Place, S505

Level: **INTERMEDIATE**
CE Credit: 2.5

MODERATOR
#Brian Rappold
LabCorp, Raleigh, IL

TRACK: Mass Spectrometry

INTENDED AUDIENCE: This session is intended for all users of LC-MS/MS, particularly those involved in both method development and clinical operations.

SESSION OVERVIEW: Method development of liquid chromatography-tandem mass spectrometry encompasses a variety of esoteric techniques which may be difficult to apply cohesively. This session will focus on scientific approaches to optimize and enhance the LC component—the workhorse—of LC-MS/MS. The course will describe rational method development techniques, focusing specifically on; Solvent system selection (empirical screening) for improved detection limits, including use of additives and modifiers, column screening for and step-wise optimization of both Reverse Phase and Hydrophilic Interaction LC, 1D versus 2D LC setups (when and how to use), gradient versus isocratic LC (benefits and pitfalls), cycle time optimization (throughput), and techniques to enhance overall ruggedness for targeted diagnostic LC-MS/MS workflows.

EXPECTED OUTCOMES: After this session, participants will be able to:

1. Describe and execute new experimentation to improve the sensitivity of LC-MS/MS assay.
2. Describe and execute new experimentation to improve ruggedness for clinical use of LC-MS/MS workflows.
3. Be able to scientifically determine conditions for optimal chromatographic analyses.

SPEAKERS

Liquid Chromatography-Mass Spectrometry Method Development Fundamentals
#Brian Rappold
LabCorp, Raleigh, IL

Liquid Chromatography Method Development to Enable High-Quality LC-MS Assays
*Russell Grant, PhD
LabCorp, Burlington, NC

2:30pm–5:00pm

Navigating through Go-Live "Hiccups" with Instrumentation, Automation and Informatics: An Application Showcase

33218
McCormick Place, S403

Level: **BASIC**
CE Credit: 2.5

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

TRACK: Utilization & Lab Management

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

SESSION OVERVIEW: This session will present "hiccups" that occur when going live with frontend automation, middleware-information systems, automated chemistry analyzers and mass spectrometers. Real-life case studies will be presented to highlight challenges and solutions during such go-lives. Problem-based learning will be used to provide recommendations and strategies for successful implementation of these systems.

EXPECTED OUTCOMES: After this session, participants will be able to:

1. Describe both the common and the less common sources of problems encountered during the go-live phase.
2. Discuss strategies and solutions to minimize or prevent potential go-live problems.
3. Explain the process and methods for rapid intervention when hiccups occur with go-live events.

SPEAKERS

Maximizing Laboratory Efficiencies by Implementing Front-End Automation
#Qing Meng, MD, PhD, DABCC, FCACB
The University of Texas MD Anderson Cancer Center, Houston, TX

Are You Feeding Your Instruments with the Right Water?
#Stephen Master, MD, PhD, FCAP, FAACC
Children's Hospital of Philadelphia, Philadelphia, PA

Too Many Hyponatremic Patients?
#Zhen Zhao, PhD, DABCC, FAACC
Weill Cornell Medicine, New York, NY

LIS, HIS and Middleware Planning for a Successful Instrument Go-Live
*Joshua Hayden, PhD, DABCC
Weill Cornell Medical College, New York, NY

AFTERNOON

2:30pm–5:00pm

Clinical Cardiovascular Genomics Bootcamp

33219
McCormick Place,
Vista Ballroom/S406

Level: **INTERMEDIATE**
CE Credit: 2.5

MODERATOR
#Helen Fernandes, PhD
Columbia University Medical Center, New York, NY

Developed in cooperation with the Molecular Pathology Division

TRACK: Genomics/Genetics

INTENDED AUDIENCE: This session is intended for pathologists, lab directors, clinical chemists, technologists and IVD industry scientists. The session is also well suited for trainees in clinical chemistry, molecular diagnostics and pathology. Basic knowledge of molecular biology is helpful. No formal cardiovascular, genomics or bioinformatics training is necessary.

SESSION OVERVIEW: Genomic medicine is transforming healthcare; however, many healthcare professionals receive limited genomics training. Laboratorians can play an important role improving patient care in genomics. Using cardiovascular disease cases and an interactive small-group approach, participants will learn introductory principles related to applying and interpreting genomic testing. (http://www.pathologylearning.org/trig/resources).

EXPECTED OUTCOMES: After this session, participants will be able to:

1. Identify central applications and interpretive considerations of cardiovascular genomics testing.
2. Determine a variant's clinical significance using online tools.
3. Critically evaluate the benefits and limitations of genomic testing in the context of patient care.
4. Understand the significance of incidental findings that may arise from genomic testing.

SPEAKERS

Genomic Case Exercises
#Helen Fernandes, PhD
Columbia University Medical Center, New York, NY

Exploring Exome Sequencing with a Case Example
#Christina Lockwood, PhD, DABCC, DABMGG
University of Washington, Seattle, WA

An Innovative Approach to Teaching Genomic Medicine
#Richard Haspel, MD, PhD
Beth Israel Deaconess Medical Center, Boston, MA

The Utility of Next-Generation Sequencing Studies in Cardiac Disease
#Anjali Owens, MD
University of Pennsylvania, Philadelphia, PA

2:30pm–5:00pm

The Good, the Bad and the Ugly: Opportunities and Challenges for Harmonization of Autoantibody Testing

33220
McCormick Place, S106

Level: **INTERMEDIATE**
CE Credit: 2.5

MODERATOR
#Gabriella Lakos, MD, PhD
Abbott Laboratories, Hematology, Santa Clara, CA

Developed in cooperation with the Clinical and Diagnostic Immunology Division

INTENDED AUDIENCE: This session is intended for clinical laboratory directors and pathologists, laboratory technologists, IVD manufacturers and anyone interested in increasing their knowledge and understanding of autoantibody tests and improving patient care by harmonization of autoantibody assays.

SESSION OVERVIEW: Experts from the laboratory, the IFCC Committee on Harmonization of Autoimmune Tests (C-HAT), and the U.S. Food and Drug Administration (FDA) will discuss the current status of autoantibody assay standardization in this interactive session, and will address the following questions:

1. Standardization or harmonization?
2. Why do we need it?
3. (How) Can we achieve it?

EXPECTED OUTCOMES: At the completion of this session, participants will be able to:

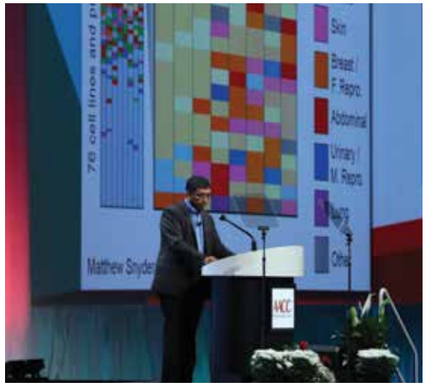
1. Describe the analytical and diagnostic challenges associated with autoantibody testing.
2. Identify the need for harmonization of autoantibody tests.
3. Define pathways to develop reference materials and harmonize autoantibody tests.
4. Understand how harmonization of autoantibody assays can contribute to the development of better laboratory tests and improved patient care.

SPEAKERS

Analytical and Diagnostics Challenges of Autoantibody Testing: Perspectives of a Laboratory Director
*Anne Tebo, PhD
University of Utah/ARUP Laboratories, Salt Lake City, UT

Autoantibody Standardization—The Final Frontier
#Joanna Sheldon, PhD, FRCPath
St. Georges Hospital, London, England, United Kingdom

Autoantibody Testing: An FDA Perspective
#Elizabeth Stafford, PhD
FDA/CDRH/OIR, Silver Spring, MD



AFTERNOON

2:30pm–5:00pm

Opportunities for Clinical Chemists in Precision Oncology Multi-Omic Clinical Trials

33221
McCormick Place, S504

Level: **INTERMEDIATE**
CE Credit: 2.5

MODERATOR
*Y. Victoria Zhang, PhD, MBA, DABCC, FAACC
University of Rochester Medical Center, Rochester, NY

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

TRACK: Precision Medicine & Oncology

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

SESSION OVERVIEW: Precision medicine aims to improve the diagnosis and treatment of cancer. However, research now shows the integration of genomics with proteomics (proteogenomics), revealing new knowledge inaccessible by NGS. This session will discuss mass spectrometry in therapeutic drug monitoring, discuss proteogenomic tests in clinical trials and review the FDA's approach to 'omics tests.

EXPECTED OUTCOMES: After attending this session on targeted peptide diagnostic mass spec assays in precision medicine, learners will be able to:

1. Discuss the applications of pharmacogenomics in clinical diagnostics.
2. Describe challenges and opportunities in integrating genomics and proteomics alternations in oncology clinical trials and patient treatment.
3. Understand the potential functions and values of clinical chemists in clinical trials for cancer treatment.
4. Grasp the FDA regulatory considerations for the oncology trials based on genomics and proteomics features.

SPEAKERS

Pharmacogenomics Applications in Clinical Laboratories
*Nigel Clarke, PhD
Quest Diagnostics Nichols Institute, San Juan Capistrano, CA

Integrating Ex Vivo Cytotoxicity Assays, Genomic Tests and Proteomic Tests to Select Precision Therapies in Clinical Trials and Cancer Patient Care
#Karin Rodland, PhD
Pacific Northwest National Laboratory, Richland, WA

Opportunities for Clinical Chemists in Precision Oncology Multi-Omic Clinical Trials
#Henry Rodriguez, PhD, MBA
National Cancer Institute, Bethesda, MD

2:30pm–5:00pm

Capillary Samples and Best Practices for Blood Glucose Monitoring in Critical Care and Hospitalized Patients: A Report on the IFCC-POCT Task Force Work Group, Recent FDA Activities and CLSI POCT17

33223
McCormick Place, S503

Level: **INTERMEDIATE**
CE Credit: 2.5

MODERATOR
#Cynthia Bowman, MD, FCAP
Baystate Health, Springfield, MA

Developed in cooperation with the IFCC, CLSI

INTENDED AUDIENCE: This session is intended for a broad audience, including pathologists, lab directors, clinical chemists, medical technologists and scientists, point-of-care coordinators, laboratory supervisors and managers, IVD industry representatives, regulators, administrators, and clinical stakeholders.

SESSION OVERVIEW: Serious errors and performance concerns involving blood glucose meters used in critical care and other hospital settings, especially with capillary samples, will be addressed. Variables affecting BGM, ideal performance, testing options, and strategies for ensuring best technical and clinical practice will be included. Information from a recent IFCC document and FDA Advisory Committee meeting along with the CLSI white paper POCT17 will be presented.

EXPECTED OUTCOMES: After this session, participants will be able to:

1. Identify potential variables and risks associated with BGM in critical care and professional healthcare settings, especially with capillary sample types.
2. Construct a process to evaluate, select, implement, oversee and document safety of BGM use with critical care and hospitalized patients.
3. Identify all operators and stakeholders who need to be provided with education and oversight in using BGM for critical and acute care patients.
4. Define the expectations of good clinical BGM performance and risks associated with insulin therapy.

SPEAKERS

An Introduction to the IFCC Document: How Should Glucose Meters Be Evaluated in Critical Care; Validation and Verification Concepts for BGM Best Practice with Hospitalized Patients; Understanding BGM Performance
#Cynthia Bowman, MD, FCAP
Baystate Health, Springfield, MA

The Clinical Practice of Using BGM for Hospitalized Patients: What Factors Should Be Considered and How Should a Process Be Organized?
#James Nichols, PhD, DABCC, FAACC
Vanderbilt University Medical Center, Nashville, TN

Capillary Glucose Accuracy in Critical Care: What Do We Really Know?
*Brad Karon, MD, PhD, FCAP, FAACC
Mayo Clinic, Rochester, MN

Clinical and Technical Factors Affecting BGM in Hospitalized Patients: Understanding Risks and Benefits with Insulin Therapy
#Dieter Mesotten, MD, PhD
Ziekenhuis Oost-Limburg, Genk, Belgium

Validation and Verification Concepts for BGM Best Practice with Hospitalized Patients; Understanding BGM Performance
#Cynthia Bowman, MD, FCAP
Baystate Health, Springfield, MA

WEDNESDAY

AUGUST 1

PLENARY & SCIENTIFIC SESSIONS

PLENARY SESSION

8:45am–10:15am

McCormick Place, Grand Ballroom/S100

Nucleic Acid Detection Using CRISPR-Dx

SPEAKER: #James Collins, PhD

Massachusetts Institute of Technology Founding Core Faculty & Wyss Institute at Harvard University, Cambridge, MA

14001

Level: **BASIC** | CE Credit: 1.0

INTENDED AUDIENCE: This session is intended for pathologists, lab directors, clinical chemists, medical laboratory scientists and laboratory administrators with an interest in methods to detect nucleic acid sequences.

SESSION OVERVIEW: This session reports on the discovery that CRISPR-Cas13a/C2c2 can be used for the rapid, reliable, inexpensive detection of nucleic acid sequences. This technique achieves single-base specificity in detection of specific RNA or DNA variants. The proof of concept experiment used fragments of the Zika virus genome spliced into a lentivirus and achieved detection down to 1,000 copies per mL (2 attomolar). Dr. Collins and his colleagues have coined the technique SHERLOCK (Specific High-sensitivity Enzymatic Reporter unLOCKing).

EXPECTED OUTCOMES: After this session, participants will be able to:

1. Predict the usefulness of CRISPR-Dx.
2. Design and synthesize a SHERLOCK assay for a pathogen.
3. Describe future detailed studies needed to validate this new technique.

WEDNESDAY | AUGUST 1

BROWN BAG SESSIONS T TICKET

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

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 your own food in the convention center prior to the session.

CE Credit: 1.0 (per session) unless otherwise noted in the mobile app, or at www.aacc.org/2018am | McCormick Place, Vista Ballroom/S406

TITLE	SESSION # AM	SESSION # PM	SPEAKER	LEVEL
Strategies for Collaboration with Departments Outside of the Laboratory to Achieve Quality Improvements and Enhance Patient Outcomes	44101	54201	**#Vickie Trace,** MS, MLS(ASCP), Mayo Clinic Florida, Jacksonville, FL	BASIC
Measuring Low Estrone and Estradiol Levels in the Clinical Lab: Why, When and How? **TRACK:** Endocrinology	44102	54202	**#Run Zhang Shi,** PhD, Stanford Medical Center Clinical Laboratories, Palo Alto, CA	BASIC
Oxytocin Testing: Status and Clinical Applications **TRACK:** Endocrinology	44103	54203	**#Damien Gruson,** PhD, Cliniques Universitaires Saint Luc, Brussels, Belgium	INTERMEDIATE
CLIA Roles, Qualifications and Responsibilities: A Roadmap for Laboratory Compliance	44104	54204	**#Elia Mears,** MS, MT(ASCP)SM, The Joint Commission, Houma, LA	INTERMEDIATE
Implementing or Extending Toxicology Laboratory Services—What and How? **TRACK:** Toxicology/TDM	44105	54205	**#Alina Sofronescu,** MSc, PhD, NRCC-CC, FAACC, University of Nebraska Medical Center, Omaha, NE	BASIC
Embracing Pathology's Stepchild: A Practical Guide to Clinical Chemistry Education *Developed in cooperation with the Society for Young Clinical Laboratorians*	44106	54206	**#Joesph Wiencek,** PhD, University of Virginia School of Medicine, Charlottesville, VA	BASIC
Getting Started with Machine Learning in the Laboratory	44107	54207	**#Dustin Bunch,** PhD, Yale University School of Medicine, New Haven, CT	BASIC
Changing the Culture to a Culture of Change: Case Studies and Approaches to Empowering Change and Improvement *Developed in cooperation with the Management Sciences and Patient Safety Division*	44108	54208	***Jack Zakowski,** PhD, FAACC, IVD Consulting LLC, Yorba Linda, CA	INTERMEDIATE
Laboratory Screening for Cancer: Beyond Test Results *Developed in cooperation with the CDC*	44111	54211	**#Shahram Shahangian,** PhD, MS, DABCC, FAACC, Centers for Disease Control and Prevention, Atlanta, GA	INTERMEDIATE
Coagulation Factor VIII—Evolution, Biosynthesis, Biology and Monitoring in the Clinical Laboratory	44112	54212	***Neil Harris,** MBChB, MD, DABCC, FCAP, FAACC, University of Florida College of Medicine, Gainesville, FL	INTERMEDIATE
What Is My Patient Using? Facilitating the Accurate Interpretation of Urine Drug Screen Results **TRACK:** Toxicology/TDM	44113	54213	**#Allison Chambliss,** PhD, DABCC, FAACC, Keck Medicine of the University of Southern California, Los Angeles, CA	BASIC
Controversies and Solutions in Body Fluid Testing	44114	54214	***Darci Block,** PhD, Mayo Clinic, Rochester, MN	INTERMEDIATE
Markers of Metabolic Bone Disease, Their Prognostic Value and Novel Approaches	44115	54215	**#Christopher Farnsworth,** PhD, Washington University, St. Louis, MO	BASIC
Planning for Downtime	44116	54216	**#Yachana Kataria,** PhD, DABCC, Boston Children's Hospital, Boston, MA	INTERMEDIATE
LOINC Adoption for Both Medical and Clinical Trials Laboratories	44117	54217	**#Pamela Banning,** MLS(ASCP)CM, PMP(PMI), 3M HIS, West Linn, OR	INTERMEDIATE
Clinical Relevance of Emergency Laboratory Tests	44118	54218	**#Carlos Lemos,** MD, CHLN, Lisbon, Portugal	BASIC
The CDC Vitamin D Standardization-Certification Program Improving the Clinical Measurement of Total 25-Hydroxyvitamin D *Developed in cooperation with the Endocrinology Division*	44119	54219	**#Otoe Sugahara,** BS, Centers for Disease Control and Prevention, Atlanta, GA	INTERMEDIATE
HIV Testing Diagnostic Algorithm: Reporting Recommendations and Updates	44120	54220	**#Jessica Colon-Franco,** PhD, DABCC, Medical College of Wisconsin, Milwaukee, WI	INTERMEDIATE
Pharmacogenomics and Opioid Addiction: Can SNPs Reveal Susceptibility?	44121	54221	**#Grace Williams,** PhD, Dartmouth-Hitchcock Medical Center, Lebanon, NH	BASIC
Prevalence of Biotin Use in the United States and Its Broad Impacts on Clinical Lab Test Accuracy	44122	54222	**#Danni Li,** PhD, DABCC, FAACC, University of Minnesota, Minneapolis, MN	INTERMEDIATE
Liquid Chromatography Tandem Mass Spectrometry (LC-MS/MS) Analysis of Testosterone and Estradiol in Serum *Developed in cooperation with the Endocrinology Division* **TRACK:** Mass Spectrometry	44123	54223	**#Hui Zhou,** PhD, Centers for Disease Control and Prevention, Atlanta, GA	INTERMEDIATE
A Dirty Assay: Challenges of Parathyroid Hormone Estimation and Progress in Harmonization	44124	54224	**#Asmita Hazra,** MBBS, MD, Govt. Medical College, Pali, Rajasthan, India	INTERMEDIATE
Control Your Data Before It Controls You: Establishing and Monitoring and QC in the Clinical Laboratory	44125	54225	**#Stefani Thomas,** PhD, Johns Hopkins University, Baltimore, MD	BASIC
Serum vs. Plasma: Which Specimen Should You Use?	44126	54226	***Jeffrey Chance,** PhD, BD Life Sciences—Preanalytical Systems, Franklin Lakes, NJ	BASIC
Are You a Leader or Manager in the Clinical Laboratory?	44127	54227	**#Kenneth Hoekstra,** PhD, FAACC, Quest Diagnostics, Sedro-Woolley, CA	BASIC
Paraneoplastic Panel Utilization for Better Patient Care and Test Effectiveness	44128	54228	**#Rongrong Huang,** PhD, Houston Methodist Hospital, Houston, TX	INTERMEDIATE
How Blood Tests Are Affected by Transfusion or Apheresis	44130	54230	**#Saptarshi Mandal,** PhD, Jodhpur, Rajasthan, India	BASIC
Therapeutic Drug Monitoring: Immunoassays vs. LC-MS/MS	44131	54231	**#Kamisha Johnson-Davis,** PhD DABCC, FAACC, University of Utah/ARUP Laboratories, Salt Lake City, UT	INTERMEDIATE

WEDNESDAY | AUGUST 1

MEET THE EXPERT

10:30am–11:30am

Nucleic Acid Detection Using CRISPR-Dx

64101
McCormick Place, S101A

Level: **BASIC**
CE Credit: 1.0

MODERATOR
#Edward Ashwood, MD, ABP
University of Colorado Anschutz Medical Campus, Aurora, CO

SESSION OVERVIEW: This session provides an excellent opportunity for a limited number of attendees to meet with Dr. James Collins, one of the founders of the field of synthetic biology. His recent efforts have focused on the adaptation of a CRISPR protein that targets RNA for use as a rapid and highly sensitive diagnostic tool with the potential to transform research and global public health. This new molecular tool, dubbed "SHERLOCK" (Specific High-sensitivity Enzymatic Reporter unLOCKing), can detect extremely low amounts of nucleic acids and, in turn, be used as a diagnostic test for viral and bacterial infections. Dr. Collins will discuss this groundbreaking work and its potential to fundamentally change the diagnosis of common and emerging infectious diseases.

SPEAKER
#James Collins, PhD
Massachusetts Institute of Technology Founding Core Faculty & Wyss Institute at Harvard University, Cambridge, MA

WEDNESDAY | AUGUST 1

SCIENTIFIC SESSIONS

MORNING

10:30am–12:00pm

Biological Variation: Improved Interpretation of Lab Results and Reduced False Rejections for QC

34101
McCormick Place, S101B

Level: **INTERMEDIATE**
CE Credit: 1.5

MODERATOR
#Alan Wu, PhD, DABCC, FAACC
University of California/San Francisco General Hospital, San Francisco, CA

INTENDED AUDIENCE: This session is intended for all individuals who work in clinical laboratory science, including technologists who perform analyses, supervisors who must evaluate quality control data, lab scientists who perform biological variation studies, lab directors who provide clinical interpretation of laboratory data and those who order lab tests, and physicians who make management decisions based on lab test results.

SESSION OVERVIEW: The biological variation of a laboratory test is a determination of the assay's analytical imprecision, and variances within and between individuals. From these data, the index of individuality, reference change value, homeostatic set points and establishment of performance goals for quality control can be determined.

EXPECTED OUTCOMES: After this session, participants will be able to:

1. Design a study to determine the biological variation of a laboratory test.
2. Calculate from biological variation data the index of individuality, reference change value and number of samples to establish a homeostatic set point.
3. Design a quality control system that incorporates the biological variation of a laboratory test as one of the important attributes.

SPEAKERS
Determining Biological Variation for Clinical Lab Tests
#Alan Wu, PhD, DABCC, FAACC
University of California/San Francisco General Hospital, San Francisco, CA

Biological Variation for Establishing Quality Control Goals
#Sten Westgard, MS
Westgard QC, Inc., Madison, WI

10:30am–12:00pm

A Team Approach to Reducing Diagnostic Error—Optimizing Care for Patients with Suspected Primary Aldosteronism

34102
McCormick Place, S105BC

Level: **INTERMEDIATE**
CE Credit: 1.5

MODERATOR
*Alison Woodworth, PhD, DABCC
University of Kentucky, Lexington, KY

Developed in cooperation with the Endocrinology Division

TRACK: Endocrinology

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

SESSION OVERVIEW: The Institute of Medicine (IOM) called for a team approach to reduce diagnostic error. Diagnostic management teams (DMTs), composed of clinical and laboratory experts, are a solution to this charge. In this session, we highlight the clinical, analytical and interpretive aspects of a DMT dedicated to the diagnostic work-up of suspected primary aldosteronism.

EXPECTED OUTCOMES: After this session, participants will be able to:

1. Understand the pathophysiology and diagnostic work up of primary aldosteronism.
2. Discuss analytical considerations in the diagnosis of PA.
3. Identify common misconceptions and pre-analytical factors that prevent accurate diagnosis of PA.
4. Highlight the clinical impact of a diagnostic management team dedicated to PA.

SPEAKERS
Primary Aldosteronism, a Challenging Diagnosis—The Clinical Perspective
#Andrea Utz, MD, PhD
Vanderbilt University Medical Center, Nashville, TN

Analytical Challenges in the Work-Up of Primary Aldosteronism
*Joesph Wiencek, PhD
University of Virginia School of Medicine, Charlottesville, VA

A Team Approach to the Work-Up of Endocrine Mediated Hypertension; the Primary Aldosteronism Diagnostic Management Team
*Alison Woodworth, PhD, DABCC
University of Kentucky, Lexington, KY

10:30am–12:00pm

Mass Spectrometry Applications for Monoclonal Antibody Therapeutics: Which Road to Travel

34103
McCormick Place, S505

Level: **INTERMEDIATE**
CE Credit: 1.5

MODERATOR
*Maria Alice Willrich, PhD, DABCC, FAACC
Mayo Clinic, Rochester, MN

Developed in cooperation with the Clinical and Diagnostic Immunology Division

TRACK: Mass Spectrometry

INTENDED AUDIENCE: This session is intended for clinical laboratory directors and pathologists, clinical technologists, IVD manufacturers, pharmaceutical scientists, and anyone interested in the mass spectrometry applications for therapeutic monoclonal antibodies, especially those involved in development of new methods for t-mAb monitoring.

SESSION OVERVIEW: The clinical laboratory can make critical contributions to the management of patients receiving treatment with therapeutic monoclonal antibodies (t-mAbs) through quantitation of the t-mAbs concentration and assessment of anti-drug antibodies. However, these drugs can also pose challenges by interfering in existing tests. Mass spectrometry has been an essential tool in providing solutions for these challenges and broad applications of t-mAbs.

EXPECTED OUTCOMES:

1. List different types of monoclonal antibody therapeutics and their clinical applications.
2. Describe mass spectrometry methods available for the assessment of monoclonal antibody therapeutics (e.g., peptide vs. intact).
3. Discuss the different quantitation approaches to develop a new mass spectrometry assay for t-mAb assessment and which instruments to use.

SPEAKERS
The Different Roles of the Clinical Laboratory and Mass Spectrometry as an Important Tool for Therapeutic Monoclonal Antibodies
*Maria Alice Willrich, PhD, DABCC, FAACC
Mayo Clinic, Rochester, MN

Mass Spectrometry Approaches for Identification and Quantitation of mAbs: Peptide vs. Intact Strategies
#Paula Ladwig, MS, MT(ASCP)
Mayo Clinic, Rochester, MN

WEDNESDAY | AUGUST 1

SCIENTIFIC SESSIONS

MORNING

10:30am–12:00pm

Are Your Lab Tests Viable under PAMA Medicare Reimbursements?

34104
McCormick Place, S504

Level: **INTERMEDIATE**
CE Credit: 1.5

MODERATOR
*Matthew Clark, BS
Mayo Clinic, Rochester, MN

TRACK: Utilization & Lab Management

INTENDED AUDIENCE: This session is intended for laboratory leaders and those responsible for the continuation of viable lab operations.

SESSION OVERVIEW: Aligning a test's cost with its reimbursement is one of the core competencies that a laboratory leader must have in their skill set for the laboratory to survive and thrive in today's ever-changing and competitive healthcare marketplace. This session will provide a method of analysis for determining a test budget that is aligned with the new PAMA Medicare reimbursement plan, and for creating a plan to bring the actual test cost into alignment with the budget.

EXPECTED OUTCOMES: After this session, participants will be able to:

1. Identify the cost components of a test.
2. Describe when costs are out of alignment with Medicare reimbursement.
3. Evaluate strategies to bring costs back into alignment.

SPEAKERS

Examining High-Level Test Cost Structures to Determine Viability
#Michael Baisch, BS
Mayo Clinic, Rochester, MN

Identifying Specific Cost Savings to Improve Viability
*Matthew Clark, BS
Mayo Clinic, Rochester, MN

10:30am–12:00pm

New Approaches for Drug Screening in Pediatrics

34106
McCormick Place, S402A

Level: **BASIC**
CE Credit: 1.5

MODERATOR
#Amy Pyle-Eilola, PhD, DABCC
Nationwide Children's Hospital, Columbus, OH

Developed in cooperation with the Pediatric and Maternal-Fetal Division

TRACK: Pediatric/Maternal-Fetal

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

SESSION OVERVIEW: Immunoassay drug screens are commonly used for their convenience. However, these report qualitative results based on quantitative cut-offs designed for workplace testing, and their use in a medical setting may be inappropriate. Detection of drug exposure, even at low concentrations, is critical in pediatrics to guide treatment. This session discusses novel approaches and experiences of two labs in addressing these issues.

EXPECTED OUTCOMES: After this session, participants will be able to:

1. Describe the shortcomings of using workplace screen cut-offs in clinical laboratory settings.
2. Organize an action plan to incorporate pediatric specialists for developing a protocol to mitigate false negative results in pediatric patients exposed to drugs.

SPEAKERS

The Challenge of Pediatric Drug Screening and Use of Intermediate Results
#Amy Pyle-Eilola, PhD, DABCC
Nationwide Children's Hospital, Columbus, OH

Procedural Changes to Improve Drug Screening of Newborns and Children
#Kelly Doyle, PhD, D(ABCC), FAACC
Intermountain Healthcare, Murray, UT

10:30am–12:00pm

Accurate Measurement of Thyroid Hormones in Disease and Pregnancy

34107
McCormick Place, S402B

Level: **INTERMEDIATE**
CE Credit: 1.5

MODERATOR
#Ronald Whitley, PhD, DABCC, FAACC,
University of Kentucky, Louisville, KY

Developed in cooperation with the American Thyroid Association, Endocrine Society/PATH, Endocrinology Division

TRACK: Pediatric/Maternal-Fetal

INTENDED AUDIENCE: This session is intended for manufacturers, clinical chemists, pathologists, clinical laboratory scientists, clinical researchers, laboratory directors and public health professionals.

SESSION OVERVIEW: Correct diagnosis and consistent treatment of thyroid disorders depend on accurate and reliable thyroid hormone tests. However, discrepant measurement results have been reported due to wide variability in commercially available immunoassays for these tests. This session will explore the applications, shortfalls and future of thyroid hormone testing.

EXPECTED OUTCOMES: After this session, participants will be able to:

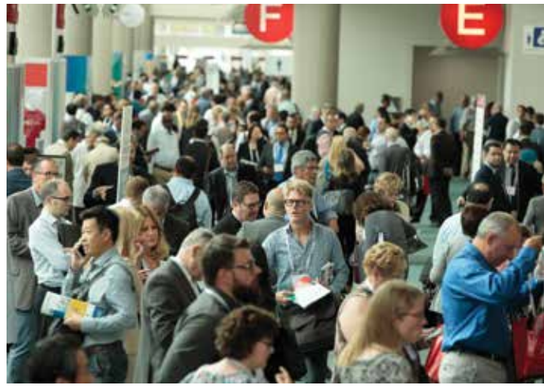
1. Understand the role of thyroid function biomarkers in clinical decision making.
2. Summarize the current state of thyroid hormone testing, including analytical performance and its impact on patient care, research translation, and public health.
3. Describe activities of the IFCC working group (C-STFT) to standardize and harmonize thyroid function tests.
4. Outline efforts to assess thyroid hormone test performance using the CDC standardization program and accuracy-based proficiency testing.
5. Understand programs and activities of PATH (Partnership for the Accurate Testing of Hormones) to improve the quality of hormone tests.

SPEAKERS

Facilitating the Transition to Accurate Measurement of Thyroid Hormones
#Ronald Whitley, PhD, DABCC, FAACC
University of Kentucky, Louisville, KY

Standardization and Harmonization of Free Thyroxine (FT4) and Thyrotropin (TSH) Measurements
#Katleen Van Uytfanghe, PhD
Ghent University, Gent, Belgium

Clinical Challenges of Thyroid Hormone Testing
#Gregory Brent, MD
David Geffen School of Medicine at University of California, Los Angeles, Los Angeles, CA



WEDNESDAY | AUGUST 1

SCIENTIFIC SESSIONS

MORNING

10:30am–12:00pm

***Journal of Applied Laboratory Medicine's* Hot Topics of 2018: From the Kidney to the Heart: Analytical and Clinical Complexities of the Cardio-Renal Systems**

34109

McCormick Place, S403

Level: **INTERMEDIATE**

CE Credit: 1.5

MODERATOR

#Robert Christenson, PhD, DABCC, FAACC
University of Maryland School of Medicine, Baltimore, MD

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

SESSION OVERVIEW: Proper utilization of cardiac and renal biomarkers is fundamental to a quality clinical laboratory. This includes maintaining up-to-date knowledge of the latest assays, such as high-sensitivity troponin and cystitis C, and awareness of the complex interplay between diseases, such as HIV and cardiac pathology. This session's focus will be the laboratorian–clinician interface for defining imminent aspects of cardiac and renal disease. High-sensitivity troponin confounders, quality management issues, and innovations for current/future clinical applications of cardiac and renal biomarkers will be explored. In addition to presenting applied knowledge, the session will include ample Q&A time with the expert panel of speakers.

EXPECTED OUTCOMES: After attending this session, participants will be able to:

1. Define criteria for high-sensitivity cardiac troponin assays and explain key differences from current, contemporary assays.
2. List and explain recommendations of the Academy of AACC and IFCC TFCAB expert opinion guidance.
3. Compare eGFR calculated from creatinine and cystatin C.
4. Discuss the mechanisms by which HIV infection influences cardiovascular health.

SPEAKERS

High-Sensitivity and Next-Generation Cardiac Troponin Implementation: Elements for Success
*Paul Collinson, MB, BChir, MD, FRCPath
St. George's Hospital, London, England, United Kingdom

Accelerated Cardiovascular Disease in HIV-Positive Patients: The Role of Biomarkers in Diagnosis, Prognosis and Treatment
*Christopher deFilippi, MD, FAC
Inova, Falls Church, VA

Clinical Value of Creatinine and Cystatin C: Evidence for Appropriate Use of the Estimated GFR
#John Toffaletti, PhD, DABCC
Duke University Health System, Durham, NC

10:30am–12:00pm

Invited Oral Abstracts: Emerging Biomarkers and Technology

34110

McCormick Place, S103A

Level: **INTERMEDIATE**

CE Credit: 1.5

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

SESSION OVERVIEW: AACC is dedicated to advance the science and practice of laboratory medicine. A select group of members has reviewed and ranked the abstracts submitted for the AACC Annual Scientific Meeting. The Annual Meeting Organizing Committee has reviewed the accepted abstracts and has chosen five authors to present their research as oral presentations. Each 15-minute presentation will be followed by a 3-minute question-and-answer session.

EXPECTED OUTCOMES: After this session, participants will be able to:

1. Describe and evaluate the latest advances in laboratory medicine in this topic area.
2. Compare and contrast the research in this topic area.
3. Integrate and translate state-of-the-art knowledge in this topic area into the roles and responsibilities of the clinical laboratory professional.

SPEAKERS

Diagnostic and High-grade Cancer Prediction Performance of LDN-PSA Glycosylation Isoform
#Tohru Yoneyama, PhD
Department of Advanced Transplant and Regenerative Medicine, Hirosaki University Graduate School of Medicine, Hirosaki, Japan

A Novel Activity-based Concept to Screen Biological Matrices for the Presence of (Synthetic) Opioids
#Christophe Stove, PharmD, PhD
Ghent University, Ghent, Belgium

Universal Pathogen Capture System for Rapid Isolation of Intact Bacteria Directly from a Patient Sample
+Rajesh Krishnamurthy, PhD
3i Diagnostics, Inc., Germantown, MD

Novel Biochemical Markers Help Aid in Stratifying Patients at Risk of Preeclampsia and Adverse Events
#Ajay Kumar, PhD
Ansh Labs, Webster, TX

Simultaneous Assessment of N-terminal pro-B-type Natriuretic Peptide and Presepsin Improves Risk Prediction of Acute Kidney Injury and Mortality after Cardiac Surgery
*Eberhard Spanuth, PhD
DIAneering GmbH, Heidelberg, Germany

WEDNESDAY | AUGUST 1

SCIENTIFIC SESSIONS

MORNING

10:30am–12:00pm

Late Breaking Session: Precision Medicine: From Novel Biomarkers to Blockbuster Drugs

34120
McCormick Place, S104

Level: **INTERMEDIATE**
CE Credit: 1.5

MODERATOR
#Mari DeMarco, PhD, DABCC, FAACC, FCACB
University of British Columbia and St. Paul's Hospital, Vancouver, BC, Canada

INTENDED AUDIENCE: This session is intended for clinical chemists, lab directors, bench-to-beside (translational) researchers, oncologists, hematologists and nephrologists.

SESSION OVERVIEW: This session will explore how to successfully identify novel protein biomarkers for unmet clinical needs and translate them into diagnostic assays for routine use. To drive this point, we will present key diagnostic advances in the areas of immuno-oncology, fibrillary glomerulonephritis and immunoglobulin light chain amyloidosis. On the topic of immuno-oncology, the rapid clinical development of pembrolizumab for non-small cell lung cancer required even more rapid development of a programmed cell death 1 ligand (PD-L1) immunohistochemistry assay. This lead to the first FDA-approved companion diagnostic in cancer immunotherapy and accelerated approval of pembrolizumab. We will also explore how tissue-based diagnoses for fibrillary glomerulonephritis and amyloidosis have recently evolved, based on proteomics approaches, to include non-invasive serum-based markers.

EXPECTED OUTCOMES: After attending this session, participants will be able to:

1. Understand how to develop novel diagnostic biomarkers for unmet clinical needs.
2. Know how to use proteomics and immunochemical analysis.
3. Understand how to translate the markers into a clinical laboratory for routine use.
4. Explain how a companion diagnostic facilitates drug development.

SPEAKERS

Developing an Immunohistochemistry Test for "Programmed Cell Death 1 Ligand" (PD-L1) as a Companion Diagnostic for Pembrolizumab
#Kenneth Emancipator, PhD
Merck & Co., Kenilworth, NJ

Novel Diagnostics to Enable Precise Diagnosis of Fibrillary Glomerulonephritis and Early Diagnosis of Light Chain Amyloidosis
*Surendra Dasari, PhD
Mayo Clinic, Rochester, MN

AFTERNOON

2:30pm–5:00pm

Harmonization of Laboratory Systems and Reference Standards in Clinical Laboratories

34211
McCormick Place, S105BC

Level: **INTERMEDIATE**
CE Credit: 2.5

MODERATOR
*Khosrow Adeli, PhD, FCACB, DABCC
The Hospital for Sick Children, Toronto, ON, Canada

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

SESSION OVERVIEW: This session will be a combination of a traditional podium presentation and a 30-minute interactive discussion forum. Following the three main presentations (30 minutes each, plus 10 minutes for questions), an interactive discussion forum will be held. Participants will be asked to share their views of the current challenges with laboratory harmonization and potential strategies to move toward harmonization of laboratory systems and reference intervals/test result interpretation.

EXPECTED OUTCOMES: After this session, participants will be able to:

1. Identify the current substantial variation in analytical and post-analytical laboratory processes, including discussion of data from recent national surveys.
2. Describe the concepts and potential advantages of harmonized laboratory systems and reference intervals, as well as potential barriers to harmonization.
3. Describe global harmonization efforts and various strategies that have been employed in different countries to achieve harmonization.

SPEAKERS

Harmonization of Adult and Pediatric Reference Intervals
*Khosrow Adeli, PhD, FCACB, DABCC
The Hospital for Sick Children, Toronto, ON, Canada

Global Initiatives in Laboratory Harmonization
#Ferruccio Ceriotti, MD
Fondazione IRCCS Ca' Granda Ospedale Maggiore Policlinico, Milan, Italy

Harmonization within the Laboratory System
#James Ritchie, PhD, DABCC, FAACC
Emory University Hospital, Atlanta, GA

2:30pm–5:00pm

Endocrine-Disrupting Chemicals in Children and Environmental Health—Emerging Opportunities for the Clinical Laboratory

34212
McCormick Place, S402A

Level: **INTERMEDIATE**
CE Credit: 2.5

MODERATOR
#Roy Gerona, PhD
University of California, San Francisco, San Francisco, CA

Developed in cooperation with the Mass Spectrometry and Separation Sciences Division, Pediatric and Maternal-Fetal Division

TRACKS: Endocrinology; Pediatric/Maternal-Fetal

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

SESSION OVERVIEW: Exposure to endocrine-disrupting chemicals (EDCs) affects human health and development. To reliably assess the impact of these chemicals on diseases, analytical measurements need to meet the same standards as those used in clinical laboratories. This creates unique opportunities for clinical laboratories to help improve EDC measurements and human health.

EXPECTED OUTCOMES: After this session, participants will be able to:

1. Describe EDCs and their importance in individual and public health.
2. Explain how EDCs are measured and how laboratory measurements can affect the interpretation of health effects.
3. List major contributions the clinical laboratory can make to advance the field of EDCs research.

SPEAKERS

Endocrine-Disrupting Chemicals in Environmental Health Research
#Linda Birnbaum, PhD
National Institute of Environmental Health Sciences and National Toxicology Program, Research Triangle Park, NC

Endocrine-Disrupting Chemicals: A Costly Public Health Threat to Children's Health
#Leonardo Trasande, MD, MPP
New York University School of Medicine, New York, NY

Measuring Endocrine Disruptors in Biological Samples: What Clinical Laboratories Can Offer
#Roy Gerona, PhD
University of California, San Francisco, San Francisco, CA

2:30pm–5:00pm

AACC/ASCLS Healthcare Forum

34213
McCormick Place, S402B

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: CDC efforts to improve the quality of laboratory testing; Office of the Inspector General investigations of laboratory billing practices and strategies to comply; recent cuts in Medicare reimbursement and how they will affect laboratories; and an overview of healthcare reform and how it is affecting clinical laboratories.

EXPECTED OUTCOMES: After this session, participants will be able to:

1. Understand current CDC efforts to improve laboratory testing.
2. Explain recent changes in the clinical laboratory fee schedule and how those changes will affect their laboratory.
3. Describe government concerns with laboratory billing practices and what they need to do to be in compliance.
4. Be familiar with the healthcare reform law, how it affects clinical laboratories, and strategies for adapting to the changing healthcare environment.

SPEAKERS

PAMA: What Labs Need to Do
*Charles Root, PhD
CodeMap LLC, Chicago, IL

CDC's Division of Laboratory Systems: Protecting America's Health by Strengthening Clinical Laboratories
#Reynolds Salerno, PhD
Centers for Disease Control and Prevention, Atlanta, GA

Keeping Out of Trouble with the Office of Inspector General: Strategies for Improving Laboratory Compliance
#Gregory Root, JD
Codemap, Chicago, IL

Healthcare Reform: What the Future Holds for Clinical Labs
#Elissa Passiment, EdM, CLS, EP
Clinical Lab Consulting, Bluffton, SC

AFTERNOON

2:30pm–5:00pm

Protein Electrophoresis Reporting: Multinational Recommendations and Perspectives on Standardization

34214
McCormick Place, S403

Level: **INTERMEDIATE**
CE Credit: 2.5

MODERATOR
#Ronald Booth, PhD, FCACB, FAACC
The Ottawa Hospital, Ottawa, ON, Canada

INTENDED AUDIENCE: This session is intended for laboratorians (pathologists, lab directors, clinical biochemists, technologists) involved in performing and interpreting serum and/or urine protein electrophoresis.

SESSION OVERVIEW: Protein electrophoresis reporting varies significantly between laboratories and individuals. This session will present international recommendations for reporting protein electrophoresis. It will include interactive case presentations using standardized approaches and a multinational panel discussion following the lectures and interactive session.

EXPECTED OUTCOMES: After this session, participants will be able to:

1. Recognize the need for standardization of protein electrophoresis reporting.
2. Be aware of the ongoing international efforts to achieve standardization of protein electrophoresis reporting.
3. Apply the standardized techniques when interpreting and reporting protein electrophoresis.

SPEAKERS

2018 Canadian Recommendations for Protein Electrophoresis Reporting
#Ronald Booth, PhD, FCACB, FAACC
The Ottawa Hospital, Ottawa, ON, Canada

Dutch Perspective on Protein Electrophoresis Standardization
#Joannes Jacobs, MD, PhD
Radboud University Medical Center, Nijmegen, Netherlands

Update on International Federation of Clinical Chemists (IFCC) Protein Electrophoresis Standardization Efforts
#Maria Alice Willrich, PhD, DABCC, FAACC
Mayo Clinic, Rochester, MN

Novel Methods For Quantitation of Monoclonal Proteins
#David Keren, MD
The University of Michigan Medical School, Ann Arbor, MI

Synoptic Reporting Applied to Protein Electrophoresis Reporting: A Step toward Standardization
#Christopher McCudden, PhD, DABCC, FCACB, FACB
The Ottawa Hospital, Ottawa, ON, Canada

2:30pm–4:00pm

Invited Oral Abstracts: Hot Topics in Lab Medicine

34215
McCormick Place, S103A

Level: **INTERMEDIATE**
CE Credit: 1.5

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

SESSION OVERVIEW: AACC is dedicated to advance the science and practice of laboratory medicine. A select group of members has reviewed and ranked the abstracts submitted for the AACC Annual Scientific Meeting. The Annual Meeting Organizing Committee has reviewed the accepted abstracts and has chosen five authors to present their research as oral presentations. Each 15-minute presentation will be followed by a 3-minute question-and-answer session.

EXPECTED OUTCOMES: After this session, participants will be able to:

1. Describe and evaluate the latest advances in laboratory medicine in this topic area.
2. Compare and contrast the research in this topic area.
3. Integrate and translate state-of-the-art knowledge in this topic area into the roles and responsibilities of the clinical laboratory professional.

SPEAKERS

Sex-Specific 99th Percentiles Derived from the AACC Universal Sample Bank for 8 High-Sensitivity Cardiac Troponin Assays
#Karen Schulz, DC
Hennepin County Medical Center, Minneapolis, MN

A Novel Derivatization-Based LC-MS/MS Method with High Sensitivity for Quantitation of Cannabinoids in Breath Samples
#Yang Luo, PhD
University of California at San Francisco, San Francisco, CA

Assessing the Impact of Biotin and Simulating Patient Risk Using the Elecsys Troponin T Gen 5 STAT Assay
#Brooke Katzman, PhD
Mayo Clinic, Rochester, MN

Baseline High-Sensitivity Cardiac Troponin I Aids in Risk Assessment in Patients with Diabetes, Hypertension, and Dyslipidemia without Myocardial Infarction
#Ian Gunsolus, PhD
Department of Laboratory Medicine and Pathology, Hennepin County Medical Center, Minneapolis, MN

Clinical Significance of Discrepant ELISA and IFA Results for Anti-PLA2R Antibody Testing
#Callen Giesen, PhD
Mayo Clinic, Rochester, MN

AFTERNOON

2:30pm–5:00pm

Innovations in Body Fluid Testing

34216
McCormick Place, S101B

Level: **INTERMEDIATE**
CE Credit: 2.5

MODERATOR
*Lakshmi Ramanathan, PhD, COQ
New York State Department of Health, Memorial Sloan-Kettering Cancer Center, New York, NY

TRACK: Point-of-Care Testing

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

SESSION OVERVIEW: Non-invasive body fluids show promise in population-based screening studies and point-of-care, decentralized testing. Tests in saliva, cerebral spinal and body fluids will improve diagnostic interpretation and permit biomarker analysis for management and treatment decisions. This session will provide a road map to non-invasive clinical testing (NIT).

EXPECTED OUTCOMES: After this session, participants will be able to:

1. List the advantages of noninvasive testing.
2. Understand the performance characteristic required for assays in body fluids.
3. Learn about biomarkers that are used in blood and how these are measured in saliva and body fluids after proper validation.

SPEAKERS

Current and New Opportunities in Saliva Analysis
*Chamindie Punyadeera, PhD
Queensland University of Technology, Brisbane, Queensland, Australia

New Biomarker Analysis in CSF and Lavage Fluids
#Martin Fleisher, PhD, FAACC
Memorial Sloan Kettering Cancer Center, New York, NY

Performance Characteristics and Validation in Non-Blood Analysis
*Lakshmi Ramanathan, PhD, COQ
New York State Department of Health, Memorial Sloan Kettering Cancer Center, New York, NY

2:30pm–5:00pm

Advances in Allergen Testing Diagnostics

34217
McCormick Place, S103BC

Level: **INTERMEDIATE**
CE Credit: 2.5

MODERATOR
#L.V. Rao, NACB
Quest Diagnostics, Marlborough, MA

Developed in cooperation with the Clinical and Diagnostic Immunology Division

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

SESSION OVERVIEW: Diagnosis of Immunoglobulin E (IgE)–associated disorders is challenging. Increasing availability of laboratory tests based on clinically relevant allergen components and cell-based functional assays has the potential of changing the way allergen-specific IgE antibody diagnostics are performed. In this scientific session, current advances in allergy diagnostics, advantages and challenges will be discussed.

EXPECTED OUTCOMES: After completion of this session, participants will be able to:

1. Understand the technological advances in allergen-specific IgE antibody testing diagnostics—specifically, component-based diagnostic testing, and functional assays such as the basophil activation test and the basophil histamine release test.
2. Understand how microarray technology has been applied to the diagnosis of human allergic disease.
3. Understand the concepts of diagnosing non-IgE mediated food allergy in the absence of validated tests.

SPEAKERS

Technological Advances in Allergen-Specific IGE Antibody Testing
*Anthony Horner, MD
Quest Diagnostics, San Juan Capistrano, CA

Microarray Technology as Applied to Human Allergic Disease Diagnosis
*Robert Hamilton, PhD, D.ABMLI, F.AAAAI
Johns Hopkins University School of Medicine, Baltimore, MD

Non-IGE Mediated Allergen Testing in Food Allergy
+Carina Venter, PhD, RD
University of Colorado Denver School of Medicine, Aurora, CO

2:30pm–5:00pm

Real Global News: It's Time to Embrace High-Sensitivity Cardiac Troponin Assays with Cost-Benefit Strategies for Early Rule-Out and Rule-In of Myocardial Infarction and Injury

34218
McCormick Place, S504

Level: **ADVANCED**
CE Credit: 2.5

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

TRACK: Precision Medicine & Oncology

INTENDED AUDIENCE: This session is intended for any laboratory/physician scientist, including pathologists, lab directors, clinical chemists, technologists, IVD industry scientists and regulatory experts, who has an interest in cardiac biomarkers, with specific reference to cardiac troponin and high-sensitivity assays pertaining to analytical and clinical issues.

SESSION OVERVIEW: This session will include nteractive audience participation with evidence-based case studies. We will discuss how to implement utilization of high-sensitivity cardiac troponin (hs-cTnI, hs-cTnT) for early rule-out and rule-in of myocardial infarction in clinical practice. We will also discuss international guidelines for defining normality, 99th percentiles and decision cut-off concentrations to optimize patient safety outcomes.

EXPECTED OUTCOMES: After this session, participants will be able to demonstrate:

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

SPEAKERS

Clinical Laboratory Practice Recommendations for the Use of Cardiac Troponin Assays
*Fred Apple, PhD, DABCC
Hennepin County Medical Center, Minneapolis, MN

Early, Rapid Rule-Out Strategies and Safety Performance at 30 Days
#Richard Body, PhD
Manchester Royal Infirmary, Manchester, England, United Kingdom

Implementation into Clinical Practice by Carefully Defining and Differentiating Myocardial Injury from Myocardial Infarction Using Global Task Force Guidelines
*Allan Jaffe, MD
Mayo Clinic, Rochester, MN

AFTERNOON

2:30pm–5:00pm

Better Testing, Better Care—The Role of the Laboratory in Improving Patient Outcomes

34219
McCormick Place, S505

Level: **INTERMEDIATE**
CE Credit: 2.5

MODERATOR
*Mike Hallworth, MA, MSc, MCB, FRCPath
Association of Clinical Biochemists (UK), London, England

TRACK: Utilization & Lab Management

INTENDED AUDIENCE: This session is intended for pathologists, laboratory directors, clinical chemists, technologists, IVD industry scientists and others with an interest in the value of laboratory medicine and the linkage of laboratory testing and patient outcomes.

SESSION OVERVIEW: The shift from volume to value, the need to demonstrate improved patient outcomes, and the reduction of diagnostic error and unnecessary or harmful procedures are key themes of 21st-century medicine, and the clinical laboratory has a central role in all these areas. However, laboratory medicine has failed in the past to maximize its contribution to healthcare for reasons including perverse reimbursement incentives and lack of education in the proper use of testing. This session will explore the changing external environment and its effects on laboratory medicine and will indicate new approaches to delivering patient-centered laboratory medicine.

EXPECTED OUTCOMES: After this session, participants will be able to:

1. Describe the changes in delivery of diagnostic medicine envisaged in the National Academies' report "Improving Diagnosis in Health Care" (2015).
2. Evaluate the role of the diagnostic management team (DMT) in improving test selection and results interpretation.
3. Identify the factors that influence the link between laboratory testing and patient outcomes.
4. Partner more effectively with clinicians and diagnostic colleagues to ensure effective interpretation, improved diagnosis and better patient outcomes.
5. Discuss the application of the DMT approach to specific clinical problems.

SPEAKERS

Overview of the Problem: Using the Diagnostic Management Team to Improve Diagnostic Testing
#Michael Laposata, MD, PhD
University of Texas Medical Branch Galveston, Galveston, TX

Linking Laboratory Medicine to Patient Outcomes
*Mike Hallworth, MA, MSc, MCB, FRCPath
Association of Clinical Biochemists (UK), London, England

Better Patient Outcomes by Improving the Laboratory–Clinician Interface
#Danielle Freedman, MBChB, FRCPath, MD
Luton & Dunstable Hospital NHS Trust, Luton, England

The Diagnostic Management Team in Action
#James Nichols, PhD, DABCC, FAACC
Vanderbilt University Medical Center, Nashville, TN

SPECIAL SESSION

4:00pm–5:00pm
McCormick Place, Expo Show Floor, Poster Theater

Laboratory Feud: AACC Academy vs. CLS Council

Level: **BASIC** | CE Credit: 0

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

SESSION OVERVIEW: This session will use the "Family Feud" game show-style format. Two teams (five members of the AACC Academy Council versus five members of the CLS Council) will compete in an educational challenge covering various laboratory medicine topics. It will be educational and will give everyone an opportunity to learn a little bit more about AACC members in key leadership positions.

EXPECTED OUTCOMES: After this session, participants will be able to:

1. List various tumor markers and their clinical utility.
2. Identify new and current cardiovascular biomarkers.
3. Know the most commonly used/abused drugs.
4. List common factors that can affect laboratory test results.

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

SPEAKERS

AACC Academy Team
#Angela Ferguson, PhD, DABCC, FAACC
Children's Mercy Hospitals and Clinics, Kansas City, MO

#Patrick Kyle, PhD, ABFT, DABCC, FAACC
University of Mississippi Medical Center, Jackson, MS

*Kara Lynch, PhD, DABCC
University of California/San Francisco General Hospital, San Francisco, CA

#James Ritchie, PhD, DABCC, FAACC
Emory University Hospital, Atlanta, GA

#William Winter, MD
University of Florida, Gainesville, FL

Clinical Laboratory Scientist (CLS) Council Team
#Cheri Curtis, BS
Emory Medical Laboratory, Atlanta, GA

*Peggy Mann, MS, MT(ASCP)
University of Texas Medical Branch, Galveston, TX

#David Shiembob, MBA, C(ASCP)
ARUP Laboratories, Salt Lake City, UT

#Jeff Young, MLS(ASCP)
Providence Regional Laboratory — Oregon, Portland, OR

*Steven Zibrat, MS, MT(ASCP)
University of Chicago Hospital, Chicago, IL

THURSDAY
AUGUST 2

PLENARY & SCIENTIFIC SESSIONS

PLENARY SESSION

8:45am–10:15am
McCormick Place, Grand Ballroom/S100

Essential Diagnostics: Meeting the Needs of a Global Population

SPEAKERS

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

#Lee Schroeder, MD, PhD
University of Michigan, Ann Arbor, MI

15001
Level: **BASIC** | CE Credit: 1.0

INTENDED AUDIENCE: This session is intended for pathologists, lab directors, clinical chemists, medical technologists and laboratory administrators with an interest in laboratory testing in resource-poor settings.

SESSION OVERVIEW: While medicines treat disease, diagnostics find disease. Yet in global health initiatives, diagnostics receive much less attention. The WHO's Model List of Essential Medicines has been critical to the efficient delivery of medicines. This session will describe how a Model List of Essential Diagnostics will help strengthen laboratory capacity in resource-poor settings.

EXPECTED OUTCOMES: After this session, participants will be able to:

1. Describe the state of laboratory capacity in low-resource countries.
2. Explain the impact of the Model List of Essential Medicines.
3. List the barriers to diagnostics implementation and explain how an essential diagnostics list can help overcome those barriers.

THURSDAY | AUGUST 2

MEET THE EXPERT

10:30am–11:30am

Essential Diagnostics: Meeting the Needs of a Global Population

65101
McCormick Place, S101A

Level: **BASIC**
CE Credit: 1.0

MODERATOR
#Edward Ashwood, MD, ABP
University of Colorado Anschutz Medical Campus, Aurora, CO

SESSION OVERVIEW: This session provides an excellent opportunity for a limited number of attendees to meet with Drs. Timothy Amukule and Lee Schroeder, leaders in ongoing efforts to improve the quality and impact of clinical laboratories in developing countries. Together, they have been strong voices in the need for a list of essential diagnostics in order to fulfill the healthcare needs of populations. Drs. Amukule and Schroeder will discuss their vision of how an essential diagnostics list will help strengthen laboratory capacity in resource-poor settings and improve outcomes for a global population.

SPEAKERS
#Timothy Amukele, PhD, MD
Johns Hopkins University, Baltimore, MD

#Lee Schroeder, MD, PhD
University of Michigan, Ann Arbor, MI

THURSDAY | AUGUST 2

SCIENTIFIC SESSIONS

MORNING

10:30am–12:00pm

Why Negative Interferences in Immunoassays Cause More Errors Than Positive Interferences

35101
McCormick Place, S101B

Level: **INTERMEDIATE**
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: It is accepted that the majority of clinical diagnoses are based on clinical laboratory test results. Immunoassays are widely used in clinical laboratories, which may suffer from interferences from endogenous substances such as heterophilic antibody, hyperbilirubinemia, hyperlipidemia, etc., as well as from exogenous substances such as drug metabolites, biotin interference (if biotinylated antibody is used in assay design), and components of non-prescription, nutraceutical supplements. In general, a false elevation in test results is more likely to prompt recognition and a call to the laboratory for further clarification than is the case when test results are falsely lowered. In this scientific session, case reports will be presented to demonstrate the dangers of negative and bidirectional interferences in clinical laboratory test results, including bidirectional interference of biotin (negative interference with sandwich immunoassays but positive interferences with competitive immunoassays), and especially in assays used for endocrine testing and therapeutic drug monitoring. Although the mechanism of positive interference is straightforward, mechanisms of negative interference can be more complicated. Results of mathematical modeling to explain negative interference will also be discussed in the scientific session.

EXPECTED OUTCOMES:

1. Identify negative interferences and positive interferences and how to avoid such interferences.
2. Understand impact of biotin in clinical laboratory tests results and be a better consultant to ordering physicians.
3. Understand varied mechanisms of negative interference.

SPEAKERS
Impact of Negative and Bidirectional Interferences Including Biotin Interferences On Clinical Decision Making: Clinical Case Studies, and How to Correct Such Errors
*Amitava Dasgupta, PhD, DABCC, NRCC
University of Texas at Houston Medical School, Houston, TX

Mechanisms of Negative and Bidirectional Interferences in Clinical Laboratory Immunoassay Test Results
*Douglas Stickle, PhD, DABCC
Jefferson University Hospital, Philadelphia, PA

10:30am–12:00pm

Clinical Applications of Established and Emerging Multi-Analyte Testing Approaches

35102
McCormick Place, S103A

Level: **INTERMEDIATE**
CE Credit: 1.5

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

Developed in cooperation with the Tumor Markers and Cancer Diagnostics Division

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

SESSION OVERVIEW: Implementing multi-analyte tests that combine biomarkers, patient demographics and clinical information into an algorithm to generate a disease risk score is becoming increasingly common in clinical laboratories. This session will center on the clinical utility and implementation considerations of established multi-analyte strategies, and will highlighting emerging multi-analyte testing approaches. A Q&A session will provide a forum for discussing experiences and perspectives.

EXPECTED OUTCOMES: After this session, participants will be able to:

1. Describe the clinical utility of FDA-cleared multi-analyte biochemical assays with algorithmic analyses in prostate and ovarian cancer.
2. List implementation, regulatory and infrastructure needs related to the adoption of multi-analyte tests in clinical laboratories.
3. Assess the strengths and limitations of emerging multi-analyte testing approaches for the diagnosis of diseases with unmet clinical needs, including sepsis, cardiac risk and cancer.

SPEAKERS
Introductory Remarks on Multi-Analyte Assays with Algorithmic Analyses
*Alicia Algeciras-Schimnich, PhD, DABCC
Mayo Clinic, Rochester, MN

Established Multi-Analyte Assays with Algorithmic Analyses in Prostate and Ovarian Cancer: From Clinical Utility to Implementation
#Jessica Colon-Franco, PhD, DABCC
Medical College of Wisconsin, Milwaukee, WI

Emerging MAAAs from Sepsis and Cardiac Risk to Cancer Genomics—the Answer to Limited Diagnostic Utility
*Alison Woodworth, PhD, DABCC
University of Kentucky, Lexington, KY

10:30am–12:00pm

AACC Artery Hot Topics of 2018

35103
McCormick Place, S104

Level: **BASIC**
CE Credit: 1.5

MODERATOR
#Allison Chambliss, PhD, DABCC, FAACC
Keck Medicine of the University of Southern California, Los Angeles, CA

INTENDED AUDIENCE: This session is intended for pathologists, lab directors, clinical chemists, lab managers and supervisors, technologists, and IVD industry scientists who are involved with general chemistry laboratory testing.

SESSION OVERVIEW: Using AACC's online forum, Artery, as a metric, we have identified four of the most common pain points and areas of ambiguity facing today's clinical laboratorians. Relevant to each of these challenges, this session will provide essential scientific background, current practice guidelines and practical opportunities for resolution.

EXPECTED OUTCOMES: After this session, participants will be able to:

1. Contrast various approaches for the evaluation of LDL-cholesterol and its interpretation.
2. Summarize strategies to identify and prevent specimen dilution during phlebotomy.
3. Apply IQ/OQ/PQ processes in relation to analytical validation following an instrument move.
4. Debate the clinical utility of a critical laboratory value for creatinine.

SPEAKERS
Keeping Up with the Guidelines: How to Interpret (and Measure) LDL Cholesterol
#Allison Chambliss, PhD, DABCC, FAACC
Keck Medicine of the University of Southern California, Los Angeles, CA

Creatinine Critical Value: Worthy or Not
#David Alter, PhD
Spectrum Health, Grand Rapids, MI

That's Not Blood: Recognizing and Preventing Dilution of Specimens with IV Fluid
#Claire Knezevic, PhD
Johns Hopkins Medical Institutes, Baltimore, MD

The Day after Tomorrow: Preparing for a Disaster During an Instrument Move
#Frederick Strathmann, PhD, MBA, DABCC (CC, TC)
NMS Labs, Willow Grove, PA

THURSDAY | AUGUST 2

SCIENTIFIC SESSIONS

MORNING

10:30am–12:00pm

Sequence Gazing: Somatic Variant Calling and Interpretation for Next-Generation Sequencing

35104
McCormick Place, S102A

Level: **INTERMEDIATE**
CE Credit: 1.5

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

Developed in cooperation with the College of American Pathologists

TRACK: Genomics/Genetics

INTENDED AUDIENCE: This session is intended for pathologists, pathology residents and fellows, and PhD lab directors and fellows.

SESSION OVERVIEW: Attend this clinical next-generation sequencing (NGS) testing course to learn more about the emerging NGS component of precision medicine. These tests generate large amounts of genetic data that must undergo bioinformatic analysis to extract clinically useful results. While "sequence gazing" initially appears to be a daunting and technical task, the basic principles are approachable for all laboratorians. In this session, faculty will review the basic principles of sequencing and present the steps required to identify variants in clinical data. Additionally, faculty will present the use of public databases and medical literature to determine the significance of these variants for patient care, with a focus on somatic variants. Case studies will be used to reinforce concepts such as reporting of incidental variants and variants of uncertain significance. Interactive audience response questions will allow participants to test their understanding in real time.

EXPECTED OUTCOMES: After this session, participants will be able to:

1. Summarize the target enrichment methods used for clinical NGS.
2. Distinguish classes of genetic variation detected by NGS.
3. Describe steps involved in processing NGS data to identify sequence variants.
4. Differentiate between clinically significant and insignificant sequence variants.
5. Describe the issues raised by discovery of incidental variants.

SPEAKERS
Basic NGS Bioinformatics—from DNA to Somatic Variants
*Eric Duncavage, MD
Washington University School of Medicine, St. Louis, MO

The Search for Meaning: Clinical Interpretation of Sequence Variants
*Ian Hagemann, MD, PhD, FCAP
Washington University School of Medicine, St. Louis, MO

10:30am–12:00pm

ICP-MS: Essentials and Interactive Case Studies on Elemental Testing in Clinical Laboratories

35105
McCormick Place, S103BC

Level: **BASIC**
CE Credit: 1.5

MODERATOR
*Sarina Yang, PhD, DABCC (CC, TC), FAACC
Quest Diagnostics, Valencia, CA

TRACK: Mass Spectrometry

INTENDED AUDIENCE: This session is intended for pathologists, clinicians, laboratorians and persons from industry who desire to develop or refine their understanding of trace element testing in biological samples and clinical applications of ICP-MS.

SESSION OVERVIEW: ICP-MS has great potential to provide sensitive, accurate and high-throughput measurement of trace elements in biological specimens. This scientific session will be presented by two laboratory directors who will review the principles behind ICP-MS, discuss method development and validation, and present its clinical application in trace element testing using clinical case studies.

EXPECTED OUTCOMES: After attending this session, participants will be able to:

1. Compare the strengths and weaknesses of current technologies in trace element testing.
2. Describe the basic principles of an ICP-MS.
3. List the steps of method development and validation using ICP-MS.
4. Describe the clinical work-up of patients with elemental toxicity and interpret results of elemental analysis.

SPEAKERS
Laboratory Testing of Heavy Metals in Blood and Urine Using ICP-MS
*Sarina Yang, PhD, DABCC (CC, TC), FAACC
Quest Diagnostics, Valencia, CA

Interactive Elemental Case Studies
#Paul Jannetto, PhD, DABCC, FAACC, MT(ASCP)
Mayo Clinic, Rochester, MN

10:30am–12:00pm

Toward Improving Parathyroid Hormone Measurements and Management of the Chronic Kidney Disease–Mineral and Bone Disorder (CKD-MBD)

35106
McCormick Place, S103D

Level: **INTERMEDIATE**
CE Credit: 1.5

MODERATOR
#Uliana Danilenko, PhD
Centers for Disease Control and Prevention, Atlanta, GA

Developed in cooperation with the IFCC Scientific Division PTH Working Group

TRACK: Endocrinology

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

SESSION OVERVIEW: This session will examine the importance and current state of parathyroid hormone (PTH) measurement, including pre-analytical and analytical challenges. Standardization efforts and the advances in PTH reliable measurement will be discussed.

EXPECTED OUTCOMES: After this session, participants will be able to:

1. Summarize the updates to the Kidney Disease: Improving Global Outcomes (KDIGO) 2017 Clinical Practice Guideline.
2. Identify current analytical and pre-analytical challenges of PTH testing.
3. Describe advancements in using mass spectrometry for measurement of intact PTH and its fragments and development of reference measurement procedures.

SPEAKERS
The Kidney Disease: Improving Global Outcomes (KDIGO) 2017 Clinical Practice Guideline: Update with the Focus on New PTH Recommendations
*Kevin Martin, MD, MB, BCh, FASN
St. Louis University, St. Louis, MO

Challenges of the Current State of PTH Testing
#Ravinder Singh, PhD, DABCC, FAACC
Mayo Clinic, Rochester, MN

Impact of Pre-Analytical Conditions on PTH Testing and an Update from the IFCC Working Group
#Catharine Sturgeon, PhD, FAACC, FRCPath
The Royal Infirmary of Edinburgh, Edinburgh, Scotland, United Kingdom

FOLLOW AACC @_AACC AND USE THE HASHTAG #2018AACC TO JOIN THE CONVERSATION.

MORNING

10:30am–12:00pm

Mastering Laboratory Data with Open-Source Computational Resources

35107
McCormick Place, S105A

Level: **BASIC**
CE Credit: 1.5

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

INTENDED AUDIENCE: This session is intended for pathologists, lab directors, clinical chemists, technologists, IVD industry scientists and those interested in automated data processing with open-source computational resources.

SESSION OVERVIEW: This session will introduce available open-source computational resources that can be tailored for laboratory data processing. Real-world examples will illustrate the advantages and impacts of those tools in routine laboratory practice. The concepts of machine learning and its opportunities in the laboratory medicine field will be discussed and basic data processing and visualization approaches will be explained.

EXPECTED OUTCOMES: After this session, participants will be able to:

1. Recognize the open-source data analysis tools that are available and the impact of applying those tools within clinical laboratories and beyond, to healthcare more broadly.
2. Identify the projects and fields where such tools can be applied to improve the quality and efficiency of laboratory practice.
3. Minimize the barrier to efficient data analysis and grasp some basic code-reading and editing skills.

SPEAKERS

Basic Data Cleansing, Processing and Visualization: A Case Study Using Turnaround Times
#James Harrison, MD, PhD
University of Virginia School of Medicine, Charlottesville, VA

A Glimpse into Machine Learning: Embracing the Opportunities in Laboratory Medicine
#Min Yu, MD, PhD, DABCC
University of Kentucky, Lexington, KY

Beyond the Personal Computer: Moving Analysis to Computational Clusters
#Cody Bumgardner, PhD
University of Kentucky, Lexington, KY

10:30am–12:00pm

Harnessing the Power of Evidence-Based Medicine to Maximize Laboratory Cost Savings and Effective Test Utilization

35108
McCormick Place, S102BC

Level: **BASIC**
CE Credit: 1.5

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

TRACK: Utilization & Lab Management

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

SESSION OVERVIEW: Clinically irrelevant testing may contribute to negative patient outcomes (expensive subsequent tests/invasive procedures, initiation of therapeutics, increased hospital stay, iatrogenic anemia, and morbidity/mortality). The clinical laboratorian can play a major role in test utilization by leading a multi-disciplinary team focused on developing and implementing customized evidence-based medicine test guidelines and interpretative comments for test results.

EXPECTED OUTCOMES: After this session, participants will be able:

1. Communicate the role that laboratorians can play in participating in the EMR and Computerized Physician Order Entry enterprises.
2. Identify evidence-based content that can be leveraged in the EMR/CPOE to improve laboratory test utilization.
3. Identify tests that benefit from interpretative comments and develop appropriate interpretative comments.
4. Design and implement test utilization monitoring to identify positive patient outcomes.

SPEAKERS

Providing Meaningful Test Interpretation to Drive Cost Savings and Effective Test Utilization
#Octavia Palmer, PhD, FAACC
University of Pittsburgh Medical Center, Pittsburgh, PA

How to Implement Evidence-Based Content in the Electronic Medical Record (EMR) to Improve Laboratory Test Utilization
#Eugenio Zabaleta, PhD
OhioHealth MedCentral Mansfield Hospital, Mansfield, OH

10:30am–12:00pm

Jumping the Pediatric Reference Interval Hurdles

35109
McCormick Place, S105BC

Level: **BASIC**
CE Credit: 1.5

MODERATOR
#Amy Pyle-Eilola, PhD, DABCC
Nationwide Children's Hospital, Columbus, OH

Developed in cooperation with the Pediatric and Maternal-Fetal Division

TRACK: Pediatric/Maternal-Fetal

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

SESSION OVERVIEW: Ideal methods for establishing reference intervals are generally not feasible for pediatric populations, forcing labs to turn to alternative approaches. This session will review CLSI guidelines for generating reference intervals and discuss real-world applications to pediatrics.

EXPECTED OUTCOMES: After attending this session, participants will be able to:

1. Establish reference intervals in their own laboratory by identifying the appropriate samples to use.
2. Recognize tools and tricks available to validate and transfer reference intervals from other laboratories or publications.
3. Start their own program for identifying and storing normal pediatric samples.

SPEAKERS

Basics of Pediatric Reference Intervals
#Brenda Suh-Lailam, PhD, DABCC
Ann & Robert H. Lurie Children's Hospital of Chicago/Northwestern University, Chicago, IL

A Large-Scale Approach to Pediatric Reference Intervals
#Joely Straseski, PhD, DABCC, FAACC
ARUP Laboratories/University of Utah, Salt Lake City, UT

Practical Approaches to Pediatric Reference Intervals
#Amy Pyle-Eilola, PhD, DABCC
Nationwide Children's Hospital, Columbus, OH

THURSDAY | AUGUST 2

SCIENTIFIC SESSIONS

MORNING

10:30am–12:00pm

Late Breaking Session: Traumatic Brain Injury Biomarkers: Ready for Prime Time!

35110
McCormick Place, S105D

Level: **INTERMEDIATE**
CE Credit: 1.5

MODERATOR
*Robert Christenson, PhD, DABCC, FAACC
University of Maryland School of Medicine, Baltimore, MD

INTENDED AUDIENCE: This session is intended for pathologists, clinical practitioners, laboratory directors, clinical chemistry professionals, laboratory managers, federal and state regulators, technologists, IVD industry scientists, IVD managers and healthcare economists.

SESSION OVERVIEW: Strategic biomarker selection for rapid and accurate traumatic brain injury (TBI) rule-out/rule-in will be discussed. Interpretation of the first FDA-cleared TBI test, coined the Brain Trauma Indicator, will be presented. Biomarker applications for aiding in clinical evaluation of symptomatic patients and appropriate utilization along with head CT will be discussed.

EXPECTED OUTCOMES: After attending this session, participants will be able to:

1. Identify strategies for identifying, quantifying and validating potential TBI biomarkers.
2. Discuss the algorithm for interpretation of the Brain Trauma Index.
3. List ways that TBI biomarkers can be used to benefit patients and decrease healthcare costs.

SPEAKERS

Discovery and Characterization of Biomarkers for the Rapid Identification of Traumatic Brain Injury
*Frank Peacock, MD, FACEP
Baylor College of Medicine, Houston, TX

Measurement and Interpretation of the Brain Trauma Index
*Robert Christenson, PhD, DABCC, FAACC
University of Maryland School of Medicine, Baltimore, MD

How Biomarkers of Traumatic Brain Injury Will Contribute to Clinical Management of TBI
#Robert Welch, PhD
Wayne State University School of Medicine, Detroit, MI

AACC BOOTH, MEMBER LOUNGE & STORE

AACC BOOTH

Stop by and visit booth #2231 to learn how AACC is at the forefront of new approaches in laboratory medicine, as well as addressing the complexity of an evolving healthcare landscape and promoting new thinking and new skills.

AACC MEMBER LOUNGE

AACC members are welcome to visit the Member Lounge located at the AACC booth #2231 on the Expo show floor. This members-only benefit provides a place to recharge between sessions, mingle with colleagues, and enjoy light refreshments.

AACC Booth/Member Lounge Hours
Tuesday–Wednesday 9:30am–5:00pm
Thursday 9:30am–1:00pm

Member Lounge Activities
Tuesday, July 31
SYCL Meet & Greet 1:00pm–2:00pm
Artery Happy Hour 3:00pm–5:00pm
(RSVP required — see the Artery for details)

Wednesday, August 1
SYCL Meet & Greet 1:00pm–2:00pm
International Travel Grant Sweet Treat Break 2:00pm–4:00pm
(non-members welcome)

AACC STORE

Plan to visit the AACC store to browse some of AACC's bestsellers and AACC merchandise for purchase, including t-shirts, wearables and gifts. Select book titles will be discounted by 33% and are cash and carry (no shipment).

AACC Store Hours
Sunday–Wednesday 9:00am–5:00pm
Thursday 9:00am–1:00pm

BOOK SIGNINGS
Two book signings will take place in the AACC Store this year. Don't miss your chance to meet with the author and get your copy signed.

Monday, July 30, 10:30am–11:30am
John Carreyrou
Bad Blood: Secrets and Lies in a Silicon Valley Startup

Tuesday, July 31, 9:00am–10:00am
Alan Wu, PhD
Dr. Wu will be signing all his books. Some titles available in Chinese and Italian.

AACC
ACCESS PROGRAM

HELP THE NEXT GENERATION OF LABORATORY MEDICINE SCIENTISTS

AACC's International Travel Grant Program is a way for you to give back to the clinical chemistry profession. Through your generous donations, emerging laboratory scientists from outside the U.S. and Canada are supported and encouraged to contribute to excellence in the profession. These grants bring laboratorians from all over the world to the AACC Annual Scientific Meeting, allowing them to network with colleagues, attend cutting-edge scientific sessions and tour the AACC Clinical Lab Expo.

"Being an academician as well as a clinical laboratory scientist, I have to guide graduate students in their thesis. Hence, the knowledge and skill I gain during the AACC Annual Scientific Meeting can easily and fruitfully be transferred to the students during their research work so that they will have an opportunity to develop new techniques in the diagnosis and treatment of diseases."
— Dr. Dipendra Raj Pandeya, Saudi Arabia

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- Go to www.aacc.org/donate.
- Email us at itg@aacc.org.

Thank you to all our donors who made these grants possible this year. A list of recent donors can be found at www.aacc.org/access/donors.

Meet this year's International Travel Grantees representing 15 countries and four global regions. Join us for cookies, coffee, and a chance to hear about their experiences, learn from each other and help us spread the word about the **access** Program. Wednesday, August 1, from 2:00pm–4:00pm at the AACC booth #2231.

SPEAKER INDEX

LF = Laboratory Feud: AACC Academy vs. CLS Council

LF = Laboratory Feud: AACC Academy vs. CLS Council

CONTINUING EDUCATION CREDIT

ACCREDITATION

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. AACC designates the following sessions for AMA PRA Category 1 Credit™ (refer to individual session descriptions to see number of designated credits):

- Plenary Sessions
- Scientific Sessions
- Brown Bag Sessions
- Meet the Expert Sessions

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 types 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.

Credit amounts are subject to change. For the most up-to-date information on credits available by session, check the mobile app, or visit www.aacc.org/2018am and select "Conference Program."

Attendees should only claim credit commensurate with the extent of their participation in activities.

CE/CME CREDIT AND CERTIFICATE OF ATTENDANCE INFORMATION

1. To claim your credits and/or to obtain your Certificate of Attendance, click the CE/CME icon on the AACC mobile app, or go to www.aacc.org/AMcredits18.
2. Log in using your AACC Customer Number (or badge number) and your last name.
3. For CE and CME credits, you will be required to evaluate each session attended; then print (or save) your Verification of Participation (credit) certificate.
4. Sessions that you attend where your name badge is scanned will automatically appear in your session list. You may add more sessions to your list and you may delete sessions.
5. Credits may be claimed at any time, i.e., at the end of each session, each day, or after the meeting ends.
6. Credits may be claimed using a computer, laptop, tablet, smartphone or other electronic device. Computers will be available on site at the AACC booth #2231.
7. Credits for the 2018 AACC Annual Scientific Meeting must be claimed by June 1, 2019, with the exception of credits claimed by Florida-licensed laboratory professionals (see information below).

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 Scientific Meeting and provide your Florida license number when you go online 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 Scientific Meeting* to be eligible to earn continuing education credit (ACCENT® or AMA PRA Category 1 Credit™) for the following scientific sessions of the AACC Annual Scientific Meeting: Plenary, Scientific Sessions, Brown Bag, Meet the Expert and Poster sessions. Individuals registered as Guest/Spouse or Expo Only are not eligible to earn credit for these sessions.

*ASCLS Registrants and AACC Exhibitors who want to claim credit for the scientific sessions will require special instructions for claiming credits. Visit Conference Registration on site or contact the AACC Education Team at education@aacc.org.

FREQUENTLY ASKED **QUESTIONS**

How do I get credit for the scientific sessions (Plenary, Scientific Sessions, Meet the Expert, Brown Bag and Poster sessions)?	When you are ready to claim your credits, click on the CE/CME icon on the mobile app, or go to www.aacc.org/AMcredits18 and follow the instructions to evaluate each session you attended and then print (or save) your Verification of Participation (credit) certificate.
What is the deadline for claiming credits or getting a Certificate of Attendance for the 70th AACC Annual Scientific Meeting?	The deadline for claiming credits and getting your Certificate of Attendance for this year's meeting is June 1, 2019, with the exception of Florida laboratory professionals (see further information below).
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, click on the CE/CME icon on the mobile app, or go to www.aacc.org/AMcredits18 and follow the same steps as you would for claiming credits for other scientific sessions.
What's the difference between ACCENT® credit and AMA PRA Category 1 Credit™?	ACCENT® credit is for clinical laboratory professionals, and AMA PRA Category 1 Credit™ is for physicians only.
Can I obtain my continuing education credits or Certificate of Attendance on site at the Annual Scientific Meeting?	Yes, there will be a computer at the AACC booth #2231. You may use your own computer, laptop, tablet, smartphone or other electronic device.
How do I get my Certificate of Attendance for the 70th AACC Annual Scientific Meeting?	Click on the CE/CME icon on the mobile app, or go to www.aacc.org/AMcredits18 and follow the instructions to obtain your Certificate of Attendance. You will need your AACC Customer Number (or badge number) located on your badge.
Who can answer additional questions about continuing education credit?	Contact the AACC Education Team at education@aacc.org.

DEFINE YOUR PROCESS

From declining reimbursement to a shortage of medical professionals, the demands placed on my laboratory have never been more complex. Aligning our people, processes and technology has **empowered us to tackle today's challenges** head on and take control of our tomorrow. We're ready to:

- Elevate efficiency, effectiveness and patient care
- Unify multiple systems to achieve network-wide efficiency
- Create consistent experiences for patients, caregivers and communities
- Foster a culture of collaboration and positive change

DEFINE YOUR TOMORROW

with the power of partnership

See how real laboratories are defining their processes at **booth 3612**.

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