The 135th Meeting of the Association of Clinical Scientists will be held in Salt Lake City, Utah on May 13 to 16, 2015. Charles D. Hawker, PhD and the members of the Program Committee cordially invite you to attend this outstanding conference to be hosted by the Department of Pathology of the University of Utah School of Medicine and ARUP Laboratories. The host venue is the Little America Hotel (see next page). The Thursday and Saturday sessions will be held at the hotel, whereas the Friday morning lectures and tour will be at ARUP Laboratories. Tour participants will be able to see ARUP’s world class automation systems as well as several leading edge technologies in specialized laboratories.

THURSDAY HIGHLIGHTS

The program theme will be Clinical Applications of Next Generation Technologies. The entire first day will be devoted to next generation sequencing and similar new technologies. The Claude P. Brown Memorial Lecture will be presented by Mary P. Bronner, MD, Director of the Anatomic Pathology and Oncology Divisions of the Department of Pathology and the Carl J. Kjeldsberg Professor of Pathology at the University of Utah. Her presentation is entitled “Circulating Tumor DNA: Disruptive Technology in Cancer.”

FRIDAY HIGHLIGHTS

The Friday morning highlights are described to the left. On Friday afternoon, attendees will have an optional bus tour of downtown Salt Lake City with box lunches, culminating in a tour of the Natural History Museum of Utah (nhmu.utah.edu), an architectural marvel and a case study in “green” design created by community generosity and housed at the Rio Tinto Center. This world class museum opened in the fall of 2011 to rave reviews. The five levels are arranged in a manner that allows one to start at the top and gradually descend; exploring all that is of particular interest on each level, and ending with a walk over and under massive dinosaur skeletons.

CME/CMLE Accreditation Statements

Credits 19.75 CME/CMLE (CE) Credits

CME Accreditation Statement
This activity has been planned and implemented in accordance with the Essential Areas and policies of the Accreditation Council for Continuing Medical Education (ACCME) through the joint sponsorship of the American Society for Clinical Pathology (ASCP) and the Association of Clinical Scientists (ACS). The ASCP is accredited by the ACCME to provide continuing medical education for physicians.

CME Credit Designation Statement
The ASCP designates this live activity for a maximum of 19.75 AMA PRA Category 1 Credit(s)™. Physicians should only claim credit commensurate with the extent of their participation in the activity.

CMLE (CE) Credit Designation Statement
The ASCP designates this live activity for a maximum of 19.75 CMLE (CE) Credits. This activity meets ASCP CMP and state licensure requirements for laboratory personnel, who should only claim credit commensurate with the extent of their participation in the activity.
Registration Now Open for the Annual Meeting

RECEPTION AND BANQUET
The Association’s annual reception and banquet will be held on Friday evening in the elegant Savoy Salon in the Grand America Hotel across the street from the Little America. In addition to the presentation of the Association’s annual awards, the banquet will include a lecture by Will Bagley, a noted Western historian, author of more than 20 books, and a frequent speaker. His topic will be “Voices from the Dust: How Forensic Pathology and Archeology Help Historians Understand the Past.”

SATURDAY HIGHLIGHTS
Saturday morning will feature split tracks for Anatomic and Clinical Pathology. The clinical track will feature several presentations on mass spectrometry, in addition to submitted abstracts, whereas the anatomic track features presentations on breast pathology and gastrointestinal pathology along with submitted abstracts. The Saturday afternoon session includes submitted abstracts on a variety of current topics.

LUNCHEON SESSIONS
There will be outstanding luncheon seminars on Thursday and Saturday that registrants will definitely want to attend. On Thursday, Carl T. Wittwer, MD, PhD, the inventor of the Light Cycler and one of the world’s most prominent scientists in the PCR field, will speak on “The Evolution of Molecular Diagnostics: Past, Present, and Future.” On Saturday, Edward R. Ashwood, MD, President and CEO of ARUP Laboratories, will speak on “The Impact of the FDA’s Initiative to Regulate Lab-Developed Tests.”

HOTEL INFORMATION
The Headquarters Hotel is the Little America Hotel. This 3-star/4-diamond facility has been beautifully refurbished and is an ideal venue for our meeting. Located in the downtown area and a short ½ mile walk or TRAX ride to many restaurants and attractions, this wonderful hotel features Salt Lake’s largest indoor/outdoor swimming pool, a large fitness center with sauna and whirlpool, retail shops, a business center, the Lucky H Bar and Grill, the Coffee Shop, and the Lobby Lounge. Among the many services there is complimentary in-room Wi-Fi access. All rooms have coffee makers and most have refrigerators. The conference rate for standard rooms is $139, single or double, plus taxes, which currently total 12.72%. Online reservations can be made through a link on the Association’s website.

Little America Hotel
www.saltlake.littleamerica.com
500 South Main Street
Salt Lake City, UT 84101
Telephone 800-281-7899

PRICING INFORMATION
Registration for the 135th Annual Meeting is now open on the Association’s website at: clinicalscience.org/annualmeeting.html#Registration.

$535 Full Meeting Registration
Includes one ticket to the reception and banquet, but does not include luncheons

$275 Full Meeting Registration for Associate or Emeritus Fellows, Residents, Trainees, and Fellows
Includes one ticket to the reception and banquet, but does not include luncheons

$0 One-day Registration for Speakers
Does not include luncheons, reception and banquet

$40 Thursday Luncheon
Speaker: Carl Wittwer

$40 Saturday Luncheon
Speaker: Ed Ashwood

$50 Friday Afternoon Tour (optional)
Natural History Museum of Utah
Includes box lunch

$95 Additional Ticket to Annual Reception and Banquet on Friday evening

$0 Saturday Evening Musicale and Art Show
Includes wine and cheese reception
Greetings, and welcome to the ACS President’s column. I want to highlight some of the great things that are happening in the Society.

As you are well aware, our annual meeting is fast approaching. The Program Committee, chaired by Dr. Charles Hawker, has done an outstanding job of programming the wealth of molecular and genetic diagnostic knowledge at the University of Utah and ARUP Labs. A highlight will be the Thursday sessions on clinical applications of next generation technologies, including the Brown Memorial Lecture by Dr. Mary Bronner on circulating tumor DNA diagnostics, and a luncheon lecture by Dr. Carl Wittwer, pioneer inventor of novel PCR-based technologies, including Real-Time PCR and other innovations that have revolutionized the practice of our clinical laboratories. A tour of the ARUP Labs, rehearsal concert of the Mormon Tabernacle Choir, and visit to the Natural History Museum of Utah will make this a must attend event for everyone. I hope to see you at the opening reception.

The Annals are experiencing such a great success that they have been expanded to six issues per year in 2015. Congratulations to our Editor, Dr. Nina Tatevian. We look forward to hearing more about the expanded format at the annual meeting.

We are in the process of reorganizing and revitalizing our committees, with the goal of having fewer, more active committees. Two of the most important changes are the addition of the Young Fellows Section, and the expansion of the Membership & Mentoring Committee. Our goal is to ensure that all new members are paired with a current ACS mentor to provide a personal contact in the Society. If you would like to become a mentor, contact Peter Hu, Vice President and Chair of the M&M Committee (pchu@mdanderson.org). You will be receiving email notifications about committee assignments shortly, and expect further communications from your Chairs prior to the meeting. If you would like to serve on a committee, please let me know.

I hope everyone is enjoying the new format of the Trumpet. We are indebted to Charlie Hawker for all of his work on this newsletter. Since no one person could do all that he has done for us as Secretary, we have created a new position of Newsletter Editor. I am pleased to announce that Dr. Lori Millner of the University of Louisville has agreed to serve as our first Editor.

Finally, the Executive Committee has been busy working with ASCP to continue to streamline and improve our administrative functions. I sincerely appreciate everyone’s hard work, and your continued patience. Although many of the initial bugs have been fixed, should you encounter a problem, please pick up the phone and call. There is always someone available to assist with membership renewals and receipts, meeting registration and information, and general ACS questions.

It is an honor to serve all of you as president. If you have any comments, concerns, or ideas, feel free to contact me directly (kyle.kurek@ucalgary.ca).

Sincerely,

Kyle Kurek
Over the course of this year, the Executive Committee has had numerous discussions about re-vamping our committee structure. Central to these discussions were two objectives: first, to make the committees more relevant and functional than just something that was listed on the website, published in the newsletter, and listed in the CVs of members, and second, to enable more of our younger and newer members to serve on a committee and be involved in Association affairs. To that end the proposed Bylaws amendment changes the name of the Membership Committee to the Membership and Mentoring Committee to reflect the belief of the Executive Committee that establishing some mentoring programs for younger and newer members should be an important function of the committee, beyond seeking ways to attract new members to join the Association.

The proposed Bylaws amendment also eliminates three committees which the Executive Committee felt were no longer necessary and weren’t functioning as intended when they were established early in the Association’s history. These committees are Public Relations, Ethics and Professional Relations, and Educational Accreditation. The Public Relations Committee’s purpose was to issue press releases about the Association’s programs and award winners. This has never worked very well, largely because the clinical scientists who might belong to that committee have little or no experience in writing and issuing press releases. In addition, our website and broadcast emails provide substantial information to our members and others who are interested. And, if we do need a press release for some occasion, we could use the resources of ASCP. The Ethics and Professional Relations Committee has similarly faded from a role in the Association. No one on the Executive Committee can recall any time where such a committee might have been needed. Should such an incident occur, it could be handled by the Executive Committee.

Finally, the Educational Accreditation Committee’s functions are now largely performed by the Program Committee. Each year’s Program Committee reviews the speaker and program evaluations of the previous meeting and the recommendations regarding future programs. The Program Committee uses this information to guide the next year’s program. The Program Committee always includes the Director of Scientific Sections and others from the Executive Committee to assure continuity in our programs and that the Association’s goals are being met. If necessary, the President can appoint a Coordinator to assist the Program Committee in completing the package that must be submitted for CME approval. This process has worked quite well the past two years without need for a formal Education Accreditation Committee to also hold meetings.

The proposed amendments to the Bylaws are shown in red below. These proposed changes will be voted upon by the members attending the Business Meeting on Saturday, May 16.

ARTICLE III: DUTIES OF OFFICERS

Section 7. Additional Committees: The President appoints the following committees: Awards, Constitution and Bylaws, Educational Accreditation, Program, Ethics and Professional Relations, Historical, Membership and Mentoring, Program, and Publications, and Public Relations Committees. The President may appoint additional committees, such as the Music and Arts Committee and the Athletics Committee.
Activities of the Auxiliary

The Auxiliary of the Association of Clinical Scientists promotes and provides a forum of support, camaraderie and entertainment for Association members’ family, friends and guests in attendance at the annual meetings. All are welcome to participate in these optional events of the Auxiliary.

WEDNESDAY, MAY 13
5:30 pm Auxiliary Reception
(Garden Room, Grand America Hotel)
Complimentary
6:30 pm Combined Reception
(Garden Room, Grand America Hotel)
Auxiliary members to be joined by spouses or significant others for drinks or dinner.
All charges are responsibilities of individuals.

THURSDAY, MAY 14
9:30 am Tour of Temple Square and the LDS Family History Library
Reservations requested: patti@pattihawker.com
Free transport by TRAX three stops
North on Green Line or Blue Line
3:30 pm High Tea in the Grand America Hotel
Reservations required: patti@pattihawker.com

FRIDAY, MAY 15
9:00 am Leadership Meeting of the Auxiliary
(Private Dining Room, Coffee Shop)
12:45 pm Afternoon Tour of the
Natural History Museum of Utah
Box lunch provided
Registration and ticket required

SATURDAY, MAY 16
No formal organized activity.
Suggestions include:
• Shopping at City Creek Centre in downtown Salt Lake City (use TRAX Green Line or Blue Line two stops North)
• Visiting Utah Museum of Fine Arts (Taxi)
• Mountain excursion to Park City Historic Main Street (Requires a car)

Auxiliary President:
Patti Hawker
patti@pattihawker.com
Final Program

WEDNESDAY, MAY 13

2:30 pm Meeting Registration Opens (Lobby)
3:00 pm-5:10 pm Executive Committee Meeting (Casper Room)
5:30 pm-6:30 pm Welcome Reception (Olympus Room)
6:30 pm Combined Reception (Garden Room, Grand America Hotel)

THURSDAY, MAY 14

Morning Activities
7:00 am Breakfast Meeting of the Membership and Mentoring Committee (Coffee Shop, Private Dining Room)

Clinical Applications of Next Generation Technologies Session (Ballroom A)
7:30 am Meeting Registration Opens (Ballroom A Foyer)
7:50 am President's Welcome Kyle C. Kurek
8:00 am Claude P. Brown Memorial Lecture Circulating Tumor DNA: Disruptive Technology in Cancer Mary P. Bronner
8:45 am A Primer on Next Generation Sequencing Kyle C. Kurek
9:15 am NGS in Genetics, Exome, and Gene Panels Pinar Bayrak-Toydemir
9:45 am Role of a Genetic Counselor Chris Miller
10:05 am Coffee Break
10:20 am Coding and Reimbursement for Genomic Testing Procedures Elaine Lyon
10:50 am NGS in Solid Tumors Wade Samowitz
11:20 am The Impact of Next Generation Sequencing on Hematology Todd Kelley

Luncheon Seminar (Arizona Room)
12:30 pm The Evolution of Molecular Diagnostics: Past, Present, and Future Carl Wittwer

Clinical Applications of Next Generation Technologies Session (Ballroom A)
1:30 pm Building a Clinical NGS Data Pipeline: Lessons From 2500 Samples Brendan O’Fallon
2:00 pm Next Generation Sequencing-based Gene Panels for Primary Immunodeficiencies Atilla Kumanovics
2:30 pm Next-generation Sequencing-based Pathogen Detection Directly From Patient Samples Robert Schlaberg
3:00 pm Coffee Break
3:15 pm CAP Accreditation Standards and Proficiency Testing for Next Generation Sequencing Karl Voelkerding
3:45 pm Negative Depletion for Enrichment of Heterogeneous Circulating Tumor Cells Lindsay N. Strotman
4:00 pm Next Generation Sequencing of Single Tumor Cell Isolated From Whole Blood Lori M. Milner
4:15 pm Gene Expression in Primary Human Bone Marrow Adipocytes Versus Subcutaneous Adipocytes Robert Hardy
4:30 pm Bioinformatics Analysis to Determine Prognostic Mutations of De Novo Acute Myeloid Leukemia Andy N.D. Nguyen

Evening Activities
7:00 pm Optional Free Activity Attend the weekly rehearsal of the Mormon Tabernacle Choir at the LDS Church’s Conference Center Information at the registration desk
8:00 pm Nominating Committee Meeting (Casper Room)

FRIDAY, MAY 15

Session and Tour at ARUP Laboratories
6:55 am Bus Loads (Outside South Lobby Doors)
7:10 am Bus Departs Hotel
7:30 am Check-In (ARUP Laboratories Main Lobby) Required for HIPAA compliance
7:40 am Continental Breakfast
8:00 am Welcome to ARUP Edward Ashwood
8:05 am The Structure of an Academic Reference Laboratory Peter Jensen
8:30 am Cost and Accuracy Advantage in Medication Compliance Testing Using a Definitive Screen Kelly Doyle
8:45 am Impact of Multiple CYP Variants on Tamoxifen Metabolite Concentrations Jennifer Powers
9:00 am Benchmarking as a Screening Tool to Identify Potential Targets for Utilization Management Heather Signorelli
9:15 am Umbilical Cord Tissue: An Ideal Candidate for Detection of In Utero Marijuana Exposure
Jennifer Byerley

9:30 am Validation of a Point of Care Chemistry Panel for Ebola Virus Patients
Justin Caron

9:45 am Undifferentiated Sarcoma with BCOR-CCNB3 Translocation: A Consideration in Reclassifying Certain Undifferentiated Tumors
John Hicks

10:00 am Overview and Explanation of the Tours of ARUP
Charles Hawker

10:05 am Coffee Break

10:20 am Tour of ARUP Automation and Selected Laboratories

11:55 am Reboard Bus for Return to Hotel

Natural History Museum of Utah Tour (Optional Event - requires ticket)
Box lunch provided at bus

Morning Activities
6:15 am Walk or Run for the Lilies
7:00 am Breakfast meeting of the Young Fellows Section (Coffee Shop, Private Dining Room)
7:30 am Registration (Hallway outside Arizona and Idaho Rooms)

Clinical Pathology Track (Arizona Room)
8:00 am Evolution of Mass Spectrometry in Clinical Laboratory Testing
Alan L. Rockwood

8:30 am Mass Spectrometry in the Clinical Microbiology Lab
Adam Barker

9:00 am Tandem Mass Spectrometry for Screening, Diagnosis, and Monitoring of Inherited Metabolic Disorders
Marzia Pasquali

9:30 am Utility of Mass Spectrometry in Endocrinology: Reports from the Front Line
Joely Straseski

10:00 am Coffee Break

10:15 am Clinical Applications of Ethanol Metabolite Analysis in a Pain Management Population
Matthew H. Slawson

10:30 am LC-MS/MS Method for Quantitative Analysis of Mycophenolic Acid and Two Serum Metabolites
Stephen D. Merrigan

10:45 am LC-MS/MS Method for Quantitation of Thiopurine Drug Metabolites in Whole Blood
Erik Kish-Trier

11:00 am Predictive Value of Positive Urine Drug Screening
Roger L. Bertholf

11:15 am Hemoglobin A1C: Evaluation of Four Methods
Frederick L. Kiechle

11:30 am Comparison of the Sensitivity of a Type-specific and a Combined Immunoassay Against HSV-1 and HSV-2
Dejan Nickolic

11:45 am Long-term Evaluation of the Performance of an Automation System in a Hospital Setting
Joshua Bornhorst

12:00 pm Adjourn for Luncheon

Clinical Science Trumpet www.clinicalscience.org

Final program continued on page 8
Final Program

### Afternoon Session (Arizona Room)

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
</tr>
</thead>
<tbody>
<tr>
<td>1:10 pm</td>
<td>PAM50 Gene Assay for Breast Cancer</td>
</tr>
<tr>
<td></td>
<td><em>Philip Bernard (This lecture has no CME)</em></td>
</tr>
<tr>
<td>1:40 pm</td>
<td>Inflammatory Pathways Sculpt Microbial Communities</td>
</tr>
<tr>
<td></td>
<td><em>Jason Kubinak</em></td>
</tr>
<tr>
<td>2:10 pm</td>
<td>Homocysteine, Nicotinamide, Thioretinaco, and Oxidative Phosphorylation in Diseases of Aging</td>
</tr>
<tr>
<td></td>
<td><em>Kilmer S. McCully</em></td>
</tr>
<tr>
<td>2:25 pm</td>
<td>Limiting Blood Transfusion in Sickle Cell Disease (SCD)</td>
</tr>
<tr>
<td></td>
<td><em>Jonathan S. Krauss</em></td>
</tr>
<tr>
<td>2:40 pm</td>
<td>Sickle Cell Trait (SCT): Benign or Serious Complications?</td>
</tr>
<tr>
<td></td>
<td><em>Chesinta Voma</em></td>
</tr>
<tr>
<td>2:55 pm</td>
<td>Management of Catastrophic Anti-Phospholipids Syndrome (CAPS) with Thrombocytopenia with Plasma Apheresis and Cyclophosphamide</td>
</tr>
<tr>
<td></td>
<td><em>Fouad N. Boctor</em></td>
</tr>
<tr>
<td>3:10 pm</td>
<td>Coffee Break</td>
</tr>
<tr>
<td>3:25 pm</td>
<td>Big Data: One Facility’s Solution and Experience</td>
</tr>
<tr>
<td></td>
<td><em>Philip Foulis</em></td>
</tr>
<tr>
<td>3:40 pm</td>
<td>Algorithmic Testing, Data Integration and Diagnostic Consulting: New Role of Clinical Pathologists</td>
</tr>
<tr>
<td></td>
<td><em>Semyon A. Risin</em></td>
</tr>
<tr>
<td>3:55 pm</td>
<td>Cervico-vaginal Epithelial Abnormality and HPV Prevalence in North Florida Population Subgroups</td>
</tr>
<tr>
<td></td>
<td><em>Anwer Siddiqi</em></td>
</tr>
<tr>
<td>4:10 pm</td>
<td>Investigating the Role of Epigenetic Modification on the Metastatic Potential of Breast Cancer Cells</td>
</tr>
<tr>
<td></td>
<td><em>Delu Yin</em></td>
</tr>
<tr>
<td>4:25 pm</td>
<td>Laboratory and Clinical Features of EIA Toxin-positive and EIA Toxin-negative Community-acquired Clostridium Difficile Infection</td>
</tr>
<tr>
<td></td>
<td><em>Hiren Patel</em></td>
</tr>
<tr>
<td>4:40 pm</td>
<td>Oral Feeding Lactobacillus Reuteri DSM17938 Reduces Inflammation in Lungs of Treg-deficient Scurly Mice</td>
</tr>
<tr>
<td></td>
<td><em>Nina Tatevian</em></td>
</tr>
<tr>
<td>4:55 pm</td>
<td>Session Adjourns</td>
</tr>
<tr>
<td>5:00 pm</td>
<td>Annual Business Meeting</td>
</tr>
<tr>
<td></td>
<td><em>(Arizona Room)</em></td>
</tr>
<tr>
<td></td>
<td><em>Kyle C. Kurek, presiding</em></td>
</tr>
</tbody>
</table>

### Evening Activities

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>7:30 pm</td>
<td>Musicale and Art Show</td>
</tr>
<tr>
<td></td>
<td><em>(Olympus Room)</em></td>
</tr>
<tr>
<td></td>
<td><em>Includes complimentary wine and cheese at intermission</em></td>
</tr>
</tbody>
</table>