



Clinical Science Trumpet

Newsletter of the Association of Clinical Scientists

Charles D. Hawker, Ph.D., M.B.A., FACS, Interim Editor

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FINAL PROGRAM SET FOR ACS ANNUAL MEETING



Tuesday–Thursday, April 2–4, 2024 • Jacksonville Beach, Florida

by Jonathan B. Hoyne, Ph.D., FACS, and Charles D. Hawker, Ph.D., M.B.A. FACS

The 2024 ACS Annual Meeting, celebrating the 75th year of the Association, will be held in Jacksonville, Florida April 2-4, 2024. As previously announced, this meeting—the Association’s 145th and sponsored by Mayo Clinic Florida—is being held in April instead of the Association’s normal May schedule to avoid Florida’s hot and humid weather. In addition, the meeting will have a Tuesday-Thursday format as local hotels have weddings booked every weekend from April through August.

The host hotel for the meeting will be the Hotel Casa Marina in Jacksonville Beach, FL and the meeting will be co-hosted by Margaritaville Hotel. The hotels are across the street from one another and

both have views and beach access to the Atlantic Ocean. Casa Marina Hotel was established in 1925 and is a member of Historic Hotels of America. As a historic hotel, its style, amenities and number of rooms are typical of a boutique hotel. ACS has also contracted with the Margaritaville Hotel, which is across the street. This hotel stands as a contrast for those who prefer their rooms and amenities more modern. Details of both hotels can be found on the ACS website at <http://clinicalscience.org> and click the “Meetings” tab [or copy/paste into your browser: <http://clinicalscience.org/meetings/html#Accommodations>].

The Program Committee, chaired by **Jonathan B. Hoyne, Ph.D.**,

has developed an exciting agenda for attendees to both engage with outstanding clinical science and enjoy the usual camaraderie and networking for which ACS meetings are highly noted. The overall meeting theme is *Tomorrow’s Diagnostics and Therapeutics Today*. The Tuesday morning session theme of “*Pathobiology of Neurological Disorders*” begins with the Abraham J. Gitlitz Honorary Lecture, presented by **Dennis W. Dickson, M.D.**, the Robert E. Jacoby Professor for Alzheimer’s Research at Mayo Clinic, Jacksonville. He is the winner of the 2011 Potamkin Prize for Research in Pick’s, Alzheimer’s and Related Diseases from the American Academy of Neurology. The program continues on Tuesday afternoon with two sessions:

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Jacksonville, Florida at sunset

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Jacksonville in 2024...

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The historic Casa Marina Hotel, Jacksonville Beach, Florida



The modern Margaritaville Hotel, Jacksonville Beach, Florida

the first with a theme of *“Transforming Transplant”* and the second on *“Tomorrow’s Therapy Today.”*

Other significant presentations will be a luncheon seminar by **Jorge M. Mallea, M.D.**, also of the Mayo Clinic Florida on “Machine perfusion: A platform for organ repair and regeneration.” The Annual Awards Banquet speaker, **Russell Brodie** of Florida Fish and Wildlife Marine Science Research Institute and Jacksonville University will present a lecture on “How Fish are Managed in Florida—an overview of the Florida Fish and Wildlife Conservation Commission.”

The Wednesday morning program will feature research conducted in the Department of Laboratory Medicine and Pathology at Mayo Clinic in Florida. Following an introduction to the Department of Laboratory Medicine and Pathology, there will be seven scientific lectures by department staff including lectures on the use of AI in digital pathology and microbiology among other topics.

On Wednesday afternoon, the Association’s traditional cultural tour takes us to St. Augustine, the oldest permanently occupied city of European origin in the continental United States. We will travel from Mayo Clinic by bus, where we will tour the Spanish fort, Castillo de San Marcos. The fort is the oldest surviving masonry fortress in the in the continental U.S., built by the Spanish between 1672 and 1695 to defend their claims in



Flag of Spain, 1685



Coquina stone at St. Augustine



Castillo de San Marcos, St. Augustine, Florida

Jacksonville in 2024...

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the new world. During its long history, the fort was never captured. Its walls are made of coquina, a sedimentary soft limestone comprised of seashells, which was impenetrable to enemy attack and also fire resistant. The tour will consist of a guided tour and lecture on the history of the fort around the outside of the fort followed by a self-guided exploration of the interior of the fort.

At the Annual Reception and Awards Banquet on Wednesday evening, there will be a special presentation of the past presidents in attendance. In addition to this year's travel grants, several Association awards will be presented, including the Young Clinical Scientist Award to **Anthony Maus, Ph.D.**, the FW Sunderman, Jr., Diploma of Honor to **Joshua A. Bornhorst, Ph.D.**, the Clinical Scientist of the Year Award to **Shuko Harada, M.D.**, and the Gold Headed Cane award to **Charles D. Hawker, Ph.D., M.B.A.** See elsewhere in this newsletter for biographical sketches and photos of these awardees.

The Program Committee for the Annual Meeting includes: **Jonathan B. Hoyne, Ph.D., DABCC, FACSc**, Mayo Clinic – Florida, Chair, **Christopher Marquez, M.D.**, Mayo Clinic – Florida, **Melissa E. Murray, Ph.D.**, Mayo Clinic – Florida, **Nina Tatevian, M.D., Ph.D., FACSc**, Brown University, **Christopher Crutchfield, Ph.D., FACSc**, Northwestern University, and **Charles D. Hawker, Ph.D., M.B.A, FACSc** (ex officio).

Accommodations

Accommodations for the 2024 ACS Annual Meeting will be hosted beachfront at both the Casa Marina and the Margaritaville Hotels in Jacksonville Beach, Florida. The Casa Marina Hotel in Jacksonville Beach, FL, which will be the headquarters hotel for the ACS meeting, was established in 1925 and is a member of Historic Hotels of America. This beachfront, boutique hotel features 16 parlor suites (the ACS contracted weekday rate is \$189 + taxes and fees) and 7 standard deluxe rooms (the ACS contracted weekday rate is \$139 + taxes and fees). The hotel's third

floor features a rooftop bar and restaurant. The rooms optionally have a view of the Atlantic Ocean; the hotel also offers nearby parking. The hotel's address is 691 1st Street, N, Jacksonville Beach, FL 32250 (telephone 904-270-0025).

Because of the limited number of sleeping rooms at the Casa Marina, ACS has also contracted with the Margaritaville Hotel, which is across the street. This hotel stands as a contrast for those who prefer their amenities modern. This 202-room hotel opened its doors in 2021 and has many rooms with oceanfront views and patios (The ACS contracted room rate is \$177.65 + taxes & fees +\$27/day parking). The hotel has a spectacular pool, a fitness center, and three restaurants including the LandShark Lookout and the LandShark Bar & Grill. The hotel's address is 715 1st Street, N, Jacksonville Beach, FL 32250 (telephone 904-222-0222).

Both hotels are just steps from the beach and a very short walk to the Jacksonville Pier for a refreshing walk or some relaxing fishing. Nearby attractions include family friendly Adventure Landing water park and entertainment complex. There is nightlife at the trendy Atlantic Beach and Jacksonville features a wonderful zoo, in addition to many cultural and natural attractions. Our group rate is available by calling each hotel and saying you are with the Association of Clinical Sciences or by clicking on the link below and booking reservations by March 2nd, 2024 at Margaritaville Hotel and by March 19th, 2024 for the Casa Marina. However, the Casa Marina is small and will fill up quickly, so don't wait that late.

Transportation

Jacksonville Beach is 24 miles from the Jacksonville International Airport (JAX). Travel time by car is about 35-45 mins depending on traffic. The hotels do not offer complimentary shuttles. Rental cars, Uber, Lyft, and taxis are available at the airport. UberX is about \$50 for a one-way trip. Uber Black runs a little over \$100 - \$125.



Jacksonville, Florida

Among the Speakers to Present in Jacksonville

The Abraham J. Gitlitz Honorary Speaker

DENNIS W. DICKSON, M.D.

Robert E. Jacoby Professor for Alzheimer's Research, Mayo Clinic Jacksonville
"Contributions of Mayo Clinic brain bank to discoveries in neurodegenerative disorders"

Luncheon Speaker

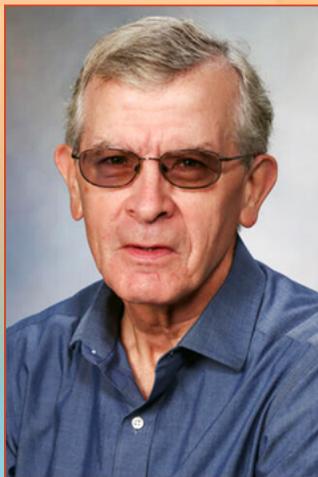
JORGE M. MALLEA, M.D.

Mayo Clinic Florida
"Machine Perfusion: a platform for organ repair and regeneration"

Annual Awards Banquet Speaker

RUSSELL BRODIE

Research Administrator I, Florida Fish and Wildlife Institute, Jacksonville University
"How Fish are Managed in Florida – Overview of the Florida Fish and Wildlife Conservation Commission"



Dr. Dennis Dickson



Dr. Jorge Mallea



Russell Brodie



Since 1949

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CLINICAL SCIENTISTS**
clinicalscience.org



This year's Meeting table runner will recognize the Association's 75th anniversary

The 2024 ACS Awardees

Clinical Scientist of the Year

SHUKO HARADA, M.D., FACSc

Shuko Harada, M.D., FACSc is currently Professor and Vice Chair for Diversity, Equity, and Inclusion (DEI), Department of Pathology at University of Alabama at Birmingham (UAB).

Dr. Harada received her Medical Degree and completed an Internal Medicine residency from University of Tokyo Faculty of Medicine, Japan. After three years working as an internist, subspecialized in diabetes and endocrinology, she crossed the Pacific Ocean to the US to join Dr. Leonard Jarett's laboratory at the University of Pennsylvania as a postdoctoral research fellow. She stayed there as Senior Research Investigator and Research Assistant Professor. Her research topic was insulin signaling and its gene regulation. She became interested in precision medicine/molecular diagnostics and then completed a residency and fellowship training in AP/CP (anatomic and clinical pathology), surgical pathology and molecular genetic pathology at Drexel University, University of Pennsylvania, and Johns Hopkins University, respectively.



Dr. Shuko Harada

She joined the University of Alabama at Birmingham (UAB) in 2011 as an Assistant Professor of Pathology, and was promoted to tenured Professor in nine years. She has been leading the Molecular Diagnostic Laboratory at UAB Hospital, expanding the oncology and infectious disease molecular test menu, which built a fundamental ground for a cutting-edge joint venture, the "Genomic Diagnostic Laboratory." She has been playing a major role in teaching at UAB as well as on national and international levels. She has given many invited lectures including IAP (International Academy of Pathology) in Thailand and Jordan, Japanese Society of Pathology, and CME in Pathology in India. She also serves as the Program Director for the UAB's Molecular Genetic Pathology Fellowship and mentors fellows and junior faculty members.

Dr. Harada is one of the most collaborative clinical faculty in the department. She has published over 85 peer-reviewed manuscripts in high impact-factor journals, 41 of them as first or corresponding author, with 34 of them published since 2020. She is on the editorial boards for the *Annals of Clinical & Laboratory Science*, the *American Journal of Clinical Pathology* (Associate Editor for Molecular Diagnostics), *Lab Medicine*, and *Modern Pathology*.

Dr. Harada has been participating in leadership roles at the national level of several professional societies, including Association of Pathology Chairs (APC), National Comprehensive Cancer Network (NCCN), American Society of Clinical Pathology (ASCP), Association of Clinical Scientists, and the Association for Molecular Pathology (AMP). Recently, as Vice Chair for DEI, she has taken a leadership role for the Faculty Association for Asian American Pacific Islander (AAPI) as well as the departmental DEI committee.



F.W. Sunderman, Jr. Diploma of Honor

JOSHUA A. BORNHORST, PH.D., DABCC, FACSc

Joshua A. Bornhorst, Ph.D., DABCC, FACSc served the Association of Clinical Scientists as Treasurer for two terms (2014 – 2018) and President in 2021. He was the Program Committee Chair for the 2016 Annual Meeting in Hot Springs and Little Rock, Arkansas and the 2023 Annual Meeting in Rochester, Minnesota.



Dr. Joshua Bornhorst

He is a Consultant and Assistant Professor in the Department of Laboratory Medicine and Pathology at the Mayo Clinic in Rochester where he serves as Co-Director of the Clinical Immunoassay and Metals Laboratories. His research interests include neurological and tumor markers, as well as the investigation of allergy component markers and assessment of the presence of trace and toxic metals.



Previously he was Associate Professor of Pathology in the School of Medicine at the University of Arkansas for Medical Science. He was technical and operations director of the AP and CP sections of the University of Arkansas Clinical Laboratory and was also the Director of the Chemistry, Toxicology, Immunology, Pediatric Clinical Laboratory, and Point-of-Care Testing sections of the University of Arkansas hospital system.

Dr. Bornhorst received a PhD in biochemistry from the University of Colorado at Boulder under the mentorship of Dr. Joe Falke and entered the clinical chemistry fellowship program at the University of Utah/ARUP Laboratories. At Arkansas, he worked to fully automate chemistry testing, reduce turnaround time, improve results reporting, and expand in-house testing menus, as well as educate pathology residents.

He has received several honors and awards throughout his career and is a past recipient of the AACC Scientific Achievement by a Young Investigator award (2009). He is a Diplomate of the American Board of Clinical Chemistry and a Fellow of the National Academy of Clinical Biochemistry. Past AACC responsibilities include serving on the Board of Editors of *Clinical Laboratory News*. He has been a Chair of the Management Sciences and Patient Safety Division of AACC and was a previous member of the AACC Publications Committee.

2024 ACS Awardees continued

Gold-Headed Cane Award

CHARLES D. HAWKER, PH.D., M.B.A.

Dr. Charles Hawker is honored to be the recipient of the Association of Clinical Scientists Gold Headed Cane Award in 2024, which will mark the 50th anniversary of when he first joined the Association (1974). In November of that year, he presented his first paper to ACS on *Practical Aspects of Radioimmunoassay of Parathyroid Hormone* at the Applied Seminar on the Laboratory Diagnosis of Skeletal, Muscular, and Nervous Diseases. Over the years he presented nearly two dozen papers on laboratory automation in addition to parathyroid hormone radioimmunoassay.

Charlie served ACS as Vice President in 2008, President in 2009, and as Secretary from 2011–2015. He was a member of the Program Committees for the ACS meetings in Salt Lake City in 1997 and 2002 and Chair of the Program Committee for the Salt Lake City meeting in 2015. The Association has previously honored Charlie with the Diploma of Honor in 2011 and the Clinical Scientist of the Year Award in 2015.

He retired as Scientific Director for Automation and Special Projects after 26 years at ARUP. He also retired as Professor (Adjunct) of Pathology in the University of Utah, School of Medicine. Prior to joining ARUP, over a twenty year period, he held various positions in research and development and management at Laboratory Procedures, Inc. (Upjohn) and SmithKline Beecham Clinical Labs. He has received numerous awards including AACC's highest award, the Outstanding Lifetime Achievement Award in Clinical Chemistry and Laboratory Medicine, and other awards from the National Academy of Clinical Biochemistry (NACB), the Clinical and Laboratory Standards Institute (CLSI), and the Association for Laboratory Automation.

Charlie was a co-author of chapters on clinical laboratory automation in the 4th through 7th Editions of the *Tietz Textbook of Clinical Chemistry and Molecular Diagnostics*, and the 6th through 8th Editions of the *Tietz Fundamentals of Clinical Chemistry*. He is a frequent lecturer on laboratory automation to national and international audiences. He holds three patents and has published 50 peer-reviewed papers, 18 book chapters or invited reviews, three invited editorials, and 49 abstracts.



Dr. Charles Hawker



Young Clinical Scientist Award

ANTHONY MAUS, PH.D.

Anthony (Tony) Maus received his Ph.D. from University of Wyoming under the mentorship of Franco Basile where he worked on methods for identification of antibiotic resistant bacteria using MALDI-ToF mass spectrometry. Immediately after graduate school, he joined the Department of Laboratory Medicine and Pathology at Mayo Clinic and developed clinical tests for the Clinical Mass Spectrometry and Clinical Forensic Toxicology Laboratories. During this time, he developed innovative solutions for identification of variants of insulin-like growth factor-1 and a novel quantitation technique. He was also a key member of a team that published numerous papers on development of a mass spectrometry-based test for SARS-CoV-2 based on detection of tryptic peptides. Additionally, he worked on countless improvements to historical methods that positively impacted the laboratory and patient care, such as lowering the lower limit of quantitation of thyroglobulin and improving the precision of measurements of vitamin B6.



Dr. Tony Maus

Currently, Tony holds the title of Associate Consultant I and in this role he supports labs throughout the Division of Clinical Biochemistry and Immunology at Mayo Clinic by serving as technical resource for laboratory and development staff. Implementation of emergent technologies is a passion of his, and he is currently working to bring ion mobility instrumentation to the clinical laboratories. Performing discovery and proof-of-concept studies on potentially clinically useful biomarkers is also significant component of his work, with extensive recent effort going into evaluation of several biomarkers of neurocognitive diseases. **Dr. Maus** was awarded the Young Clinical Scientist Award for his presentation at the 2023 Annual Meeting entitled "In-solution Ion Pairing Benefits Measurements, Instruments, and the Environment." The award will be presented at the 2024 Annual Meeting in Jacksonville, FL.



At ARUP **Dr. Hawker** installed several major automation and robotic systems that helped make ARUP the most automated clinical laboratory in North America. These systems collectively improved productivity and quality, especially enabling ARUP to become the first laboratory to achieve Six-Sigma quality levels for lost specimens. He later developed an automated camera system that used optical character recognition (OCR) to identify specimens mislabeled by patient name.

Final Program Schedule

145th Meeting of the Association of Clinical Scientists, Jacksonville, FL Meeting Theme: Tomorrow's Diagnostics and Therapeutics Today

Subject to change. All sessions are in the Casa Marina Hotel, Jacksonville Beach, Florida, unless otherwise noted.

Monday, April 01

- 2:30-5:00 p.m. Registration, Margaritaville Hotel main lobby
- 3:00-6:00 p.m. Executive Committee meeting, Seagrass Meeting room, Margaritaville Hotel

Tuesday, April 02

Session A Theme: *Pathobiology of Neurological Disorders*

- 7:00 a.m. Registration open
Continental Breakfast
- 8:15 a.m. **Welcome Remarks:**
Yusheng Zhu, Ph.D., ACS President, and Jonathan B. Hoyne, Ph.D., Program Chair
- 8:30-9:15 a.m. **Abraham J. Gitlitz Memorial Lecture**
Dennis Dickson, M.D., Mayo Clinic
Contributions of Mayo Clinic brain bank to discoveries in neurodegenerative disorders
- 9:15-10:00 a.m. **Tania Gendron, Ph.D., Mayo Clinic**
Biomarkers of Neurodegeneration
- 10:00 a.m. Refreshment Break
- 10:30-11:00 a.m. **Amitava Dasgupta, Ph.D., University of Kansas Medical School**
Biomarkers of Alzheimer's disease in CSF and plasma
- 11:00-11:30 a.m. **Melissa Murray, Ph.D., Mayo Clinic**
Pathobiology of Alzheimer's Disease
- 11:30 a.m. Session adjourns for Luncheon

Session B: *Luncheon Speaker*

- 12:00-12:45 p.m. **Jorge Mallea, M.D., Mayo Clinic**
Machine perfusion: A platform for organ repair and regeneration

Session C Theme: *Transforming Transplant*

- 1:00-1:30 p.m. **C. Burcin Tanner, M.D., Mayo Clinic**
Transforming Transplant
- 1:30-2:00 p.m. **Linnea M. Baudhuin, Ph.D., Mayo Clinic**
Leveraging genomics for transplant monitoring
- 2:00-2:30 p.m. **Rohan Goswami, M.D., Mayo Clinic**
Artificial Intelligence in Heart Transplant

- 2:30-3:00 p.m. **Fadi E. Salem, M.D., Mayo Clinic**
Transforming the Future of Pre-implantation Kidney Biopsy

- 3:00 p.m. Refreshment Break

Session D Theme: *Tomorrow's Therapy Today*

- 3:30-4:00 p.m. **Chris J. Beltran, Ph.D., Mayo Clinic**
Carbon Ion Therapy
- 4:00-4:30 p.m. **Shane A. Shapiro, M.D., Mayo Clinic**
Use of Bone Marrow Aspirate Concentrate in Orthopedic Surgeries
- 4:30-5:00 p.m. **John Copland, Ph.D., Mayo Clinic**
Fatty Acid Inhibition in Cancer Models and Companion Diagnostics

- 5:00 p.m. Session adjourns

Evening

- 6:00 p.m. **Welcome Reception**
- 7:30 p.m. **Young Fellows Event**
(open to all participants, age ≤ 45, and accompanying persons)
Hosted by Jessica Claus, M.D., Chair Young Fellows Section and Yusheng Zhu, Ph.D., ACS President



Jacksonville, Florida at night

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Wednesday, April 03

Session E Theme: *Research in the Department of Laboratory Medicine & Pathology*

- 8:00 a.m. Welcome and Introduction
- 8:15-8:35 a.m. **Ravinder Singh, Ph.D., Mayo Clinic**
Intraoperative Parathyroid Hormone, Cortisol and ACTH Monitoring for Various Endocrine Surgeries
- 8:35-8:55 a.m. **Jane J. Hata, Ph.D., Mayo Clinic**
Artificial Intelligence in Gram Positive Identification
- 8:55-9:15 a.m. **Bryan Dangott, M.D., Mayo Clinic**
Bone Marrow Cellularity Estimation Using Low Code / No Code AI Tools
- 9:15-9:35 a.m. **Jonathan B. Hoyne, Ph.D., Mayo Clinic**
Nimodipine Quantitation by LC-MS/MS: Application to Treatment after Subarachnoid Hemorrhage
- 9:35-9:55 a.m. **Zeynettin Akkus, Ph.D., Mayo Clinic**
AI-Powered Digital Pathology Workflow
- 9:55-10:15 a.m. **Nilufer Ertekin-Taner, M.D., Ph.D., Mayo Clinic**
Genetics of Alzheimer's Disease
- 10:15-10:35 a.m. **Sikander Ailawadhi, M.D., Mayo Clinic**
Chimeric Antigen Receptor T-Cell Therapy
- 10:35 a.m. Session adjourns—load bus
- 10:55 a.m. **Bus Departs for Laboratory Tours:**
- Lung Bioengineering
 - Hematology, Coagulation, Chemistry Labs
 - Microbiology Lab
 - HLA Lab, expansion space
- 11:20-1:30 p.m. lab tours
- 1:40 p.m. **Load bus: Cultural Tour [ticket required]**

Afternoon Cultural Tour: *Castillo de San Marcus*

- 2:35 p.m. Castillo de San Marcus in St. Augustine arrival [ticket required]
- 2:45-3:45 p.m. Exterior tour of fort (guided)
- 3:45-4:45 p.m. Interior tour of fort (self-guided)
- 5:00 p.m. Load bus for return to hotels
- 5:45 p.m. Bus arrives to hotels

Evening: *Annual Awards Banquet*

- 6:45 p.m. Annual Awards Reception
- 7:30 p.m. Annual Awards Banquet & Presentations
- 9:00 p.m. Banquet Speaker:
Russell Brodie, Research Administrator I, Florida Fish & Wildlife Research Institute / Jacksonville University
How Fish are Managed in Florida—Overview of the Florida Fish and Wildlife Conservation Commission

Thursday, April 04

Session F Theme: *Molecular Genetics*

- 8:15-9:00 a.m. **Young Investigator of the Year: Anthony D. Maus, Ph.D., Mayo Clinic**
Thyroglobulin Iodination Mapping: a Step Towards the Monitoring Technique of the Future?
- 9:00-9:20 a.m. **Alexander C. Mackinnon, M.D., Ph.D., University of Alabama at Birmingham**
Controversies in Surgical Pathology: Challenges Correlating Molecular and Histological Findings
- 9:20-9:40 a.m. **Jessica Claus, M.D., Warren Alpert Medical School of Brown University**
Molecular Profiling of Ovarian High-grade Serous Carcinomas Using Protein-protein Interaction Networks
- 9:40-10:00 a.m. **Shuko Harada, M.D., University of Alabama at Birmingham**
Evaluation of Failure Rates of In-house and Send-out Solid Tumors NGS Testing
- 10:00 a.m. Refreshment Break

Session G Theme: *Clinical Chemistry*

- 10:30-10:50 a.m. **Joshua Bornhorst, Ph.D., Mayo Clinic**
The Relationship Between Specific and Component IgE Antibody Testing in the Evaluation of Allergy
- 10:50-11:10 a.m. **Emily Ryan, Ph.D., Atrium Health Navicent, Macon, GA; Mercer School of Medicine, Macon, GA**
Real-world Assessment of Mild Traumatic Brain Injury Markers
- 11:10-11:30 a.m. **Amy Theriault, D.O., University of Alabama at Birmingham**
Development of New Valproic Acid Estimating Equations for Patients with Hypoalbuminemia
- 11:30-11:50 a.m. **Magali Fontaine, M.D., Ph.D., University of Maryland School of Medicine**
Transfusion Related Immunomodulation
- 11:50 a.m. Session adjourns for Lunch and ACS Business Meeting (all participants invited, regardless of Association membership status)

Lunch: *ACS Annual Business Meeting*

- 12:00-1:20 p.m. ACS Annual Business Meeting (all participants invited, regardless of Association membership status)

Thursday, April 04 (continued)

Session H Theme: *Anatomic Pathology*

- 1:30-1:50 p.m. **Rita Hayes, M.D., Rhode Island Office of State Medical Examiners**
Fibrosis of the Intestines in Response to Foreign Objects
- 1:50-2:10 p.m. **M. John Hicks, M.D., D.D.S., M.S., Ph.D., Texas Children's Hospital, Baylor College of Medicine**
Dermatofibrosarcoma Protuberans (DFSP) Transformation from Giant Cell Fibroblastoma (GCF)
- 2:10-2:30 p.m. **Falone Amoa, M.D., M.S., University of Alabama at Birmingham**
Case Report: Unusual Manifestation of BAP1-tumor Predisposition Syndrome
- 2:30-2:50 p.m. **Kirk Bourgeois, M.D., Mayo Clinic-Jacksonville**
Abrupt Lymphocytosis in Multiple Myeloma Undergoing Transplants
- 2:50-3:10 p.m. **Miguel Carabaño, M.D., Brown University**
Cellular Senescence as a Mechanism of Treatment Resistance in Prostate Cancer
- 3:10-3:30 p.m. **Bushra Al-Tarawneh, M.D., Brown University**
An Undescribed Pathologic Finding and Immunohistochemical Profile in the First-Trimester Twin Placenta, excessive primitive erythroid cells
- 3:30 p.m. Refreshment Break

Session I Theme: *Clinical Science in Practice*

- 3:50-4:10 p.m. **Faisal Bukeirat, M.D., University of Mississippi Medical Center**
The Safety and Efficacy of Endoscopic Ultrasound-guided Portal Pressure Gradient Measurement: A Systematic Review and Meta-Analysis
- 4:10-4:30 p.m. **Mustafa Barbhuiya, Ph.D., U.Mass Chan Medical Center- Baystate Medical Center**
Heparin-Induced Thrombocytopenia (HIT) Testing, Method Selections and Dilemma of Confirmatory Testing
- 4:30-4:50 p.m. **Benjamin Andress, Ph.D., Mayo Clinic**
Clinical Utility of Pancreatic Cyst Fluid Glucose for Identification of Mucinous Cysts
- 4:50-5:10 p.m. **Hunter Miller, Ph.D., University of Louisville**
Implementation of Machine Learning and Artificial Intelligence Models in Laboratory Medicine
- 5:10 p.m. Session adjourns

Evening: *Musical and Art Show*

- 7:30 p.m. Musical and Art Show (with light hors d'oeuvres)

President's Corner

Dear Fellow ACS members,

Welcome to the Spring 2024 Newsletter of the Association of Clinical Scientists.

Many great things of ACS have happened. Here are some examples.

First, ACS is more and more active on social media. We have had several impactful posts on LinkedIn and Twitter (X). Thanks to **Dr. Erica Fatica**, Treasurer of ACS, who posted several articles on LinkedIn, while **Jessica Claus**, Chair of Young Fellows Section Oversight Committee, for managing several posts on X (formerly Twitter).

Second, the membership of the ACS is growing quickly. In the last couple of months, five outstanding clinical scientists joined our Association. Thanks to our current members for recruiting and sponsoring new blood of the Association.

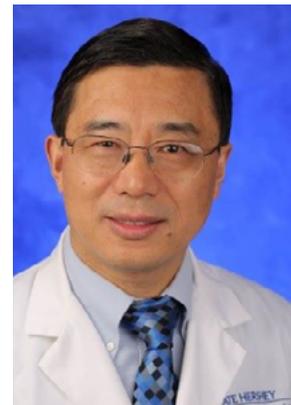
Third, we have a new face of our website now. The newly designed website is more user-friendly and has more functions. It will be a great platform for us to showcase the great work of the Association.

More exciting things are coming in 2024. I hope all of you will attend the exciting 145th ACS Meeting that will take place in Jacksonville, Florida, April 1-4, 2024. Many experts will talk about cutting-age topics such as "Neuropathology Disease and Treatment", "Transforming Transplant", and "Emerging Therapeutics". Our members will present their excellent research work as well.

At the upcoming 2024 Annual Meeting, we will celebrate the 75th anniversary of the founding of ACS. Many Past Presidents of ACS will be joining us for this celebration. At the meeting, we will present several awards including "Clinical Scientist of the Year", "F.W. Sunderman, Jr. Diploma of Honor", "Gold-Headed Cane Award", "Young Clinical Scientist Award", "Alexander Feldman Travel Grant", "Early Career Professional Travel Grant", and "Trainee Travel Grant" to the respective award winners.

I look forward to seeing all of you in Jacksonville, Florida.

Yusheng Zhu,
Ph.D., D(ABCC), FACSc, FADLM
President (2023-2024)



Dr. Yusheng Zhu



Association of Clinical Scientists

Registration for 145th Meeting, Jacksonville, Florida, April 02–04, 2024

ATTENDEE INFORMATION

Last Name	First Name	Initial	Degree(s)
Institution		Street Address	
City	State	Postal/Zip Code	Country
Telephone Number	Fax Number	Email Address	

Please record number of persons for all No Charge (NC) items

	Unit Price (\$ US)	Number of Persons	Amount Charged
Full Meeting Registration, Regular For all Fellows of the Association and non-members attending the full Meeting; includes luncheons, one banquet ticket and continuing education credits, if desired	\$500	_____	_____
Full Meeting Registration, Emeritus, Assoc. Fellows & Trainees and Invited Speakers Attending Full Meeting For all Emeritus or Associate Fellows of the Association and all trainees, residents, and Fellows attending the full Meeting; includes luncheons, one banquet ticket and CE credits, if desired	\$200	_____	_____
Meeting Registration, Complimentary – day of Lecture Speakers only attending the meeting for the day of their lecture – includes Luncheon, but excludes banquet	NC	_____	NC
Single Day Registration – for either Tuesday or Thursday Includes luncheon and continuing education credits, if desired	\$200	_____	_____
Tuesday, April 02			
Luncheon presentation with Dr. Mallea. Indicate attendance for headcount	NC	_____	NC
Welcome Reception – Open to all meeting registrants and accompanying persons. Indicate attendance for headcount.	NC	_____	NC
Wednesday, April 03			
Cultural/Historical Tour (Castillo de San Marcos in St. Augustine) – Includes bus and lunch	\$60	_____	_____
Extra tickets to Awards Banquet and Reception (subject to availability)	\$95	_____	NC
Thursday, April 04			
Luncheon, Annual Business Meeting (and presentation of travel grant awards) Reserved seating for all Young Scientists, age 45 and under; included with full or single day registration (please indicate attendance for headcount estimation)	NC	_____	NC
Musicale, with Wine and hors d'oeuvres Intermission Complimentary for all attendees (please indicate attendance for headcount estimation)	NC	_____	NC
Include Renewal of Dues (Fellows)	\$250	_____	_____
Renewal of Dues (Assoc. Fellows)	\$50	_____	_____
Total Payment Enclosed (in USD)			=====

continues on page 11

Association of Clinical Scientists

Registration for 145th Meeting, Jacksonville, Florida, April 02–04, 2024

PAYMENT OPTIONS

Cancellation with full refund will be accepted until **March 27, 2024**.

1. Register securely on-line at <http://www.clinicalscience.org/annualmeeting.html#Registration>.
2. Complete and mail this form (**print both pages 10-11 of form**) with a check, payable to Association of Clinical Scientists, or with credit card information, to Association of Clinical Scientists, 6431 Fannin Street, MSB2.292, Houston, TX 77030
3. To charge using American Express, Visa, or MasterCard, call the ACS office at (713) 500-5381, Mon–Fri, 8:00 a.m.–5:00 p.m. Central Time. You may also fax this form with your credit card information to our secure Fax at (713) 500-0732.

CREDIT CARD INFORMATION

Credit card type
(check only one)

Visa

MasterCard

American Express

Card number

Expiration (mo/yr)

Security Code (CVV) No.

Name on the card

Billing Address

City

State (Province)

Country

Postal (Zip) Code

Signature



People Behind the Scenes: Those Who Make ACS Function

Starting with the April, 2022 issue, we began featuring an individual who works and/or contributes to ACS in a role or capacity that keeps ACS functioning. These are people who work “behind the scenes.”

Below is an interview between **Charles D. Hawker, PhD, MBA, FACSc**, *Clinical Science Trumpet* Interim Editor, and **Jason Shepherd**, who serves as the Website Manager for the ACS website.

Charles Hawker: Please tell me a little bit about yourself. Where did you grow up? Where did you go to school? What did you study?

Jason Shepherd: I remember enjoying my childhood summer days in the warm and dry air of Tooele, Utah. I developed a great fascination early with computer science, BASIC programming and system fundamentals. During high school I began learning C, C++ and earned my first professional certification as a service technician.

My “gap year” between high school and university originally intended to be a year backpacking through mainland China where I ended up staying for several more years. During that time I learned Mandarin and taught English as a Second Language to a wide variety of students from kindergarten to university. I received special honors for three years of service at Guangxi Shifan University where I made a lot of friends and associates, many of whom I keep in touch with today.

After my return to the US I promptly completed an AAS degree in Computer Science and Information Systems from Salt Lake Community College with proficiency in mobile application development and Linux system administration. After that I studied and completed a BS degree in Software Development from Western Governors University with an emphasis and proficiency in MVC (Model View Controller) architecture and the Java language.

Hawker: Prior to starting work with ACS, where did you work (with titles and descriptions of duties), and where do you currently work (with title and description of duties)?

Shepherd: Prior to starting work with ACS I worked as a contractor for the Department of Labor as a web developer for OSHA, mainly JavaScript, CSS, and HTML development. From there, I moved into a web design and development position with ARUP laboratories where my main duties included JavaScript, PHP, and Drupal development with a strong emphasis in UX/UI design practices.

Currently, I work for the State of Utah as an IT Analyst III where my main duties include software development on the ServiceNow platform and AWS (Amazon Web Services) cloud architecture development.

Hawker: When did you start working for ACS?

Shepherd: I started web development for ACS at around the same time I started doing web development for ARUP Laboratories in 2016.



Jason Shepherd

Hawker: What do you like or enjoy most about working with ACS?

Shepherd: I have really enjoyed the process of migrating the clinicalscience.org domain from a domain that was previously dependent on a variety of university servers into an independently hosted domain. Web development work can be done independently with the entirety of hosting and domain configuration entirely managed by ACS. I also enjoy working with Dr. Hawker when updates and changes are needed. I find his directions are very clear and precise. It takes a lot of guess work out of what I do.

Hawker: What suggestions do you have for someone who is interested in a similar career path?

Shepherd: Computer Science and Information Systems are a collection of very fast changing fields and it is often that relevant technology becomes irrelevant fast. My advice is to understand the fundamentals that do not change, such as object-oriented programming fundamentals and system administration fundamentals.

continued on page 13

Behind the Scenes continued

continued from page 12

“Flavor-of-the-month” languages come and go, but the fundamentals really have not changed much over the last 30 years. At a minimum get a BS degree to cover the fundamentals. After that, stay up-to-date on certifications and for most certifications, re-certify every two years.

Hawker: What ideas do you have for further improving the ACS website?

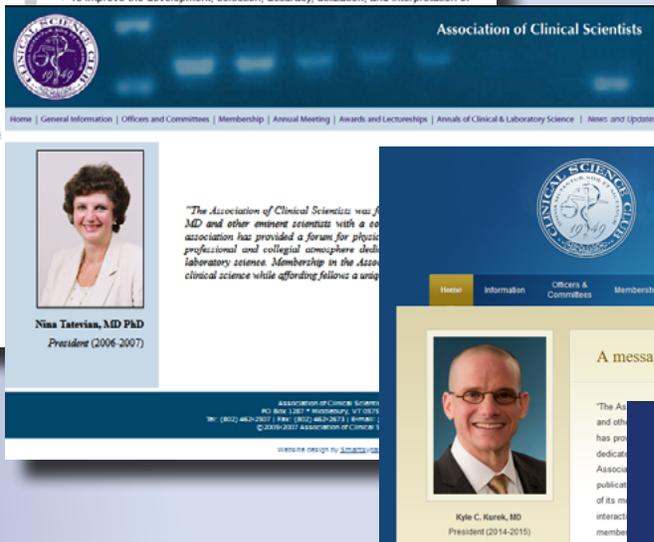
Shepherd: As with any website, there is room for improvement. For the ACS website, improvements related to Search Engine Optimization (SEO) can be considered. We have already made some progress by migrating into Drupal. Additional improvements may be on the hosting side where the domain registrar offers hosting. It may be advisable to review, consolidate, and utilize hosting through the registrar (Network Solutions).



From 1999 through 2005, the Association's website home page was simple and text-based, as seen February, 2003 frame [far left]

In 2006, a new format added more color and photographs [immediate left]

The website evolved to a familiar look, shown here in March, 2015 [below]



After Jason Shepherd began working for the Association in 2016 and a new logo was adopted in 2018, the ACS website was updated again and kept its look through 2023 [as shown above]

In 2024, Jason Shepherd helped launch a redesigned website, with more menus, a lot more content, and a fresh design [shown left]

All website images courtesy of WebArchive.org

The Young Fellows Section

Join the Young Fellows Section for a Career Inspiring Journey!

Our Young Fellows Section opens doors that will propel you forward in your professional life by providing networking opportunities and sharing knowledge and expertise with other professionals.

Being a young professional, the Association of Clinical Scientists not only allowed me to present my work through both poster and platform presentations, but also cultivated an intellectually stimulating and supportive environment by providing mentorship within the organization.

The Association also presents awards to acknowledge individuals and exceptional achievements. We invite young fellows to consider submitting case reports, review articles, or original research manuscripts for potential publication in the *Annals of Clinical and Laboratory Science*, the official journal affiliated with ACS. Detailed author instructions can be accessed: <https://www.clinicalscience.org>

If you are attending our upcoming annual meeting in Jacksonville, join us for our Young Fellow Section Dinner Event! It's a great opportunity to meet people from the Association and get involved with our work.

Young Fellow Section Dinner

Date: April 2nd, 2024

Time: 7:30 pm EST

Location: Oaxaca Club, 131 1st Ave N #102, Jacksonville Beach, FL 32250

Please don't hesitate to reach out to me via email if you have any questions. We look forward to hearing from you and having you on board!

Jessica Claus, M.D.

Chair, Young Fellows Section Oversight Committee
PGY-3 Resident, Anatomic and Pathology Residency
Warren Alpert Medical School of Brown University

E-Mail: jessica_claus1@brown.edu



Jacksonville, Florida



Dr. Jessica Claus

Travel Grants Announced

Myra L. Wilkerson, M.D., Chair, and the members of the Awards Committee have announced the 2024 Travel Grants that can be used to attend this year's Annual Meeting in Jacksonville, FL. Each grant is in the amount of \$2,000. The Travel Grants are based on the quality of abstracts that were submitted for presentation at the Annual Meeting. Eligibility for all travel grants is based on an age of 45 years or younger.

This year the Association established the **Alexander Z. Feldman, M.D.** travel grant which, in addition to the age requirement, also requires the awardee to be a member of ACS. Membership is not required for the other two grants given each year, as the intention of these grants is to incentivize young clinical scientists to attend ACS meetings, enjoy the camaraderie and networking for which our meetings are well known, and apply for membership. One of the other two travel grants is awarded to a young career professional who has completed their fellowship or residency and is in their first professional position. The second of these other two travel grants is awarded to a trainee, typically a postdoctoral fellow in clinical chemistry or a related clinical science or a pathology resident or fellow.

The winner of the first ever **Alexander Z. Feldman, M.D.** travel grant is **Jessica Claus, M.D.** [pictured at left with Young Fellows Section column], a pathology resident at the Warren Alpert Medical School of Brown University, for her abstract entitled *Molecular profiling of ovarian high-grade serous carcinomas using protein-protein interaction networks*.

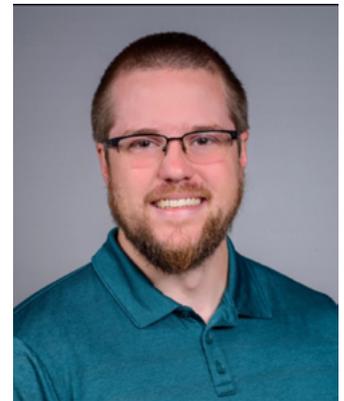
The winner of the travel grant for a young career professional is **Mustafa A. Barbhuiya, Ph.D.**, of the UMass Chan Medical Center – Baystate Medical Center, for the abstract entitled *Heparin-Induced Thrombocytopenia (HIT) testing, method selections and dilemma of confirmatory testing*.

The winner of the travel grant for a trainee is **Hunter A. Miller, Ph.D.**, a clinical chemistry fellow at the University of Louisville. His abstract is entitled *Implementation of machine learning and artificial intelligence models in laboratory medicine*.

Congratulations to all three awardees!



Dr. Mustafa Barbhuiya



Dr. Hunter Miller

Newsletter Trivia Question

Edited by **Stephen M. Roper, Ph.D., FACSc**

The first person to email the correct answer will have their name mentioned in the following newsletter and the satisfaction of knowing they won. Please respond to, or if you *have a trivia question you would like to submit*, please email to Stephen M. Roper at: smroper@wustl.edu.

PREVIOUS QUESTION

(submitted by **Dr. Stephen Roper**)

Biotin is a water-soluble vitamin that is an essential cofactor for carboxylases. Defects in the metabolic pathway of biotin can result in a variety of manifestations secondary to decreased activity of these enzymes. Name the 4 carboxylases that require biotin as a cofactor.

ANSWER

No one submitted an answer for the previous trivia question.

The answer is:

Pyruvate, acetyl-CoA, propionyl-CoA, and 3-methylcrotonyl-CoA carboxylases.

CURRENT QUESTION

(submitted by **Dr. Stephen Roper**)

In the Jendrassik-Grof method for bilirubin measurement, a colored product proportionate to the bilirubin concentration is formed using diazotized sulfanilic acid. In the 1980s, which researcher introduced the use of caffeine as an accelerator to enhance the reaction's sensitivity and speed with unconjugated bilirubin?

ANSWER

The answer will appear in the next *Clinical Science Trumpet*. The person submitting the first correct answer will have a chance to write the trivia question for the subsequent newsletter.

Submit your answer by email to **Stephen M. Roper, Ph.D., FACSc**, at: smroper@wustl.edu.



The Grapevine: Member News

Henry Oh, Ph.D., FACSc, FAARC, FRSB, has been selected by the Board of Directors of the American Medical Technologists (AMT) to receive the Pillar Award at the 2024 Annual National AMT Meeting, St. Louis, MO on July 9, 2024. The award recognizes an AMT member who has a track record of contributions to state societies, including state society offices held, state committees involved, lectures presented, articles published, and other scholarly works and community service. Moreover, **Dr. Oh** has recently accepted the position of Associate Dean of Health Professions in the School of Health Sciences and Wellness at Laramie College in Cheyenne, WY. He previously served as the Department Chair and Clinical Professor of Health Occupations at Idaho State University.

ACS HAS A NEW NEWSLETTER EDITOR!

Charles D. Hawker, Ph.D., M.B.A., the Association's Executive Director and interim Newsletter Editor, has announced that a new Editor for the Newsletter has been appointed. He is **Mustafa A. Barbhuiya, Ph.D.** [pictured on page 14], currently the Medical Director of Clinical Chemistry and Point of Care Testing at the Department of Pathology of the University of Massachusetts (UMass) Chan Medical Center – Baystate Regional Campus in Springfield, MA. Welcome, Mustafa!

Dr. Barbhuiya completed a Clinical Chemistry Fellowship (2018-2020) at the Department of Pathology and Laboratory Medicine, Penn State University College of Medicine, Hershey. He earned a Doctorate in Biochemistry (2013) from Jiwaji University, Gwalior, India and subsequently completed postdoctoral studies (2013-2018) from Johns Hopkins University School of Medicine, Baltimore, MD.

AWARDS, NEWS, PROMOTIONS...?

Please send your news of job changes, transfers, promotions, awards, etc. to:

Mustafa Barbhuiya, Ph.D., Newsletter Editor, at: mustafa.barbhuiya@baystatehealth.org.

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Clinical Chemistry Fellow
University of Louisville
Louisville, KY

FELLOWS

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Linnea Baudhuin, Ph.D.
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Imad Tarhoni, M.D., M.S., Ph.D.
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Clinical Science Trumpet

Newsletter of the Association of Clinical Scientists

The Clinical Science Trumpet Newsletter is the official newsletter of the Association of Clinical Scientists and is published three times per year. Back issues may be viewed at: <http://clinicalscience.org/news.html>.

Announcements, commentaries, and news/photos of members are welcome. Please send to the Editor at: mustafa.barbhuiya@baystatehealth.org.

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