



# Clinical Science Trumpet

Newsletter of the Association of Clinical Scientists

Charles D. Hawker, PhD, MBA, FACSc, FAACC, Editor

Vol. 41, No. 1—February 2021

## Association Schedules Its First Virtual Annual Meeting

Thursday and Friday,  
May 13 and 14, 2021  
1:00 p.m. CDT

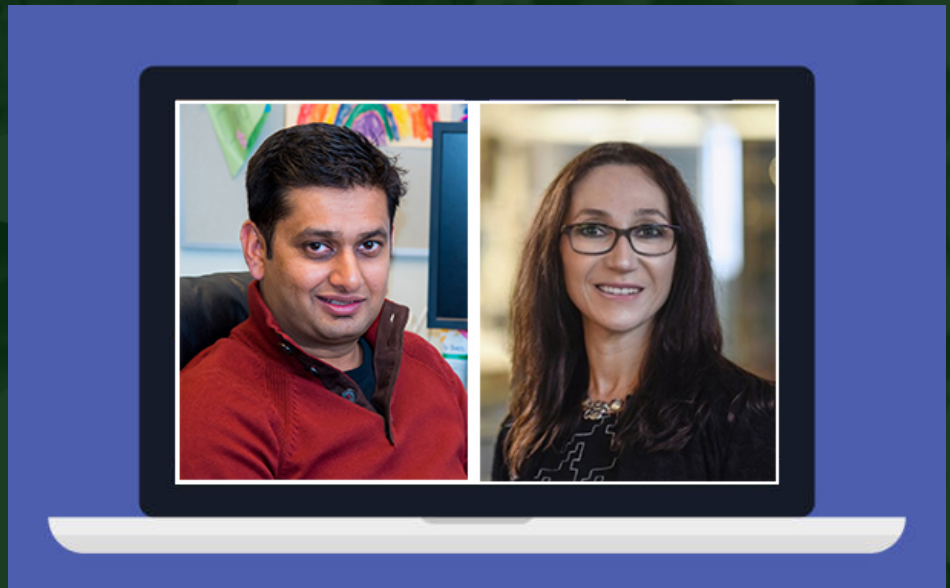
Following on the success of its first ever virtual symposium on November 13, the Association of Clinical Scientists has scheduled its first ever virtual Annual Meeting for Thursday, May 13, and Friday, May 14, 2021, with each day's program beginning at 1:00 p.m. CDT. The Program Committee, chaired by **Jonathan B. Hoyne, Ph.D.**, has developed an excellent program for the two half days.

The Thursday program will consist of the Claude P. Brown Memorial Lecture by **Faisal Khan, Ph.D.**, University of Calgary, on *Towards Improved Outcomes of Hematological Malignancies: Three Approaches of Precision Medicine*, two shorter invited lectures from the cancelled Banff meeting, followed by short papers solicited from young scientists under the auspices of the Association's Young Fellows Section.

Following the short papers from young scientists, the Association will hold its annual Business Meeting, which will include the election of officers and new members of the Executive Committee. This meeting is open to all, members and non-members alike.

The Friday program will consist of the Abraham J. Gitlitz Memorial Lecture by **Maria Elena Bottazzi, Ph.D.**, Baylor College of Medicine, followed by two other lectures on the SARS-CoV-2 virus and laboratory medicine. Dr. Bottazzi will present *Update on COVID19 Vaccines, Variants and Immunologic Response*.

Information regarding the program, how to register for the virtual meeting, the plans for CE or CME accreditation, and



Above: Dr. Faisal Khan (left) and Dr. Maria Elena Bottazzi (right) will present at the 2021 Virtual Annual Meeting

the procedure for submission of abstracts by young scientists for the Thursday program can be found on the ACS website at:

<http://www.clinicalscience.org/meetings.html>.

### ANNUAL AWARDS

The Association's Annual Awards, which had previously been selected by the Awards Committee, but were not presented in Banff due to the cancellation of the 2020 meeting, will be presented virtually over the two days.

On Thursday, the Young Clinical Scientist Award will be presented to **Amanda Haynes, D.O.**, Division Director for Clinical Pathology Professional Services and Operations at Geisinger Medical Center.

On Friday, the Clinical Scientist of the Year Award will be presented to **Keri J. Donaldson, M.D., MSCE**,

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COVID-19 source image credit:  
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# Association to Present Awards During 2021 Virtual Annual Meeting

When the 2020 Annual Meeting in Banff was canceled due to the pandemic, the already announced annual awards could not be presented. These awards will be presented during the upcoming Virtual Annual Meeting, May 13-14, 2021. The following came from the announcement published in the September 2019 *Clinical Science Trumpet* is included here to showcase these awards.

## Clinical Scientist of the Year

**KERI J. DONALDSON, M.D., PH.D., MSCE**

**Dr. Keri Donaldson** is an Assistant Professor of Biochemistry and Molecular Biology; Assistant Professor of Public Health Sciences (Joint Appointment) as well as the Director of the CLIA Laboratory and The Institute of Personalized Medicine and Clinical Processing Specimen Laboratory at the Penn State Hershey College of Medicine, Penn State Health, Hershey, PA. He is the Founder and CEO of Prescient Medicine located in Hummelstown, PA, as well as CEO of Prescient Metabionics, Chicago, IL. Dr. Donaldson is a graduate of Temple University School of Medicine, and the University of Pennsylvania, School of Medicine, Philadelphia, PA. He also holds an MSCE in Pharmacoepidemiology from the Perelman School of Medicine at the University of Pennsylvania, Philadelphia, PA.



*Dr. Keri Donaldson*

His major research interest is the application of predictability modeling on outcomes relative to patient care. Over the previous 10 years, he has been involved in or lead multiple successful efforts for novel test and intervention design at academic institutions including University of Pennsylvania and Penn State University, as well as private industry at Prescient Medicine and Pacific Edge Diagnostics. During this time, he developed the first of its kind polygenetic combinatorial and environmental predictability model for

drug response, advance analytical rare event detection algorithms to predict susceptible populations, and multiple factorial disease detection models to identify disease in patients earlier than previously possible. Portions of this work are now incorporated into standard disease screening practice (BRAF mutational testing and urinary tract infection detection), have driven new in vitro diagnostics (urine and coagulation testing), and are used to identify and guide practice at the payer level. The broadened impact of his research and development of new tests will assist in the precision delivery of care on all health systems

Dr. Donaldson continues to serve as a lab inspector for the College of American Pathologists to ensure proper laboratory standards. He is a diplomate of the National Board of Medical Examiners and the American Board of Pathology. He serves on many committees for the College of American Pathologists and has chaired several of them over the years. He is a member of the Association of Clinical Scientists, acting as Secretary for three years and serving currently as President-Elect. He is a member of the American Association for Clinical Chemistry and has presented sessions on laboratory requirements. He is a much sought-after invited speaker and has presented over 40 talks and abstracts, nationally and internationally. He has publications in peer-reviewed journals as well as book chapters. Dr. Donaldson has received many awards including the National Academy of Clinical Biochemistry Distinguished Abstract Award and the Association of Clinical Scientists Travel Grant Award for the Early Career Professionals.

## Virtual Meeting...

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Assistant Professor of Biochemistry and Molecular Biology and Assistant Professor of Public Health Sciences (Joint Appointment) as well as the Director of the CLIA Laboratory and Institute of Personalized Medicine and Clinical Processing Specimen Laboratory at the Penn State Hershey College of Medicine.

Also, on Friday, the F.W. Sunderman, Jr. Diploma of Honor will be presented to **Robert W. Hardy, Ph.D.**, Professor in the Department of Pathology, Division of Laboratory Medicine, at the University of Alabama at Birmingham (UAB).

The other members of the Program Committee for the 2021 Annual Meeting include **Joshua A. Bornhorst, Ph.D.**, **Chris Crutchfield, Ph.D.**, **Keri J. Donaldson, M.D., MSCE**, **Alexander Feldman, M.D.**, **Shuko Harada, M.D.**, **Robert Hardy, Ph.D.**, **Charles D. Hawker, Ph.D., M.B.A.**, **M. John Hicks, M.D., Ph.D., D.D.S.**, **Stephen M. Roper, Ph.D.**, **Consolato M. Sergi, M.D., Ph.D.**, and **Roland Valdes, Jr., Ph.D.**



## Awards...

### F.W. Sunderman, Jr. Diploma of Honor

**ROBERT W. HARDY, Ph.D.**

**Dr. Robert Hardy** is Professor in the Department of Pathology, Division of Laboratory Medicine at the University of Alabama at Birmingham (UAB). He is Section Head, Clinical Chemistry, Director, Core Chemistry Laboratory, RNICU Laboratory, and Specimen Receiving. He did his undergraduate studies at the University of Waterloo (Canada) in Biology and Chemistry (BSc, double major) and his graduate studies (MSc and Ph.D.) in Clinical Biochemistry at the University of Toronto. He did postdoctoral training at Washington University in Clinical Chemistry and Diabetes. He moved to UAB in 1990 and was board certified in Clinical Chemistry (ABCC) and did basic research in Diabetes and Cancer.



*Dr. Robert Hardy*

Dr. Hardy's research was continuously funded for 20 years and he has published 58 manuscripts. He has served on the ABCC (Secretary, Treasurer), NIH and American Institute for Cancer Research grant panels and been Senior Associate Editor for Laboratory Investigation for 11 years.

He has served on the ACS Executive and Membership and Mentoring committees, hosted the 137th Annual Meeting of the ACS in Birmingham and is a Past President of the ACS. Dr. Hardy is pleased to be honored as the 2019 recipient of the F.W. Sunderman, Jr. Diploma of Honor. Dr. Hardy enjoys the warm collegiality of the ACS and looks forward to the annual meetings because, in his words: "In addition to great science, they allow you to learn interesting features of the host city, see the facilities in other institutions, enjoy wonderful music, and socialize with your colleagues." Dr. Hardy is looking forward to continue serving the ACS as Past President and member of the Executive Committee.

### Young Clinical Scientist Award

**AMANDA HAYNES, D.O.**

**Dr. Amanda Haynes** is the Division Director for Clinical Pathology Professional Services and Operations at Geisinger Medical Center in central Pennsylvania. Previously she was the Transfusion Medicine Director for Geisinger, including Blood Bank, Apheresis, Stem Cell Collections and Stem Cell Processing.

Dr. Haynes is boarded in Transfusion Medicine and Anatomic and Clinical Pathology. Her residency and fellowship training were completed at Penn State Milton S. Hershey Medical Center.

She is a past Top Five honoree of the American Society for Clinical Pathology's 40 under Forty program. Her work on Patient Blood Management has been featured by the College of American Pathologists as a CAPcast, CAP blog, and published Case Example, and also by the Clinical Laboratory Management Association as an invited webinar.



*Dr. Amanda Haynes*

## President's Corner

As the challenging year of 2020 has now ended, I hope this column finds all of you safe and well. As you know, the pandemic has forced many of us to modify our normal day-to-day lives. The Association's annual in-person meeting typically held in May had to be cancelled in 2020. **Dr. Kyle Kurek** and his committee had an exceptional program planned and perhaps we will be able to present that in the future. However, we were indeed fortunate to be able to offer our members and guests an exciting free half-day virtual Symposium on November 13th that was met with much success. We are grateful to Committee Co-Chairs, **Robert Hardy, Ph.D.**, and **Consolato Sergi, M.D., Ph.D.**, and committee members, **Christopher Crutchfield, Ph.D.**, **Alexander Feldman, M.D.**, **Shuko Harada, Ph.D.**, **Charles D. Hawker, Ph.D.**, **M. John Hicks, M.D., D.D.S., Ph.D.**, **Jonathan B. Hoyne, Ph.D.**, **Stephen M. Roper, Ph.D.**, and **Roland Valdes, Jr., Ph.D.**, for their effort in planning and managing this program.



*Dr. Keri Donaldson*

The timely symposium topic was "Problems and Challenges with COVID-19 Laboratory Testing". **Dr. M. John Hicks**, the former president of the Association, presented *Epidemic and Pandemics Through the Centuries: A Historical Perspective*. **Dr. James J. Dunn**, from Texas Children's Hospital, presented *Development of Molecular Testing for SARS-CoV-2: Challenges with Implementation during a Pandemic*. **Dr. Salika Shakir**, from ARUP Laboratories and University of Utah School of Medicine, presented *Saliva Testing for SARS-CoV-2: A Game Changer and the Challenges That Come with It*. **Dr. Elitza Theel**, from the Mayo Clinic, presented *Serologic Testing for SARS-CoV-2: Much Ado About...Antibodies?*

I hope you all took the opportunity to attend these presentations, either live on November 13 or by viewing the archived presentations which can still be found on our website at <http://www.clinicalscience.org/meetings.html#Ondemand>. We are very grateful to our sponsors: Becton Dickinson, Roche, Hologic, and Beckman Coulter. Due to their generosity and support, we were able to offer the Symposium at no cost.

We may not be able to hold an in-person meeting again until 2022, and we sincerely hope you will all be able to join us then. Our Annual Meetings provide the opportunity for members to not only gain insights into the latest aspects of laboratory medicine and anatomic pathology, but to engage in a warm social program as well. Since the meetings are held at a different city each year, attendees will have the opportunity to explore other areas. However, in the meantime, we will be offering a virtual Annual Meeting this year that will provide members and attendees with innovative, educational, and timely lectures and abstracts. **Dr. Jonathan Hoyne** and his committee will present this program on May 13-14, 2021. It will include the annual Business Meeting with election of officers and members of the Executive Committee as well as the presentation of our annual awards which was deferred from the 2020 meeting. All the information about the meeting is listed on the main page.

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# Association Hosts Its First Ever Virtual Symposium

On Friday, November 13, definitely not an unlucky day, the Association of Clinical Scientists held its first ever virtual symposium. Registration for the event far out-paced the expectations of the Program Committee as did attendance at the live event. Approximately 45 ACS members and 110 non-members, from 12 foreign countries in addition to the United States, registered for the event. Live attendance on the day of the event reached a peak of 72, although an additional number of registrants attended the archived presentations after they were posted on-line. The archived presentations, which continue to have current content, can still be found on-line at:

<http://www.clinicalscience.org/meetings.html#Ondemand>.

**Keri J. Donaldson, M.D., M.S.C.E.**, President of the Association, served as the moderator for the symposium, introducing the speakers and sharing questions from the audience with the speakers during the Q&A sessions. The entire program was conducted using the ZOOM platform, which enabled the audience to submit questions during the program. Each of the speakers answered questions for 5-10 minutes following their presentations.



**Dr. Keri Donaldson**

**M. John Hicks, M.D., D.D.S., Ph.D.**, Baylor College of Medicine, Houston, TX and the immediate past president of ACS, presented *Epidemics and Pandemics Through the Centuries: A Historical Perspective*. Dr. Hicks noted that, over the past centuries, numerous epidemics and pandemics have occurred in isolated countries, as well as throughout the entire globe and the approach to limiting epidemics and pandemics has been quite variable. Depending upon individual locales and countries and means of dealing with an epidemic or pandemic, outcomes are remarkably different with respect to the proportion of the population experiencing the infection and the overall number of deaths. In fact, epidemics and pandemics have resulted in disruption of the economic stability of affected countries, changing the course of history, and heralding the possible end of a civilization. The current SARS-Cov2 pandemic is not a unique event; history has shown that epidemics and pandemics have existed since prehistoric times. With the advent of effective immunization programs, epidemics and pandemics have largely been prevented or avoided, until the current SARS-Cov2 pandemic. Many of the lessons learned from investigation of prior epidemics and pandemics are important in application to current and future epidemics and pandemics.



**Dr. John Hicks**

**James Dunn, Ph.D., D.(ABMM)**, Texas Children's Hospital, Houston, TX presented *Development of Molecular Testing for SARS-CoV-2: Challenges with Implementation during a Pandemic*. Dr. Dunn noted that the COVID-19 pandemic, caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), has necessitated the rapid deployment of molecular diagnostic assays to identify infected individuals.

The recommended test for diagnosis of SARS-CoV-2 infection must detect one or more specific viral RNA gene sequences in a respiratory tract specimen. However, lack of sustained adequate amounts of supplies of SARS-CoV-2 RNA detection tests, test components and collection materials from commercial manufacturers has necessitated that laboratories undertake verification and implementation of multiple types of analytic test systems as well as reagents and materials used in the pre-analytic process in order to meet the demand for testing capacity. The U.S. Food and Drug Administration (FDA) has provided Emergency Use Authorization (EUA) status to over 200 different RNA detection test systems, most of which are designed to detect only SARS-CoV-2, although some may include detection of other respiratory pathogens that may manifest with symptoms similar to COVID-19. Laboratories unable to perform high complexity molecular testing are limited in the number of EUA assay options available and a number of EUA test systems require acquisition of manufacturer-specific instrumentation; a purchasing process which can delay platform placement for scaling up testing capacity. Lack of coordinated efforts for SARS-CoV-2 testing at the national level has left most labs to fend for themselves and many continue to struggle with meeting testing demands and timely reporting in their communities.



**Dr. James Dunn**

**Salika M. Shakir, Ph.D., D.(ABMM)**, ARUP Laboratories and University of Utah School of Medicine, Salt Lake City, UT presented *Saliva Testing for SARS-CoV-2: A Game Changer and the Challenges That Come with It*. Dr. Shakir introduced her presentation by noting that rapid and accurate diagnostic tests are essential for controlling the SARS-CoV-2 pandemic and that nasopharyngeal swabs (NPS) are considered the reference method for respiratory virus detection. However, the collection is relatively invasive and unpleasant, and puts healthcare workers at higher risk for disease transmission. Thus, her team evaluated alternative diagnostic samples including patient self-collected saliva and anterior nasal swab (ANS) for SARS-CoV-2 detection. Our large, prospective study of symptomatic patients presenting to a drive-thru test center showed that a self-collected saliva sample is equally effective compared to healthcare worker-collected NPS for detecting SARS-CoV-2. In comparison, self-collected ANS missed nearly 15% of infections. Saliva testing showed a high concordance rate of greater than 95% compared with NPS. She also noted that saliva specimens are easier to collect, are non-invasive and therefore more appealing than NPS, and alleviate the global shortages for swabs and personal protective equipment. Dr. Shakir indicated that the team validated saliva diluted two-fold in transport media on three different nucleic acid amplification testing platforms. She concluded that clinical laboratories will need to optimize their collection and processing procedures before implementing saliva for SARS-CoV-2 testing.



**Dr. Salika Shakir**

## Symposium...

**Elitza S. Theel, Ph.D., D.(ABMM)**, Mayo Clinic, Rochester, MN presented *SARS-CoV-2 Serologic Testing: Much Ado About...Antibodies?* Dr. Theel reported that testing for antibodies to SARS-CoV-2 took the US by storm during the initial few months of the COVID-19 pandemic. Over 200 serologic tests rapidly flooded the market, some with questionable performance characteristics. Although the clinical utility of serologic assays for SARS-CoV-2 was not well defined, clinical laboratories, including hers, rapidly began evaluating serologic assays to implement in clinical practice. This was in large part due to the skyrocketing demand for antibody testing from both clinicians and from patients who 'just wanted to know' whether they'd been infected already. But this presented several challenging questions: how do you validate assays when you don't have positive samples? As a laboratory, how do you rapidly adapt to what seemed to be the constantly changing regulatory guidelines? And, how do you educate clinicians, the media and the lay public about what antibody results do and maybe more importantly, do not mean? Dr. Theel reviewed the status of antibody testing for SARS-CoV-2 and what the future may look like. She also discussed what some of the challenges were related to implementing a serologic test in the middle of a pandemic and the lessons that were learned, should a similar crisis occur in the future.



Dr. Elitza Theel

### VIRTUAL SYMPOSIUM SURVEY RESULTS

ACS conducted a survey of registrants for the Virtual Symposium and there was a meaningful number of respondents - 28. The Association's broadcast emails, newsletter, and website, along with word-of-mouth, were the principal means by which registrants learned of the program. Counting those who watched the archived talks on the website, each of the presentations was watched a similar number of times, ranging from 24 to 28. Having the talks archived, which enabled registrants to watch on their own schedule, was a well-liked feature, as the two talks with the lowest live views had the most views of the archive material. The Association will definitely continue to archive talks in our future virtual meetings.

Twenty-five (94%) of the respondents rated the program as outstanding or excellent, while three rated it as good. Registrants commented that they liked the currency of the topic, the quality of the talks, the expert speakers, the organization of the program, and the on-demand feature. In short, one commenter stated that the "symposium delivered as advertised." Asked for what they didn't like, more than half of respondents said nothing, none, or N/A. Two requested that ACS offer CME credit, which we are working on for future meetings. Two said they missed "in-person" meetings and seeing their friends. We hope this will be corrected in 2022 when the pandemic is in everyone's rearview mirror, although we now know that all future meetings will have virtual options to increase attendance. All respondents stated they would be interested in future ACS virtual symposia and interest was almost evenly split between COVID-19 topics and non-COVID-19 topics. ❖❖

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The Association welcomes the following new members:

### Fellows

**Sanay Bhatt, M.Sc., Ph.D.**  
**Rajdeep Das, M.D., M.S.C.P., Ph.D.**  
**Saswati Das, M.D., M.B.B.S.**  
**Pawan K. Kare, M.Sc., Ph.D.**  
**Anu Maharjan, Ph.D.**  
**Sukhes Nuherjee, Ph.D.**  
**Purvi Purohit, Ph.D.**  
**Rojeet Shrestha, Ph.D.**  
**Natalie N. Whitfield, Ph.D.**  
**Bing Yu, MD, Ph.D.**

### Associate Fellow

**Korawit Kanjana, Ph.D.**

### Members

**Fayez Bahwerth, M.Sc.**  
**Varghese Bousaliyose, B.E.**  
**Shreya Ghiya, M.S.**

The Association publishes the *Annals of Clinical & Laboratory Science* that is in its 51st year of publication. This highly regarded bi-monthly journal also publishes the abstracts from the ACS annual meeting and is an excellent choice for submission of the manuscripts derived from the ACS presentations. We invite you to review the latest issue. Information on how to obtain subscriptions and submit manuscripts can be found at (<http://www.annclinlabsci.org/>).

We invite you to encourage your colleagues and trainees to participate in the virtual Annual Meeting and to become members of the Association. The benefits of membership are many and the membership form is included on the website (<http://www.clinicalsciences.org/>).

With best regards,

Keri Donaldson, M.D., M.S.C.E.

## ACS Negotiates New Contract for Louisville Annual Meeting in 2022

The Association of Clinical Scientists was successfully able to negotiate a cancellation of its contract with the Embassy Suites Louisville Hotel planned for May 2021 with a new contract for May 11-14, 2022. This meeting is tentatively planned to be a hybrid virtual and in-person meeting, offering a virtual attendance option for participants unable to travel to Louisville, but retaining the usual in-person features of a typical ACS meeting – the receptions, Annual Awards Banquet, and the Musicale. **Dr. Roland Valdes**, Program Chair, and his committee of **Mark Linder, Ph.D.**, **Tiffany Roberts, Ph.D.**, **Chris Crutchfield, Ph.D.**, **Philip J. Foulis, M.D., M.P.H.**, and **Jonathan Hoyne, Ph.D.** will tell us more about this exciting meeting as we get closer to 2022.

## Interview: Dr. Robert W. Hardy

The Young Fellows Section arranges interviews between Young Fellows and more senior Fellows. Young Fellows can obtain scientific and career advice from a senior member who may offer valuable guidance. Below is an interview between Shuko Harada, M.D., FACSc (Young Fellow) and Robert W. Hardy Ph.D., FACSc.

**Editor's Note:** *Dr. Hardy recently retired after a long and distinguished career at the University of Alabama, Birmingham. Dr. Hardy served as President of ACS for two years, 2017 and 2018 when the Association changed its Bylaws to add a new position of President Elect. Only F. William Sunderman, Sr., the Association's founder, served a longer term as President. He also was the Program Committee Chair for the Association's 2017 Annual Meeting in Birmingham.*

**Shuko Harada:** Please tell me a little bit about yourself. Where did you grow up?

**Robert Hardy:** I grew up in Brantford which is a small blue-collar town in Southern Ontario, Canada. The Grand River runs right through Brantford so in my youth I spent a good deal of time fishing and hiking the river. This was how I first developed an interest in nature, which would later lead to my studies in biology and biochemistry.

**Harada:** Where did you go to school?

**Hardy:** I went to small Catholic high school, then to the University of Waterloo, which is strong in science, engineering, and computer technology, for my undergrad studies. I then went on to the University of Toronto for my graduate studies.

**Harada:** How did you develop an interest in science and medicine?

**Hardy:** As I mentioned I have always enjoyed the outdoors/nature and as a boy, I would read about biology but had no formal education in it until I went to the University of Waterloo, as my high school did not offer biology courses. So, I was eager to major in biology. I had a very good teacher for chemistry in high school and was also keen to major in chemistry. So, I did both. When I heard about biochemistry (third year) I knew that I wanted to work in that area and did an elective study on bile acids in my biochemistry professor's laboratory. This was my first experience working on a project and writing it up. It was a very enjoyable experience and made me want to do more.

**Harada:** Tell me about your career progression.

**Hardy:** After I completed my undergraduate education, I was in debt and decided to take time to work and pay off my school debt. I first worked in a sand lab at a foundry, which paid well but was not what I had in mind for a career. I wanted to do something more related to human biochemistry. So, my next job was working as a medical technologist in a small reference lab. This was more like what I was after, but after a couple years, I wanted to get deeper into human biochemistry and decided to go to graduate school. While I was still working in the reference lab we were being inspected and I asked the Inspector what her qualifications were. She told me that after her undergrad she got a Masters in clinical biochemistry at the University of Toronto. Something clicked when I heard "clinical biochemistry", so I looked into it and it was exactly what I was looking for.

I got a Masters and Ph.D. in clinical biochemistry and was very hopeful that I would get into the University of Toronto clinical biochemistry post-doctoral program. However, there was only one position and I didn't get it. This was a big disappointment,



**Dr. Robert Hardy**

however it spurred me on to expand my horizons. I applied to several other programs in Canada and the U.S. and was very fortunate to get a clinical chemistry post doctorate position at Washington University. The Wash. U. program was somewhat unique as it allowed me to do both basic research and get my post-doctoral training in clinical chemistry at the same time. I blame the dual undergrad majors and dual career paths on being a Gemini!

**Harada:** Did your career progression exceed your expectations?

**Hardy:** The main reason I went back to graduate school was to become a clinical chemist, not to do basic research. However, since the research I was able to do was on human disorders (insulin resistance/diabetes and later cancer metastasis), I felt it was a tremendous opportunity and was connected to clinical chemistry so again I tried to do both. I was able to maintain a grant funded research lab for 20 years all the while gradually increasing my clinical chemistry and teaching duties. At the point of closing my research lab I was the Section Head of clinical chemistry at UAB which kept me occupied for another 10 years as well as teaching pathology residents, medical students and

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## Robert W. Hardy

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being course director for Fundamentals 1 and 2 for the dental and optometry students for eight of those years. So yes, I would say my career progression very much exceeded my expectations.

**Harada:** What unexpected turns did you have in your career?

**Hardy:** I had two major unexpected turns in my career that really affected my life. The first one was obtaining a clinical chemistry post-doctoral fellowship. I had obtained both a Masters and Ph.D. degrees from the University of Toronto in one of the few Clinical Biochemistry departments in the country. When I was told I would not get into their program I was really disappointed. I decided to apply to many clinical chemistry post-doctoral programs including in the U.S.A. It turned out that I was accepted to the Washington University program which greatly affected my career and life. Their program was excellent and I was encouraged to do basic research at the same time. Another benefit is that the Wash. U. program has many graduates around the country some of who became valued colleagues. Drs. Jay McDonald and Jack Ladenson were a great influence on my career.

The second unexpected turn was that Dr. McDonald, surprisingly took the position of Chair of Pathology at UAB. He asked me and others to go with him and I did. I did not plan to stay in Birmingham and Dr. McDonald encouraged me to interview for jobs elsewhere which I did and I got a job offer in Washington, D.C. I was excited about living in D.C. and told Dr. McDonald about the offer which I intended to take. Surprisingly he talked me into staying at UAB, which turned out to be a much better opportunity than the job I was offered in D.C. There was much more possibility for advancement as the Pathology Department grew tremendously and is now nationally recognized for excellence in Clinical Service, Teaching and Research. The clincher for staying in Birmingham happened when I met my wife there. It couldn't have turned out better.

**Harada:** How has ACS helped you in your career?

**Hardy:** Initially as a young investigator the ACS allowed me to fill out my CV with oral presentations and networking with other investigators. As I got more involved with the ACS I was trusted to be on the Executive Committee, co-hosted an annual ACS meeting (with Dr. Siegal's support), and rose to the President of the ACS, which I had the honor and privilege of serving for two years. I met many excellent scientists, contacts, friends, and have been fortunate to recruit and mentor younger members to become more involved with the ACS. The ACS experience, comradery, and how they hold their meetings and strongly support their young investigators are unique and what has kept me involved. For my career, it gave me national/international recognition, which is important for promotion, fortified my network of colleagues, helped with recruiting faculty, mentoring, getting answers to questions outside of my areas of interest, and giving answers to questions within my areas of interest as well as managing administrative responsibilities. It has been a very rewarding experience and I highly recommend young investigators to join the ACS and get involved.

**Harada:** Did you have any instances where mentors influenced your professional career? How did they influence you?

**Hardy:** I owe a great deal of thanks to Dr. Jay McDonald, who mentored my career and especially the basic research part. He guided me through the academic world from a postdoctoral fellow to a tenured professor and was a tireless reviewer of my grant proposals. Jack Ladenson (clinical chemistry mentor) who guided me through the clinical chemistry program at Wash. U. and introduced me to many of my now colleagues. Gene

Siegal, who was also a basic research mentor at UAB, helped me with my publications as well as introducing me to the ACS and encouraging my involvement. He also asked me to be a Senior Associate Editor for Laboratory Investigation which is an USCAP journal. I have worked with Dr. Siegal (Editor in Chief) in this capacity for the past 13 years. Looking back, these mentors were the keys to my success. While they presented very challenging opportunities they were, to me, amazing.

**Harada:** Describe the importance for faculty to be involved in National/International organizations and to have administrative responsibilities outside of your current institution.


**Hardy:** The importance of being involved in National/International organizations and having administration responsibilities is critically important in garnering national/international recognition, which is required to be promoted in academia. Also, it is a great opportunity to develop new colleagues who are helpful in new areas of science and administration. They may become collaborators. You have opportunities for oral presentations, poster presentations and writing abstracts. With ACS you also have a journal that you can publish in and possibly be on the editorial board. Although administrative responsibilities may not be your focus you will be asked to be on or head up committees at your place of employment. The ACS provides the opportunity to gain experience in leadership roles, understand the dynamics of meetings and committees and to my surprise is actually rewarding.

**Harada:** How did you develop your network of colleagues over the years? How critical has this been towards success in your career?

**Hardy:** I developed my network of colleagues through my involvement with the AACC, AACC-SES, ACS, and by doing grant reviews at institutions such as the NIH and AICR. It is important to not just join these institutions but get involved with their various committees and attend and present your work at their annual meetings. This is how you meet new colleagues who have similar interests to you and maybe more importantly are experts in areas that you are not familiar with. These colleagues can help you find answers to questions that come up in everyday clinical service, teaching and research. It is impossible to be an expert in all these areas so these contacts are very important.

**Harada:** What advice would you give to someone starting out in their career in clinical chemistry/laboratory medicine? What advice would you give someone at the Assistant Professor level in their career?

**Hardy:** Early in your career you need to develop your own network of colleagues. Join organizations in your field and get involved. For clinical chemistry the ACS, ACLPS and AACC have been excellent for building my network of colleagues. The ACS in particular has annual meetings that are somewhat different than the norm in that it is much more collegial and you have more time and opportunity to establish contacts and get involved in a meaningful way. It is also a great organization for getting more oral presentations on your CV. Present your work, get to know your colleagues and get involved. You won't get promoted without recognition from your peers.

For those who are at the Associate level, it is important to give back to your field of Clinical Science. Get involved with leadership positions in your particular organizations. Remember your mentors who made your career possible and be a mentor to young investigators. It is a tremendously rewarding experience to help them succeed. 

## The Young Fellows Section

The Young Fellows Section, which serves scientists age 45 or younger, aims to foster career growth by providing opportunities to network and build relationships with other professionals in the field, give presentations and receive awards at our annual meeting and receive mentorship from more experienced members. If you are interested in establishing a mentor from within our organization, please contact me via email.



Alex Feldman

For the upcoming virtual Annual Meeting of the Association, we are planning a session on Thursday, May 13, 2021, for presentations by young scientists, regardless of whether they have yet joined the Association as Associate Fellows. All young scientists are invited to submit abstracts for the possibility of giving an oral presentation in this session. Information about submitting an abstract can be found on the Association website at:

<http://www.clinicalscience.org/meetings/html>.

In addition, we encourage young fellows to submit a case report, review article or original research manuscript for publication to the *Annals of Clinical and Laboratory Science*, the ACS journal. The instructions for authors can be found at:

[www.annclinlabsci.org](http://www.annclinlabsci.org).

It would be great to see a young fellow or trainee submit an article each quarter for publication. The editorial board also encourages trainees to serve as reviewers for the journal, wherein you can be paired with senior reviewers to receive hands-on guidance in the reviewing process. If you are interested in serving as a reviewer, please contact me via email.

Sincerely,

Alex Feldman, M.D.  
Chair, Young Fellows Section - Association of Clinical Scientists  
Neuropathology Fellow, Northwestern Memorial Hospital

### YOUNG FELLOWS SECTION CHAIR:

**Alex Feldman, M.D.**

email: [alexander.feldman@northwestern.edu](mailto:alexander.feldman@northwestern.edu)



## The Grapevine: Member News

**Christopher Crutchfield, Ph.D.**, the Association's current Vice President, is moving from the University of Cincinnati to the Northwestern Memorial Hospital, Evanston, Illinois as Associate Medical Director. At Cincinnati, Dr. Crutchfield was Technical Director for Clinical Chemistry, Toxicology, and Point-of-Care, and Medical Director of the UCMC Ridgeway Tower Clinical Laboratory. He was an assistant professor of Pathology at the University of Cincinnati and will be associate professor of Pathology at Northwestern.

**Alexander Feldman, M.D.**, who has served as the Chair of the Association's Young Fellows Section Steering Committee for the past three years, has completed his fellowship in neuropathology at Northwestern University, Evanston, Illinois, and has accepted a position effective July 1, as Assistant Professor, Department of Pathology, Division of Neuropathology, at the University of Alabama at Birmingham.

## 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](mailto:smroper@wustl.edu).

### PREVIOUS QUESTION

In the early 20th century, the eminent statistician and editor of *Biometrika*, Karl Pearson, took a young protégé named William Sealy Gosset under his wing. Gosset was introduced by Pearson to the great Ronald A. Fisher, whose advice and encouragement inspired Gosset to develop and publish some of his most important work in statistics. Gosset published under a pen name, however, because his employer prohibited him from revealing his surname in scientific publications. What was Gosset's pen name, and who was his employer?

### ANSWER

"Student" and Guinness Brewery. No one submitted an answer.

### CURRENT QUESTION (SUBMITTED BY STEPHEN M ROPER)

**Cystic fibrosis is a disorder characterized by pancreatic insufficiency, chronic respiratory infections, and elevated concentration of chloride in the sweat; all secondary to defects in CFTR function. Definitive diagnosis of cystic fibrosis typically requires demonstration of elevated chloride concentration (> 60mmol/L) in sweat via the sweat test. What is the name of the two individuals who first described pilocarpine iontophoresis for sweat stimulation in 1959?**

### 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](mailto:smroper@wustl.edu).

## Wanted

Fellow or Associate Fellow to volunteer to serve as Newsletter Editor for the *Clinical Science Trumpet*. This is a great way to serve and learn about the Association. It can also open doors to other responsibilities and opportunities in ACS. Contact Charles D. Hawker, Ph.D., at: [charlie@charlesdhawker.com](mailto:charlie@charlesdhawker.com)



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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: [charlie@charlesdhawker.com](mailto:charlie@charlesdhawker.com)

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Graphic Editor: Michael Hawker, MArch, MS, Adobe Cert. Associate



# Grants Available

**Philip R. Foulis, M.D., M.P.H.**, Chair of the Association's Scientific Section on Medical Error Reduction, has reported that the Society to Improve Diagnosis in Medicine, of which ACS is a member, has established the DxQI Seed Grant Program, making available grants of up to \$50,000 for work in Quality Improvement. The deadline to apply is March 25. See the website for details and an informational webinar:

<https://www.improvediagnosis.org/dxqi/>.



## GRANTS OF UP TO \$50,000 AVAILABLE FOR WORK IN QI

Diagnostic errors are the most common, catastrophic and costly of all causes of preventable medical harm. In fact, errors in diagnosis are the most frequent cause of medical error reported by patients.

With funding from the Gordon and Betty Moore Foundation, the Society to Improve Diagnosis in Medicine (SIDM) has established the DxQI Seed Grant Program to engage healthcare organizations in efforts to identify, develop, and test interventions aimed at improving diagnostic quality and reducing harm from diagnostic error.

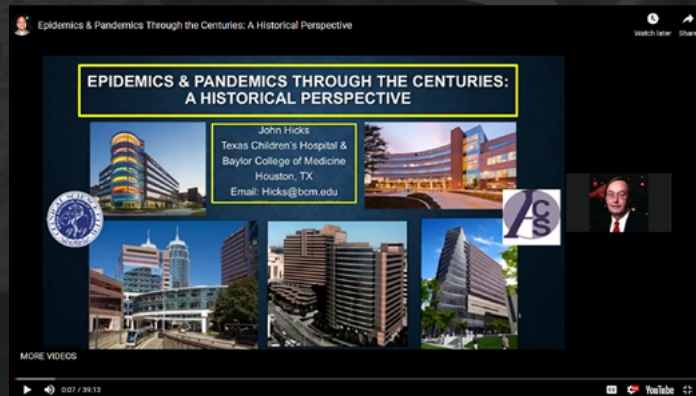
**CALL FOR PROPOSALS NOW OPEN**

# The First Virtual Symposium for ACS

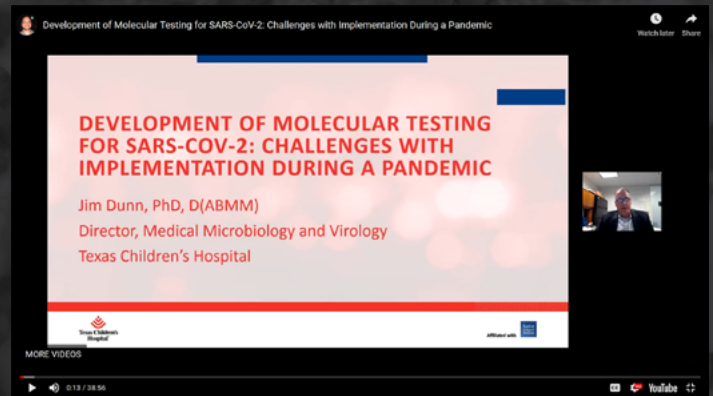
*see page 4 for a recap*

The Virtual Symposium presented in November, 2020 is available for viewing:

<http://clinicalscience.org/meetings.html#Past>.



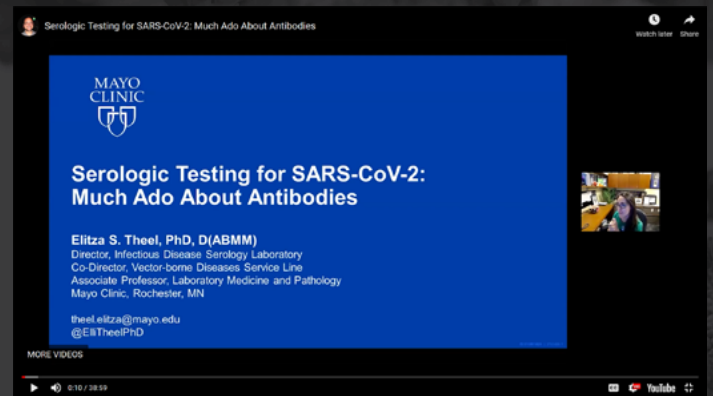
*Dr. John Hicks presented a historical perspective of epidemics and pandemics*



*Dr. Jim Dunn presented the development of molecular Sars-Cov-2 testing during a pandemic*



*Dr. Salika Shakir presented the benefits and challenges to saliva testing for Sars-Cov-2*



*Dr. Elitza Theel presented about antibodies in serologic testing for Sars-Cov-2*