Abstracts are now being invited for the 140th Annual Meeting of the Association of Clinical Scientists to be held June 24-27th in the magnificent setting of Banff National Park in the Canadian Rockies. Banff is Canada’s oldest national park, a crown jewel of the Rockies. Members are encouraged to bring their significant others/families to enjoy the countless summer activities in the park. The meeting is sponsored by the University of Calgary, and cosponsored by the University of Alberta. Dr. Kyle Kurek, Program Chair, and members of the Program Committee will ensure a warm welcome filled with fresh mountain air and stimulating science.

**Theme and Highlights**

The opening day (Thursday) will be dedicated to the theme of “Histocompatibility & Transplantation.” An outstanding group of local clinical and laboratory scientists has been chosen to highlight clinical updates, laboratory advances and cutting-edge translational research covering diverse topics in solid organ and bone marrow transplantation. Faisal Khan, Ph.D., ACHF Chair of Pediatric Hematology and Director of the Hematology Translational Research Laboratory at the University of Calgary, will present the Claude P. Brown Memorial Lecture, “Toward Improved Outcomes of Hematological Malignancies: Three Approaches of Precision Medicine.” After a day of science, we will unwind with a welcome reception at the Rimrock’s Divas Cocktail Lounge.

Friday will be a day not to miss! Our morning session will feature a theme of “Amalgamation, Standardization and Utilization of Clinical Labs: The Alberta Experience,” and will highlight lessons learned from the unique practice...
environment of laboratory medicine in Alberta, followed by a lively interactive discussion of the future of clinical lab services. In the afternoon, a private Pursuit Brewster Tour will take us to some of the most magnificent yet highly accessible natural wonders of the area, including Lake Louise and Moraine Lake in Banff National Park and Takakkaw Falls in nearby Yoho National Park. After exploring the grandeur of the Canadian Rockies, we will be treated to the annual banquet with a keynote address by Stephen Legault, a talented storyteller, photographer and conservationist who has devoted his career to celebrating the beauty and preserving the natural environment of the Banff region. Members of the Association will also be recognized in an awards ceremony (see page 3).

Saturday morning will feature an anatomic pathology update session entitled “Drain the Swamp: Updates on Spindled, Epithelioid and Myxoid Tumors” given by local experts. The remainder of the day will be open sessions for submitted abstracts involving all clinical, translational and/or basic science topics in pathology and laboratory medicine. The meeting will conclude with a musica!e and art show with reception.

REGISTRATION
Registration is now open for the 140th Meeting of the Association. The most convenient way to register is to use the shopping cart on the ACS website at: http://www.clinicalscience.org/annualmeeting.html#Registration. Alternatively, you may complete the form in this newsletter and mail it to the ACS office (Association of Clinical Scientists, 6431 Fannin Street, MSB2.292, Houston, TX 77030) with a check or credit card information. Or call the Office Manager, Anara Baimetova, at (713) 500-5381, and register by telephone.

ACCOMMODATIONS
The meeting is headquartered in the beautiful AAA/CAA Four Diamond Rimrock Resort Hotel. The hotel is located high above the Banff townsite on the slope of the Sulphur Mountain and offers exceptional views of the Canadian Rockies, fine dining with one of Canada’s most exclusive restaurants, a luxury spa, and special accommodation packages to suit your vacation needs. The town’s ROAM bus network offers regular service to the townsite and other tourist destinations from the hotel. The Banff Gondola station is only a short walk from the hotel and offers breathtaking views of the mountains and an outstanding restaurant.

The contracted meeting rate for the Association is available for the dates of June 23-29th. The meeting rate is $358 (CAD) plus 11% tax per night, bringing the total nightly cost to $397 (CAD). The current exchange rate converts this nightly total with taxes to ≈$290 in U.S. dollars. To make reservations, call toll-free (Canada and United States): 1-888-RIMROCK (746-7625), or reserve your room online using this link which is specific for the Association: https://usrrh.webhotel.microsdc.us/bp/search_rooms.cmd.

TRANSPORTATION
Banff National Park is west of Calgary, Alberta. Calgary International Airport (YYC) is serviced by the major U.S. airlines. In addition to rental cars, convenient hourly shuttles are available from the airport to the Banff hotels. Full details including international customs information and recommendations for travel can be found on the meeting website. http://www.clinicalscience.org/annualmeeting.html#Transportation.
Preliminary Program Details

Thursday, June 25, 2020
Histocompatibility & Transplantation

A. Solid Organ Transplantation
Transplantation

Michael Mengel  
Univ. of Alberta  
Molecular predictors of all graft rejection

Serdar Yilmaz  
Univ. of Calgary  
Pathology scores - CADI

Lori West  
Univ. of Alberta  
CDTRP - One Transplant for Life

Lee Anne Tibbles  
Univ. of Calgary  
BK virus nephropathy

Steven Greenway  
Univ. of Alberta  
Methylation pattern of allograft rejection

Histocompatibility & Immunogenetics

Patricia Campbell  
Univ. of Alberta  
Antibody-mediated rejection

Ahmed Mostafa  
Univ. of Saskatchewan  
Complement assays in HLA antibody detections

Noureddine Berka  
Univ. of Calgary  
Role of HLA labs in national registry transplants

Esme Dijke  
Univ. of Alberta  
HLA diagnostics in solid organ transplantation

B. Bone Marrow Transplantation
Transplantation

Jan Storek  
Univ. of Calgary  
Immune reconstitution/ATG

Anneal Khan  
Univ. of Calgary  
Transplant for metabolic disease

Michael Chu  
Univ. of Alberta  
CAR-T cell therapy

Ravi Shah  
Univ. of Alberta  
Alpha-beta T-cell depleted transplants

Victor Lewis  
Univ. of Calgary  
Autologous HCT for Lymphoma

Doug Stewart  
Univ. of Calgary  

Histocompatibility & Immunogenetics

Noureddine Berka  
Univ. of Calgary  
NGS in HLA transplant risk management

Faisal Khan  
Univ. of Calgary  
Non-HLA immunogenetics in HCT (Brown Lecture)

Aru Narendran  
Univ. of Calgary  
Posttransplant leukemia vaccine

Taher Rad  
Univ. of Calgary  
Development of an IVIG program for Alberta

Etienne Mahe  
Univ. of Calgary  
Myeloid NGA profiling for HCT decision

Friday, June 26, 2020
Amalgamation, Standardization & Utilization of Clinical Labs: The Alberta Experience

James R. Wright, Jr.  
Univ. of Calgary  
A Case Study in Merger Madness - Lessons Learned from Calgary

Deirdre Church  
Univ. of Calgary  
Standardization: Panacea or Procrustean Bed

Christopher T. Naugler  
Univ. of Calgary  
Does Laboratory Utilization Management Enhance or Detract from the Quality of Care for Individual Patients?

Saturday, June 27, 2020
AP Update & Cases:  
Drain the Swamp - Updates on Spindled, Epithelioid & Myxoid Tumors

Pediatric & Adult Soft Tissue Pathology and Dermatopathology Faculty and Trainees (Calgary)

Last Call for Abstracts

Abstracts are welcome in all areas of clinical laboratory science and anatomic pathology. You may indicate your preference of an oral or poster presentation. The deadline for submission of abstracts to the 140th Meeting of the Association of Clinical Scientists is Friday, February 21, 2020. Please submit your abstract as soon as possible. The Abstract Submission Form and Disclosure of Conflict of Interest Form (which must be completed by all authors and co-authors) can be found on the Association’s website at (click link below then click menu button “Abstract Instructions”):

http://www.clinicalscience.org/annualmeeting.html
President’s Corner

A CLEAR VISION FOR ACS IN 2020

The Association of Clinical Scientists (ACS) is looking forward to the 140th Meeting to be held in Banff at the Rimrock Resort Hotel from June 24 through 27th. The ACS organizing committee has been working tirelessly to ensure that the educational and social program will be an exceptional one. The theme of the 140th ACS meeting is Histocompatibility & Transplantation. The thematic lectures will be presented on the 1st day of the ACS meeting by internationally recognized experts. On Friday morning we will learn about Aspects of Laboratory Amalgamation and the practice of pathology in the province of Alberta. As always, the attendees will be presenting their basic, translational and clinical research in a wide array of topics.

While the invited lecturerships arranged by the organizing committee provide important updates in the chosen thematic topics, many pearls of wisdom are garnered from the presentations by the attendees at ACS meetings. Often, innovative concepts, techniques and methods which can be readily integrated into the practice of laboratory medicine and anatomic pathology are shared among the attendees. The social program is one not to be missed, highlighted by a tour of the natural beauty of the Banff area, an outstanding banquet speaker, and the wonderful Musicale featuring ACS members. A shout-out goes to Dr. Kyle Kurek and his organizing committee for what will be an outstanding 140th ACS meeting. Further details of the 140th ACS meeting are presented in this Newsletter.

CALL FOR ABSTRACTS

ACS is unique in that the majority of the educational program is presented by the attendees. This is one of the strengths of this association. The expertise of the attendees is deep, wide and varied. All aspects of laboratory medicine and anatomic pathology are covered to a certain extent. I challenge any attendee to leave an ACS meeting without learning something new that can be applied to the practice of laboratory medicine and anatomic pathology. ACS members and attendees are encouraged to submit their basic, translational and clinical research for the 140th ACS meeting. Also, ACS members should solicit their colleagues, fellows, residents, graduate students, and post-doctoral fellows to attend and present at this nationally and internationally recognized meeting. Trainees are eligible for several competitive awards based upon their presentations (http://www.clinicalscience.org/awards.html#YoungClinicalScientist). Please see information in this newsletter and the ACS website regarding abstract submission (http://www.clinicalscience.org/awards.html#AnnualMeetingTravelGrants).

WE ARE ALL ACS

As noted in the last newsletter, the functions of ACS are possible due to the numerous person-hours invested by members of this association. As an all volunteer association, it is necessary to periodically reinvigorate this organization by soliciting members to participate in leadership, committee membership and the editorial aspects of the association. The ACS leadership is always in search of individuals willing to commit to the mission of the association, and contribute to the future of ACS. For those of you interested in serving ACS, please review the possible leadership and committee positions at the ACS website (http://www.clinicalsciences.org). Without ACS membership involvement, the association will not continue to flourish as an innovative organization.

Similarly, the viability of the ACS is dependent upon refreshing the association with membership growth. The vast majority of new members are acquired by recruitment by our current members. Once a non-member attends an ACS meeting, the benefits and camaraderie are obvious and often result in membership in ACS. The best means for recruiting new members is YOU, our current member. You are implored to encourage your colleagues and trainees to attend the 140th ACS meeting, as well as soliciting abstract submissions. One of the outstanding aspects of ACS is the Annals of Clinical & Laboratory Science is that it is in its 50th year of publication. This journal publishes the abstracts from the ACS annual meeting, and is an excellent choice for submission of the manuscripts derived from the ACS presentations. Our members are quite aware of the exceptional quality of the papers published in this journal. ACS owes a debt of gratitude to the Drs. Nina Tatevian (editor-in-chief), Dr. Kyle Kurek (senior associate editor), and Ms. Anara Baimetova (managing editor), for continuing to produce a journal that represents the hallmark of ACS.

The ACS leadership is in the process of assessing geofencing to improve the visibility of ACS among a targeted population to attract colleagues to ACS meetings and membership. Geofencing with web-based ACS advertisements regarding benefits of ACS membership, as well as information regarding the annual ACS meeting, has been employed during the past several months. Non-member colleagues have accessed the advertisements and the ACS website, with encouraging results. With the digital world becoming the primary area of communication, ACS leadership encourages the membership to promote the association through YouTube, Twitter, Instagram and Snapchat (please contact hicks@bcm.edu if you have interest or expertise in further involvement).

NEW MEMBERS

ACS welcomes the following new members since September, 2019:

- Faysal Fedda, M.D., Dept. of Pathology, UT MD Anderson Medical Center, Houston (Associate Fellow)
- Laim C. Lee, Ph.D., Medical Affairs, Amgen, San Diego, CA (Fellow)
- Dipi Sagar, M.D., Dept. of Gastroenterology, Ventura County Med. Ctr., Ventura, CA (Fellow)
- Alicia Algeciras-Schimnich, Ph.D., Dept. of Lab Medicine, Mayo Clinic, Rochester, MN (Fellow)

Wishing you a happy and healthy new year,

John Hicks

The Association has a new email direct to its office: ACS@uth.tmc.edu
### Association of Clinical Scientists

**Registration for 140th Meeting, Banff, AB, Canada, June 24–27, 2020**

#### ATTENDEE INFORMATION

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<td><strong>Thursday, June 25</strong>&lt;br&gt;Luncheon, presentation of travel grant awards, reserved seating for all young Scientists, age ≤ 45&lt;br&gt;Included with full or single day registration</td>
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<td><strong>Friday, June 26</strong>&lt;br&gt;Tour&lt;br&gt;Banff and Yoho National Parks, including Takakkaw Falls, Lake Louise, and Moraine Lake (lunch included)</td>
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<td><strong>Extra tickets to Awards Banquet and Reception</strong></td>
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<td><strong>Saturday, June 27</strong>&lt;br&gt;Luncheon with Annual Business Meeting&lt;br&gt;Included with full or single day registration</td>
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<td><strong>Musicale, with Wine and hors d’oeuvres Intermission</strong>&lt;br&gt;Complimentary for all attendees (please indicate attendance for headcount estimation)</td>
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**Total Payment Enclosed (in US Dollars)**

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*continues on page 6*
PAYMENT OPTIONS
Cancellation with full refund will be accepted until May 8, 2020.

1. Register securely on-line at http://www.clinicalscience.org/annualmeeting.html#Registration.

2. Complete and mail this form (copy/print both sides 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 ____________________________________________________________

Security code (CVV) __________________________________________ Expiration date (mo/yr) ________________

Name on the card ________________________________________________________

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City __________________________ State (Province) ________________

Country __________________________ Postal (Zip) Code ________________

Signature ______________________________________________________________

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.
Contact Charles D. Hawker, PhD, at:
charlie@charlesdhawker.com
Interview: Dr. Phil Foulis

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 Alex Feldman, MD (Young Fellow) and Philip Foulis, MD, MPH, FACSc.

Alex Feldman: Please tell me a little bit about yourself. Where did you grow up? Where did you go to school?

Phil Foulis: I was born and raised in Buffalo, NY and went to public school. I was very involved in music and started playing cello in 5th grade. I still remember my first concert, the Haydn Surprise Symphony. The conductor said if we played a wrong note, he had tomatoes to throw at us. He never did. Many of my fondest memories center on playing music and attending concerts.

My dad was an engineer in the aerospace industry. I was going to be an engineer, but when the industry crashed, I rethought my future career. I attended Ashland College, now Ashland University in Ashland, OH. I was initially interested in becoming a biology teacher, though, throughout undergraduate school, I became more interested in the field of medicine. In college, I also became interested in computers. In those days we used punch cards or paper tape. I was amazed how you could provide a set of instructions and the computer would calculate and answer. I still find that magical.

I attended McMaster University School of Medicine in Hamilton, Ontario Canada. This was the first problem-based medical school. It was one of the best experiences in my life. It taught me self-directed learning and problem solving, both essential in medicine. I did my residency in internal medicine for one year and then pathology residency at the University of Pittsburgh, before it became UPMC.

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

Foulis: I have always been interested in science and mathematics. I enjoyed the search, discovery and finding answers. My interest in computers and medical informatics was a logical extension of that, using computers to make things more efficient and productive. In college while some of my colleagues were going out on Fridays, I’d be programming with friends.

Feldman: Tell me about your career progression. How did mentorship influence your professional career?

Foulis: During residency, I was fortunate to have several attendings support my interest in medical informatics. I acquired an Apple computer to do morphometrics on cells. Prior to that, they used photographs, cut out the shapes and weighed them. I then acquired a Northstar computer and developed many useful applications, including the first Anatomic Pathology system using a microcomputer which was used for several years after I left residency. When I was recruited to USF and the Tampa VA, my laboratory director allowed me to develop my interest in informatics.

Feldman: Did you have any unexpected turns in your training or career?

Foulis: Very fortunate only one. I was in private practice in Cleveland when the reimbursement was drastically cut for pathology. Since I was the junior member of our group, I had to relocate. It was a blessing, since I was offered my present position. I was extremely fortunate.

Feldman: How did you get involved with the Association? How has ACS helped you in your career?

Foulis: I was recruited by Dr. Jeno Szakacs when our meeting was held in Tampa. It took me several years and a hiatus to be more involved. The musicale is one of the best aspects of the association. Many of the members mentored me and were responsible for my promotion to professor at the University of South Florida. The organization is always a forum to present new ideas and work to get constructive thoughtful suggestions. It's much more helpful than any other venue.

Feldman: Describe the importance for faculty to be involved in National/International organizations and to have administrative responsibilities outside of one's home institution.

Foulis: It is critical. It allows you to see beyond your institution, make friends and challenge your perceived thoughts. It advances and furthers issues in the field of pathology. It also provides a forum to express ideas and expands what you do to make an impact. Otherwise, we tend to be way too portalized.

continued on page 8
The Young Fellows Section

The Young Fellows Section aims to foster career growth by providing opportunities to network, build relationships, give presentations and receive awards at our annual meeting; mentorship from more experienced members; and the ability to publish or gain experience reviewing manuscripts through the ACS journal Annals of Clinical and Laboratory Science.

The Young Fellows Section will also be holding a social event during our upcoming Annual Meeting in Banff, Alberta. This will be a great opportunity to meet up with your peers in a relaxed atmosphere, have some fun, and also learn about other ways to get involved with ACS. Senior members will be present to answer questions and offer suggestions. I’ll be sharing more details about this as we get closer to the conference. In the meantime, please feel free to reach out to me via email (see below) at any time.

Sincerely,

Alex Feldman, MD
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

Phil Foulis

continued from page 7

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

Foulis: Two organizations were instrumental in my network of colleagues: the Association of Clinical Scientists and the College of American Pathologists. The chair of one of the CAP committees offered me my present position. Serving on committees allowed me to discover the richness of pathology and expanded what was available and what could be done in pathology. I’ve developed many professional friends over the years thanks to these two organizations.

Feldman: What advice would you give to someone starting out in their career in clinical chemistry/laboratory medicine?

Foulis: Find an area that is your passion. You will be doing it for much of your life and have worked hard to get to where you are. Find a group that works well together; life is too short to be in a hostile environment. The group you work with is more important than the content of what you do. Challenge yourself; always think about how to improve yourself and your workplace. Never be complacent with the “as is”; move ahead. Find a mentor to discuss ideas. Get out and be visible; it will help you and it will help the profession of laboratory medicine.

Corrigendum

In the September, 2019 newsletter, page 7, in the paragraph about the Annual Musicale and Art Show, we failed to note that a special guest violinist, the highly acclaimed Mr. Odin Rathnam (odinsviolin.com/bio), was accompanied by Dr. Keith Cheng, a pathologist from Penn State University, on the piano. It was Dr. Cheng who invited Mr. Rathnam to our event. We regret this omission.

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.

No one attempted to answer the September, 2019 Trivia question provided by Dr. Roger Bertholf, which was:

PREVIOUS QUESTION

“Direct bilirubin” is often used in reference to the conjugated fraction of bilirubin, including mono- and di-conjugated forms, as well as delta bilirubin (bilirubin covalently bound to albumin). What is the origin of the term “direct”?

ANSWER

Historically, “direct” was used to indicate that the diazo reaction occurred without any modification of the reagent. Addition of alcohol prior to the diazo reaction solubilized the unconjugated bilirubin fraction, and therefore was called the “Indirect” measurement. Consequently, “indirect bilirubin” originally corresponded to the total bilirubin, but now it typically refers to the unconjugated fraction (the difference between total and direct fractions). To make matters worse, the “direct” reaction measures some of the unconjugated fraction. The terminology is horribly confusing.

CURRENT QUESTION (SUBMITTED BY DR. STEPHEN ROPER)

The Friedewald equation is a widely used method for estimating LDL-cholesterol. The equation is LDL cholesterol = Total cholesterol – HDL-cholesterol – (Triglycerides/5), where “Triglycerides/5” is a surrogate for VLDL cholesterol. One limitation of this equation is that it should not be used when triglycerides exceed 399 mg/dL. What happens to Friedewald calculated LDL-cholesterol levels in specimens with hypertriglyceridemia (>399 mg/dL)?

ANSWER

Answer will appear in the next Clinical Science Trumpet. The individual with the first correct answer will have the honor of writing the trivia question for the next newsletter.

Submit your answer by email to Dr. Stephen Roper at: smroper@wustl.edu.
New Members

FELLOW

Laim C. Lee, Ph.D.
Medical Affairs, Amgen
San Diego, CA

Dipli Sagir, M.D.
Department of Gastroenterology, Ventura County Medical Center, Ventura, CA

Alicia Algeciras-Schimnich, Ph.D.
Department of Laboratory Medicine
Mayo Clinic, Rochester, MN

ASSOCIATE FELLOW

Faysal Fedda, M.D.
Department of Pathology, Univ. of Texas, MD Anderson Cancer Center, Houston, TX

The Grapevine: Member News

AWARD

Philip R. Foulis, MD, MPH, FCAP, FACSC
received the 2019 Pathology Advancement Award of the College of American Pathologists at its Annual Meeting in Orlando. The award recognizes a person who demonstrates components of foresight, resolve, and unifying commitment to both evolutionary and revolutionary undertakings that advance the positioning of the pathologist in the house of medicine and the delivery of safer patient care. Dr. Foulis, a past president of ACS and chief of pathology informatics in the Department of Pathology and Laboratory Medicine at the James A. Haley Veterans Administration Hospital, Tampa, FL, was recognized for his dedication to improve communication and use of standardized, structured cancer reports for all users, including pathologists, oncologists, surgeons, cancer registrars, and public health entities.

IN MEMORIAM—HERBERT DERMAN, MD (1921-2019)

The Association recently learned of the passing of one of its Founding Fellows, Herbert Derman, MD, on December 18, 2019 in Philadelphia. Dr. Derman served as Secretary and as President in 1961. He received the Clinical Scientist of the Year Award in 1962. An obituary will be published in an upcoming issue of the Annals of Clinical and Laboratory Science.

Clinical Science Trumpet

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@charleshawker.com

Publisher: Association of Clinical Scientists
Editor: Charles D. Hawker, PhD, MBA, FACSc, FAACC
Graphic Editor: Michael Hawker, MArch, MS, Adobe Cert. Associate
Banff, Alberta, CA, June 24-27, 2020

View of Banff's mountains from the rooftop of the Gondola

Rimrock Resort Hotel's view of the Banff mountains

Association of Clinical Scientists
6431 Fannin Street, MSB2.292
Houston, TX 77030