Biophysical Society of Canada
Joint IUPAB Focused Meeting and 7th Annual Meeting
May 23-27, 2022
University of Ottawa
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The meeting program including lists of invited speakers, abstracts, keynote and award winner lecturer bios, lists of participants, etc. are all found on the conference website: https://event.fourwaves.com/jointbsc2022iupab

WIFI INFORMATION

Network Name: guOttawa - no identification needed
Bienvenue à Ottawa! Welcome to Ottawa!

Welcome to the 7th Annual Meeting of the Biophysical Society of Canada (BSC)! This year’s meeting will be held on the campus of the University of Ottawa (uOttawa) located minutes walk from the heart of the Nations Capital including the Canadian Parliament and all of Canada’s Capital attractions. After a three-year hiatus, we return with an in-person meeting with a livestreaming option for those who cannot attend in person. The annual meeting offers attendees the opportunity to learn about exciting new developments in biophysics research and to network with peers from across Canada and further afield. The meeting is dedicated to biophysical techniques and discoveries that have revolutionized research leading to advancements in medicine, pharmaceutical sciences, biotechnology, material sciences and biosensing.

The 2022 meeting will be held in conjunction with an IUPAB Focused Meeting titled “The biophysics of ligand-gated ion channels: from structures to drug discovery”. The IUPAB meeting hosts the top ligand-gated ion channel structural and functional biologists from across the globe from May 23rd – 25th, with one day overlapping the 7th Annual BSC meeting from May 25th – 27th. The IUPAB meeting features two keynote talks by Eric Gouaux (Vollum Institute, OHSU) and Henry Lester (Caltech). The BSC meeting features four keynote talks by Cees Dekker (TU Delft), Ruth Nussinov (NIH), Sandra Schmid (CZ Biohub), and Sriram Subramaniam (UBC). The BSC also features the National Lecture by Julie Forman-Kay (University of Toronto), the 2022 BSC Fellow, and the 2022 Young Investigator Award Lecture by Trushar Patel (University of Lethbridge). All attendees are invited to participate in the trainee symposium in the afternoon on May 24th, just prior to the opening mixer. The symposium will consist of a career session and will provide a venue for trainees to share their research accomplishments and network with their peers.

Nous sommes reconnaissants pour le soutien généreux de nos commanditaires industriels, ainsi que de l'appui des départements et instituts des facultés de médecine et des sciences de l'Université d'Ottawa. Enfin, nous vous remercions d'avoir fait le voyage jusqu'ici, que vous soyez de la région ou de passage à Ottawa. Nous sommes fiers de vous accueillir sur notre campus moderne au cœur de la capitale nationale. Nous nous attendons à une réunion stimulante!

John Baenziger (uOttawa), Vincent Tabard-Cossa (uOttawa), Jyh-Yeuan (Eric) Lee (uOttawa), Corrie daCosta (uOttawa), Anna Panchenko (Queen’s), Mazdak Khajehpour (Manitoba) and Derek Bowie (McGill)

President’s message

At long last, we are gathering again! On behalf of the Biophysical Society of Canada (BSC), I welcome you to Ottawa, whether you are joining us in person or virtually. Je vous souhaite la bienvenue au congrès annuel 2022 de la Société de Biophysique du Canada (SBC) à l’Université d’Ottawa. I hope that the annual meeting of the BSC will provide each of you an opportunity to be exposed to new research findings, stimulated to think in new ways about your own research, and to renew and forge new connections with others in the Canadian and international biophysics communities. This year, we offer a unique bridge to an International Union of Pure and Applied Biophysics (IUPAB) Focused Meeting titled “The biophysics of ligand-gated ion channels: from structures to drug discovery”, which immediately precedes the BSC meeting. For those joining the BSC meeting from the IUPAB meeting, welcome to our BSC community!
I would like to acknowledge the conference organizing team for its work in putting together this outstanding scientific and social program of events: John Baenziger, Vincent Tabard-Cossa, Jyh-Yeuan (Eric) Lee, Anna Panchenko and Mazdak Khajehpour. Thanks also to the organizers of the IUPAB Focused Meeting, John Baenziger, Corrie daCosta and Derek Bowie. Huge thanks for your efforts on behalf of the BSC! Thanks also to the members of the BSC Trainee Executive who put together the Trainee Symposium, which provides an opportunity to showcase the research of our trainees and allows them to build their professional networks. Finally, I would like to thank the financial sponsors of BSC 2022. Your contributions have allowed us to maintain the affordability of this meeting for all participants, for which we are grateful.

J’espère que vous serez stimulés par ce congrès et plus que jamais motivés à contribuer à notre société. I encourage you to get involved in our society!

Nancy Forde
President
Biophysical Society of Canada / Société de Biophysique du Canada

BSC 2022 LOCAL ORGANIZING COMMITTEE

John Baenziger
uOttawa

Vincent Tabard-Cossa
uOttawa

Jyh-Yeuan (Eric) Lee
uOttawa

Anna Panchenko
Queen’s University

Mazdak Khajehpour
University of Manitoba

IUPAB 2022 LOCAL ORGANIZING COMMITTEE

John Baenziger
uOttawa

Corrie daCosta
uOttawa

Derek Bowie
McGill University
BIOPHYSICAL SOCIETY OF CANADA - EXECUTIVE TEAM

Nancy Forde  
President

Claudiu Gradinaru  
Vice President

David Langelaan  
Treasurer

Suzanna Straus  
Membership

Zoya Leonenko  
Past President

Cécile Fradin  
e-News

Mazdak Khajehpour  
BSC Meetings

Nicolas Doucet  
Awards

Leonid Brown  
Awards

Justin MacCallum  
Awards

Isaac Li  
Web & Social Media

Sarika Kumari  
Trainee Representative

Vishal Pandya  
Trainee Representative

BSC 2022 TRAINEE SYMPOSIUM LOCAL ORGANIZING COMMITTEE

Toka Hussein  
Graduate student

Anna Ananchenko  
Graduate student

Mariam Taktek  
Graduate student

Rebecca Dean  
Graduate student

Megan Miaro  
Graduate student

Deepansh Mody  
Graduate student

Department of Biochemistry, Microbiology and Immunology, Department of Chemistry and Biomolecular Sciences, University of Ottawa.

BIOPHYSICAL SOCIETY OF CANADA – TRAINEE EXECUTIVE TEAM

Sarika Kumari  
President  
Memorial University of Newfoundland

Vishal Pandya  
Vice President  
Memorial University of Newfoundland

Benjamin Baylis  
Member at Large  
University of Guelph

Tam Pham  
Member at Large  
Dalhousie University

Alaa Al-Shaer  
Member at Large  
Simon Fraser University

Alex Brown  
Member at Large  
Dalhousie University

MacAulay Harvey  
Member at Large  
Saint Mary’s University

Emily Prowse  
Member at Large  
McGill University

Jeff Simmons  
Member at Large  
Dalhousie University

Kathleen Vergunst  
Member at Large  
Dalhousie University

Samira Rasouli Koohi  
Member at Large  
University of Alberta

Alyssa Oke  
Member at Large  
Simon Fraser University
CONFERENCE LOCATION

University of Ottawa maps: https://maps.uottawa.ca/

Meeting location – CRX Learning Crossroads
100 Louis-Pasteur Private, Ottawa, ON K1N 9N3
CONFERENCE LOCATION

CRX Learning Crossroads, 100 Louis-Pasteur Private
RESTAURANTS AND TAKE-OUT OPTIONS FOR LUNCH

Searching “restaurants near me” on google maps will give you many options close to campus. Due to the pandemic, some options on campus are closed. We recommend going off campus to either Sandy Hill (Zone 1 on the map below), to Elgin Street via the pedestrian bridge over the Rideau canal (Zone 2) or to the Byward Market (Zone 3) (either on foot or via the O-train West to the Rideau stop (1 stop from campus) where you will find over 70 options!

Zone 1 – uOttawa & Sandy Hill (< 1 km)
- Première Moisson: Social Sciences Building, 120 University Private
- Le Bac à frites (Foodtruck): 56 University Private
- Freshii: 50 Laurier Ave. E
- Subway: 50 Laurier Ave. E & 231 Laurier Ave. E
- Father & Sons Restaurant: 112 Osgoode St.
- 3 Brothers Shawarma & Poutine: 124 Osgoode St.
- No Forks Given: 191 Rue Somerset St. E
- In’s Kitchen - 1-65 Templeton St.
- CoCo Fresh Tea & Juice - 218 Laurier Ave. E.
- Second Cup Café - 153 Laurier Ave. E.

Zone 2 – Elgin Street (~15 min walk via pedestrian bridge next to O-train)
- Johnny Farina: 216 Elgin St.
- Zak’s Diner Elgin St: 220 Elgin St.
- Sir John A Pub: 284 Elgin St.
- PI·RHO Grill: 346 Elgin St.
- Pure Kitchen Elgin: 340 Elgin St.

Zone 3 – Byward Market (<10 min by O-Train, ~20 min walk): Check out over 70 options here: [https://www.byward-market.com/](https://www.byward-market.com/)
The IUPAB-BSC Mixer (Tuesday evening, May 24th) will be held at the Aulde Dubliner & Pour House, 62 William St. The BSC Banquet (Thursday evening, May 26th) will be held at the Side Door Restaurant, 18b York St. Both are in Zone 3 in the Byward Market.
COVID INFORMATION

Covid Safety and Mask Policy: Learning Crossroads (CRS) is a new building with modern ventilation. The organizers chose this location for the IUPAB - BSC conference because the lobby, where the coffee breaks and poster sessions will take place, is spacious with high ceilings. The conference auditorium (CRX-C140) seats 350 people and is thus much larger than required for the IUPAB - BSC conference. This will ensure that there is ample spacing for attendees during the conference lectures. To ensure the safety of those on campus, the University of Ottawa has extended its current mandatory masking policy until the end of May. Wearing a mask is always mandatory, except when seated to eat. You can find more information here: [https://www.uottawa.ca/coronavirus/en/be-part-of-a-safe-return](https://www.uottawa.ca/coronavirus/en/be-part-of-a-safe-return). The organizers ask that all attendees adhere to the masking policy in consideration of the health and safety of fellow attendees.

COVID Testing: Countries, such as the United States of America, require a negative COVID test prior to boarding your return flight. Pre-travel testing is NOT available at the Ottawa International Airport. Below are private providers that offer pre-travel clearance tests. For more information, including clickable links, go to [https://yow.ca/en/recovery](https://yow.ca/en/recovery).

- Appletree Medical Clinic
- Bridle Path Pharmasave
- LifeLabs
- MD Connected/JC Health
- PCR Travel Test Ontario
- Riverside Travel Medical Clinic
- Shoppers Drug Mart

Rapid antigen screening is available at the Shoppers Drug Mart located in the Rideau Center, a short walk from CRX. PCR Travel Test Ontario offers a range of tests (rapid antigen, expedited RT-PCR and regular RT-PCR), but is a 15-minute drive from CRX. Please make yourself aware of the testing requirements for your return travel and, if required, book the appropriate test well in advance of your return flight. You can use the above links to book an appointment for the appropriate test. Especially for Shoppers Drug Mart, make sure that you choose the Rideau Center location.

REGISTRATION INFORMATION

The registration desk is in the atrium of the Learning Crossroads (CRX) Building across from the lecture hall (CRX-C140) where all talks will take place.

<table>
<thead>
<tr>
<th>Hours of registration</th>
<th>Time</th>
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<tbody>
<tr>
<td>Monday May 23</td>
<td>8:00 AM - 12:00 AM</td>
</tr>
<tr>
<td>Tuesday May 24</td>
<td>10:00 AM – 6:00 PM</td>
</tr>
<tr>
<td>Wednesday May 25</td>
<td>8:00 AM - 1:00 PM</td>
</tr>
<tr>
<td>Thursday May 26</td>
<td>10:00 AM - 13:00 PM</td>
</tr>
</tbody>
</table>
RECEPTION INFORMATION

IUPAB - BSC Mixer: Tuesday May 24, 5:30 PM - 8:00 PM at the Aulde Dubliner & Pour House, 62 William St in the Byward Market

Banquet: Thursday May 26, 6:00 PM - 10:00 PM at the Side Door Restaurant, 18b York St. in the Byward Market

Closing Reception: Weather permitting, those interested will meet for an informal gathering on the patio for drinks and/or dinner at Social, 537 Sussex Dr. in the Byward Market from 5:30 to 8:00 PM. The patio is in the courtyard adjacent to the Side Door Restaurant.

POSTER INFORMATION

The poster board size is 4’ (width) x 4’ (height). The poster sessions for both the IUPAB and BSC meetings will be held in the lobby of CRX. The poster boards for the IUPAB meeting will be available on the morning of Monday, May 23rd. IUPAB posters should remain in place until noon on Wednesday May 25th. The numbering of the IUPAB posters is listed on page 30 (abstracts are on the conference website). The boards for the BSC posters will be available by noon on Wednesday, May 25th, although many will be empty earlier. BSC posters should remain in place until noon on Friday, May 27th. The numbering of the BSC posters is listed on page 31 (abstracts on the conference website). Poster viewing will be held during lunch breaks and/or coffee breaks. The main catered BSC poster session with poster judging will be Wednesday evening, May 25th, from 6:10 PM to 9:00 PM. Presenters with odd-numbered posters should be at their posters from 6:30 PM to 7:30 PM. Presenters with even-numbered posters should be at their posters from 7:30 PM to 8:30 PM. Everyone is welcome to visit posters at their leisure.

ACCESSIBILITY AND INCLUSION

Accessibility Parenting Resources
If you have disability-related accommodation needs or parenting-resources needs, please contact Vincent Tabard-Cossa (tcossa@uottawa.ca) to work with you to make appropriate arrangements. This may include, for example, information about accessible services on campus.

Washroom Inclusivity
A list of washrooms that are inclusive to all, regardless of gender identity: https://www.uottawa.ca/respect/accessibility-hub/available-washrooms-all-regardless-gender-identity

Multi-faith Spaces at uOttawa:
https://www.uottawa.ca/respect/accessibility-hub/Multi-faith_spaces

Campus Maps
Campus maps with directions, parking, buildings, accessibility, etc.: https://maps.uottawa.ca/
The Biophysical Society of Canada is excited to partner with the International Union of Pure and Applied Biophysics to host this fabulous joint meeting!

ABOUT THE INTERNATIONAL UNION OF PURE AND APPLIED BIOPHYSICS

The International Union for Pure and Applied Biophysics (IUPAB: http://iupab.org/) was formed in Stockholm in 1961 as the International Organisation for Pure and Applied Biophysics. It was established as the International Union in 1966, when it became a member of the ICSU (International Council for Science) family. Affiliated to it are the national adhering bodies of 61 countries. Its function is to support research and teaching in biophysics. Its principal regular activity is the triennial International Congresses and General Assemblies.

The IUPAB "Focused" meeting is a new initiative promoted by the IUPAB. The IUPAB Focused Meeting “The biophysics of ligand-gated ion channels: from structures to drug discovery” is the inaugural IUPAB Focused Meeting!

ABOUT THE BIOPHYSICAL SOCIETY OF CANADA

The Biophysical Society of Canada (BSC: https://biophysicalsociety.ca/) was officially formed in 1985 by a group of Canadian scientists led by Don Chapman (Cross Cancer Institute, Edmonton), Alan Groom (University of Western Ontario, London) and Ian Smith (then at the NRC Institute for Biological Sciences, Ottawa). The BSC has maintained close ties to the IUPAB throughout its existence, with a representative of the BSC sitting on the IUPAB council since the early 1970s. BSC founder, Ian Smith, served for many years as a member of council, and then as Vice-President and President of the IUPAB. The BSC hosted the highly successful 10th IUPAB congress in 1990 in Vancouver.

The BSC has evolved into an independent, dynamic and diverse society with membership from across Canada. Professional activities of the BSC include an annual meeting, sponsorship of symposia and trainee travel awards to both our annual meeting and the annual meeting of the US Biophysical Society, and the administration of society awards. The BSC sponsors prizes for the best student posters at the annual meeting of the BSC. Researchers who have made exceptional contributions to Biophysicists are recognized as Fellows of the Biophysical Society of Canada. Outstanding researchers are also recognized annually as the National Lecturer at the BSC meeting. Finally, outstanding contributions to the BSC are recognized by the Michele Auger award for exceptional service.
PLATINUM CORPORATE SPONSOR

nan]i[on
Joint IUPAB Focused Meeting and 7th ANNUAL MEETING of the BSC

uOttawa

ACADEMIC SPONSORS

uOttawa
Faculté de médecine
Faculty of Medicine

uOttawa
Département de chimie et sciences biomoléculaires
Department of Chemistry and Biomolecular Sciences

uOttawa
Département de physique
Department of Physics

uOttawa
Institut de recherche sur le cerveau
Brain and Mind Research Institute

uOttawa
Cellular and Molecular Medicine
Médecine cellulaire et moléculaire
PROGRAM OVERVIEW
All oral presentations and poster sessions will take place in the Learning Crossroads (CRX).

**Monday, May 23rd**

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:45 AM – 9:00 AM</td>
<td>Opening Remarks</td>
</tr>
<tr>
<td>9:00 AM – 10:30 AM</td>
<td>IUPAB Theme 1: TRP Channels</td>
</tr>
<tr>
<td>10:30 PM – 11:00 PM</td>
<td>Coffee Break &amp; IUPAB Posters</td>
</tr>
<tr>
<td>11:00 AM – 12:30 PM</td>
<td>IUPAB Theme 2: Pentameric Ligand-Gated Ion Channels</td>
</tr>
<tr>
<td>12:30 PM – 1:30 PM</td>
<td>Lunch &amp; IUPAB Posters</td>
</tr>
<tr>
<td>1:30 PM – 2:00 PM</td>
<td>Selected Talks</td>
</tr>
<tr>
<td>2:00 PM – 4:00 PM</td>
<td>IUPAB Theme 3: Muscle nAChRs</td>
</tr>
<tr>
<td>4:00 PM – 4:30 PM</td>
<td>Coffee Break &amp; IUPAB Posters</td>
</tr>
<tr>
<td>4:30 PM – 5:30 PM</td>
<td>IUPAB Keynote: Eric Gouaux</td>
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**Tuesday, May 24th**

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
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<tbody>
<tr>
<td>9:00 AM – 10:30 AM</td>
<td>IUPAB Theme 4: Fluorescence and Ligand-Gated Ion Channels</td>
</tr>
<tr>
<td>10:30 AM – 11:00 AM</td>
<td>Coffee Break &amp; IUPAB Posters</td>
</tr>
<tr>
<td>11:00 AM – 12:30 PM</td>
<td>IUPAB Theme 5: iGluRs</td>
</tr>
<tr>
<td>12:30 PM – 1:30 PM</td>
<td>Lunch &amp; IUPAB Posters</td>
</tr>
<tr>
<td>12:30 PM – 5:30 PM</td>
<td>Trainee Symposium (CRX-C240)</td>
</tr>
<tr>
<td>1:00 PM – 1:30 PM</td>
<td>Sponsor Presentation: Nanion Technologies</td>
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<tr>
<td>1:30 PM – 3:00 PM</td>
<td>IUPAB Theme 6: Inactivation and Desensitization</td>
</tr>
<tr>
<td>3:00 PM – 3:30 PM</td>
<td>Coffee Break &amp; IUPAB Posters</td>
</tr>
<tr>
<td>3:30 PM – 4:00 PM</td>
<td>Selected Talks</td>
</tr>
<tr>
<td>4:00 PM – 5:30 PM</td>
<td>IUPAB Theme 7: Computational Approaches to LGICs</td>
</tr>
<tr>
<td>5:30 PM – 8:00 PM</td>
<td>IUPAB-BSC Mixer: The Aulde Dubliner, 62 William St.</td>
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</table>

**Wednesday, May 25th**

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
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</thead>
<tbody>
<tr>
<td>8:45 AM – 9:00 AM</td>
<td>Opening Remarks</td>
</tr>
<tr>
<td>9:00 AM – 10:30 AM</td>
<td>IUPAB-BSC Session 1: Ligand-Gated Ion Channels</td>
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<tr>
<td>10:30 AM – 11:00 AM</td>
<td>Coffee Break and IUPAB Posters</td>
</tr>
<tr>
<td>11:00 AM – 11:40 AM</td>
<td>IUPAB – BSC Keynote: Henry Lester</td>
</tr>
<tr>
<td>11:40 AM – 1:45 PM</td>
<td>Lunch (IUPAB poster take down &amp; BSC poster set up)</td>
</tr>
<tr>
<td>1:15 PM – 1:45 PM</td>
<td>Sponsor Presentation: Malvern Panalytical</td>
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<tr>
<td>Time</td>
<td>Event</td>
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<td>--------------</td>
<td>--------------------------------------------</td>
</tr>
<tr>
<td>1:45 PM – 3:30 PM</td>
<td>BSC Session 2: Nanoscale Biophysics</td>
</tr>
<tr>
<td>2:10 PM – 2:25 PM</td>
<td>BSC Trainee Paper of the Year: Adam Yasunaga</td>
</tr>
<tr>
<td>2:50 PM – 3:30 PM</td>
<td>Keynote: Cees Dekker via Zoom</td>
</tr>
<tr>
<td>3:30 PM – 4:00 PM</td>
<td>Coffee Break &amp; BSC Posters</td>
</tr>
<tr>
<td>3:30 PM – 3:50 PM</td>
<td>Corporate Presentation: Sophion Bioscience</td>
</tr>
<tr>
<td>4:00 PM – 5:40 PM</td>
<td>BSC Session 3: Cellular Biophysics</td>
</tr>
<tr>
<td>5:40 PM – 6:10 PM</td>
<td>BSC YIA: Trushar Patel</td>
</tr>
<tr>
<td>6:10 PM – 9:00 PM</td>
<td>Catered BSC Poster Session</td>
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**Thursday, May 26th**

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
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</thead>
<tbody>
<tr>
<td>9:00 AM – 10:40 AM</td>
<td>BSC Session 4: Lipids and Membranes</td>
</tr>
<tr>
<td>10:40 AM – 11:10 AM</td>
<td>Coffee Break &amp; BSC Posters</td>
</tr>
<tr>
<td>11:10 AM – 12:25 PM</td>
<td>BSC Session 5: Biophysics of the Nucleus</td>
</tr>
<tr>
<td>12:25 PM – 2:30 PM</td>
<td>Lunch &amp; BSC Business Meeting (CRX-C407)</td>
</tr>
<tr>
<td>2:00 PM – 2:30 PM</td>
<td>Sponsor Presentation: Lumicks Technologies</td>
</tr>
<tr>
<td>2:30 PM – 4:25 PM</td>
<td>BSC Session 6: Biomolecular Structure and Dynamics I</td>
</tr>
<tr>
<td>2:30 PM – 3:10 PM</td>
<td>Coffee Break</td>
</tr>
<tr>
<td>4:45 PM – 5:00 PM</td>
<td>Trainee Travel and Poster Awards</td>
</tr>
<tr>
<td>5:00 PM – 5:40 PM</td>
<td>National Lecture: Julie Forman-Kay</td>
</tr>
<tr>
<td>6:00 PM – 10:00 PM</td>
<td>Banquet: Side Door Restaurant, 18b York St.</td>
</tr>
</tbody>
</table>

**Friday, May 27th**

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:30 AM – 10:10 AM</td>
<td>BSC Session 7: Single Molecule Biophysics</td>
</tr>
<tr>
<td>10:10 AM – 10:40 AM</td>
<td>Coffee Break &amp; BSC Posters</td>
</tr>
<tr>
<td>10:40 AM – 12:35 PM</td>
<td>BSC Session 8: Cells and Systems</td>
</tr>
<tr>
<td>11:55 AM – 12:35 PM</td>
<td>Keynote: Sandra Schmid</td>
</tr>
<tr>
<td>12:35 PM – 2:30 PM</td>
<td>Lunch</td>
</tr>
<tr>
<td>2:30 PM – 4:50 PM</td>
<td>Biomolecular Structure and Dynamics II</td>
</tr>
<tr>
<td>2:30 PM – 3:10 PM</td>
<td>Keynote: Sriram Subramaniam</td>
</tr>
<tr>
<td>4:50 PM – 5:00 PM</td>
<td>Closing Remarks</td>
</tr>
<tr>
<td>5:30 PM – 8:00 PM</td>
<td>Informal Closing Mixer on the patio at Social, 537 Sussex Dr.</td>
</tr>
</tbody>
</table>

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**Corporate Presentation:** Sophion Bioscience

**Keynote:** Sandra Schmid

**Closing Remarks**
# IUPAB Scientific Program

**Monday, May 23rd**

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Speaker(s)</th>
<th>Institution</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:45 AM</td>
<td>Welcoming Address</td>
<td>John Baenziger</td>
<td></td>
</tr>
<tr>
<td>9:00 AM – 10:30 AM</td>
<td><strong>IUPAB Theme 1: TRP Channels</strong></td>
<td>Vasanthi Jayaraman, Alexander Sobolevsky, Columbia University</td>
<td></td>
</tr>
<tr>
<td>9:00 AM</td>
<td>Structural mechanism of heat-induced opening of a temperature-sensitive TRP channel</td>
<td>Wei Lu</td>
<td>Van Andel Institute</td>
</tr>
<tr>
<td>9:30 AM</td>
<td>Activation and Inhibition of the “taste channel” TRPM5</td>
<td>Vera Moiseenkova-Bell</td>
<td>University of Pennsylvania</td>
</tr>
<tr>
<td>10:00 AM</td>
<td>Structural pharmacology of TRPV channels</td>
<td></td>
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<tr>
<td>10:30 AM – 11:00 AM</td>
<td><strong>Coffee Break and IUPAB Posters</strong></td>
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<tr>
<td>11:00 AM – 12:30 PM</td>
<td><strong>IUPAB Theme 2: Pentameric Ligand-Gated Ion Channels</strong></td>
<td>Rebecca Howard</td>
<td></td>
</tr>
<tr>
<td>11:00 AM</td>
<td>What can we do with and learn from the flexible intracellular domain of Cys-loop receptors?</td>
<td>Pei Tang</td>
<td>University of Pittsburgh School of Medicine</td>
</tr>
<tr>
<td>11:30 AM</td>
<td>Sites of allosteric modulation in a pentameric ligand-gated ion channel</td>
<td>Chris Ulens</td>
<td>KU Leuven</td>
</tr>
<tr>
<td>12:00 PM</td>
<td>The puzzling activity of the antidepressant Vortioxetine at 5-HT3 receptors</td>
<td>Hugues Nury</td>
<td>Institut de Biologie Structurale</td>
</tr>
<tr>
<td>12:30 PM – 1:30 PM</td>
<td><strong>Lunch and IUPAB Posters</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1:30 PM – 2:00 PM</td>
<td><strong>Selected Talks from Abstracts</strong></td>
<td>Ayman K Hamouda, Alican Gulsevin</td>
<td></td>
</tr>
<tr>
<td>1:30 PM</td>
<td>Unraveling the pharmacological differences between the two α4β2 nAChR isoforms using positive allosteric modulators</td>
<td></td>
<td>Vanderbilt University</td>
</tr>
<tr>
<td>1:45 PM</td>
<td>The Allosteric Activation of α7 nAChR by α-Conotoxin Mr1C Is Modified by Mutations at the Vestibular Site</td>
<td></td>
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</tr>
</tbody>
</table>
2:00 PM – 4:00 PM  **IUPAB Theme 3: Muscle-Type nAChRs**  
Chair: Pierre-Jean Corringer  
2:00 PM  Anthony Auerbach, SUNY at Buffalo  
*Agonist Efficiency*  
2:30 PM  Md Mahfuzur Rahman, UT Southwestern Medical Center  
*Asymmetric transitions and diverse antagonism of the muscle nicotinic receptor spontaneously*  
3:00 PM  Corrie daCosta, University of Ottawa  
*Ancestral acetylcholine receptor β-subunit forms homopentamers that prime before opening spontaneously*  
3:30 PM  Stephen Sine, Mayo Clinic  
*Conserved salt bridge regulates coupling between ion permeation and channel gating in muscle acetylcholine receptor*

4:00 PM – 4:30 PM  **Coffee Break & IUPAB Posters**

4:30 PM – 5:30 PM  **IUPAB Keynote Lecture**  
Chair: Derek Bowie  
4:30 PM  Eric Gouaux, Vollum Institute  
*How we hear*

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**Tuesday, May 24th**

9:00 AM – 10:30 AM  **IUPAB Theme 4: Fluorescence Spectroscopy and Ligand-Gated Ion Channels**  
Chair: Vera Moiseenkova-Bell  
9:00 AM  Pierre-Jean Corringer, Institut Pasteur  
*Illumination of progressive and variable allosteric mechanism mediating pentameric channel activation*  
9:30 AM  Vasanthi Jayaraman, University of Texas Health Science Center at Houston  
*Glutamate receptors from single molecules to synapses*  
10:00 AM  Baron Chanda, Washington University in St. Louis  
*Probing complex ligand binding allostery in pacemaker ion channels using single molecule measurements*

10:30 AM – 11:00 AM  **Coffee Break and IUPAB Posters**

11:00 AM – 12:30 PM  **IUPAB Theme 5: iGluRs**  
Chair: Alexander Sobolevsky  
11:00 AM  Lonnie Wollmuth, Stony Brook University  
*Pulling and pushing: Fast signaling via the NMDA receptor*
<table>
<thead>
<tr>
<th>Time</th>
<th>Speaker</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>11:30 AM</td>
<td>Terunaga Nakagawa, Vanderbilt University</td>
<td>Structure and mechanism of the AMPA receptor in complex with its auxiliary subunit</td>
</tr>
<tr>
<td>12:00 PM</td>
<td>Derek Bowie, McGill University</td>
<td>The inner workings of the AMPA receptor-auxiliary subunit complex</td>
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<tr>
<td>12:30 PM – 1:30 PM</td>
<td>Lunch and IUPAB Posters</td>
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</tr>
<tr>
<td>1:30 PM – 3:00 PM</td>
<td>IUPAB Theme 6: Inactivation and Desensitization</td>
<td>Chair: Corrie daCosta</td>
</tr>
<tr>
<td>1:30 PM</td>
<td>David MaClean, University of Rochester Medical Center</td>
<td>Mechanism of Acid-sensing ion channel desensitization</td>
</tr>
<tr>
<td>2:00 PM</td>
<td>Timothy Lynagh, University of Bergen</td>
<td>Comparative analysis of the FaNaC family identifies determinants of neuropeptide activity</td>
</tr>
<tr>
<td>2:30 PM</td>
<td>Kenton Swartz, National Institute of Neurological Disorders and Stroke</td>
<td>Structure of the Shaker Kv channel and mechanism of slow C-type inactivation</td>
</tr>
<tr>
<td>3:00 PM – 3:30 PM</td>
<td>Coffee Break and IUPAB Posters</td>
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<tr>
<td>3:30 PM – 4:00 PM</td>
<td>Selected Talks from Abstracts</td>
<td>Chair: Mackenzie Thompson</td>
</tr>
<tr>
<td>3:30 PM</td>
<td>Catherine Bergh, Stockholm University</td>
<td>State-Dependent Protein-Lipid Interactions in a Ligand-Gated Ion Channel</td>
</tr>
<tr>
<td>3:45 PM</td>
<td>Casey Gallagher, University of Sydney</td>
<td>Identification and characterization of lipids that are positive allosteric modulators of glycine receptors.</td>
</tr>
<tr>
<td>4:00 PM – 5:30 PM</td>
<td>IUPAB Theme 7: Computational Approaches to LGICs</td>
<td>Chair: Hugues Nury</td>
</tr>
<tr>
<td>4:00 PM</td>
<td>Grace Brannigan, Rutgers University - Camden</td>
<td>Computational prediction of specifically bound lipids for pentameric ligand-gated ion channels</td>
</tr>
<tr>
<td>4:30 PM</td>
<td>Philip Biggin, University of Oxford</td>
<td>TRPA1 activation by electrophile irritants through molecular dynamics simulation and mutual information analysis</td>
</tr>
<tr>
<td>5:00 PM</td>
<td>Rebecca Howard, Stockholm University</td>
<td>Structure and dynamics of conserved modulatory mechanisms in a pentameric ligand-gated ion channel</td>
</tr>
<tr>
<td>5:30 PM – 8:00 PM</td>
<td>IUPAB - BSC Mixer</td>
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</tbody>
</table>
Joint IUPAB Focused Meeting and 7th ANNUAL MEETING of the BSC
uOttawa May 23-27

TRAINEE SYMPOSIUM
Presentations in CRX-C240. Registration & Coffee in the Lobby of CRX

Tuesday May 24th

12:30 PM – 12:35 PM **Welcoming Address**
Sarika Kumari, President of the BSC Trainee Executive

12:35 PM – 3:00 PM **Career Session**
Chair: Sarika Kumari

12:35 PM Trushar Patel, Canada Research Chair, University of Lethbridge
1:05 PM Kyle Briggs, CEO & Co-Founder of Nothern Nanopore Instruments Inc.
1:35 PM Shawn McGuirk, Deputy Director of NSERC
2:05 PM Naman Shah, Senior Scientist, Paraza Pharma Inc.
2:35 Panel Discussion

3:00 PM - 3:30 PM **Coffee Break**

3:30 PM – 5:30 PM **Trainee Talks**
Chair: Vishal Pandya

3:30 PM Yanitza Trosel, Memorial University of Newfoundland
*Diffusion NMR of Alpha Synuclein in the presence of bacterial cell lysate crowders*

3:45 PM Vinayak Mull, Dalhousie University
*Adhesion force microscopy imaging reveals the charge distribution at the surface of single collagen fibrils*

4:00 PM Euan Joly-Smith, University of Toronto
*Inferring gene regulation from static snapshots of gene expression variability*

4:15 PM Thaisa Luup Carvalho Kannen, University of Toronto
*Multi-axis electromagnetic sample handler for live imaging of organoids structure and dynamics*

4:30 PM Sajad Shiekh, Kent State University
*Emerging Accessibility Patterns in Long Telomeric Overhangs*

4:45 PM Cynthia Shaheen, University of British Columbia
*Non-equilibrium structural dynamics of supercoiled DNA plasmids exhibits asymmetrical relaxation*

5:00 PM Thomas Tsangaris, University of Toronto
*Finding Order in Disorder: Modelling the Disordered Protein 4E-BP2*

5:15 PM Benjamin Baylis, University of Guelph
*Closing Remarks*

5:30 PM – 8:00 PM **IUPAB - BSC Mixer**
## IUPAB-BSC JOINT SCIENTIFIC PROGRAM

### Wednesday, May 25th

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Speaker(s)</th>
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<tbody>
<tr>
<td>8:45 AM</td>
<td><strong>Welcoming remarks</strong></td>
<td>John Baenziger, Department of Biochemistry, Microbiology and Immunology</td>
</tr>
<tr>
<td>9:00 AM – 10:30 AM</td>
<td><strong>IUPAB - BSC Session 1: Ligand-Gated Ion Channels</strong></td>
<td><strong>Chair:</strong> Chris Ulens</td>
</tr>
<tr>
<td>9:00 AM</td>
<td>Andrija Sente, MRC Laboratory of Molecular Biology</td>
<td><strong>Structural Diversity of GABA(\alpha) Receptors</strong></td>
</tr>
<tr>
<td>9:30 AM</td>
<td>Sudha Chakrapani, Case Western Reserve University</td>
<td><strong>Gating Mechanisms and Drug Modulation of Pentameric Ligand-Gated Ion channels</strong></td>
</tr>
<tr>
<td>10:00 AM</td>
<td>John Baenziger, University of Ottawa</td>
<td><strong>Conformational transitions and ligand-binding to a muscle-type nicotinic acetylcholine receptor</strong></td>
</tr>
<tr>
<td>10:30 AM - 11:00 AM</td>
<td><strong>Coffee Break and IUPAB Posters</strong></td>
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<tr>
<td>11:00 AM - 11:40 PM</td>
<td><strong>IUPAB – BSC Keynote Lecture</strong></td>
<td><strong>Chair:</strong> John Baenziger (University of Ottawa)</td>
</tr>
<tr>
<td>11:00 AM</td>
<td>Henry Lester, Caltech</td>
<td><strong>Subcellular Pharmacokinetics of Ion Channel Ligands</strong></td>
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<tr>
<td>11:40 PM - 1:45 PM</td>
<td><strong>Lunch Break (IUPAB poster take down &amp; BSC poster set up)</strong></td>
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<tr>
<td>1:15 PM - 1:45 PM</td>
<td><strong>Sponsor Talk: Malvern Panalytical</strong></td>
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<tr>
<td>1:45 PM – 3:30 PM</td>
<td><strong>BSC Session 2: Nanoscale Biophysics</strong></td>
<td><strong>Chair:</strong> Vincent Tabard-Cossa (University of Ottawa)</td>
</tr>
<tr>
<td>1:45 PM</td>
<td>Hendrick de Haan, Ontario Tech University</td>
<td><strong>Will it Leak? Spontaneous Translocation and Escape to DNA from Pourous Nanoconfinement</strong></td>
</tr>
<tr>
<td>2:10 PM</td>
<td>Adam Yasunaga, University of British Columbia Okanagan</td>
<td><strong>Quantification of fast molecular adhesion by fluorescence footprinting</strong></td>
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<tr>
<td>2:25 PM</td>
<td>Reuven Gordon, University of Victoria</td>
<td><strong>The Power of One: Seeing Proteins in Action</strong></td>
</tr>
<tr>
<td>2:50 PM</td>
<td>Cees Dekker, Delft University of Technology (Keynote via Zoom)</td>
<td><strong>Nanopores for studying single molecules – from motors to nuclear transport to protein sequencing</strong></td>
</tr>
<tr>
<td>3:30 PM – 4:00 PM</td>
<td><strong>Coffee Break &amp; BSC Posters</strong></td>
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<tr>
<td>3:30 PM – 3:50 PM</td>
<td><strong>Sponsor Talk: Sophion Bioscience</strong></td>
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</tbody>
</table>
4:00 PM – 5:40 PM **BSC Session 3: Cellular Biophysics**
Chair: Claudiu Gradinaru

4:00 PM Joshua Milstein, University of Toronto Mississauga
*Advancing spatial proteomics with quantitative single-molecule imaging*

4:25 PM David Cramb, Toronto Metropolitan University
*Serum Proteins on Nanoparticles: Rethinking the early “Protein Corona”*

4:50 PM Jonathan Rocheleau, University of Toronto
*Revealing pancreatic beta-cell metabolism using quantitative fluorescence microscopy*

5:15 PM Ruby Sullan, University of Toronto Scarborough
*Interfacial nanomechanical heterogeneity of the E. coli biofilm*

5:40 PM – 6:10 PM **BSC Young Investigator Award**
Chair: Nancy Forde, President of the BSC

Trushar Patel, University of Lethbridge
*Solution structure and interactions of non-coding RNAs*

5:40 PM – 9:00 PM **BSC Poster Session**

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**BSC SCIENTIFIC PROGRAM**

**Thursday, May 26**

9:00 AM - 10:40 AM **Session 4: Lipids and Membranes**
Chair: Rikard Blunck

9:00 AM Jayesh Kulkarni, NanoVation Therapeutics
*What is a lipid nanoparticle: On the role of lipids within LNP formulations of nucleic acid*

9:25 AM Valerie Booth, Memorial University of Newfoundland
*Unravelling How Surface-Active Peptides Interact with Cells Using Whole Cell Biophysical Techniques*

10:00 AM Trevor Moraes, University of Toronto
*Bacterial lipoprotein translocation*

10:25 AM Nazzareno D’Avanzo, Université de Montréal
*Computational Prediction of Phosphoinositide Binding to Hyperpolarization-Activated Cyclic-Nucleotide Gated (HCN) Channels*

10:40 AM - 11:10 AM **Coffee Break and BSC Posters**
<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
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</thead>
</table>
| 11:10 AM - 12:25 PM | **Session 5: Biophysics of the Nucleus**  
Chair: Mazdak Khajehpour |
| 11:10 AM     | Gil Privé, University of Toronto  
*Structure-guided design of small molecule inhibitors that target the BCL6 transcription factor* |
| 11:35 AM     | Alexey Onufriev, Virginia Tech  
*In search of structure-function connections in chromatin at the scale of the whole nucleus* |
| 12:00 AM     | Alba Guarne, McGill University  
*Structural basis for DNA targeting by the Tn7 transposon* |
| 12:25 PM - 2:30 PM | **Lunch & BSC Business Meeting (CRX-C407)** |
| 2:00 PM - 2:30 PM | **Sponsor Presentation: Lumicks** |
| 2:30 PM - 4:25 PM | **BSC Session 6: Biomolecular Structure and Dynamics I**  
Chair: Anna Panchenko |
| 2:30 PM      | Ruth Nussinov, The National Cancer Institute, NIH  
*Emerging Mechanisms of Activation in Cancer and their Linkage to Neurodevelopmental Disorders* |
| 3:10 PM      | Lois Pollack, Cornell University  
*Revealing the structural dynamics of biomolecules using x-rays and XFELs* |
| 3:35 PM      | Steven Smith, Queen’s University  
*Molecular determinants regulating macromolecular complex assembly and function* |
| 4:00 PM      | Guiseppe Melacini, McMaster University  
*Allosteric Regulation of Protein Kinases* |
| 4:25 PM - 4:45 PM | **Coffee Break and Posters** |
| 4:45 PM - 5:00 PM | **BSC Trainee Travel and Poster Awards**  
Chair: Nancy Forde, President of the BSC |
| 5:00 PM - 5:40 PM | **Fellow of the Biophysical Society of Canada & National Lecture**  
Chair: Nancy Forde, President of the BSC  
Julie Forman-Kay, University of Toronto  
*Regulation of biochemistry and biomolecular condensates by post-translational modifications of intrinsically disordered protein regions* |
<p>| 5:40 PM - 6:30 PM | <strong>Travel to Side Door Restaurant (18b York St., Ottawa)</strong> |
| 6:30 PM - 10:00 PM | <strong>Conference Banquet at Side Door Restaurant</strong> |</p>
<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Chair(s)</th>
<th>Speaker(s)</th>
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<tbody>
<tr>
<td>8:30 AM - 10:10 AM</td>
<td><strong>BSC Session 7: Single Molecule Biophysics</strong></td>
<td>Cécile Fradin</td>
<td>Stacey Wetmore, University of Lethbridge</td>
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<td>8:30 AM</td>
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<td><em>The Structure and Dynamics of Modified Nucleic Acids from Computer Modeling</em></td>
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<td>8:55 AM</td>
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<td>Claudiu Gradinaru, University of Toronto Mississauga</td>
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<td>8:55 AM</td>
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<td><em>Defining the structure of disordered proteins – from single-molecule experiments to integrative modelling</em></td>
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<td>9:20 AM</td>
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<td>Paul Higgs, McMaster University</td>
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<td>9:20 AM</td>
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<td><em>Computer Simulations of Non-Enzymatic Template-Directed RNA Synthesis</em></td>
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<td>9:45 AM</td>
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<td>Sébastien Côté, Université de Montréal</td>
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<td>9:45 AM</td>
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<td><em>The electrostatic gating of carbon nanotube field-effect biosensors characterized at the molecular scale using simulations</em></td>
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<td>10:10 AM - 10:40 AM</td>
<td><strong>Coffee Break and Posters</strong></td>
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<tr>
<td>10:40 AM - 12:35 AM</td>
<td><strong>BSC Session 8: Cell and Systems</strong></td>
<td>Jyh-Yeuan (Eric) Lee</td>
<td>Laurent Bozec, University of Toronto</td>
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<td>10:40 AM</td>
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<td><em>Exploration of nanoscale dermal collagen fibrils phenotype to define human skin biological age</em></td>
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<td>11:05 AM</td>
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<td>Paul Francois, McGill University</td>
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<td>11:05 AM</td>
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<td><em>Absolute discrimination and universal antigen encoding by T cells</em></td>
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<td>11:30 AM</td>
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<td>Aidan Brown, Toronto Metropolitan University</td>
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<td>11:30 AM</td>
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<td><em>Origins of protein concentration noise in mitochondria</em></td>
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<td>11:55 AM</td>
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<td>Sandra Schmid, Chan Zuckerberg Biohub</td>
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<td>11:55 AM</td>
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<td><em>Dynamin: The prototypical membrane fission GTPase</em></td>
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<tr>
<td>12:35 PM – 2:30 PM</td>
<td><strong>Lunch</strong></td>
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<tr>
<td>2:30 PM - 4:50 PM</td>
<td><strong>BSC Session 9: Biomolecular Structure and Dynamics II</strong></td>
<td>John Baenziger</td>
<td>Sriram Subramaniam, University of British Columbia</td>
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<td>2:30 PM – 3:10 PM</td>
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<td><em>Cryo-EM of Dynamic Molecular Assemblies</em></td>
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<td>3:10 PM – 3:35 PM</td>
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<td>Jan Rainey, Dalhousie University</td>
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<td>3:10 PM – 3:35 PM</td>
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<td><em>Applying structure and dynamics to engineer (dys)functional recombinant silks</em></td>
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<td>3:35 PM – 4:00 PM</td>
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<td>Rachel Mansbach, Concordia University</td>
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<td>3:35 PM – 4:00 PM</td>
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<td><em>Free Energy Landscapes of Disulfide-rich Peptide Toxins</em></td>
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<td>4:00 PM – 4:25 PM</td>
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<td>Robert Thorne, Cornell University</td>
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<td>4:00 PM – 4:25 PM</td>
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<td><em>Physical aspects of sample preparation for single-particle cryo-em and time-resolved crystallography</em></td>
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<td>Time</td>
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</table>
| 4:25 PM - 4:50 PM | Elizabeth Meiering, University of Waterloo  
A fine balance of hydrophobic-electrostatic communications pathways in a pH-switching protein |
| 4:50 PM - 5:00 PM | Closing Remarks  
BSC Organizing Committee |
| 5:00 PM -     | Informal Closing Mixer at Social, 537 Sussex Dr. |
Notes
IUPAB POSTER SESSION (abstracts online)  
(Tuesday, May 23rd until noon on Wednesday, May 25th)

01 - Alican Gulsevin: Vanderbilt University  
The Allosteric Activation of α7 nAChR by α-Conotoxin MrIC Is Modified by Mutations at the Vestibular Site

02 - Amanda Perozzo: McGill University  
Alternative splicing of AMPA receptor signalling complexes

03 - Anna Ananchenko: University of Ottawa  
Probing cholesterol and anionic lipid binding to the nicotinic acetylcholine receptor using MD simulations

04 - Casey Gallagher: University of Sydney  
Identification and characterization of lipids that are positive allosteric modulators of glycine receptors

05 - Christian Tessier: University of Ottawa  
Ancestral acetylcholine receptor β-subunit forms homomers with spontaneous activity

06 - Daniel Sauter: Sophion Bioscience Inc.  
Characterization of the rapidly desensitizing α7 nicotinic acetylcholine receptor using the Qube

07 - Ezry Santiago-McRae: Center for Computational and Integrative Biology, Rutgers University - Camden  
Computational Prediction of Specifically Bound Lipids on Pentameric Ligand Gated Ion Channels

08 - Federico Miguez Cabello: McGill University  
Functional analysis of pathological variants on the GluA2 AMPA receptor subunit

09 - Mackenzie J. Thompson: University of Ottawa  
The coupling of binding and gating in a muscle-type acetylcholine receptor

10 - Xin-tong Wang: McGill University  
AMPA receptor auxiliary subunits TARP γ2 and CNIH-3 attenuate polyamine block through different structural mechanisms
BSC POSTER SESSION (abstracts online)
(noon on Wednesday, May 25th until noon on Friday, May 27th)

Biomolecular Structure and Dynamics

01 - Simisola Ajayi: University of Manitoba
Investigating the effects of various co-solvents on protein folding

02 - Iman Asakereh: University of Manitoba
Hofmeister Effects of Group II Cations as Seen in the Unfolding of Ribonuclease A

03 - Alexandra Brown: Dalhousie University,
Investigating the molecular mechanisms of a melanogenic transcription factor and its co-activator

04 – Robert Cocciardi: Malvern Panalytical
Enzyme kinetics assays with Isothermal Titration Calorimetry

05 – Hossein Davarinejad: University of Ottawa
The histone H3.1 variant regulates TONSOKU-mediated DNA repair during replication

06 - Sara Evans: Dalhousie University
Reducing the disulfide bond in mutant aciniform spider silk

07 – Emma Ferguson: Dalhousie University
Optimization of the Purification and the Refolding of RquA

08 – Anupama Ghimire: Dalhousie University
Development and characterization of recombinant hybrid spider silks

09 – Sabrina Grégoire: University of Ottawa
Probing the mutational landscape of the CFP1 PHD domain.

10 – Isha Jogleka: University of Texas at Arlington
pH effects on the stability and folding of monomeric caspases

11 – Euan Joly-Smith: University of Toronto
Inferring gene regulation from static snapshots of gene expression variability

12 – Brayden Kell: University of Toronto
Achieving robust perfect adaptation while suppressing stochastic fluctuations in biochemical reaction networks

13 – Justin Sung-Ho Kim: University of Toronto
Conformational Changes of Proteins Induced by Electric Fields in Crystal Simulations

14 – Gabriel Lacroix: Université de Montréal
Structural determinants of shifted KV6.4 inactivation kinetics

15 – Robert Lu: University of Toronto
Domain specific interactions promote tropoelastin coacervation

16 – Trilok Neupane: Dalhousie University
Investigating the mechanism of rhodoquinone biosynthesis

17 – Hanieh Rezasoltani: University of Manitoba
Effect of various salts on the tetramerization of Melittin
18 – Cynthia Shaheen: University of British Columbia
Non-equilibrium structural dynamics of supercoiled DNA plasmids exhibits asymmetrical relaxation

19 - Sophie Shi: Sorbonne Université
Illumination of a progressive and variable allosteric mechanism mediating the glycine receptor activation

20 – M. Quadir Siddiqui: University of Lethbridge
Deciphering the role of Zyxin LIM domains in Cell Proliferation

21 – Jeffrey Simmons: Dalhousie University
Solving the Atomic-Level Structure of Recombinant Pyriform Silk

22 - Bahareh Taghavi Shahraki: University of Manitoba
Effect of Salts on Enzyme Activity: Using Ribonuclease A as a Model System

23 – Yanitza Trosel: Memorial University of Newfoundland
Diffusion NMR of Alpha Synuclein in the presence of bacterial cell lysate crowders

24 – Kathleen L. Vergunst: Dalhousie University
Characterizing the structure and assembly of hydrophobin proteins

Lipids and Membranes

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