The Protein Society is a not-for-profit scholarly society with a mission to advance state-of-the-art science through international forums that promote communication, cooperation, and collaboration among scientists involved in the study of proteins.

For 31 years, The Protein Society has served as the intellectual home of investigators across all disciplines - and from around the world - involved in the study of protein structure, function, and design. The Society provides forums for scientific collaboration and communication and supports professional growth of young investigators through workshops, networking opportunities, and by encouraging junior researchers to participate fully in the Annual Symposium. In addition to our Symposium, the Society’s prestigious journal, Protein Science, serves as an ideal platform to further the science of proteins in the broadest sense possible.
Welcome to Montreal and to the 2017 31st Annual Symposium of the Protein Society!

This year’s Symposium recognizes accomplished and emerging scientific achievements in the field and offers opportunities for networking and collaboration. The Program Committee, chaired by John Kuriyan, has organized twelve exciting sessions covering a broad range of topics in protein science, and presented by a stimulating group of speakers. We are proud to feature almost 30% of our talks from contributed submissions, and urge you not to miss the talks by this year’s award winners, presented in three sessions throughout the Symposium. If you do have to miss one, you can read about the award-winning work in a future special issue of Protein Science, the Society journal. Finally, I encourage you to participate in the numerous fun activities we’ve planned for Montreal – from the mixers and social events, to the mentoring and education panels, and our Members’ Reception (which is open to all).

As we celebrate more than 3 decades of impact in the protein science field, we find ourselves challenged by the future and driven to advocate for the importance of scientific research in the United States and across the world. I urge you to engage in important dialogues within our community and, of growing importance, with the public on the critical need for scientific research.

Thank you for joining us in our 31st Annual Symposium in Montreal. We are pleased to recognize our collaboration with Canada’s PROTEO network in this new adventure and hope you will take advantage of everything our Symposium has to offer. Please take a few moments to give us your feedback and suggestions for improvement in the survey you’ll receive at the end of the conference. We are committed to strengthening our events to meet the needs of our members and constituents, and your honest feedback will directly shape our future events.

Kind Regards,

Carol B. Post, Ph.D.
Committees

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The Protein Society is extremely grateful to the following sponsors for their generosity and continued support:

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BECKMAN COULTER Life Sciences

MITSUBISHI CHEMICAL CORPORATION

PALL FortéBio

SILVER SPONSORS

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WILEY

Thank you for helping us celebrate 31 years of impact.
Registration

The Registration Area will open at 5:00 p.m. on Sunday, July 23 (refer to hours below). Registration includes admission to all scientific and poster sessions, exhibits, and one delegate bag. Registration does not include any meals.

**Hours**

<table>
<thead>
<tr>
<th>Day</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sunday, July 23:</td>
<td>5:00 p.m. - 8:00 p.m.</td>
</tr>
<tr>
<td>Monday, July 24:</td>
<td>7:30 a.m. - 6:30 p.m.</td>
</tr>
<tr>
<td>Tuesday, July 25:</td>
<td>7:30 a.m. - 6:30 p.m.</td>
</tr>
<tr>
<td>Wednesday, July 26:</td>
<td>8:30 a.m. - 7:00 p.m.</td>
</tr>
<tr>
<td>Thursday, July 27:</td>
<td>8:30 a.m. - 12:00 p.m.</td>
</tr>
</tbody>
</table>

**Badge/Delegate Pickup**

All registrants must go to the Symposium Registration Desk on the Lower Level. All attendees are required to wear their badge at all times. In addition to being a means of identification, the name badge is required for admission to scientific sessions and exhibits. Each registrant will receive one t-shirt and one delegate bag.
**General Info**

**Live Mobile App**
The PS31 Mobile App provides on-the-go Symposium information including a program planner, poster presentations info, exhibitor list, social media updates, #PS31 alerts, and maps. The Protein Society’s “PS31” mobile application is available for download in the Apple App Store and Google Play. You can view/create schedules, view abstracts, and interact virtually with speakers using the app.

**Cameras/Video Recording**
The unauthorized use of cameras/video recording inside session rooms or among the posters is prohibited.

**Mobile Devices**
As a courtesy to your fellow attendees, please silence all cell phones prior to entering a session room.

**Certificates of Attendance**
All attendees will receive a certificate of attendance via email in PDF format after the Symposium.

**Internet Access**
There is complimentary wi-fi internet access for the Symposium in the meeting space. Please use the following information to gain access:
Network Name: PS31    Password: PS312017

**Photography**
Registration for the meeting implies consent to having photographs taken and to their use by officials of The Protein Society, or their representatives, for editorial and promotional purposes, on the Society website, social media outlets, and publications. Recordings of any kind (audio taping, videotaping, camera, tablets, or cell phones) in the session rooms, exhibit hall, and poster areas are strictly prohibited, unless accompanied by a member of the Society staff. Any individual seen taking photographs of any session or presentation will be escorted out by security.

**Social Media**
The Society staff will be updating its Facebook page, Instagram, and Twitter feed with Annual Meeting information throughout the meeting. Follow us on: Facebook: www.facebook.com/ProteinSociety; www.instagram/proteinsociety; Twitter: @ProteinSociety, use hashtag #PS31.

**Public Transportation**
Public transportation is a great way to see the city. Hop on the metro, and it’s only about 10 - 15 minutes to a myriad of museums, attractions, and restaurants and to Old Montréal.

A special transit pass, called the Carte touristique, has been designed specifically for individuals attending conventions in Montréal. It gives holders unlimited access to the city’s public transportation system for one or three days depending on the pass purchased. This includes the use of four subway lines accessed by 60 metro stations, as well as more than 150 bus routes.

- $3.00 CA for a one-way ticket
- $9.00 CA for a one-day Carte touristique
- $18.00 CA for a three-day Carte touristique

All rates quoted above are subject to change.

For more information about public transportation in Montreal, please visit www.stm.info.

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For more information about public transportation in Montreal, please visit www.stm.info.
**General Info**

**Poster Set Up & Removal**
The poster set-up is taking place on Sunday, July 23, 5:00 – 8:00 p.m. and on Monday, July 24, 7:30 – 11:00 a.m. All posters will be up during the whole Symposium. The dimensions of the posters must not exceed 94 cm in width x 127 cm in height (3 feet wide X 4 feet high). Each poster presenter is responsible for removing his own poster at the end of the Symposium, on Wednesday, July 26, 7:30 – 9:00 p.m. and on Thursday, July 27, 7:30 – 11:30 a.m. We will dispose of any posters that are left behind.

**Poster Viewing Times**
Posters are on display from Monday morning until Wednesday evening in the Exhibit and Poster Hall (Fontaine A - H). During the following shifts, exhibitors will be on hand, and a Mix & Mingle networking reception taking place:

- **Monday, July 24:**
  - 11:30 a.m. - 1:30 p.m.
  - 4:30 - 6:30 p.m.*

- **Tuesday, July 25:**
  - 11:30 a.m. - 1:30 p.m.
  - 4:30 - 6:30 p.m.*

- **Wednesday, July 26:**
  - 11:30 a.m. - 1:30 p.m.
  - 5:30 - 7:00 p.m.*

*Presentations

**General Info**

**TPS Membership**

<table>
<thead>
<tr>
<th>Category</th>
<th>1-Year Standard</th>
<th>2-Year Standard</th>
<th>5-Year Standard</th>
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<td>Undergraduate</td>
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<td>$50</td>
<td></td>
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<tr>
<td>Graduate</td>
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<td>$90</td>
<td></td>
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<tr>
<td>Early-Career</td>
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<td>$180</td>
<td>$475</td>
</tr>
<tr>
<td>Lab Staff</td>
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<tr>
<td>Full</td>
<td>$200</td>
<td>$380</td>
<td>$950</td>
</tr>
<tr>
<td>Emeritus</td>
<td>$25</td>
<td>$40</td>
<td>$115</td>
</tr>
</tbody>
</table>

**Individual Memberships**
TPS members represent an international community of all those who share an interest in the structure, function, design, synthesis, and utilization of proteins. In fact, it is this diversity of disciplines and perspectives represented by TPS members that is the group’s defining characteristic.

Members include chemists, biologists, physicists, and mathematicians—researchers of all stripes, whose collaboration and communication comprise the Society’s core mission. They represent academia, industry, government, non-profits, and leading institutions in more than 50 nations.

**Benefits Include:**

**Annual Symposium and Awards**
- Members save as much as 50% for the Annual Symposium
- Get funding for your local protein-centered mini-symposium, workshop, or other event with a Member Mini-Grant
- Connect with TPS leaders and have a say in the direction of your Society
- Only members can submit or sponsor an abstract for the Best Poster Competition
- Nominate your colleagues for one of seven prestigious TPS awards
- Eligibility to submit a contributed talk or be considered for a Young Investigator Talk
- Design your own session at an upcoming Symposium
General Info

Protein Science Benefits
- Complimentary online access to the premier journal focused on all aspects of protein science
- $250 discount on publication fees
- Pain-Free Publishing: Fast turnaround under the guidance of Editor-in-Chief Brian Matthews
- Reduced open-access fees from publisher Wiley Blackwell

Networking and Leadership
- Connect and collaborate privately with other members through the Member Directory or the members-only LinkedIn group
- Be eligible to vote - or stand yourself - for TPS Executive Council, Nominating Committee, and other leadership roles
- Stay informed with the monthly member e-news

Legislative Action
- Public affairs representation through FASEB

Publish with Protein Science
We want your work

- Flagship journal of The Protein Society
- Peer review by world-class editorial board
- Open access options (discount for TPS members!)
- Fast publication and high-quality copy-editing
- Extensive circulation and dedicated social media promotions

Announcing New Article Type!
Now accepting submissions of Tools for Protein Science, articles describing computational procedures, databases, web servers and other tools that will be readily accessible and useful to the protein science community at large.

See our latest special issues
- Special Issue on Molecular Machines
  Guest edited by Dr. Carlos Bustamante, this issue represents a limited set of the many applications of single molecule methods to the study of molecular machines, written by several leaders of the field.
- Virtual Issue: Protein Science Canada
  Read this new Virtual Issue edited by EIC Dr. Brian Matthews celebrating highlighted works by Canadian authors.

Use this QR code or visit our journal webpage to see our latest special issues.
The 2017 recipient of this award is Dr. Billy Hudson. Hudson has worked tirelessly to develop the Aspinaut K-20 STEM Pipeline for Diversity Program that provides internships to an untapped pool of talented high-school students to encourage them to work in the STEM fields and go on to college. Hudson’s outstanding research accomplishments include seminal discoveries about the structure and chemistry of collagen IV scaffolds in extracellular basement membranes and have led to a potential treatment of diabetic kidney disease.

Kazuhiro Nagata, Ph.D. - Kyoto Sangyo University
2017 Hans Neurath Award Winner

In 2017, the Hans Neurath Awardee is Dr. Kazuhiro Nagata. Nagata has made fundamental discoveries advancing our understanding of protein quality control in the endoplasmic reticulum. Dr. Nagata’s research focuses on functional analysis of collagen-specific molecular chaperone, Hsp47; functional analysis of mammalian ER quality control and ER-associated degradation; and ER-associated degradation of misfolded proteins by the EDEM-ERdj5 system.

Billy Hudson, Ph.D. - Vanderbilt University
2017 Carl Brändén Award Winner

The 2017 award will be presented this year to two deserving nominees. The first is Dr. Juli Feigon. Feigon’s structural studies on proteins has largely evolved around proteins interacting with DNA or RNA, and has revealed interactions crucial to understanding DNA repair and regulation of gene expression. Feigon’s recent accomplishment is structural analysis of the Tetrahymena telomerase complex, a multisubunit ribonucleoprotein complex responsible for the maintenance of telomeres. The structures provide new mechanistic knowledge of telomere function associated with aging and cancer.

Juli Feigon, Ph.D. - University of California, Los Angeles
2017 Dorothy Crowfoot Hodgkin Award Winner

The co-recipient of the Dorothy Crowfoot Hodgkin Award is Dr. Manajit Hayer-Hartl (Max Planck Institute of Biochemistry). For the past 2 decades Dr. Hayer-Hartl has investigated the mechanism of GroEL and its co-factor GroES. This work led to the insight that the chaperonin, in addition to preventing aggregation, profoundly influences the free-energy landscapes for some proteins by accelerating folding through entropic destabilization of unfolded states in the confining environment of the folding cage, a mechanism that can be considered specific to chaperonin.

Manajit Hayer-Hartl, Ph.D. - Max Planck Institute
2017 Dorothy Crowfoot Hodgkin Award Winner
The 2017 recipient is Dr. Thomas Muir. Muir is known for his innovative work to develop semisynthetic approaches, known as “expressed protein ligation,” to manipulate covalent structure of proteins. By combining tools of organic chemistry, biochemistry and cell biology, Muir has developed a suite of new technologies for making proteins with defined post-translational modifications, enabling functional studies of how proteins work that would otherwise not be possible. The chemistry-driven approaches pioneered by the Muir lab are now widely used by chemical biologists around the world.

The 2017 recipient is Dr. John Kuriyan (University of California, Berkeley). Kuriyan’s major scientific contributions have been in understanding the regulation of eukaryotic cell signaling and the phenomenon of processivity in DNA repair. His contributions include seminal studies on the structural basis of regulating protein interactions and molecular mechanisms associated with cancer. These insights come from work on protein kinases such as the Src-family kinases, Abl kinase, the epidermal growth factor receptor and Ca2+/calmodulin-dependent kinase II.

The 2017 recipient is Dr. David Pagliarini (University of Wisconsin, Madison). From the earliest point in his career, Pagliarini has made substantive and lasting contributions to our understanding of mitochondrial protein function. Taking an interdisciplinary approach, Pagliarini has revealed that a large number of mitochondrial proteins have no established function, and many are associated with human disease. His goal is to use a range of techniques to connect “orphan” proteins with mitochondrial pathways and processes.

* Dr. Kay will speak at the 2018 Annual Symposium in Boston, MA.
Charlotte Miton, Ph.D. - University of British Columbia
2017 Best Paper Award Winner

Charlotte Miton is something of a world traveler. Following completion of her Master’s degree in France, she participated in research projects in Mexico and Italy before undertaking her Ph.D. in Cambridge with Drs. F. Hofkelder and M. Hyvonen. Following her Ph.D work, she joined Dr. Nobuhiko Tokuriki at UBC in Vancouver, with whom she shares a passion for tracking and elucidating the mechanisms behind functional transitions, mutational interactions, and conformational changes that result from evolutionary selection. Dr. Tokuriki describes Charlotte as a “bona fide” scientist. She is, he says, an “old-school scientist,” but meant in the best way. “She is really meticulous and dives into every detail of the project...which often led to exciting findings.”

Zach Schaefer - University of Chicago
2017 Best Paper Award Winner

Zach Schaefer joined the laboratory of Dr. Anthony A. Kossiakoff at the University of Chicago to learn more about the chemical basis of molecular recognition—a protein’s ability to selectively interact with a target partner in the complex milieu of the body’s interior. Dr. Kossiakoff’s research contributed extensively to our understanding of the molecular determinates for specific and high affinity protein-protein interactions. With this knowledge, the lab has developed a powerful minimalist synthetic antibody discovery platform, which provided new models to explore the basis for protein interaction specificity. Our findings shed light on the mechanisms governing an important constraint for all cellular proteins, which is the requirement to maintain interaction specificity. This research has important implications for the design of affinity reagents, and demonstrates that protein interaction specificity can be directly targeted without compromising affinity.

Best Paper Award Winners

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Travel Awards

Congratulations to the following outstanding students and early-career investigators for receiving travel assistance to attend The 31st Annual Symposium of The Protein Society.

Under the strong belief that our Symposia presents an invaluable opportunity for future protein scientists, The Protein Society is committed to making it possible for young scientists to participate and benefit from our Annual Meeting by awarding the Finn Wold Travel Awards. The leadership and Executive Council of The Protein Society also THANKS the recent donors to the Finn Wold Travel Awards Fund. The Protein Society would also like to recognize the Hans Neurath Foundation for supporting the generous Hans Neurath Outstanding Promise Travel awards and Wiley, for supporting the Protein Science travel awards.

2017 Hans Neurath Outstanding Promise Travel Awards

Martine Abboud, University of Oxford
Christopher Bahl, University of Washington
Ksenia Beyrakhova, University of Saskatchewan
Kelan Chen, The Walter and Eliza Hall Institute of Medical Research
Hokyung Kay Chung, Stanford University
Claire de March, Duke University
Mainak Guharoy, VIB-VUB Center for Structural Biology
Chen Li, Biomedicine Discovery Institute, Monash University
Varunavas D. Mouchlis, University of California, San Diego
Jirka Peschek, University of California, San Francisco
Cesar Antonio Ramirez-Sarmiento, Institute for Biological & Medical Engineering, Schools of Engineering, Medicine and Biological Sciences, Pontificia Universidad Catolica de Chile

Finn Wold and Protein Science Travel Award Recipients

Claudia Alvarez, University of Toronto
Jeanine Amacher, University of California, Berkeley
Amir Babalhavaeji, University of Toronto
Sara Banerjee, Centre de Recherche sur le Cancer, PROTEO
Shanadeen Begay, Northeastern University
Alyssa Benn, Grand Valley State University
Kristyna Bousova, Czech Academy of Sciences
G. Patricia Casas, La Trobe University

Devika Channaveerappa, Clarkson University
Liah Clark, Biomedicine Discovery Institute
Samuel Craven, University of Wisconsin - Madison
Matthew Dominguez, Eastern New Mexico University
Emmalyn Dupree, Clarkson University
Saatchal Erramilli, University of Chicago
Min Fey Chek, Nara Institute of Science and Technology (NAIST)
Alec Fraser, University of Texas Medical Branch
María Frigole-Vivas, Institute for Research in Biomedicine (IRB Barcelona)
Natalie J. Galanti, University of Toronto
Kendra Hailey, University of California, San Diego
Brett Janis, University of Louisville
Evan Koutos, Lehigh University
Xuni Li, University of Massachusetts - Amherst
Huixin (Lulu) Lu, University of Toronto
Girik Malik, Nationwide Children’s Hospital
Emilia Marijanovic, Monash University
Ivo Martins, Universidade de Lisboa
Camille McAvoy, California Institute of Technology
Calilfn Mills, Northeastern University
Elena Morena-Cordova, Centro de Investigación en Alimentación y Desarrollo
Neha Nandwani, National Centre for Biological Sciences
Denise Okaror, Emory University
Remy Peace, Boston University
Cecilia Pérez-Borracho, University of British Columbia
João Pessoa, Instituto de Medicina Molecular, Faculdade de Medicina, Universidade de Lisboa
Monasi Pethe, Rutgers University
Claudia Rodríguez Almazán, Universidad Nacional Autónoma de México
Sneha Roy, Jawaharlal Nehru University
Maryam Raeessazadeh Sarmazdeh, Mayo Clinic-Cancer Biology Department
Neelam Shah, Monash University
Ishankumar Soni, University of Massachusetts - Amherst
Taylor Stewart, Tufts University
Senmiao Sun, Brandeis University
Matthew Tillman, Emory University
Marie-Aude Tschopp, Swiss Federal Institute of Technology
Thirumalanai Selvi Ulaganathan, University of Saskatchewan
Melissa Webby, University of Auckland
Joy Yang, University of Auckland, School of Biological Sciences
Heehong Yang, School of Chemical and Biological Engineering, Seoul National University
At A Glance

NOMINATIONS

Call For

The Protein Society presents awards annually to distinguished scientists. These seven awards recognize excellence & outstanding achievements in the multidisciplinary fields of protein science and honor contributions in the areas of leadership, education & service.

We will present the 2018 Awards at The Protein Society’s 32nd Annual Symposium, July 9 - 12, 2018, in Boston, Massachusetts. The deadline to submit complete award nomination packages for the 2018 Awards cycle is noon (EDT) on September 30, 2017.

WWW.PROTEINSOCIETY.ORG
Program

Day 1 - Monday, July 24, 2017

Opening Plenary Session
8:30 - 9:10 a.m. | Montreal Ballroom

8:30 - 8:35 a.m. Intro & Welcome From The Protein Society President
Carol B. Post, Purdue University

8:35 - 8:40 a.m. Presentation of the Hans Neurath Award* to Kazuhiro Nagata

8:40 - 9:10 a.m. Protein Quality Control in the Endoplasmic Reticulum
Kazuhiro Nagata, Institute for Protein Dynamics, Kyoto Sangyo University; Kyoto, Japan
*Sponsored by the Hans Neurath Foundation

Coffee Break | 9:10 - 9:40 a.m. | Foyer

CONCURRENT MORNING SESSION 1
Synthetic Biology
9:40 - 11:30 a.m. | Westmount/Mt. Royal/Hampstead/Cote-St. Luc

9:40 - 9:45 a.m. Introduction From Chair
David Kwan, Concordia University; California, United States

9:45 - 10:15 a.m. Defining a Mechanistic Framework for the Role of Scaffold Proteins in Cell Signaling Networks
Jesse Zalatan, University of Washington; Seattle, Washington, United States

10:15 - 10:45 a.m. Perceiving and Recording Signals in Mammalian Cells
Michael Elowitz, California Institute of Technology; Pasadena, California, United States

10:45 - 11 a.m. Protein Science Best Paper Award Winner
A Polar Ring Endows Improved Specificity to an Antibody Fragment
Zachary Schaefer, University of Chicago; Chicago, Illinois, United States

11 - 11:30 a.m. Understanding Cellular Heterogeneity
Sarah Teichmann, Wellcome Trust Sanger Institute; Cambridge, United Kingdom

CONCURRENT MORNING SESSION 2
Protein Dynamics & Allostery
9:40 - 11:30 a.m. | Outremont/Verdun/Lachine/LaSalle

9:40 - 9:45 a.m. Introduction From Chair
Duy P. Hua, Oberlin College; Ohio, United States

9:45 - 10:15 a.m. Protein Mechanics: The Link Between Structure, Function, and Evolution
Rama Ranganathan, University of Texas Southwestern Medical Center; Dallas, Texas, United States

10:15 - 10:45 a.m. Allostery in a Monomeric Enzyme Uncovered by Saturating Mutagenesis
C. Robert Matthews, University of Massachusetts Medical School; Worcester, Massachusetts, United States

10:45 - 11 a.m. Conservation of Conformational Motions Impacting Function in an Enzyme Superfamily
Chitra Narayanan, INRS - University of Quebec, Laval, Canada

11 - 11:30 a.m. Birth of the Cool: Multi-Temperature Crystallography Predicts Allosteric Response
James Fraser, University of California, San Francisco; California, United States

LUNCH
11:30 a.m. - 1:30 p.m.
Networking Lunch (RSVP-ONLY EVENT) | Salon Ville Marie
Boxed Lunch Pick Up Station | Fontaine

Poster Displays & Exhibits Open | Salons Fontaine - Lower Level
CONCURRENT AFTERNOON SESSION 1
Protein Folding
1:30 - 4:30 p.m. | Westmount/Mt. Royal/Hampstead/Cote-St. Luc

1:30 - 1:35 p.m.
Introduction From Chair
Michael Woodside, University of Alberta; Alberta, Canada

1:35 - 2:05 p.m.
Engineering the Folding and Function of Tandem-Repeat Proteins
Laura Itzhaki, University of Cambridge; Cambridge, United Kingdom

2:05 - 2:35 p.m.
Consensus Stabilization, Folding Cooperativity, and Function in Repeat and Globular Proteins
Doug Barrick, Johns Hopkins University; Baltimore, Maryland, United States

2:35 - 2:50 p.m.
Organoselenium Compounds: A New Class of Oxidative Folding Reagent
Kenta Arai, Tokai University; Hiratsuka-shi, Japan

Coffee Break | 2:50 - 3:15 p.m. | Foyer and Fontaine

3:15 - 3:45 p.m.
Mapping the Folding Energy Landscape of a Single Membrane Protein
Tae-Young Yoon, Korea Advanced Institute of Science and Technology; Seoul, South Korea

3:45 - 4 p.m.
Entropically-Challenged Tandem-Repeat Proteins: Breakdown of Nearest-Neighbor Cooperativity
Albert Perez-Riba, University of Cambridge; Cambridge, England, United Kingdom

4 - 4:30 p.m.
Latin American Protein Society Exchange Speaker
Breaking Down Protein Metamorphosis: Primary Drivers Behind the Structural Transformation of the Bacterial Virulence Factor RfaH
Cesar Ramirez-Sarmiento, Pontificia Universidad Catolica de Chile; Santiago, Chile

CONCURRENT AFTERNOON SESSION 2
Ubiquitin-Proteasome System
1:30 - 4:30 p.m. | Outremont/Verdun/Lachine/LaSalle

1:30 - 1:35 p.m.
Introduction From Chair
Juliette Lecomte, Johns Hopkins University; Baltimore, Maryland

1:35 - 2:05 p.m.
Selectively Modulating Conformational States of USP7 Catalytic Domain
Erin Dueber, Genentech; San Francisco, California, United States

2:05 - 2:35 p.m.
A Small Protein, Big Impact - The Story of CSNAP
Michal Sharon, Weizmann Institute of Science; Rehovot, Israel

2:35 - 2:50 p.m.
Intrinsically Disordered Segments Regulate Cellular Protein Abundance by Encoding a Multilayer Degron Architecture
Mainak Guharoy, VIB-VUB Center for Structural Biology, Brussels, Belgium

Coffee Break | 2:50 - 3:15 p.m. | Foyer and Fontaine

3:15 - 3:45 p.m.
Structural Basis for the Regulation of the Anaphase Promoting Complex
David Barford, MRC Laboratory of Molecular Biology; Cambridge, United Kingdom

3:45 - 4 p.m.
Ubiquitin Receptors Mediate Proteasomal Processivity
Daniel Kraut, Villanova University, Villanova, Pennsylvania, United States

4 - 4:30 p.m.
Protein Chemical Synthesis for Biochemical Studies of Ubiquinated Proteins
Changlin Tian, University of Science and Technology of China, Hefei, China

POSTERS OPEN, EXHIBITS, MIX & MINGLE
4:30 - 6:30 p.m. | Salons Fontaine - Lower Level

EDUCATION & MENTORING MIXER (RSVP-ONLY-EVENT)
8:00 - 10:00 p.m. | St. Paul Hotel
Program

Day 2 - Tuesday, July 25, 2017

NEW MEMBER WELCOME BREAKFAST/MEMBER BUSINESS MEETING
7:30 - 8:15 a.m. | Pointe-Aux-Trembles

CONCURRENT MORNING SESSION 1
Amyloids & Chaperones
8:30 - 11:30 a.m. | Westmount/Mt. Royal/Hampstead/Cote-St. Luc

8:30 - 8:35 a.m.
Introduction From Chair
Sanela Martic, Oakland University; Michigan, United States

8:35 - 9:05 a.m.
Folding & Misfolding of Immature Superoxide Dismutase Associated with ALS
Elizabeth Meiering, University of Waterloo; Waterloo, Canada

9:05 - 9:35 a.m.
Characterizing Chaperone/Client Interactions with Functional Proteomics
Mikko Taipale, University of Toronto; Toronto, Canada

9:35 - 9:50 a.m.
Understanding the Structure and Function of UDP-Glucose: Glycoprotein Glucosyltransferase (UGGT), A Unique Sensor of Misfolded Glycoproteins in ER
Meng Yang, McGill University; Montreal, Canada

COFFEE BREAK | 9:50 - 10:15 a.m. | Foyer and Fontaine

10:15 - 10:45 a.m.
How Does the Prion Protein Begin to Misfold?
Jayant Udgaonkar, National Center Biological Sciences; Bangalore, India

10:45 - 11:15 a.m.
Chaperone-Client Interactions: From Basic Principles to Roles In Health and Disease
Sebastian Hiller, University of Basel; Basel, Switzerland

11:15 - 11:45 a.m.
Disorder-to-Order Transitions in the Regulation of Synaptic Vesicle Release
David Eliezer, Weill Cornell Medicine; New York, New York, United States

CONCURRENT MORNING SESSION 2
Approaches to Therapeutics
8:30 - 11:30 a.m. | Outremont/Verdun/Lachine/LaSalle

8:30 - 8:35 a.m.
Introduction From Chair
Jean-Francois Trempe, McGill University; Quebec, Canada

8:35 - 9:05 a.m.
Germline-Targeting Vaccine Design for HIV
William Schief, Scripps Research Institute; La Jolla, California; United States

9:05 - 9:35 a.m.
If In Doubt, Compute: A Computational Approach to Biomedicine
Gianni De Fabritiis, Universitat Pompeu Fabra; Barcelona, Spain

9:35 - 9:50 a.m.
Generation of Allosteric Chaperones to Treat G6PD (Glucose-6-Phosphate Dehydrogenase) Deficiency
Sunhee Hwang, Stanford University; Stanford, California, United States

COFFEE BREAK | 9:50 - 10:15 a.m. | Foyer and Fontaine

10:15 - 10:45 a.m.
Role of Short Linear Motifs in Selective Autophagy
Vladimir Kirkin, The Institute of Cancer Research; London, United Kingdom

10:45 - 11:15 a.m.
Polycomb Repressive Complex 2 Structure With Inhibitor Reveals a Mechanism of Activation & Drug Resistance
Alexei Broun, Pfizer; San Diego, California, United States

11:15 - 11:45 a.m.
A Fast, Open Source Implementation of Adaptive Biasing Potentials: Applications to Drugging the Human Chromatic Regulator BRD4 and Plant Hormone Receptor PYL2
Brad Dickson, Van Andel Research Institute; Grand Rapids, Michigan, United States

LUNCH | 11:30 a.m. - 1:30 p.m.
Boxed Lunch Pick Up Station | Fontaine

12:00 - 1:30 p.m. | Educators’ Luncheon (RSVP-ONLY EVENT) | Fundy

11:30 a.m. - 1:00 p.m. | Exhibitor Workshop: Pall ForteBio LLC | Salon Bonaventure
Program

Day 2 - Tuesday, July 25, 2017 (cont.)

CONCURRENT AFTERNOON SESSION 1
Analysis of Large Complexes
1:30 - 4:30 p.m. | Westmount/Mt. Royal/Hampstead/Cote-St. Luc

1:30 - 1:35 p.m. Introduction From Chair
Kalle Gehring, McGill University; Montreal, Canada

1:35 - 2:05 p.m. Kinetochores Structure(s)
Stephen Harrison, Harvard Medical School; Boston, Massachusetts, United States

2:05 - 2:35 p.m. Cryo-EM at Atomic Resolution
Sriram Subramaniam, National Institutes of Health; Bethesda, Maryland, United States

2:35 - 2:50 p.m. CaMKII Biophysics and Its Role In Long-Term Potentiation
Margaret Stratton, University of Massachusetts, Amherst; Amherst, Massachusetts, United States

Coffee Break I 2:50 - 3:15 p.m. | Foyer and Fontaine

3:15 - 3:45 p.m. Supramolecular Complexes In Immunity
Hao Wu, Harvard Medical School; Boston, Massachusetts, United States

3:45 - 4 p.m. Structural and Functional Insight Into the Epigenetic Regulator SMC HD1
Kelan Chen, The Walter and Eliza Hall Institute of Medical Research; Parkville, Australia

4 - 4:30 p.m. The Mechanisms for Counting and Handoff By Human DNA Primase: A Role for the 4Fe-4s Cluster?
Walter Chazin, Vanderbilt University; Nashville, Tennessee, United States

CONCURRENT AFTERNOON SESSION 2
Transient Protein-Protein Interactions
1:30 - 4:30 p.m. | Outremont/Verdun/Lachine/LaSalle

1:30 - 1:35 p.m. Introduction From Chair
Joelle Pelletier, PROTEO, University of Montreal; Montreal, Canada

1:35 - 2:05 p.m. Engineering Bispecific Antibodies to Control the Mechanism-of-Action of Therapeutic Agents
Gavin MacBeath, Abpro; Woburn, Massachusetts, United States

2:05 - 2:35 p.m. Functional Dynamics of Proteins By NMR
Ichio Shimada, University of Tokyo; Tokyo, Japan

2:35 - 2:50 p.m. Legionella Effectors Interfering With Host Cell Phosphoproteome: Structural Insights Into Host-Pathogen Interactions
Ksenia Beyrakhova, University of Saskatchewan; Saskatoon, Canada

Coffee Break I 2:50 - 3:15 p.m. | Foyer and Fontaine

3:15 - 3:45 p.m. Investigating Chromatin Protein Interactions Using Mass Spectrometry-Based Proteomics
Petra Beli, Institute of Molecular Biology; Mainz, Germany

3:45 - 4 p.m. De Novo Design of Antivirulence Therapeutics Based On Genetically Encodable, Hyperstable Constrained Peptides
Christopher Bahl, University of Washington; Seattle, Washington, United States

4 - 4:30 p.m. Rational Design of Proteins That Exchange on Functional Timescales
Roberto Chica, University of Ottawa; Ottawa, Canada

POSTER PRESENTATIONS, EXHIBITS, MIX & MINGLE
4:30 - 6:30 p.m. | Salons Fontaine - Lower Level

MENTORING PANEL (RSVP-ONLY EVENT)
6:45 - 7:45 p.m. | INRS-Énergie Matériaux et Télécommunications Place Bonaventure
CONCURRENT MORNING SESSION 1
Protein Evolution
8:30 - 11:30 a.m. | Westmount/Mt. Royal/Hampstead/Cote-St. Luc

8:30 - 8:35 a.m. Introduction From Chair
Nobuhiko Tokuriki, University of British Columbia; Vancouver, Canada

8:35 - 9:05 a.m. Distal Substitutions Alter Conformational Space to Create New Functions Among Paralogous Transcription Factors
Eric Ortlund, Emory University; Atlanta, Georgia, United States

9:05 - 9:35 a.m. Molecular Ensembles Make Evolution Unpredictable
Mike Harms, University of Oregon; Eugene, Oregon, United States

9:35 - 9:50 a.m. Protein Science Best Paper Award Winner
How Mutational Epistasis Impairs Predictability in Protein Evolution and Design
Charlotte Miton, University of British Columbia; Vancouver, Canada

COFFEE BREAK I 9:50 - 10:15 a.m. | Foyer and Fontaine

10:15 - 10:45 a.m. Estimating the Contribution of Selection for Folding Stability to Epistasis in Protein Evolution
Pouriah Dasmeh, Université de Montréal; Montréal, Canada

10:45 - 11:15 a.m. Domain Family Analysis Reveals Insights Into Structure and Function of Yeast SH3 Domains
Elliott Stollar, Eastern New Mexico University; Portales, New Mexico, United States

11:15 - 11:45 a.m. Structural Insights on Protein Evolution
Christine Orengo, University College London; London, United Kingdom

CONCURRENT MORNING SESSION 2
Structural Insights Into Ion-Transporting Membrane Proteins
8:30 - 11:30 a.m. | Outremont/Verdun/Lachine/LaSalle

8:30 - 8:35 a.m. Introduction From Chair
Joachim Krebs, Max Planck Institute for Biophysical Chemistry; Göttingen, Germany

8:35 - 9:05 a.m. Cryo-EM Studies of IP3R Channel in Different Functional States
Irina Serysheva, University of Texas Health Science Ctr.; Houston, Texas, United States

9:05 - 9:35 a.m. Conformational Memory in SERCA Regulatory Complexes
Howard Young, University of Alberta, Edmonton, Canada

9:35 - 9:50 a.m. X-ray Crystal Structures of the Influenza A M2 Proton Channel Bound to Amphidamine, Rimantadine, and Inhibitors
Jessica Thomaston, University of California, San Francisco; San Francisco, California, United States

COFFEE BREAK I 9:50 - 10:15 a.m. | Foyer and Fontaine

10:15 - 10:45 a.m. Structure and Mechanism of Ryanodine Receptor
Rouslan Efremov, VIB Structural Biology Research Ctr.; Brussels, Belgium

10:45 - 11:15 a.m. Recent Advances in Structural Studies of P-type ATPases
Haruo Ogawa, University of Tokyo; Tokyo, Japan

11:15 - 11:45 a.m. Lorne Exchange Speaker
The Structural Biology of Complex IV Assembly
Megan Maher, La Trobe University, Melbourne, Australia

LUNCH
11:30 a.m. - 1:30 p.m.

Noon | Undergraduate Research Session | Pointe-Aux-Trembles
Poster Displays & Exhibits Open | Salons Fontaine - Lower Level
PLENARY AWARDS SESSION
1:30 - 5:30 p.m. | Montreal Ballroom

1:30 - 1:35 p.m. Introduction from The Protein Society President
Carol B. Post, Purdue University

1:35 - 1:40 p.m. Presentation of the Dorothy Crowfoot Hodgkin* Award

1:40 - 2:10 p.m. Integrative Structural Biology of Telomerase
2017 Dorothy Crowfoot Hodgkin Award Winner
Juli Feigon, University of California, Los Angeles;
Los Angeles, California, United States

2:10 - 2:15 p.m. Presentation of the Dorothy Crowfoot Hodgkin* Award

2:15 - 2:45 p.m. Chaperone Machineries in RuBisCO Biogenesis and Metabolic Repair
2017 Dorothy Crowfoot Hodgkin Award Winner
Manajit Hayer-Hartl, Max Planck Institute of Biochemistry; Martinsried, Germany

2:45 - 2:50 p.m. Presentation of the Carl Brändén** Award

2:50 - 3:20 p.m. Building Collagen IV Smart Scaffolds On the Outside of Cells
2017 Carl Brändén Award Winner
Billy Hudson, Vanderbilt University Medical Center;
Brentwood, Tennessee, United States

COFFEE BREAK I 3:20 - 3:45 p.m. | Foyer and Fontaine

3:45 - 3:50 p.m. Presentation of the Protein Science Young Investigator Award***

3:50 - 4:20 p.m. Mitochondrial Proteins, Pathways, and Pathogenesis
2017 Protein Science Young Investigator Award Winner
David Pagliarini, Morgridge Institute for Research;
Madison, Wisconsin, United States

4:20 - 4:25 p.m. Presentation of the Emil Thomas Kaiser Award

4:25 - 4:55 p.m. Painting Chromatin With Synthetic Protein Chemistry
2017 Emil Thomas Kaiser Award Winner
Thomas Muir, Princeton University; Princeton,
New Jersey, United States

4:55 - 5:05 p.m. Presentation of the Protein Society Service Awards

5:05 - 5:30 p.m. Presentation of the Hans Neurath Outstanding Promise Travel Awards****

POSTERS OPEN, EXHIBITS, MIX & MINGLE
5:30 - 7:30 p.m. | Salons Fontaine - Lower Level

MEMBERS’ RECEPTION (all welcome)
8:45 - 10:45 p.m. | Montreal Ballroom
Presentation of the Best Poster Competition Winners

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Day 4 - Thursday, July 27, 2017

CONCURRENT MORNING SESSION 1
Intrinsically-Disordered Proteins & Phase Transitions
8:30 - 10:20 a.m. | Westmount/Mt. Royal/Hampstead/Cote-St. Luc

8:30 - 8:35 a.m. Introduction From Chair
Regis Pomes, Hospital for Sick Children; Ontario, Canada

8:35 - 9:05 a.m. Autoinhibition by Disordered Linkers: Regulation of Motility, Transcription and Viral Replication
Elisar Barbar, Oregon State University; Corvallis, Oregon, United States

9:05 - 9:35 a.m. Decoding Molecular Plasticity in the Dark Proteome
Edward Lemke, European Molecular Biology Laboratory; Heidelberg, Germany

9:35 - 9:50 a.m. Endocytosis Caused by Liquid-Liquid Phase Separation of Proteins
Louis-Phillippe Bergeron-Sandoval, Université de Montréal; Montréal, Canada

9:50 - 10:20 a.m. Disordered Proteins Populate Diverse Conformational Landscapes: From Disordered Clusters to Phase Separated Scaffolds
Richard Kriwacki, Saint Jude Children’s Research Hospital; Memphis, Tennessee, United States

CONCURRENT MORNING SESSION 2
Advances in Membrane Proteins
8:30 - 10:20 a.m. | Out remont/Verdun/Lachine/LaSalle

8:30 - 8:35 a.m. Introduction From Chair
Joshua Levitz, Weill Cornell Medicine; New York, United States

8:35 - 9:05 a.m. Membrane Proteins - The Lipid Connection
Carol Robinson, Oxford University; Oxford, United Kingdom

9:05 - 9:35 a.m. Structure of the Mitochondrial ATP Synthases and Its Role In Cristae Biogenesis
Karen Davies, Lawrence Berkeley National Lab; Berkeley, California, United States

9:35 - 9:50 a.m. Predicting Deleteriousness of Genetic Variations In Membrane Proteins
Julia Koehler Leman, New York University; New York, New York, United States

9:50 - 10:20 a.m. The Molecular Mechanism of P-type ATPase Ion Pumps
Benoit Roux, University of Chicago; Chicago, Illinois, United States

COFFEE BREAK | 10:20 - 10:50 a.m. | Foyer

CLOSING PLENARY and 2017 STEIN & MOORE AWARD
10:50 a.m. - 11:45 a.m.
Montreal Ballroom

10:50 - 10:55 a.m. Introduction from The Protein Society President and Presentation of the Stein & Moore Award Winner
Carol B. Post, Purdue University

10:55 - 11:25 a.m. Deconstructing the Ras Signaling Switch Through Saturation Mutagenesis
John Kuriyan, University of California, Berkeley; Berkeley, California, United States

11:25 - 11:45 a.m. Closing Remarks from The Protein Society President
Carol B. Post, Purdue University
MENTORING PANEL

July 25, 6:45 - 7:45 p.m.

RSVP-ONLY EVENT

Location:
INRS-Énergie Matériaux et Télécommunications à Place Bonaventure

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Booths 13, 14, 16

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<td>PL Membrane Proteins</td>
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<td>PQ Proteins in Cells</td>
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**Poster Session 2**

**Poster Session 2**

Tuesday, July 25, 4:30 - 6:30 p.m.  
Exhibit Hall - Room Fontaine A - H  
(All Posters Up)

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## Poster Session 3
**Wednesday, July 26, 5:30 - 7 p.m.**
Exhibit Hall - Room Fontaine A - H
(All Posters Up)

### Themes

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<td>80, 89, 137, 325, 332, 360, 430, 433, 484, 525</td>
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<td>PI Evolution</td>
<td>104, 171, 196, 206, 258, 280</td>
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<td>PJ Folding</td>
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<td>PL Membrane Proteins</td>
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### Board Numbers

POS014 **CELL WALL PIRACY BY SYNTHETIC ANALOGS REVEALS METABOLIC ADAPTATION IN VANCOMYCIN RESISTANT ENTEROCOCCI**
Marcos Pires, Sean Pidgeon
(1) Lehigh University (Bethlehem, United States)

POS015 **APPLICATION OF GAMMA-LINKED ATP-SEPHAROSE CAPTURE TECHNOLOGY TO THE STUDY OF NLRP INFLAMMASOMES**
Christina Sandall, Kuo-Chieh Liao, Annegret Ulke-Lemee, David Carlson, Timothy Haystead, Daniel Muruve, Justin Mac Donald
(1) Department of Biochemistry & Molecular Biology, University of Calgary, Cumming School of Medicine (Calgary, Canada)

POS016 **LARGE-SCALE PREDICTION, CHARACTERIZATION AND MODULATION OF PROTEASE ENZYME SPECIFICITY LANDSCAPE USING COMPUTATION AND EXPERIMENT**
Sagar Khare, Manasi Pethe, Aliza Rubenstein
(1) Rutgers University (Piscataway, United States)

POS017 **A PLACE FOR UNPUBLISHED GENE-TO-PROTEIN INFORMATION: THE RECOMBINANT PROTEOMIC DATABASE RESOURCE**
Peter Nollert, Mark Mixon
(1) Bio Data Bridges (Seattle, United States)

POS020 **CHAPERONE ACTIVITY OF THE N-TERMINAL SEQUENCE OF A HUMAN SMALL HEAT SHOCK PROTEIN**
Kathryn McMenimen, Elizabeth DeLeon, Mahima Poreddy, Emily Gilniewicz, Chenwei Wang
(1) Mount Holyoke College (South Hadley, United States)

POS022 **ODORANT RECEPTORS ACTIVATION DYNAMICS INVOLVES SPECIFIC SEQUENCE MOTIFS**
Claire de March, Elise Bruguera, Jérémie Topin, Jérôme Golebiowski, Hiroaki Matsunami
(1) Duke University (Durham, United States)

POS023 **EGCG DISAGGREGATES HUMAN Γ-SYNUCLEIN FIBRILS AND MODULATES THE PATHWAY TO FORM STABLE AND DISTINCT Oligomeric SPECIES**
Sneha Roy, Rajiv Bhat
(1) Jawaharlal Nehru University (New Delhi, India)
POS025  PROTEIN CHEMICAL SYNTHESIS FOR BIOCHEMICAL STUDIES OF BIQUITINATED PROTEINS
Changlin Tian (1)
(1) University of Science and Technology of China (Hefei, China)

POS027  MAMMALIAN CELL PROGRAMMING TARGETS TNFA SOURCES
Anam Qudrat (1)
(1) University of Toronto (Toronto, Canada)

POS028  LURE-ING THE MALE GAMETE: TALE OF POLLEN RECEPTOR KINASES AND THEIR ROLE IN POLLEN TUBE GROWTH
Sayan Chakraborty (1), Haiyun Pan, Guozhou Xu
(1) North Carolina State University (Raleigh, United States)

POS030  HTRA3 SERINE PROTEASE: ELUCIDATING THE COMPLEX REGULATORY MECHANISMS OF A UNIQUE CELL DEATH REGULATOR
Saujanya Acharya (1), Kakoli Bose
(1) ACTREC, India (Mumbai, India)

POS031  STRUCTURAL BASIS FOR INACTIVATION OF AN HTRA2/OMI VARIANT - IMPLICATION IN NEURODEGENERATION
Ajay Wagh (1), Kakoli Bose
(1) Actrec, India (Mumbai, India)

POS033  ORGANOSELENIUM COMPOUNDS: A NEW CLASS OF OXIDATIVE FOLDING REAGENT
Kenta Arai (1), Haruhito Ueno, Yuki Asano, Michio Iwaoka
(1) Department of Chemistry, School of Science, Tokai University (Hiratsuka-shi, Japan)

POS035  STRUCTURAL AND FUNCTIONAL ANALYSES OF A BACTERIAL QUORUM-SENSING SIGNAL PEPTIDE RECEPTOR PROTEIN
Yung-Hua Li (1), Xiao-Lin Tian
(1) Dalhousie University (Halifax, Canada)

POS036  REGULATED PROTEOLYSIS OF THE ALTERNATIVE SIGMA FACTOR SIGX DURING BACTERIAL COMPETENCE DEVELOPMENT
Yung-Hua Li (1)
(1) Dalhousie University (Halifax, Canada)

POS037  STRUCTURAL MODELING AND RATIONAL DESIGN OF SMALL MOLECULE ALLOSTERIC AGONISTS OF GLP-1 RECEPTOR
Tejashree Reddy (1), Zhijun Li
(1) University of the Sciences in Philadelphia (Philadelphia, United States)

POS038  GENERATING CA2+ SIGNALING VIA CHIMERAS IN MAMMALIAN CELLS
Anam Qudrat (1)
(1) University of Toronto (Toronto, Canada)

POS039  SYNTHETIC MCSF SOURCES ATTRACT PROTEIN CHIMERAS
Anam Qudrat (1)
(1) University of Toronto (Toronto, Canada)

POS040  VARIANT STRUCTURAL INTERMEDIATES OF A NOVEL HUMAN CALCIUM-BINDING PROTEIN, CALNUC
Vignesh Ravichandran (1), Gopala Krishna Aradhyam
(1) Department of Biotechnology, Bhupat and Jyoti Mehta School of Biosciences (Chennai, India)

POS041  IDENTIFICATION OF APAP COVALENT BINDING PROTEIN TARGETS IN RAT AND MOUSE LIVER BY 2D-LC-HRMS/MS
Ghazaleh Moghaddam (1)
(1) Université du Québec à Montréal, Chemistry Department, Montréal (QC), Canada (Montreal, Canada)

POS042  COMBINED STRATEGIES TO ACHIEVE A DESIRED LIGAND BINDING PROTEIN SPECIFICITY
Jesús Banda (1), Alejandro Sosa-Peinado, Sooruban Shannugaratnam, Birte Höcker, Rogelio Rodríguez-Sotres
(1) National Autonomous University of Mexico (Mexico City, Mexico)

POS044  PSEUDO-PSEUDOPHOSPHATASES: PHOSPHOCYSTEINE AS A REGULATOR OF PROTEIN PHOSPHATASE INTERACTIONS
Kalle Gehring (1)
(1) McGill University (Montreal, Canada)

POS045  ENGINEERING CAL-A TOWARDS DISCRIMINATION IN THE HYDROLYSIS OF SHORT VS LONG-CHAIN FATTY ESTERS
Daniela Quaglia (1)
(1) Université de Montreal (Montréal, Canada)
POS049 PHOSPHOLIPASE A2: A UNIQUE PARADIGM OF ALLOSTERIC REGULATION BY MEMBRANES
Vamvas D. Mouchlis1, J. Andrew McCammon, Edward A. Dennis
(1) University of California, San Diego (La Jolla, San Diego, United States)

POS050 NUCLEOPHOSMIN INTERACTS WITH PIN2/TERF1-INTERACTING TELOMERASE INHIBITOR 1 (PINX1) AND ATTENUATES THE PINX1 INHIBITION ON TELOMERASE ACTIVITY
Sai Tim Ho1
(1) The Chinese University of Hong Kong (Hong Kong, China)

POS053 SELECTIVE COVALENT DERIVATIZATION OF HEXAHISTIDINE TAG IN RECOMBINANT PROTEINS
Artem Melman1
(1) Clarkson University (Potsdam, United States)

POS054 ACTIVE SITE DISTORTION IN THE DISHEVELLED PDZ DOMAIN
Charles Sader1, Jie Zheng
(1) University of California, Los Angeles (Los Angeles, United States)

POS055 POLYCOMB REPRESSIVE COMPLEX 2 STRUCTURE WITH INHIBITOR REVEALS A MECHANISM OF ACTIVATION AND DRUG RESISTANCE
Alexei Broun1, Ketan Gajiwala
(1) Pfizer (San Diego, United States)

POS056 THE SYNTHESIS OF KERATAN SULFATE GLYCOSAMINOGLYCAN BY A GLYCOSYNTHASE APPROACH
Xiaohua Zhang1, David Kwan
(1) Concordia University (Montreal, Canada)

POS057 STRUCTURAL AND FUNCTIONAL STUDY OF LEGIONELLA PNEUMOPHILA EFFECTOR LPP0008
Ivy Yeuk Wah Chung1
(1) University of Saskatchewan (Saskatoon, Canada)

POS058 INCORPORATING A FUNCTIONAL MUTATION INTO A SYMMETRIC SCAFFOLD AS PROXY FOR FUNCTIONAL ADAPTATION VIA REARRANGEMENT OF ITS FOLDING NUCLEUS
Connie Tenorio1
(1) Florida State University (Tallahassee, United States)

POS059 A COMPLEX OF ARABIDOPSIS DRB PROTEINS CAN IMPAIR DSRNA PROCESSING
Marie-Aude Tschopp1, Nathan Pumplin, Taichiro Iki, Christopher Brosnan, Pauline Jullien
(1) Swiss Federal Institute of Technology

POS060 VISUALIZING THE FIRST STEPS OF A MEGAENZYME MAKING AN ANTIBIOTIC
Janice Reimer1
(1) McGill University (Montreal, Canada)

POS061 KINETIC AND STRUCTURAL CHARACTERIZATION OF THE EFFECTS OF MEMBRANE ON THE COMPLEX OF CYTOCHROME B5 AND CYTOCHROME C
Katherine Gentry1
(1) University of Michigan (Ann Arbor, United States)

POS062 EXPLORING THE CONFORMATIONAL SPACE OF ANTI-APOPTOTIC PROTEINS OF THE BCL-2 FAMILY
Luis Caro-Gomez1
(1) Instituto Politécnico Nacional (Mexico City, Mexico)

POS063 ALLOSTERIC MODULATION OF THE KINASE/RNASE IRE1A BY SMALL MOLECULES AND SCAFFOLDING KINASES
Hannah Feldman1, Shuhei Morita, Feroz Papa, Dustin J. Maly
(1) University of Washington (SEATTLE, United States)

POS064 A STUDY TO ESTABLISH THE IMPACT OF GLYCOXIDATION ON STRUCTURAL AND IMMUNOLOGICAL CHARACTERISTICS OF IGG ISOLATED FROM RHEUMATOID ARTHRITIS PATIENTS
Sidra Islam1
(1) Department of Biochemistry (Aligarh, India)

POS065 COMPARATIVE STUDY OF DEGRADATION EFFICIENCIES OF VARIOUS EMERGING POLLUTANTS BY DIFFERENT PEROXIDASES
Syed Salman Ashraf1
(1) UAE University (Al Ain, United Arab Emirates)

POS066 SIMULTANEOUS VISUALIZATION OF A GENE AND ITS NASCENT TRANSCRIPTS IN LIVE CELLS
João Pessoa1, Célia Carvalho, Maria Camo-Fonseca
(1) Instituto de Medicina Molecular, Faculdade de Medicina, Universidade de Lisboa (Lisbon, Portugal)
POS067 DESIGN OF 2D AND 3D ARRAYS FROM ENGINEERED AMYLOID PROTEINS
Fernanda Bononi, Michael Toney
(1) UC Davis (Davis, United States)

POS068 TUNING THE GROWTH AND MATURATION OF PHASE-SEPARATED ELASTIN-BASED DROPLETS THROUGH AMINO ACID SEQUENCE MUTATIONS
Lisa Mužnieks, Fred Keeley, Régis Pomès
(1) Hospital for Sick Children (Toronto, Canada)

POS069 DEVELOPMENT OF NOVEL SURFACTANTS FOR MEMBRANE PROTEINS’ RESEARCHES
Toshihisa Mizuno
(1) Nagoya Institute of Technology (Nagoya, Japan)

POS070 STUDY OF ALLOSTERIC COMMUNICATIONS IN CHIMERIC TWO-DOMAIN PROTEINS
Kristyna Bousova
(1) Institute of Organic Chemistry and Biochemistry, Czech Academy of Sciences (Prague, Czech Republic)

POS072 ROLE OF PROLINE IN THREE-DIMENSIONAL DOMAIN SWAPPING
Yongqi Huang, Zhengding Su
(1) Hubei University of Technology (Wuhan, China)

POS073 ROLE OF AN INTRAMOLECULAR DISULFIDE BOND IN STABILITY OF LIPOCALIN-TYPE PROSTAGLANDIN D SYNTHASE
Yoshiaki Terakata, Shogo Atsugi, Young-Ho Lee, Yuji Goto, Takashi Inui
(1) Graduate School of Life and Environmental Sciences, Osaka Prefecture University (Sakai-shi, Japan)

POS074 LEARNING FROM THE AMYLOIDOGENIC PEPTIDES IN AMYOTROPHIC LATERAL SCLEROSIS (ALS)
Jen-Tse Huang
(1) Institute of Chemistry, Academia Sinica (Taipei, Taiwan)

POS075 SCREENING OF COMPOUNDS RESCUING NON-SENSE P53 GENE USING P53-GFP FUSION PROTEIN AS INDICATOR
Jingjing Zhou, Sicong Li, Yuhui Sun, Zhengding Su
(1) Institute of Biomedical and Pharmaceutical Sciences, Hubei University of Technology (Wuhan, China)

POS076 PLUG AND PLAY: INSERTING A SINGLE AMINO ACID INTO A STRETCH OF LEUCINES YIELDS A SURPRISING DIVERSITY OF ACTIVITIES
Ross Federman, Erin Heim, Sophia Chen
(1) Yale School of Medicine, Immunobiology Department (New Haven, United States)

POS077 IDENTIFICATION OF ALLOSTERIC FRAGMENTS TO RIGIDIFY DYNAMIC CONFORMATION
Zhengding Su, Rong Chen, Jingjing Zhou, Lingyun Qin, Huili Liu
(1) Institute of Biomedical and Pharmaceutical Sciences, Hubei University of Technology (Wuhan, China)

POS078 COMPARATIVE PROTEOMICS ON MYTILIDAE SPECIES REVEALING POTENTIAL BYSSUS-RELATED PROTEINS USING 2D-LC-MS/MS
Maxime Sansoucy, Réjan Tremblay, Isabelle Marcotte
(1) UQAM (Montréal, Canada)

POS079 STRUCTURAL INSIGHTS TO THE FUNCTIONS OF C-TERMINAL DOMAINS OF TOPOISOMERASE I
Kemin Tan, Nan Cao, Qingxuan Zhou, Bokun Cheng, Andrezj Joachimiak
(1) Structural Biology Center, Biosciences Division, Argonne National Laboratory (Lemont, United States)

POS080 CHARACTERIZATION OF INTRA-MELANOSOMAL DOMAIN OF THE RECOMBINANT HUMAN TYROSINASE RELATED PROTEIN 1
Monika Dolinska, Yuri Sergeev
(1) OGVFB, NEI/NIH (Bethesda, United States)

POS081 MOLECULAR LEVEL ANALYSIS OF DISEASE-CAUSING MUTATIONS IN THE HUMAN SULFONYLUREA RECEPTOR
Claudia Alvarez, Marijana Staglar, Voula Kanelis
(1) Chemistry Department (Mississauga, Canada)
POS083 KINETIC AND STRUCTURAL CHARACTERIZATION OF KABA, GLUTAMATE AMINOTRANSFERASE INVOLVED IN THE PRODUCTION OF KANOSAMINE FROM BACILLUS CEREOUS
Theerawat Prasertanan¹, David Sanders
(1) Department of Chemistry, University of Saskatchewan (Saskatoon, Canada)

POS084 STRUCTURE AND FUNCTION OF THE TOC159 M-DOMAIN IN MEMBRANE ASSOCIATION AND CHLOROPLAST PROTEIN IMPORT
Matthew Smith¹, Emily Tran, Nicholas Grimb erg, Simon Chuong
(1) Department of Biology, Wilfrid Laurier University (Waterloo, Canada)

POS085 EFFECTS OF ANTIBODIES ON TAU PHOSPHORYLATION AND TUBULIN POLYMERIZATION
Sanela Martic¹
(1) Oakland University (Rochester, United States)

POS086 THE THIOREDUXIN SYSTEM FROM THE THERMOPHILIC BACTERIUM THERMOSIPHO AFRICANUS: STRUCTURE AND FUNCTION
Naheda Sahtout¹, David A. R. Sanders, Jijin Raj Ayanath Kuttiyatveetil
(1) University of Saskatchewan (Saskatoon, Canada)

POS087 RECOGNITION AND CLEAVAGE OF CORN DEFENSE CHITINASES BY FUNGAL POLYGlyCINE HYDROLASES
Todd Naumann¹, Neil Price, Marcia Chaudet, David Rose
(1) ARS-NCAUR (Peoria, United States)

POS088 DYNAMICS AND DISRUPTION OF THE HYDROPHOBIC BRIDGE IN THE BINDING POCKET OF OXA-66 MUTANTS P130Q, P130A, AND W222L
Alyssa Benn¹, Jonathan Hall, Zachary Klam er, Troy Wymore, David Leonard, Agnieszka Sza recka
(1) Grand Valley State University, Cell and Molecular Biology Department, C/O Beverly Tramper (Allendale, United States)

POS089 THE MITORIBOSOME OF A PRIMITIVE EUKARYOTE ANDALUCIA GODOYI
Jose Gonzalez¹, Gertraud Burger, Matus Valach
(1) Robert-Cedergren Centre of Bioinformatics and Genomics, Biochemistry, Université de Montréal. (Montreal, Canada)

POS090 QUANTIFYING DYNAMIC BLEBBING IN MAMMALIAN CELL LINES TO PREDICT MIGRATORY BEHAVIOUR
Netra Unni¹, Anam Qudrat
(1) University of Toronto Faculty of Applied Sciences and Engineering (Mississauga, Canada)

POS091 REDOX REGULATION OF THE ANTIVIRAL ADAPTOR MAVS ACTIVATION THROUGH FORMATION OF SELF-PERPETUATING FIBERS
Natalia Zamorano¹, Audray Fortin, Stéfany Chartier, Espérance Mukawera, Nathalie Grandvaux
(1) CRCHUM - Université de Montréal (Montréal, Canada)

POS092 THE ANTIFUNGAL PEPTIDE PERIPLANETASIN 2 FROM AMERICAN COCKROACH PERIPLANETA AMERICANA ACTIVATES APOPTOTIC SIGNALING VIA OXIDATIVE STRESS AGAINST CANDIDA ALBITANS
Dong Gun Lee¹, Heejeong Lee
(1) Kyungpook National University (Daegu, South Korea)

POS093 ROLE OF CYSTATHIONINE B SYNTHASE MODULE IN TRYPANOSOMA BRUCEI GMP REDUCTASE
Akira Imamura¹, Takuya Otani, Manatsu Tamura, Tomoka Kobayashi, Asami Shibata, Tetsuya Okada, Shigenori Nishimura, Takashi Inui
(1) Life Sciences, Graduate School of Life and Environmental Sciences, Osaka Prefecture University (Sakai-shi, Japan)

POS094 UNDERSTANDING THE BACILLAMIDE NONRIBOSOMAL PEPTIDE SYNTHETASE SYSTEM
Camille Marie Fortinez¹, Kristjan Bloudoff, Martin Schmeing
(1) McGill University (Montreal, Canada)

POS095 CRYPTIC GENETIC VARIATION DETERMINES THE ADAPTIVE EVOLUTIONARY POTENTIAL OF ENZYMES
Nobuhiko Tokuriki¹, Florian Baier, Colin Jackson
(1) University of British Columbia (Vancouver, Canada)

POS096 PURIFICATION AND FUNCTIONAL RECONSTITUTION OF TAAR13C INTO NANODISCS FOR THE DEVELOPMENT OF CADAVERINE-DETECTION BIOSENSOR
Heehong Yang¹, Daesan Kim, Seunghun Hong, Tai Hyun Park
(1) School of Chemical and Biological Engineering, Seoul National University (Seoul, South Korea)
POS106  EXPRESSION, PURIFICATION AND FUNCTIONAL RECONSTITUTION OF THE LIGAND-DOMAIN OF UMAMI TASTE RECEPTOR FOR THE DEVELOPMENT OF UMAMI TASTE SENSOR
Sae Ryun Ahn, Ji Hyun An, Il Ha Jang, Yongsk Jang, Ta Hyun Park
(1) School of Chemical and Biological Engineering, Seoul National University (Seoul, South Korea)

POS107  UNRAVELING THE PROMISING ACTION OF PROMETHAZINE AGAINST AMYLOID FIBRILLATION OF HUMAN LYSOZYME: IMPLICATION TOWARDS SYSTEMIC AMYLOIDOSIS
Saima Nusrat, Rizwan Hasan Khan
(1) Aligarh Muslim University (Aligarh, India)

POS108  A BACTERIAL BANDPASS ASSAY FOR PROTEIN-PROTEIN INTERACTIONS
Katherine Brechun, Andrew Woolley, Katja Amdt
(1) University of Toronto, Universität Potsdam (Toronto, Canada)

POS109  STRUCTURAL SYMMETRY OF PROTEINS - WHY DO PROTEINS STOP SHY OF PERFECT SYMMETRY
Maayan Bonjack, David Avnir
(1) The Hebrew University of Jerusalem (Jerusalem, Israel)

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(1) Associate Professor (Hyderabad, India)
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Department of Chemistry, UNC Chapel Hill (Chapel Hill, United States)

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(1) Simons Foundation / NYU (New York, United States)

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(1) Emory University (Atlanta, United States)

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Mathew Sebastiao1, Isabelle Marcotte, Steve Bourgault
(1) Université du Québec à Montréal (Montreal, Canada)

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(1) INRS - Université du Québec (Laval, Canada)

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(1) Institute for Biological and Medical Engineering, Schools of Engineering, Medicine and Biological Sciences, Pontificia Universidad Católica de Chile (Santiago, Chile)

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(1) University of Montreal (Montreal, Canada)

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(1) Département de Chimie, Université de Montréal (Montréal, Canada)

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Marissa Viola¹, Jodi Camberg
(1) University of Rhode Island (Kingston, United States)

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Cherry Lin¹, Michael Miller, Geetha Veeramuthu, Jeff Pucci, Shauna Bowden
(1) Dupont (Palo Alto, United States)

POS323 NE-CAT: CRYSTALLOGRAPHY BEAMLINES FOR CHALLENGING STRUCTURAL BIOLOGY RESEARCH
Kay Perry¹, Kanagalaghatta Rajashankar, Malcolm Capel, Igor Salbego, Jonathan Schuermann, Narayanasami Sukumar, James Withrow, Steve Ealick
(1) NE-CAT/Comell University (Lemont, United States)

POS324 INHIBITOR AGAINST AN ENZYME ALSO WORKED AS AN ACTIVATOR OF ITS ORTHOLOGOUS ENZYME
Nanao Shirono¹, Noriko Nakagawa
(1) SEEDS Program, Osaka University (Toyonaka, Japan)

POS325 PHYSICAL CHARACTERIZATION OF THE INTERACTION BETWEEN ASPASE-2 AND 14-3-3 PROTEIN
Veronika Obsilova¹, Tomas Obsil, Dana Kalabova, Miroslava Alibova, Aneta Smidova, Oliva Petvalska
Institute of Physiology, The Czech Academy of Sciences, Prague, Czech Republic (Prague, Czech Republic)
(1)

POS326 STRUCTURAL CHARACTERIZATION OF COMPLEXES BETWEEN 14-3-3 PROTEIN AND PROTEIN KINASES CAMKK2 AND ASK1
Tomas Obsil², Veronika Obsilova, Oliva Petvalska, Katarina Psenakova, Salome Klyarova, Dana Kalabova
Faculty of Science, Charles University, Prague, Czech Republic (Prague, Czech Republic)
(1)

POS327 THE AAA+ CHAPERONE-PROTEASES CLPXP AND LON TARGET MIND FOR PROTEOLYSIS IN E. COLI
Chris LaBreck², Jodi Camberg
(1) University of Rhode Island (Kingston, United States)

POS328 BIOLOGICAL CHARACTERIZATION OF THE INTERACTION BETWEEN 14-3-3 PROTEIN AND PROTEIN KINASES CAMKK2 AND ASK1
Tomas Obsil², Veronika Obsilova, Oliva Petvalska, Katarina Psenakova, Salome Klyarova, Dana Kalabova
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POS332 PHYSICAL CHARACTERIZATION OF THE INTERACTION BETWEEN ASPASE-2 AND 14-3-3 PROTEIN
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POS333 STRUCTURAL CHARACTERIZATION OF COMPLEXES BETWEEN 14-3-3 PROTEIN AND PROTEIN KINASES CAMKK2 AND ASK1
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POS340 PROTEIN DYNAMICS AND DNA-BINDING SPECIFICITY OF THE EUKARYOTIC TRANSCRIPTION FACTOR FXAS
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POS341 PEROXIREDOXINS ARE KEY PLAYERS OF THE ENZYMATIC ANTIOXIDANT SYSTEM IN HUMAN SPERMATOZOA
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POS342 IDENTIFICATION OF HOTSPOT RESIDUES FOR M. TUBERCULOSIS ALANINE RACEMASE
Sudipta Majumdar1, Cuong Diep, Noriko Mikeasky
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POS343 RESTRICTED HIV-1 ENV GLYCAN ENGAGEMENT BY LECTIN-ENGINEERED DAVEI PROTEIN CHIMERA IS SUFFICIENT FOR LYTIC INACTIVATION OF THE VIRUS
Bibek Parajuli1, Kriti Acharya, Harry Bach, Cameron Abrams, Irwin Chaiken
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POS344 USING PHAGE-DISPLAYED PEPTIDE LIBRARIES TO IDENTIFY PEPTIDE LIGANDS BINDING TO BACTERIA AS A MEANS TO CHARACTERIZE THE GUT MICROBIOTA
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POS345 STUDY OF THE INTERACTION BETWEEN PARKIN AND ENDOPHILIN A1
Marjan Seira1, Zita Plotnikova, Guennadi Kozlov, Jean-Francois Tempe, Kalle Gehringer
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POS346 IDENTIFICATION OF SUBSTRATES OF THE PRP19 E3 UBQUITIN LIGASE IN RESPONSE TO DNA DAMAGE
Mailyn Yates1, Alexandre Marechal, Samuel Picard, Jean-Christophe Dubois, Antoine Gaudreau-Lapiere, Pauline Kaczmarek
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POS348 STRUCTURAL INSIGHTS INTO THE REPLICATION MACHINERY OF MENANGLE VIRUS
Melissa Webby1, Richard Kingston, Nicole Herr, Jeremy Keown, Michael Schmitz, Esther Bulloch
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POS349 STRUCTURAL AND BIOPHYSICAL INVESTIGATIONS ON SIGMA4 DOMAIN TO REVEAL HOW RNA POLYMERASE HOLOENZYME IS RECRUITED TO PMRA BOX PROMOTERS
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POS350 OPTICAL DISSECTION OF THE ASSEMBLY AND COOPERATIVITY OF A CLASS C G PROTEIN-COUPLED RECEPTOR
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POS351 HSP90 OF ESCHERICHIA COLI MODULATES ASSEMBLY OF FTSZ, THE TUBULIN HOMOLOG IN E. COLI
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POS352 ASSESSMENT OF THE EFFECTS OF POLLUTANTS IN THE GREAT LAKES ON THE HUMAN PROTEOME
Emmalyn Dupree1, Costel Darie, Bernard Crimmins, Thomas Holser, James Pagano, Brooke Thompson, Krista Christensen, Michelle Raymond
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POS353 MASS SPECTROMETRY BASED PROTEOMIC INVESTIGATION OF INDUCED OBSTRUCTIVE SLEEP APNEA (OSA) IN RAT ATRIA
Devika Channaveerappa1, Costel C. Darie, Jacob Lux, Kelly L. Womwood, Meredith McLerie, Brian K. Panama
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POS354 INCLUSION BODY FORMATION OF CU,ZN-SUPEROXIDE DISMUTASE 1 IN ESCHERICHIA COLI
Dalia Naser1, Hilary Simon
(1) University of Waterloo (Waterloo, Canada)
POS355 A PHOSPHORYLATION AND UBIQUITYLATION CIRCUITRY DRIVES HOMOLOGOUS RECOMBINATION ON RPA-SSDNA
Jean-Christophe Dubois, Alexandre Maréchal, Maïlyn Yates, Geneviève Clément, Laurent Cappadocia, Luc Gaudreau, Lee Zou (1) Université de Sherbrooke (Sherbrooke, Canada)

POS356 NICOTINE-INDUCED PROTEOME OF ARTHROBACTER NICOTINOVORANS PAO1
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POS357 CHARACTERIZATION OF MONOBODY INTERACTIONS WITH A FLUORIDE ION CHANNEL BY FLUORESCENCE ANISOTROPY
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POS358 CONFORMATION AND DYNAMICS OF THE ZINC FINGER OF NEMO AND DISEASED-ASSOCIATED MUTANTS
Freddie Salsbury (1), Ryan Godwin
(1) Wake Forest University (Winston Salem, United States)

POS359 MAPPING OF THE BINDING SITES OF NAPHTHALENE-BASED INHIBITORS ON TRYPANOSOMA BRUCEI RNA EDITING LIGASE 1
Vaibhav Mehta (1), Reza Salavati
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POS360 IDENTIFICATION AND CHARACTERIZATION OF A LACCASE ACTIVITY FROM NATIVE FUNGI DICTYOPANUS PUSILLUS
Andres Rueda (1), Yossef Lopez de los Santos, Clara Sánchez, Daniel Molina, Sonia Ospina, Nicolas Doucet
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POS361 IDENTIFICATION OF STRUCTURAL DETERMINANTS OF THE TRANSGLYCOSYLATION FUNCTION IN THE Alpha-AMYLASE ENZYME FAMILY THROUGH RESIDUE CONTACT ANALYSIS
Rodrigo Arreola-Barroso (1), Gloria Saab-Rincón
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POS362 AN ACCURATE AND EFFICIENT ATOMIC FOUR-BODY KNOWLEDGE-BASED POTENTIAL TO DISTINGUISH NATIVE PROTEIN STRUCTURES FROM NON-NATIVE FOLDS
Majid Masso (1)
(1) George Mason University (Manassas, United States)

POS363 INVESTIGATING TRIM5α RING AND B-BOX SELF-ASSOCIATION AND ITS ROLE IN ANTIRETROVIRAL SIGNALLING
Joy Yang (1), David C. Goldstone, Jeremy R. Keown
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POS364 DIVERGING FROM EUKARYOTIC TO PROKARYOTIC EXPRESSION SYSTEM FOR PP2A PHOSPHATASE CATALYTIC SUBUNIT
Priyanka Sandal (1), Shweta Shah, Gururaj Rao
(1) Iowa State University (Ames, United States)

POS365 MONOCLONAL ANTIBODIES SPECIFICALLY TARGETING AMYLOIDGENIC FORMS OF TRANSTHYRETIN (TTR) WITH POTENTIAL TO TREAT TTR-RELATED CARDIOMYOPATHY AND POLYNEUROPATHY
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POS366 POLYAMINES ENHANCES AGGREGATION OF FOLDED PROTEINS: A CASE STUDY ON BOVINE CARBONIC ANHYDRASE
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POS367 DESIGNING PROTEIN POLYHEDRA USING A GENERALIZABLE SYMMETRY-BASED APPROACH
Ajitha Cristie-David (1), Neil Marsh
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POS369 GENOMIC TARGETING OF EPGENETIC PROBES USING A CHEMICALLY TAILED CAS9 SYSTEM
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POS370 EXTENSION PROTEIN ENGINEERING (EPE), A TECHNIQUE FOR THE ENGINEERING OF NOVEL PROTEINS
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(1) Eastern New Mexico University (Portales, United States)

POS371 A SYNTHETIC TWO-COMPONENT SYSTEM REDIRECTS ONCOGENIC SIGNALING TO THERAPEUTIC OUTPUTS
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(1) Stanford University (Stanford, United States)

POS372 DESIGN AND DEPLOYMENT OF ENHANCED SPLIT INTEINS
Adam Stevens², Tom Muir, Girdhar Sekar, David Cowbum
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POS373 EXPLORING AMYLOID-LIKE AGGREGATION USING A MUTANT DOMAIN OF A SPIDROIN AS A SOLUBILITY TAG
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POS374 ENGINEERING A NON-ANTIBODY SCAFFOLD FOR BINDING TO THERAPEUTIC TARGETS
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POS375 STRUCTURE OF A COMPLEX BETWEEN THE AUTOANTIGEN GAD65 AND A HUMAN AUTOANTIBODY
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POS376 TRACKING HEME LOADING OF A PROTEIN IN LIVE CELLS BY FLUORESCENCE-LIFETIME IMAGING MICROSCOPY (FLIM)
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POS377 CONFORMATIONAL CHANGES AND FLEXIBILITY OF THE ARKA BINDING ABP15H3 DOMAIN
Kristina Foley¹, Katherine Ball, Elliot Stollar
(1) Skidmore College (Saratoga Springs, United States)

POS378 A CLOSED CONFORMATION OF THE CATALYTIC DOMAIN OF PHA SYNTHASE FROM CHROMOBACTERIUM SP. USM2
Min Fey Chek¹, Sun-Yong Kim, Tomoyuki Mori, Mohd. Razip Samian, Kumar Sudesh, Toshio Hakoalima
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POS379 NUP62 COILED-COIL MOTIF PROVIDES PLASTICITY FOR TRIPLE HELIX BUNDLE FORMATION
Pravin Dewangan², Radha Chauhan, Parshuram Sonawane, Ankita Rai Chouksey
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POS380 IMPORTANCE OF CYSTEINES IN SURFACTANT PROTEIN B ANALOGUES FOR TREATMENT OF PREMATURE NEWBORN RABBITS
Oihana Basabe Burgos¹, Marie Hägstrand-Björkman, Bim Lindholm, Anna Rising, Jan Johansson, Tore Curstedt
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POS381 THE RAVA-VIAA CHAPERONE-LIKE SYSTEM MODULATES THE ACTIVITY OF RESPIRATORY CHAIN COMPLEXES
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POS382 RESVERATROL INTERACTS WITH THE CONFORMATIONS POPULATED AT THE EARLY STAGES OF HUMAN LYSOZYME FIBRILLATION AND MODULATES THE PATHWAY TOWARDS LESS-TOXIC, OFF-PATHWAY AGGREGATES
Fatima Kamal Zaidi¹, Rajiv Bhat
(1) Jawaharlal Nehru University, New Delhi, India (New Delhi, India)
POS383  QUALITATIVE AND QUANTITATIVE STUDY OF AMYLOID-LIKE STRUCTURES IN URINE OF PREGNANT WOMEN WITH PREECLAMPSIA USING DIAZO DYES
Victoria Sergeeva1, Anna Bugrova, Natalia Starodubtseva, Alexey Kononikhin, Maria Indeykina, Zulphia Khodzhaeva, Kamilla Muminova, Igor Popov, Vladimir Frankevich, Eugene Nikolaev, Gennadiy Sukhikh
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POS385  BR12 BRICHOS MOLECULAR CHAPERONE ACTIVITY IS DECOUPLED FROM ITS ABILITY TO INHIBIT AMYLOID FIBRIL FORMATION
Gefei Chen1, Axel Abelein, Axel Leppert, Simone Tambaro, Henrik Biverstål, Jenny Presto, Jan Johansson
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POS386  ENGINEERING ANTIVIRAL LECTINS BY COMPUTER-GUIDED DESIGN AND EVOLUTION
Giovanna Ghirlanda1, Banu Ozkan, Orkun Pinar, Can Kazan
(1) Arizona State University (Tempe, United States)

POS387  KILLER PROTEIN AND L-TYPE CALCIUM CHANNELS: USING A NOVEL L-TYPE CALCIUM CHANNEL INHIBITOR TO CHARACTERIZE L-TYPE CALCIUM CHANNEL STRUCTURE, FUNCTION, AND VOLTAGE DEPENDENCE
Alexis Williams1, Thomas Smith
(1) University of Texas Medical Branch (Galveston, United States)

POS388  COMPUTATIONAL DESIGN OF NOVEL ENZYMES GUIDED BY EVOLUTIONARY DATA
Gideon Lapidoth1, Sarel Fleishman
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POS389  CHARACTERIZATION OF THE INTERACTIONS OF A LIGNOSTILBENE-Α,Β-DIOXYGENASE WITH BOTH RESVERATROL AND LUTEIN SUBSTRATES
Anthony Zara1, Fang Huang, John Allingham, Michele Loewen
Queen’s University (Kingston, Canada)

POS390  ELUCIDATING THE MOLECULAR MECHANISMS UNDERLYING THE VIRAL HIJACKING OF HUMAN PROTEIN-PROTEIN INTERACTIONS
Jae-Hyun Cho1, Qingliang Shen, Danyun Zeng, Jie Shi, Baoyu Zhao, Wonmuk Hwang, Pingwei Li
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POS391  TIMOLOL AND PENTOSE PHOSPHATE PATHWAY ENZYMES
N. Nura y Uluvi1, Muslum Gok, Belma Turan
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POS392  ENERGETICS OF SHEATH CONTRACTION IN CONTRACTILE INJECTION SYSTEMS
Alec Fraser1, Petr Leiman
(1) University of Texas Medical Branch (Galveston, United States)

POS393  INTRACELLULAR CHECKS AND BALANCES: NOT AN INFINITE ACCOUNT
Ipsita Roy1, Ratnika Sethi, Ankan Bhadra
(1) National Institute of Pharmaceutical Education and Research (NIPER), S.A.S. Nagar (S.A.S. Nagar, India)

POS394  A RARE TWO-PEAK PH PROFILE OF A COLD-ACTIVE ALKALINE PHOSPHATASE AND HOW ANIONS INCREASE ITS ACTIVITY AND STABILITY
Jens Hjörleifsson1, Bósi Asgeirsson
(1) Science institute, University of Iceland (Kopavogur, Iceland)

POS395  MODELING CYSTEINE AND METHIONINE BINDING TO AROMATIC RESIDUES
Esam Orabi1, Ann English
(1) PROTEO and Department of Chemistry and Biochemistry, Concordia University, (Montreal, Canada)

POS398  DISTINCT STRUCTURAL DYNAMICS OF MONOMERIC, DIMERIC AND TETRAMERIC GLYCERALDEHYDE-3-PHOSPHATE DEHYDROGENASE (GAPDH) ILLUMINATE ITS MULTIPLE FUNCTIONS
Vinod Parmar1, Ann M. English, Gilles H. Peslherbe
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POS400  INTEIN ZYMOSGENS: CONDITIONAL ASSEMBLY AND SPICING OF SPLIT INTEINS VIA TARGETED PROTEOLYSIS  
Josef Gramespacher1, Tom Muir  
(1) Princeton University (Princeton, United States)

POS401  ESSENTIAL PHENYLALANINE-ANION COORDINATION IN A FLUORIDE-SPECIFIC ION CHANNEL  
Senmiao Sun1, Nicholas Lasse, Christopher Miller  
(1) Brandeis University (Waltham, United States)

POS402  COMBINING DIFFERENTIAL SCANNING CALORIMETRY AND ISOTHERMAL TITRATION CALORIMETRY TO CHARACTERIZE REDUCED ZINC BOUND SUPEROXIDE DISMUTASE 1  
Harmeem Deol1, Elizabeth Meiering  
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POS403  STRUCTURAL BASIS OF SELECTIVE INHIBITION OF PKG-IA BY A NEW BALANOL DERIVATIVE, N46  
Liying Qin1, Choel Kim, Ying-Ju Sung, Darren Casteel  
(1) Baylor College of Medicine (Houston, United States)

POS404  ANALYSIS OF DIFFERENTIAL PROTEIN EXPRESSION IN POST-MORTEM HUMAN BONE OF RIB AND SKULL  
Rubén Darío Díaz Martín1, Javier R Ambrosio Hernández, Lorena Valencia Caballero  
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POS405  MACROMOLECULAR CROWDING EFFECTS ON BIOMOLECULAR RECOGNITION: PROGRESS TOWARD BUILDING ACCURATE YET EFFICIENT COMPUTATIONAL MODELS  
Mala Radhakrishnan1, Rachel Kim, Carla Perez, Helena Qi, Donald Elmore  
(1) Wellesley College (Wellesley, United States)

POS406  EXPLORING SEQUENCE SPACE USING COEVOLUTION AND STRUCTURAL TERTIARY MOTIFS  
Vincent Frappier1, Amy Keating  
(1) Massachusetts Institute of Technology (Cambridge, United States)

POS407  STRUCTURAL STUDIES OF THE SH3 DOMAIN FAMILY OF YEAST  
Rebecca Rhode1, Matthew Dominguez  
(1) Eastern New Mexico University (Clovis, United States)

POS409  SELF-ASSEMBLING SUPRAMOLECULAR NANOSTRUCTURE COMPLEXES CONSTRUCTED FROM PROTEIN NANOBUILDING BLOCKS  
Ryoichi Ara1, Naoya Kobayashi, Naoya Kimura  
(1) Shinshu University (Ueda, Japan)

POS410  ARTIFICIAL CROWN ETHER ION CHANNEL AS PROMISING THERAPEUTIC AGENTS  
Jean-Daniel Savoie1, François Otis, Jochen Bück, Anne Ulrich, Christophe Moreau, Michel Vivaudou, Normand Voyer  
(1) Université Laval (Québec, Canada)

POS411  PROBING ALLOSTERIC COMMUNICATION WITH LONG-RANGE RIGIDITY PROPAGATION ACROSS PROTEIN NETWORKS  
Adnan Sljoka1  
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POS412  PHOSPHORYLATION OF ANABAENA SENSORY RHODOPSIN TRANSDUCER: A PUTATIVE SIGNALING STATE IN SENSORY RHODOPSIN MEDIATED PROTEIN-PROTEIN CROSS TALK  
Vishwa Trivedi1, Tashmay Jones, Renee Walker, Ravi Kumar Gundampati, Thallapuranam Suresh Kumar  
(1) Bethune Cookman University (Daytona Beach, United States)

POS413  LC-MS/MS ANALYSIS OF CYTOCHROME C PEROXIDASE INTERACTORS IN YEAST MITOCHONDRIA  
Alan de Aguiar Lopes1, Ann English, Heng Jiang  
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POS414  THE TRANSMEMBRANE PROTEIN OTOFERLIN IS A CALCIUM SENSITIVE SCAFFOLD LINKING SNARES AND CALCIUM CHANNELS  
Colin Johnson1, Nicole Hams  
(1) Oregon State University (Corvallis, United States)

POS415  CHARACTERIZATION OF RECOMBINANT HUMAN MITOCHONDRIAL PROCESSING PEPTIDASE  
Andrew Bayne1, Jean Francois Trempe  
(1) McGill University (Montreal, Canada)
POS416 THE INCREDIBLE STABILITY OF POSTFUSION HCMV GLYCOPROTEIN B
Ellen White1, Yuhang Liu, Sengui Han, Ekaterina Heldwein
(1) Tufts University School of Medicine (Boston, United States)

POS417 VERIFICATION OF CANDIDATE PEPTIDE MARKERS IN URINE OF PREGNANT WOMEN WITH PRE-ECLAMPSIA BY WESTERN BLOT
Viktoria Baibakova1, Anna Bugrova, Viktoria Sergeeva, Natalia Zakharova, Kamilla Muminova, Natalia Starodubtseva, Alexey Kononikhin, Maria Indeykina, Igor Popov, Zulfiya Khodzhaeva, Vladimir Frankevich, Evgeny Nikolaev, Gennadiy Sukhikh
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POS418 DISORDER-TO-ORDER TRANSITIONS IN THE REGULATION OF SYNAPTIC VESICLE RELEASE
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POS419 DISCOVERING QUALITY DRUG SEEDS BY PRACTICAL NMR-BASED FRAGMENT SCREENING
Yann Ayotte1, Jayadeepa Rajamani Murugesan, Francois Bilodeau, Sacha Larda, Patricia Bouchard, Nathalie Droin, Melissa Morin, Steven LaPlante
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POS420 STRUCTURAL DYNAMICS OF SUFS CYSTEINE DESULFURASE INVESTIGATED BY BACKBONE AMIDE HYDROGEN/DEUTERIUM EXCHANGE MASS SPECTROMETRY
Patrick Frantom1, Dokyong Kim, Haraimran Singh, Yuyuan Dai, Guanchao Dong, Laura Busenlehner, Wayne Outten
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POS421 CHARACTERIZING A PEPTIDE THERAPEUTIC DERIVED FROM THE CHOLESTEROL RECOGNITION AMINO ACID CONSENSUS (CRAC) MOTIF OF A BACTERIAL TOXIN
Evan Koufos1, Angela Brown, Anxela Snani, Joanne Huang
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POS422 SPECTROSCOPY OF CISD PROTEINS
Mary Konkle1, Audrey Rex, Michael Menze, Nilay Chakraborty
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POS423 CHAPERONE-CLIENT-INTERACTIONS: FROM BASIC PRINCIPLES TO ROLES IN HEALTH AND DISEASE
Sebastian Hiller1, Björn Bumann, Irena Bumann, Roland Riekk, Silvia Campioni, Juan Gerez, Pratibha Kumari, Stefan Rüdiger, Magdalena Wawrzyniuk, Ichun He
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POS425 NMR CHARACTERIZATION OF O-GLCNAC MODIFIED CKIIA
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POS426 THE ROLE OF ELECTROSTATIC INTERACTIONS IN THE ABP1 SH3 DOMAIN
Benjamin Lantz2, Matthew Dominguez
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POS427 EFFECTS OF TRIMETHYLAMINEN-OXIDE (TMAO) ON THE CONFORMATION OF PEPTIDES AND MINIPROTEINS
Cristiano Dias1, Zhaojian Su
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POS428 EFFECT OF ELONGIN B C-TERMINUS ON CORRELATED MOTIONS IN HIV COMPLEX Lieza Chan, Elise Tierney, John Gross, and Katherine Ball
(1) Skidmore College (Saratoga Springs, United States)

POS429 COLD-ADAPTED ADP-DEPENDENT SUGAR KINASE: BIOPHYSICAL AND EVOLUTIONARY STUDY OF ITS FLEXIBILITY
Victoria Guixe1, Ricardo A Zarama, Cesar A Ramirez-Samiento, Victor Castro-Fernandez, Pablo Villalobos, Elizabeth Komives
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POS430 IMPROVING RNA MODIFICATION MAPPING SEQUENCE COVERAGE THROUGH A NONSPECIFIC RNASE U2-E49A VARIANT
Beulah Sollive1, Balasubrahmanyam Addepalli, Patrick Limbach
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POS431 THE STRUCTURAL BASIS FOR PARKIN-MEDIATED MITOCHONDRIAL QUALITY CONTROL
Marta Vranas1, Jean-François Trempe
(1) McGill University (Montreal, Canada)
POS432 EVOLUTION OF MULTI-DOMAIN CONFORMATIONAL ENSEMBLES FROM THE TYROSINE KINASE FAMILY
Helena Gomes Dos Santos1, Jessica Siltberg-Liberles1
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POS433 PHOSPHATE AFFECTS THE QUATERNARY STRUCTURE OF ALANINE RACEMASE FROM MYCOBACTERIUM TUBERCULOSIS
John C Ford1, Shannon A. Stirling, Jaeju Ko, Sudipta Majumdar
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POS434 CHARACTERIZATION OF THE ROLE OF HSP70 SYSTEM AND HSPB1 ON DISAGGREGASE ACTIVITY IN HUMANS
Conrado de Campos Gonçalves1, Jason C. Young, Carlos H. I. Ramos
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POS435 SELECTIVE INHIBITION OF E. COLI DNA AND RNA TOPOISOMERASE
Dev Arya1, Nihar Ranjan
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POS436 TRADE-OFF BETWEEN GPCR FOLDING AND FUNCTIONAL VERSATILITY
Daniel Estevez Prado1, Tillman Flock, Alexander S Hauser, Ramanujan S Hegde, M. Madan Babu
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POS437 ON THE DYNAMICS OF INTERLEUKIN-36RA: A KEY PLAYER IN PSORIASIS
Nicholas Tiek1, Patricia Jennings, Kendra Hailey
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POS438 AN IMPROVED METHOD TO PURIFY AND ACTIVATE WILD-TYPE AND CHIMERIC BOTULINUM NEUROTOXINS (BONTs)
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POS439 CHARACTERIZATION OF THE DOMAIN SWAPPING MECHANISM OF THE FORKHEAD DOMAIN OF HUMAN FOXP1 AT A SINGLE-MOLECULE LEVEL
Jorge Babul1, Exequiel Medina, Hugo Sanabria, César A. Ramirez-Samiento
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POS440 CONFORMATIONAL FLEXIBILITY OF INTRINSICALLY DISORDERED HIV-1 VIF PROTEIN
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POS441 MECHANISMS OF ACTIVATION AND SUBSTRATE RECOGNITION BY PINK1, A UBIQUITIN KINASE IMPLICATED IN MITOCHONDRIAL QUALITY CONTROL AND PARKINSON’S DISEASE
Jean-François Trempe1
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POS442 ON THE UNDERSTANDING OF THE LOW CATALYTIC ACTIVITY OF TIM MONOMERIC MUTANTS
Janet Garduño1, Edgar Vázquez-Contreras, María Elena Chávez-Cárdenas
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POS443 SMALL MOLECULE INHIBITION OF HSP70 INVOLVING ITS INTERACTION WITH SUBSTRATE
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POS444 X-RAY CRYSTAL STRUCTURES OF THE INFLUENZA A M2 PROTON CHANNEL BOUND TO AMANTADINE, RIMANTADINE, AND INHIBITING COMPOUNDS
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(1) UCSF (San Francisco, United States)

POS445 THE ROLE OF DNAJB1 IN CHAPERONE-MEDIATED DISAGGREGATION IN THE MAMMALIAN SYSTEM
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(1) McGill University (Montreal, Canada)

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(1) Centre for Applied Synthetic Biology, Concordia University (Montréal, Canada)

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(1) The Walter and Eliza Hall Institute of Medical Research (Parkville, Australia)

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(1) Department of Biochemistry, University of Toronto (Toronto, Canada)

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(1) Massachusetts General Hospital and Harvard Medical School (Charlestown, United States)

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(1) Departamento de Investigación y Posgrado en Alimentos, Universidad de Sonora (Hermosillo, Mexico)

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(1) The University of Iowa (Iowa City, United States)

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(1) Eastern Illinois University (Charleston, United States)

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Jennifer Noonan1, Robin N. Beech
(1) Institute of Parasitology, MacDonald Campus, McGill University (Sainte-Anne-de-Bellevue, Canada)

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Xiaomeng Wang1, Alexis Vallée-Bélisle
(1) Université de Montréal (Montréal, Canada)

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(1) NIDDK/NIH (Bethesda, United States)

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(1) KSU (RIYADH, Saudi Arabia)

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(1) NCI RAS Initiative, Cancer Research Technology Program, Frederick National Laboratory for Cancer Research, Leidos Biomedical Research, Inc (Frederick, United States)

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Man Hon Yuen1, Kam Bo Wong, Yu Hang Fong, Yap Shing Nim
(1) The Chinese University of Hong Kong, School of Life Science (Hong Kong, China)
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(1) University of Science and Technology of China (Hefei, China)

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(1) Graduate School of Life & Environmental Sciences, Osaka Prefecture University (Sakai-shi, Japan)

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(1) Stockholm University (Stockholm, Sweden)

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(1) University of Washington Department of Medicinal Chemistry
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(1) UC Berkeley (Berkeley, United States)

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(1) Shemyakin-Ovchinnikov Institute of Bioorganic Chemistry
Russian Academy of Sciences (Moscow, Russia)

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Ming-Hon Hou¹, Chai-Ning Hsu
(1) Institute of Biotechnology and Institute of Genomics and Bioinformatics, National Chung Hsing University
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(1) Freie Universität Berlin (Berlin, Germany)

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Samin Sabouhi¹, Bruno Prud'homme, Puttaswamy Manjunath
(1) University of Montreal (Montreal, Canada)

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(1) University of Michigan (Ann Arbor, United States)

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(1) Texas A&M University (College Station, United States)

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(1) Nexomics Biosciences, Inc. (Bordentown, United States)

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John Strahan¹, Sheila Jaswal, Paul Cohen
(1) Amherst College Department of Chemistry (Amherst, United States)

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(1) Department of Medicinal Chemistry, University of Washington
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(1) Amherst College Biochemistry and Biophysics Program (Amherst, United States)

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(1) Boston University (Boston, United States)

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(1) Amherst College Department of Chemistry (Amherst, United States)

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(1) Department of Biochemistry, University of Massachusetts Amherst (Amherst, United States)

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(1) University Health Network (Toronto, Canada)

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(1) University of Copenhagen (Copenhagen N, Denmark)

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(1) University of Michigan - Ann Arbor (Ann Arbor, United States)

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(1) University of Michigan (Ann Arbor, United States)

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Cory Campbell, Peter Pawelek
(1) Department of Chemistry & Biochemistry, Concordia University (Montreal, Canada)

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(1) Moscow Institute of Physics and Technology (Dolgoprudny, Russia)

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(1) Department of Molecular Genetics, University of Toronto (Toronto, Canada)

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Marie-Ève Picard1, Rong Shi (1) Université Laval (Québec, Canada)

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Ryan Thurman1, Natalie Hewitt, Tikvah Hayes, Samuel George, Channing Der, Sharon Campbell (1) University of North Carolina, Department of Biochemistry and Biophysics (Chapel Hill, United States)
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