31st Annual

Symposium

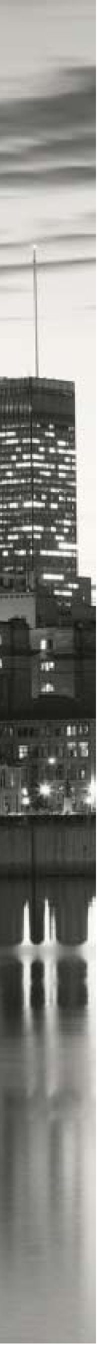
Program

Montreal, Canada

July 24 - 27, 2017

THE PROTEIN SOCIETY

www.proteinsociety.org



THE PROTEIN SOCIETY

Mission

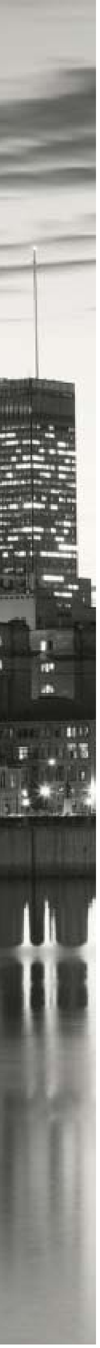
The Protein Society is a not-for-profit scholarly society with a mission to advance state-of-the-art science through international forums that promote communication, cooperation, and collaboration among scientists involved in the study of proteins.

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.

#PS31

1986 - 2017

Table of Contents



Welcome

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,

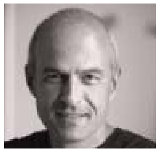
Carol B Post

Carol B. Post, Ph.D.

Program Planning Committee

John Kuriyan (Chair)
Professor of Molecular & Cell Biology and Chemistry
University of California - Berkeley

Jane Clarke
Professor of Molecular Biophysics
Senior Wellcome Research Trust Fellow
Department of Chemistry
University of Cambridge

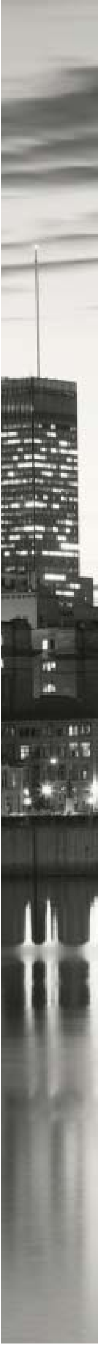


Volker Dötsch
Professor
Institute of Biophysical Chemistry
Goethe University

Yibing Shan
Senior Scientist
Chemistry & Biology
D.E. Shaw Research

Dan S. Tawfik
Principal Investigator
Department of Molecular Sciences
Weizmann Institute of Science

Nieng Yan
Professor, School of Medicine
Center for Structural Biology
Tsinghua University



Committees

Executive Council

President
Carol Post, Ph.D.
Purdue University

President-Elect
Charles Brooks, Ph.D.
University of Michigan

Secretary/Treasurer
Jacquelyn Fetrow, Ph.D.
Albright College

Secretary/Treasurer-Elect
Jean Baum, Ph.D.
Rutgers University

Councilor Carlos Bustamante, Ph.D.
University of California - Berkeley

Councilor Patricia Clark, Ph.D.
University of Notre Dame

Councilor Judith Frydman, Ph.D.
Stanford University

Councilor Donald Hilvert, Ph.D.
ETH

Councilor Elizabeth Komives, Ph.D.
University of California -
San Diego

Councilor Brian Kuhlman, Ph.D.
University of North Carolina -
Chapel Hill

Councilor Ming Lei, Ph.D.
Shanghai Institutes for Biological
Sciences, Chinese Academy of
Sciences

Councilor Mary Munson, Ph.D.
University of Massachusetts
Medical School

Councilor Hiroyuki Noji, Ph.D.
University of Tokyo

Councilor Karyn O'Neil, Ph.D.
Johnson & Johnson

Councilor Charles Sanders, Ph.D.
Vanderbilt University

Councilor Gunnar von Heijne, Ph.D.
Stockholm University

Councilor Grant Walkup, Ph.D.
Agios Pharmaceuticals

Ex-Officio Members

Editor-in-Chief Brian Matthews, Ph.D.
Protein Science
University of Oregon

Executive Director Raluca Cadar
The Protein Society

Nominating Committee

Daniel Bolon, Ph.D. (Chair)
University of Massachusetts
Medical School

Bil Clemons, Ph.D.
California Institute of Technology

Tijana Grove, Ph.D.
Virginia Tech

Jeanne Hardy, Ph.D.
University of Massachusetts

Heather Pinkett, Ph.D.
Northwestern University

Corey Wilson
Yale University

Mentoring Committee

Stephen Fuchs, Ph.D. (Chair)
Tufts University

Andrew Vendel, Ph.D.
Lilly Biotechnology

Blake Hill, Ph.D.
Medical College of Wisconsin

Eric Sundberg, Ph.D.
University of Maryland School of
Medicine

Matthew Cordes, Ph.D.
University of Arizona

Chris Snow, Ph.D.
Colorado State University

Giovanna Ghirlanda, Ph.D.
Arizona State University

Education Committee

Matthew Gage, Ph.D. (Chair)
University of Massachusetts Lowell

Shanadeen Begay, Ph.D.
Northeastern University

Lola Brown, Ph.D.
City College of New York

Annelise Gorensek, Ph.D.
University of North Carolina,
Chapel Hill

Sheila Jaswal, Ph.D.
Amherst College

Peter Kahn, Ph.D.
Rutgers University

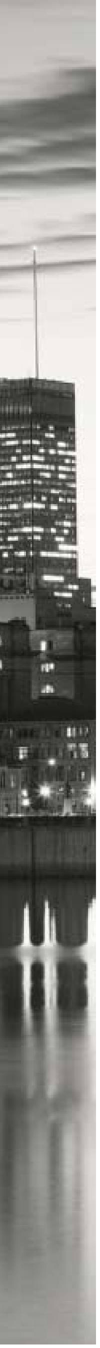
Elizabeth Komives, Ph.D.
University of California, San Diego

James Lipchock, Ph.D.
Washington College

Robert McFeeters, Ph.D.
University of Alabama, Huntsville

Kathryn McMenimen, Ph.D.
Mount Holyoke College

Jeffrey Watson, Ph.D.
Gonzaga University



Committees

Abstract Review Committee

John Osterhout, Ph.D. (Chair)
Angelo State University

Rodney Austin, Ph.D.
Geneva College, PA

Piero R. Bianco, Ph.D.
University at Buffalo

Nidhee Chaudhary, Ph.D.
Amity University Uttar Pradesh

Paola Di Lello, Ph.D.
Genentech

Azucena González-Horta, Ph.D.
Universidad Autonoma de Nuevo Leon

Constance Jeffery, Ph.D.
University of Illinois, Chicago

Peter Kahn, Ph.D.
Rutgers University

Sangho Lee, Ph.D.
Sungkyunkwan University

James Lipchock, Ph.D.
Washington College

Sanela Martic, Ph.D.
Oakland University

Barry S. Selinsky, Ph.D.
Villanova University

Suresh Kumar Thallapuranam, Ph.D.
University of Arkansas, Fayetteville

Jeffrey L Urbauer, Ph.D.
University of Georgia

Jie Zheng, Ph.D.
David Geffen School of Medicine

Corporate Support

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

GOLD

SPONSORS

BECKMAN COULTER Life Sciences

MITSUBISHI CHEMICAL CORPORATION

PALL FortéBio

PROTEO

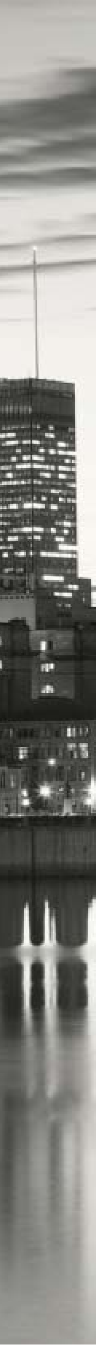
SILVER

SPONSORS

Bristol-Myers Squibb

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.

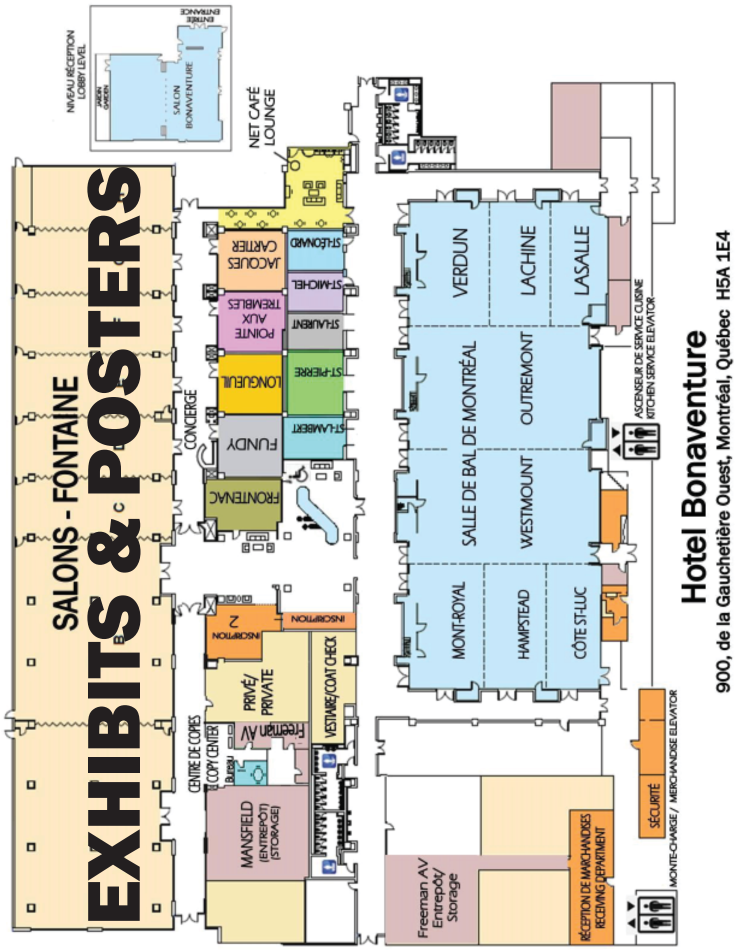
Hours

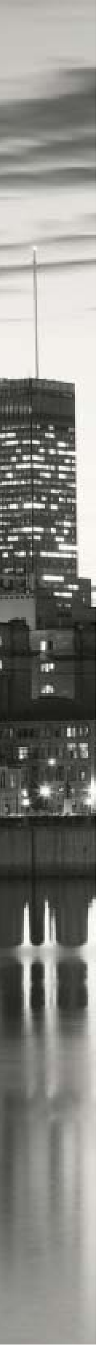
Sunday, July 23:	**5:00 p.m. - 8:00 p.m.**
Monday, July 24:	**7:30 a.m. - 6:30 p.m.**
Tuesday, July 25:	**7:30 a.m. - 6:30 p.m.**
Wednesday, July 26:	**8:30 a.m. - 7:00 p.m.**
Thursday, July 27:	**8:30 a.m. - 12:00 p.m.**

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.

Hotel Floor Plan





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 "PS 31" 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.

General Info

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.

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

2017 Membership Dues			
Category	**1-Year Standard**	**2-Year Standard**	**5-Year Standard**
Undergraduate	$25	$50	
Graduate	$50	$90	
Early-Career	$100	$180	$475
Lab Staff	$50	$90	$230
Full	$200	$380	$950
Emeritus	$25	$40	$115

Individual Memberships

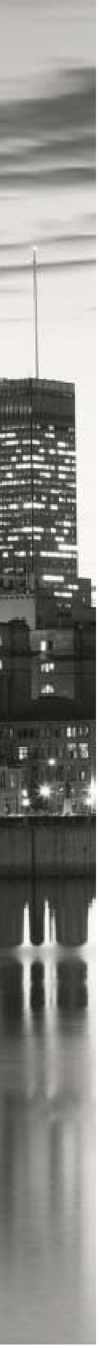
TPS members represent an international community of all those who share an interest in the structure, function, design, synthesis, and utilization of proteins. In fact, it is this diversity of disciplines and perspectives represented by TPS members that is the group's defining characteristic.

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

Editor-in-Chief:
Brian W. Matthews,
University of Oregon

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.

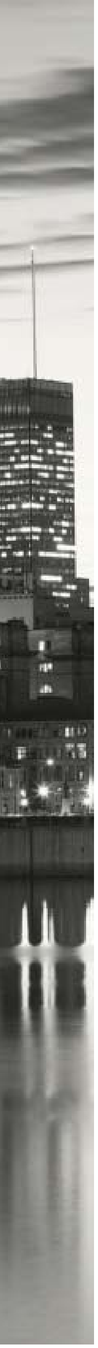
Virtual Issue: Protein Science Canada
Read this new Virtual Issue edited by EIC Dr. Brian Matthews celebrating highlighted works by Canadian authors.

Use this QR code or visit our journal webpage to see our latest special issues.

Ease Quality Reach Impact

THE PROTEIN SOCIETY

WILEY

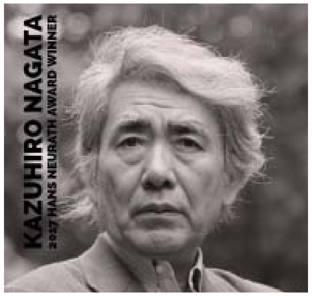


2017 Protein Society

Award Winners

Kazuhiro Nagata, Ph.D. - Kyoto Sangyo University

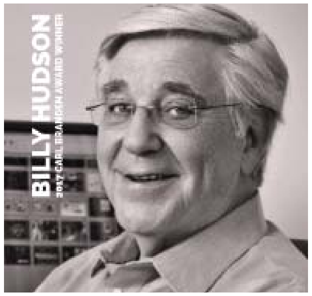
2017 Hans Neurath Award Winner



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 recipient of this award is Dr. Billy Hudson. Dr. Hudson has worked tirelessly to develop the Aspirnaut 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.

Juli Feigon, Ph.D. - University of California, Los Angeles

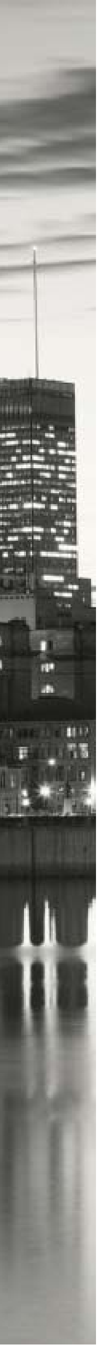
2017 Dorothy Crowfoot Hodgkin Award Winner

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 riboprotein complex responsible for the maintenance of telomeres. The structures provide new mechanistic knowledge of telomere function associated with aging and cancer.

Manajit Hayer-Hartl, Ph.D. - Max Planck Institute

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.



2017 Protein Society
Award Winners

Thomas Muir, Ph.D. - Princeton University
2017 Emil Thomas Kaiser 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.

John Kuriyan, Ph.D. - University of California, Berkeley
2017 Stein & Moore Award Winner

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, Abelson tyrosine kinase, the epidermal growth factor receptor and Ca2+/calmodulin-dependent kinase II.

Lewis Kay, Ph.D.* - University of Toronto
2017 Christian B. Anfinsen Award Winner

The recipient of this award in 2017 is Dr. Lewis Kay. Dr. Lewis Kay has been involved in developing many ground-breaking tools and approaches that have revolutionized NMR spectroscopy and have rendered it one of the most powerful techniques in protein science. The research in Dr. Kay's laboratory focuses on the development of NMR techniques for studying macromolecular structure and dynamics and the application of NMR techniques to problems of biological and clinical importance.

David Pagliarini Ph.D. - University of Wisconsin - Madison
2017 *Protein Science* Young Investigator Award Winner

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.

Best Paper

Award Winners

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. Hollfelder and M. Hyvonen. Following her PhD 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.

THE PROTEIN SOCIETY

July 26, 2017

MEMBERS' RECEPTION

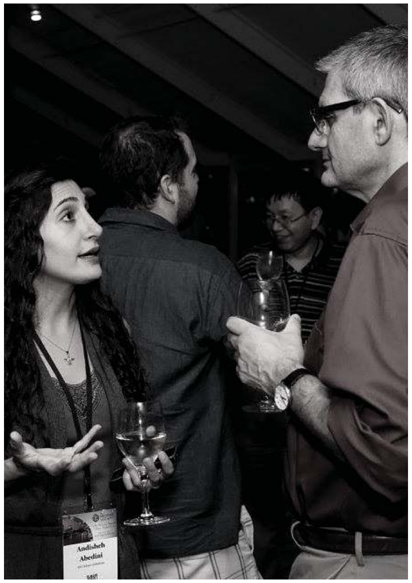
(all attendees welcome)

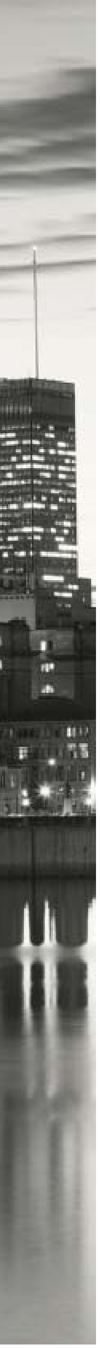
8:45 - 10:45 p.m.

Montreal Ballroom

Join us in celebrating 31 years of impact in the field of protein science.

Cocktails
Hors d'oeuvres
Networking
Prizes
Poster session winners announced





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
Varnavas 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
Satchal Erramilli, University of Chicago
Min Fey Chek, Nara Institute of Science and Technology (NAIST)
Alec Fraser, University of Texas Medical Branch
Marta Frigole-Vivas, Institute for Research in Biomedicine (IRB Barcelona)
Natalie J. Galant, University of Toronto
Kendra Hailey, University of California, San Diego
Brett Janis, University of Louisville
Evan Koufos, 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
Caitlyn Mills, Northeastern University
Elena Moreno-Cordova, Centro de Investigación en Alimentación y Desarrollo
Neha Nandwani, National Centre for Biological Sciences
Denise Okafor, Emory University
Remy Peace, Boston University
Cecilia Perez-Borrajero, University of British Columbia
João Pessoa, Instituto de Medicina Molecular, Faculdade de Medicina, Universidade de Lisboa
Manasi Pethe, Rutgers University
Claudia Rodríguez Almazán, Universidad Nacional Autónoma de México
Sneha Roy, Jawaharlal Nehru University
Maryam Raeeszadeh 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
ThirumalaiSelvi 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

	Monday, July 24	Tuesday, July 25		Wednesday, July 26		Thursday, July 27	
7:30 a.m.		**New Member Welcome Breakfast/ Member Business Meeting**					
8:30 a.m.	**Opening Plenary Session** Montreal Ballroom	**Chaperones & Amyloids** Westmount/Mt. Royal/Hampstead/ Cote St. Luc	**Approaches to Therapeutics** Outremont/Verdun/ Lachine/LaSalle	**Protein Evolution** Westmount/Mt. Royal/Hampstead/ Cote St. Luc	**Structural Insights Into Ion-Transporting Membrane Proteins** Outremont/Verdun/ Lachine/LaSalle	**Intrinsically-Disordered Proteins & Phase Transitions** Westmount/ Mt. Royal/ Hampstead/ Cote St. Luc	**Advances In Membrane Proteins** Outremont/ Verdun/ Lachine/LaSalle
9:40 a.m.	**Synthetic Biology** Westmount/Mt. Royal/Hampstead/ Cote St. Luc **Protein Dynamics & Allostery** Outremont/Verdun/ Lachine/LaSalle						
11:30 a.m.	**Lunch/Exhibits Open (11:30 a.m. – 1:30 p.m.)**					**Closing Plenary Session** **10:50 – 11:25 a.m.** Montreal Ballroom	
1:30 p.m.	**Protein Folding** Westmount/Mt. Royal/Hampstead/ Cote St. Luc **Ubiquitin-Proteasome System** Outremont/Verdun/ Lachine/LaSalle	**Analysis of Large Complexes** Westmount/Mt. Royal/Hampstead/ Cote St. Luc	**Transient Protein-Protein Interactions** Outremont/Verdun/ Lachine/LaSalle	**Plenary Awards Session** Montreal Ballroom			
4:30 p.m.	**Posters Open/Exhibits/Mix & Mingle (4:30 – 6:30 p.m.)**						
	Education & Mentoring Mixer **(8 – 10 p.m.)**			**Posters Open/Exhibits/Mix & Mingle** **(5:30 – 7:30 p.m.)**			
				Members' Reception **(8:45 – 10:45 p.m.)**			

Call For NOMINATIONS

The Protein Society AWARDS

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.

Stein & Moore Award

Hans Neurath Award

Dorothy Crowfoot Hodgkin Award

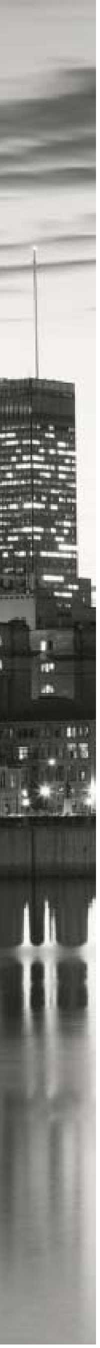
Emil Thomas Kaiser Award

Carl Brändén Award

Christian B. Anfinsen Award

***Protein Science* Young Investigator Award**

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 Sango 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

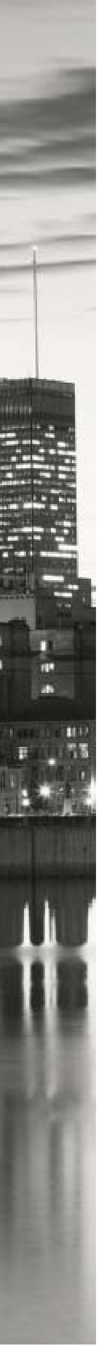
10:45 - 11 a.m. *Conservation of Conformational Motions Impacting Function in an Enzyme Superfamily*
Chitra Narayanan, INRS - University of Quebec, Laval, Canada

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



Program

Day 1 - Monday, July 24, 2017 (cont.)

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

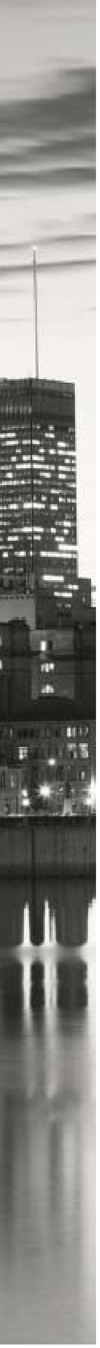
1:30 - 1:35 p.m.	*Introduction From Chair* **Juliette Lecomte,** Johns Hopkins University; Baltimore, Maryland
1:35 - 2:05 p.m.	*Selectively Modulating Conformational States of USP7 Catalytic Domain* **Erin Dueber,** Genentech; San Francisco, California, United States
2:05 - 2:35 p.m.	*A Small Protein, 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 I 2:50 - 3:15 p.m. I 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, Hefie, 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

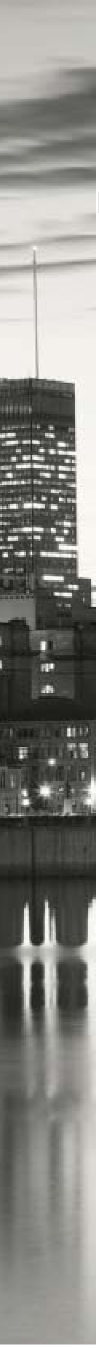
10:15 - 10:45 a.m.	*Role of Short Linear Motifs in Selective Autophagy* **Vladimir Kirkin**, The Institute of Cancer Research; London, United Kingdom
10:45 - 11:15 a.m.	*Polycomb Repressive Complex 2 Structure With Inhibitor Reveals a Mechanism of Activation & Drug Resistance* **Alexei Brooun**, Pfizer; 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 Reception 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

Poster Displays & Exhibits Open |Salons Fontaine - Lower Level



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.	*Kinetochore Structure(s)* **Stephen Harrison**, Harvard Medical School; Boston, Massachusetts, United States
2:05 - 2:35 p.m.	*Cryo-EM at Atomic Resolution* **Sriram Subramanian**, 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. I 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 SMCHD1* **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

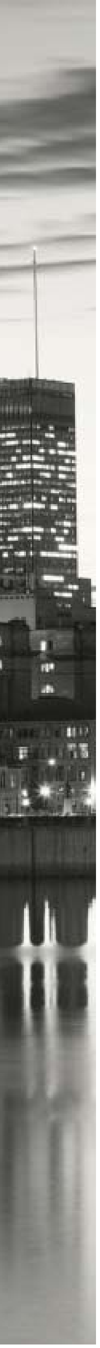
1:30 - 1:35 p.m.	*Introduction From Chair* **Joelle Pelletier,** PROTEO, University of Montreal; Montreal, Canada
1:35 - 2:05 p.m.	*Engineering Bispecific Antibodies to Control the Mechanism-of-Action of Therapeutic Agents* **Gavin MacBeath,** Abpro; Woburn, Massachusetts, United States
2:05 - 2:35 p.m.	*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. I 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



Program

Day 3 - Wednesday, July 26, 2017

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. I 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 Amantadine, Rimantadine, and Inhibitors* **Jessica Thomaston**, University of California, San Francisco; San Francisco, California, United States

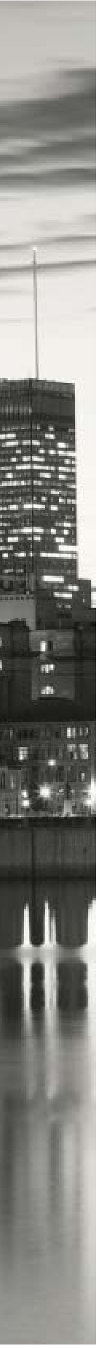
COFFEE BREAK I 9:50 - 10:15 a.m. I Foyer and Fontaine

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



Program

Day 3 - Wednesday, July 26, 2017 (cont.)

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. I Foyer and Fontaine

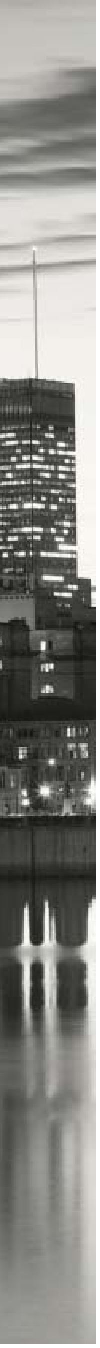
*Sponsored by Genentech
**Sponsored by Rigaku

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

***Sponsored by Wiley
****Sponsored by the Hans Neurath Foundation



Program

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-Phillipe 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. | Outremont/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*
2017 Stein & Moore Award Winner
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

Exhibitor Directory

FASEB MARC Program	**Booth 1**
St. Jude Children's Research Hospital	**Booth 2**
Thermo Fisher Scientific	**Booth 3**
Hamilton Robotics	**Booth 4**
Wyatt Technology Corporation	**Booth 6**
Malvern Instruments	**Booth 7**
Pall ForteBio, LLC	**Booth 10**
Cell Free Sciences	**Booth 11**
NanoTemper Technologies	**Booth 13**
Wiley/The Protein Society	**Booth 14**
PerkinElmer	**Booth 16**
Nicoya Lifesciences	**Booth 17**
PROTEO/Affinité Instruments	**Booth 18**
TA Instruments	**Booth 19**
Beckman Coulter	**Booth 20**

THE PROTEIN SOCIETY

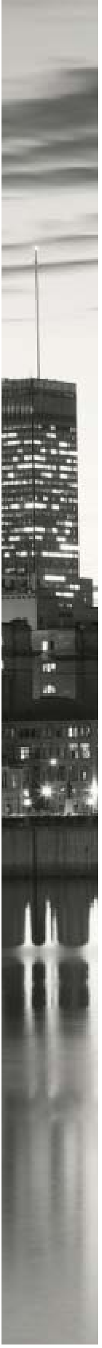
MENTORING PANEL

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

RSVP-ONLY EVENT

Location:
INRS-Énergie Matériaux
et Télécommunications à
Place Bonaventure

It's all about jobs! Listen to and meet and mingle with protein scientists from academics, industry and government to find out about job opportunities and how to secure them.



Exhibitor Directory

FASEB MARC Program **BOOTH 1**
9650 Rockville Pike
Bethesda, MD 20814, United States
Phone: 301-634-7930 | Fax: 301-634-7353
Email: cadams@faseb.org
Web: www.faseb.org

Making dreams come true – while promoting diversity in the biomedical and behavioral sciences – that's what the FASEB Maximizing Access to Research Careers (MARC) Program has done for more than 30 years. The FASEB MARC Program helps strengthen research training and leadership opportunities for students, postdoctoral fellows and academic/research faculty members from groups underrepresented in the biomedical and behavioral sciences. The FASEB MARC Program provides encouragement, preparation, and support to underrepresented students in the pursuit of postgraduate education leading to the PhD, MD-PhD, or other combined professional degree-PhD in the biomedical and behavioral sciences. We offer travel awards that enable attendance at events including: FASEB societies scientific meetings and science research conferences, FASEB Leadership Development and Grantsmanship Training Seminars, and non-FASEB meetings including ABRCMS and SACNAS.

ST. JUDE CHILDREN'S RESEARCH HOSPITAL **BOOTH 2**
262 Danny Thomas Place, MS 276
Memphis, TN, 38105, United States
Phone: 901-595-2750 | Fax: 901-595-5376
Email: postdoc@stjude.org
Web: https://www.stjude.org/postdoc

St. Jude is a non-profit biomedical research institution in Memphis, Tennessee where scientists investigate the molecular basis of both normal and diseased cellular processes. Visit our booth to discuss postdoctoral fellowship opportunities.

THERMO FISHER SCIENTIFIC **BOOTH 3**
3747 N. Meridian Road
Rockford, Illinois 61105, United States
Phone: 800-955-6288 | Fax: 815-968-7316
Email: piercecs@thermofisher.com
Web: www.thermofisher.com

Thermo Fisher Scientific is the world leader in serving science. Our mission is to enable our customers to make the world healthier, cleaner, and safer. Through our Thermo Scientific and Invitrogen brands, we help customers accelerate innovation and enhance productivity.

HAMILTON ROBOTICS **BOOTH 4**
4970 Energy Way
Reno, NV 89502, United States
Phone: 1-800-648-5950 | Fax: 775-858-3024
Email: roboticsales@hamiltoncompany.com
Web: www.hamiltoncompany.com

Hamilton Robotics is a leading global manufacturer providing automated liquid handling workstations and laboratory automation technology. With a focus on innovative design, our products incorporate Hamilton's patented liquid handling technologies into a product portfolio that includes three liquid handling platforms, standard solutions for ready-to-start applications, small devices, consumables, and OEM liquid handling solutions. Known for advancing life science, Hamilton products offer reliability, performance, and flexibility for all your scientific workflows.

WYATT TECHNOLOGY CORPORATION **BOOTH 6**
6330 Hollister Avenue
Santa Barbara, CA 93117, United States
Phone: 901-595-2750 | Fax: 901-595-5376
Email: postdoc@stjude.org
Web: https://www.stjude.org/postdoc

Wyatt Technology is the recognized leader in light scattering instrumentation and software for determining absolute molar mass, size, charge and interactions of macromolecules and nanoparticles in solution. Wyatt provides in-line multi-angle static light scattering - SEC-MALS; field flow fractionation (separation with no stationary phase)- FFF-MALS; composition gradients for interaction analysis - CG-MALS; high-throughput dynamic light scattering - DLS; high-sensitivity electrophoretic mobility - MP-PALS; differential refractometry, and differential viscosity. Wyatt's training, service and support are widely considered the industry benchmark of excellence.

MALVERN INSTRUMENTS **BOOTH 7**
117 Flanders Road
Westborough MA 01581, United States
Phone: 508-768-6400 | Fax: 508-768-6403
Email: sales.us@malvern.com
Web: www.malvern.com

Malvern's technology and application knowledge enables pharmaceutical and biopharmaceutical companies to better understand and control product characteristics impacting research, development, and manufacturing along the drug development pipeline.

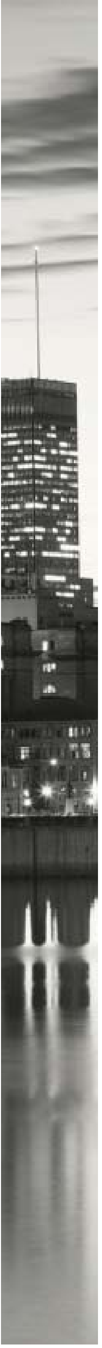
Exhibitor Directory

PALL FORTEBIO LLC **BOOTH 10**
47661 Fremont Boulevard
Fremont, CA 94538, United States
Phone: 650-322-1360 | Fax: 650-322-1370
Email: gemma_milan@pall.com
Web: www.fortebio.com

Pall ForteBio LLC is one of the world's leading providers of label-free, high-throughput and micro-volume analysis solutions for life sciences, biopharmaceutical research, development, and manufacturing. The product portfolio includes instruments, software and biosensors that enable scientists to measure biomolecular interaction kinetics, affinity, and concentration for their medical and biological research.

CELL FREE SCIENCES **BOOTH 11**
75-1, Ono-cho, Leading Venture Plaza 201,
Tsurumi-ku, Yokohama, Kanagawa 230-0046, Japan
Phone: +81-(0)45-500-2119 | Fax: +81-(0)45-500-2117
Email: tech-sales@cfsciences.com
Web: http://www.cfsciences.com/eg/

Cell Free Sciences (CFS) established a wheat germ cell-free protein expression system for which we are offering reagents, fully automated protein synthesizers, and customized protein expression services. Our cell-free protein expression system is proven to work for a wide range of heterologous proteins from many distinct species including parasite and human proteins for medical research. In high throughput experiments, our system provides superior protein solubility and yields under controlled conditions starting directly from a DNA template. Moreover, CFS has developed special reagents for protein labeling, to prepare standards for mass spectrometry enabling FLEXIQuant assays, or working with membrane proteins.



Exhibitor Directory

NANOTEMPER TECHNOLOGIES **BOOTH 13**
400 Oyster Point Blvd, Ste 336
South San Francisco, CA 94080, United States
Phone: 650-763-1658 | Fax: 650-350-4390
Email: michelle.pak@nanotemper-technologies.com
Web: www.nanotemper-technologies.com

NanoTemper Technologies is deeply committed to the best customer experience. Central to this is a strong focus on enabling researchers to easily, efficiently, and accurately perform protein characterization. With a broad offering of instrumentation, software and consumables for evaluating binding affinities and protein stability, scientists in pharmaceutical, biotech or academic labs will find an optimized workflow, quality results and responsive customer support. Work with a deeply experienced and globally operating team, and realize the NanoTemper experience.

WILEY and THE PROTEIN SOCIETY **BOOTH 14**
111 River Street
Hoboken, NJ 07030, United States
Phone: 201-748-6000 | Fax: 201-748-6088
Email: customer@wiley.com
Web: www.wiley.com

Wiley is a global provider of content-enabled solutions to improve outcomes in research, education, and professional practice with online tools, journals, books, databases, reference works and laboratory protocols. With strengths in every major academic, scientific, and professional field, Wiley proudly partners with over 800 prestigious societies representing 2 million members. We are the proud publisher of The Protein Society's flagship journal, *Protein Science*. Download a free *Protein Science* iPhone, iPad, and Android app at www.wiley.com.

PERKINELMER **BOOTH 16**
68 Elm Street
Hopkinton, MA 01748, United States
Phone: 800-762-4000
Email: customercareUS@perkinelmer.com
Web: www.perkinelmer.com

PerkinElmer, Inc. is a global leader committed to innovating for a healthier world. With our proprietary nucleic acid isolation technology, fully integrated automated library prep, robust sequencing chemistries, sample quality quantitation and visualization tools for analysis of complex sequencing data, we help you deliver top-quality samples for world-class genomics research from start to finish.

Come Join
The Protein Society
For

Cocktails

July 24

8:00 p.m.

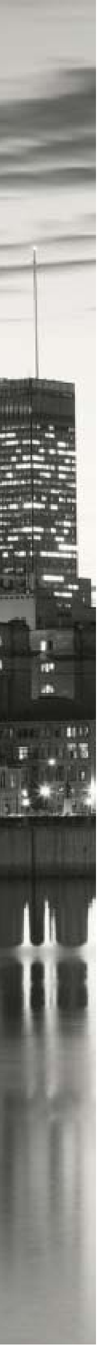
AND

Good Company

At The
ST. PAUL HOTEL
355 McGill Street
Montreal, QC H2Y 2E8

RSVP-ONLY EVENT

Hosted by the Education & Mentoring Committees



Exhibitor Directory

NICOYA LIFESCIENCES **BOOTH 17**
226-283 Duke St W
Kitchener, Ontario, N2H 3X7, Canada
Phone: 1-877-673-6777
Email: info@nicoyalife.com
Web: www.nicoyalife.com

Nicoya Lifesciences uses nanotechnology to make OpenSPR™, the world's first benchtop surface plasmon resonance instrument for molecular interaction analysis. It is affordable, user-friendly and low maintenance, providing powerful label-free analysis and high quality real-time data for a fraction of the cost of traditional SPR instruments. OpenSPR is perfect for analyzing interactions between proteins, antibodies, nucleic acids and more. With OpenSPR, every researcher can now have access to this powerful analysis technique – perfect of academia, industry, and education.

PROTEO and AFFINITÉ INSTRUMENTS **BOOTH 18**
Pavillon Alexandre-Vachon, room 3403,
1045 Avenue de la Médecine, Université Laval,
Québec (Québec), G1V 0A6, CANADA
Phone: 418-656-3927
Email: Pierre-Yves.Savard@proteo.ulaval.ca
Web: www.proteo.ca

PROTEO, The Quebec Network for Research on Protein Function, Engineering, and Applications, is a funded network of 40 research teams from 13 scientific institutions throughout the province of Québec. Our network promotes collaborative research and development concerning fundamental and applied aspects of proteins, from materials chemistry to physiological roles. Our state-of-the-art instrumentation platforms offer fee-for-service solutions to your research problems. We are proud to support the mission of the Protein Society.

AFFINITÉ **BOOTH 18**
PO Box 23543, CP Maurice-Duplessis
Montreal (Québec), H1E 1M0, Canada
Phone: 1-514-910-4339 (Montreal); 1-647-210-2416 (Toronto)
Email: info@affiniteinstruments.com
Web: www.affiniteinstruments.com

Simple, Portable, Affordable, Real-time. Affinité Instrument's P4SPR is a user-friendly Surface Plasmon Resonance platform with a small footprint to support your high-level research in your lab and in the field. Our four-channel fluidic system is designed to make every chip count. Affinité's P4SPR is research-tested and teaching lab proof: anyone from undergraduate to astronaut can obtain high-quality SPR kinetic data within a few minutes of training. Come visit our booth and try it out yourself!

TA INSTRUMENTS
159 Lukens Drive, **BOOTH 19**
New Castle, DE 19720, United States
Phone: 302-427-4000
Email: info@tainstruments.com
Web: www.tainstruments.com

With advanced technology, and unparalleled support, TA Instruments is the leader in microcalorimetry, thermal analysis, and rheology. Our new Affinity ITC, the Nano ITC (available in two cell volumes) and Nano DSC with Autosampler are powerful tools for measuring small-molecule–protein interactions, protein-protein interactions, drug-target binding, and biomolecular structure and stability.

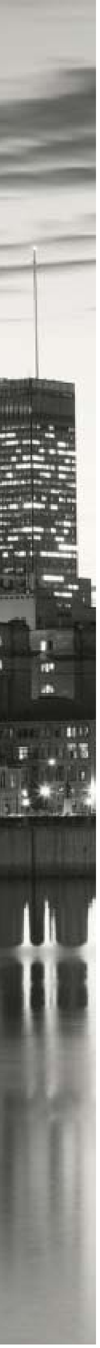
Exhibitor Directory

BECKMAN COULTER **BOOTH 20**
5350 Lakeview Parkway S. Drive
Indianapolis, Indiana 46268, United States
Phone: 800-742-2345
Email: oadiguida@beckman.com
Web: www.beckman.com

Scientists use Beckman Coulter Life Science Research instruments to study complex biological problems including causes of disease and potential new therapies or drugs. (Centrifugation, Analytical Ultracentrifugation, Automated Liquid Handling, Genomics, Particle Characterization, Cell Counting, Viability and Metabolites and Research Flow Cytometry.)

THE PROTEIN SOCIETY and WILEY **BOOTH 14**
PO Box 9397
Glendale, California 91226, United States
Phone: 844-377-6834
Email: staff@proteinsociety.org
Web: www.proteinsociety.org

Since 1985, TPS 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. TPS 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. As well as the meeting, the Society's prestigious journal *Protein Science*, edited by Brian Matthews, serves as an ideal platform for furthering the science of proteins in the broadest possible sense.



Poster Presentation Schedule

Poster Session 1

Monday, July 24, 4:30 - 6:30 p.m.

Exhibit Hall - Room Fontaine A - H

(All Posters Up)

	Themes	**Board Numbers**
PA	Amyloid & Aggregation	74, 96, 354, 382, 494, 496, 502, 514
PB	Bioinformatics	252
PC	Chaperones	20, 200, 434, 450, 526
PD	Chemical Biology	14, 56, 128, 158, 190, 250, 284, 314, 316, 340, 400, 422, 516
PE	Computational Modeling/Simulation	54, 90, 176, 298, 358, 362, 398, 474
PF	Design/Engineering	110, 118, 130, 134, 172, 188, 192, 208, 218, 282, 320, 330, 342, 344, 368, 372, 374, 376, 386
PG	Dynamics & Allostery	30, 174, 194, 230, 262, 290, 420, 476, 480
PH	Enzymology	86, 102, 122, 138, 166, 198, 286, 318, 394, 452, 472, 518
PI	Evolution	92, 114, 432, 456
PJ	Folding	40, 58, 106, 144, 150, 168, 266, 402, 466, 498
PK	Intrinsically Disordered Proteins	68, 170, 204, 238, 254, 310, 390, 418, 428, 440, 488, 528
PL	Membrane Proteins	28, 38, 76, 154, 276, 350, 436, 444, 504
PN	Motors and Machines	468
PO	Peptides	380, 410, 500
PP	Protein Interactions & Assemblies	36, 50, 72, 84, 140, 278, 326, 334, 364, 370, 412, 426, 438, 486
PQ	Proteins in Cells	184, 212, 272
PR	Proteomics	64, 78, 162, 240, 346, 352, 404, 462
PS	Proteostasis & Quality Control	126, 222
PU	Structure (x-ray/NMR/EM)	44, 60, 120, 210, 220, 226, 232, 236, 264, 270, 324, 348, 378, 392, 416,478
PV	Synthetic Biology	108, 142, 228, 248, 292
PX	Therapeutics & Antibodies	336, 460
PY	Transcription/Translation/Post-translational Modifications	244, 520

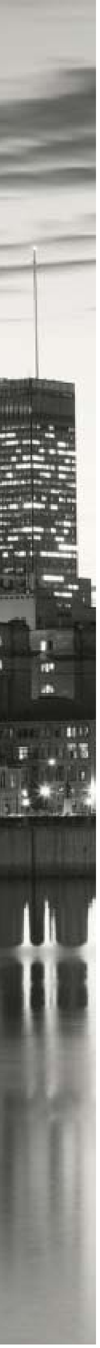
Poster Session 2

Tuesday, July 25, 4:30 - 6:30 p.m.

Exhibit Hall - Room Fontaine A - H

(All Posters Up)

	Themes	**Board Numbers**
PA	Amyloid & Aggregation	23, 107, 131, 141, 221, 367, 373, 383, 465, 471, 509
PB	Bioinformatics	209, 279, 361, 535
PC	Chaperones	135, 285, 321, 351, 381, 385, 423, 443, 445
PD	Chemical Biology	25, 53, 109, 139, 179, 217, 359, 435, 457, 505, 517
PE	Computational Modeling/Simulation	111, 159, 227, 287, 389, 395, 405, 427
PF	Design/Engineering	17, 67, 121, 197, 245, 247, 249, 275, 301, 303, 409
PG	Dynamics & Allostery	63, 77, 95, 113, 293, 437, 453
PH	Enzymology	65, 83, 173, 187, 235, 277, 281, 291, 295, 299, 333, 391, 441, 447
PI	Evolution	45, 127, 129, 205, 255, 429
PJ	Folding	73, 145, 147, 155
PK	Intrinsically Disordered Proteins	151, 167, 267, 377, 425
PL	Membrane Proteins	35, 39, 69, 81, 105, 181, 233, 271, 511
PM	Metabolic Engineering/Energy Applications	323
PO	Peptides	193, 211, 417, 421, 495
PP	Protein Interactions & Assemblies	153, 161, 223, 329, 345, 355, 357, 363, 407, 413, 463, 483, 507, 521, 539
PQ	Proteins In Cells	215, 315, 341, 473, 491
PR	Proteomics	15, 41, 133, 143, 169, 195, 353, 489
PS	Proteostasis & Quality Control	31, 415
PU	Structure (x-ray/NMR/EM)	57, 61, 79, 103, 185, 239, 257, 263, 273, 379, 387, 403, 481, 485, 523, 533
PV	Synthetic Biology	231, 259
PW	Systems Biology	241
PX	Therapeutics & Antibodies	85, 201, 365
PY	Transcription/Translation/Post-translational Modifications	431, 449, 531



Poster Presentation Schedule

Poster Session 3

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

	Themes	Board Numbers
PA	Amyloid & Aggregation	119, 225, 283, 475, 479, 532
PB	Bioinformatics	300, 406, 490, 530
PC	Chaperones	148
PD	Chemical Biology	183, 186, 369, 384, 451, 455
PE	Computational Modeling/Simulation	22, 62, 470, 482, 534
PF	Design/Engineering	16, 42, 146, 175, 253, 317, 388, 446
PG	Dynamics & Allostery	49, 70, 164, 265, 411, 522
PH	Enzymology	80, 89, 137, 325, 332, 360, 430, 433, 484, 525
PI	Evolution	104, 171, 196, 206, 258, 280
PJ	Folding	33, 112, 152, 274, 289, 439, 442, 508, 510, 512, 513
PK	Intrinsically Disordered Proteins	202, 234, 467, 499
PL	Membrane Proteins	37, 125, 219, 401, 414, 469, 503, 506
PN	Motors & Machines	229, 296
PO	Peptides	101
PP	Protein Interactions & Assemblies	59, 117, 328, 343, 493, 527, 537
PQ	Proteins In Cells	27, 66, 75, 216, 519
PR	Proteomics	356
PS	Proteostasis & Quality Control	213, 393
PT	Single Molecule Studies	132
PU	Structure (x-ray/NMR/EM)	55, 156, 160, 189, 242, 269, 338, 349, 375, 419, 464, 477, 501, 515
PV	Synthetic Biology	371
PX	Therapeutics & Antibodies	116, 149, 459, 487, 524

Posters

POS014 CELL WALL PIRACY BY SYNTHETIC ANALOGS REVEALS METABOLIC ADAPTATION IN VANCOMYCIN RESISTANT ENTEROCOCCI
Marcos Pires[1], 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[1], Kuo-Chieh Liao, Annegret Ulke-Lemee, David Carlson, Timothy Haystead, Daniel Muruve, Justin MacDonald
(1) Department of Biochemistry & Molecular Biology, University of Calgary, Cumming School of Medicine (Calgary, Canada)

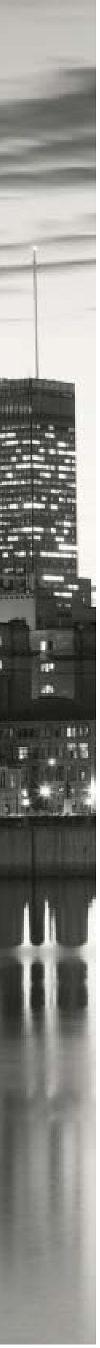
POS016 LARGE-SCALE PREDICTION, CHARACTERIZATION AND MODULATION OF PROTEASE ENZYME SPECIFICITY LANDSCAPE USING COMPUTATION AND EXPERIMENT
Sagar Khare[1], Manasi Pethe, Aliza Rubenstein
(1) Rutgers University (Piscataway, United States)

POS017 A PLACE FOR UNPUBLISHED GENE-TO-PROTEIN INFORMATION: THE RECOMBINANT PROTEOMIC DATABASE RESOURCE
Peter Nollert[1], 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[1], Elizabeth DeLeon, Mahima Poreddy, Emily Gliniewicz, Chenwei Wang
(1) Mount Holyoke College (South Hadley, United States)

POS022 ODORANT RECEPTORS ACTIVATION DYNAMICS INVOLVES SPECIFIC SEQUENCE MOTIFS
Claire de March[1], 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[1], Rajiv Bhat
(1) Jawaharlal Nehru University (New Delhi, India)



Posters

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 Redij[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)

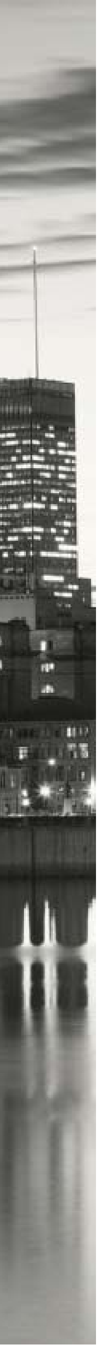
POS040 **VARIANT STRUCTURAL INTERMEDIATES OF A NOVEL HUMAN CALCIUM-BINDING PROTEIN, CALNUC**
Vignesh Ravichandran[1], Gopala Krishna Aradhyam
(1) Department of Biotechnology, Bhupat and Jyoti Mehta School of Biosciences (Chennai, India)

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 Shanmugaratnam, 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 DISCRIINATION IN THE HYDROLYSIS OF SHORT VS LONG-CHAIN FATTY ESTERS**
Daniela Quaglia[1]
(1) Universite de Montreal (Montréal, Canada)



Posters

POS049 PHOSPHOLIPASE A2: A UNIQUE PARADIGM OF ALLOSTERIC REGULATION BY MEMBRANES
Varnavas D. Mouchlis[1], 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 Ho[1]
(1) The Chinese University of Hong Kong (Hong Kong, China)

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

POS054 ACTIVE SITE DISTORTION IN THE DISHEVELLED PDZ DOMAIN
Charles Sader[1], 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 Brooun[1], Ketan Gajiwala
(1) Pfizer (San Diego, United States)

POS056 THE SYNTHESIS OF KERATAN SULFATE GLYCOSAMINOGLYCANS BY A GLYCOSYNTHASE APPROACH
Xiaohua Zhang[1], David Kwan
(1) Concordia University (Montreal, Canada)

POS057 STRUCTURAL AND FUNCTIONAL STUDY OF LEGIONELLA PNEUMOPHILA EFFECTOR LPP0008
Ivy Yeuk Wah Chung[1]
(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 Tenorio[1]
(1) Florida State University (Tallahassee, United States)

POS059 A COMPLEX OF ARABIDOPSIS DRB PROTEINS CAN IMPAIR DSRNA PROCESSING
Marie-Aude Tschopp[1], 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 Reimer[1]
(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 Gentry[1]
(1) University of Michigan (Ann Arbor, United States)

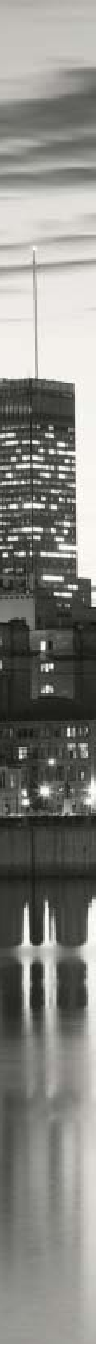
POS062 EXPLORING THE CONFORMATIONAL SPACE OF ANTI-APOPTOTIC PROTEINS OF THE BCL-2 FAMILY
Luis Caro-Gomez[1]
(1) Instituto Politécnico Nacional (Mexico City, Mexico)

POS063 ALLOSTERIC MODULATION OF THE KINASE/RNASE IRE1A BY SMALL MOLECULES AND SCAFFOLDING KINASES
Hannah Feldman[1], 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 Islam[1]
(1) Department of Biochemistry (Aligarh, India)

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

POS066 SIMULTANEOUS VISUALIZATION OF A GENE AND ITS NASCENT TRANSCRIPTS IN LIVE CELLS
João Pessoa[1], Célia Carvalho, Maria Carmo-Fonseca
(1) Instituto de Medicina Molecular, Faculdade de Medicina, Universidade de Lisboa (Lisbon, Portugal)



Posters

POS067 DESIGN OF 2D AND 3D ARRAYS FROM ENGINEERED AMYLOID PROTEINS
Fernanda Bononi[1], 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 Muiznieks[1], Fred Keeley, Régis Pomès
(1) Hospital for Sick Children (Toronto, Canada)

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

POS070 STUDY OF ALLOSTERIC COMMUNICATIONS IN CHIMERIC TWO-DOMAIN PROTEINS
Kristyna Bousova[1]
(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[1], 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 Teraoka[1], Shogo Atsuji, 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]
(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[1], Sicong Li, Yuhui Sun, Zhengding Su
(1) 1Institute 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[1], Erin Heim, Sophia Chen
(1) Yale School of Medicine, Immunobiology Department (New Haven, United States)

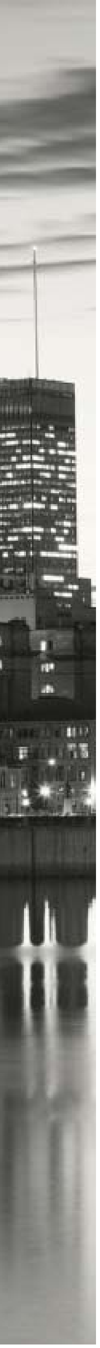
POS077 IDENTIFICATION OF ALLOSTERIC FRAGMENTS TO RIGIDIFY DYNAMIC CONFORMATION
Zhengding Su[1], Rong Chen, Jingjing Zhou, Lingyun Qin, Huili Liu
(1) Institute of Biomedical and Pharmaceutical Sciences, Hubei University of Technology (Wuhan, China)

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

POS079 STRUCTURAL INSIGHTS TO THE FUNCTIONS OF C-TERMINAL DOMAINS OF TOPOISOMERASE I
Kemin Tan[1], Nan Cao, Qingxuan Zhou, Bokun Cheng, Andrzej 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[1], Yuri Sergeev
(1) OGVFB, NEI/NIH (Bethesda, United States)

POS081 MOLECULAR LEVEL ANALYSIS OF DISEASE-CAUSING MUTATIONS IN THE HUMAN SULFONYLUREA RECEPTOR
Claudia Alvarez[1], Marijana Stagljar, Voula Kanelis
(1) Chemistry Department (Mississauga, Canada)



Posters

POS083 **KINETIC AND STRUCTURAL CHARACTERIZATION OF KABA, GLUTAMATE AMINOTRANSFERASE INVOLVED IN THE PRODUCTION OF KANOSAMINE FROM BACILLUS CEREUS**
Theerawat Prasertanan[1], 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 Smith[1], Emily Tran, Nicholas Grimberg, Simon Chuong
(1) Department of Biology, Wilfrid Laurier University (Waterloo, Canada)

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

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

POS089 **RECOGNITION AND CLEAVAGE OF CORN DEFENSE CHITINASES BY FUNGAL POLYGLYCINE HYDROLASES**
Todd Naumann[1], Neil Price, Marcia Chaudet, David Rose
(1) ARS-NCAUR (Peoria, United States)

POS090 **DYNAMICS AND DISRUPTION OF THE HYDROPHOBIC BRIDGE IN THE BINDING POCKET OF OXA-66 MUTANTS P130Q, P130A, AND W222L**
Alyssa Benn[1], Jonathan Hall, Zachary Klamer, Troy Wymore, David Leonard, Agnieszka Szarecka
(1) Grand Valley State University, Cell and Molecular Biology Department, C/O Beverly Tramper (Allendale, United States)

POS092 **THE MITORIBOSOME OF A PRIMITIVE EUKARYOTE ANDALUCIA GODOYI**
Jose Gonzalez[1], Gertraud Burger, Matus Valach
(1) Robert-Cedergren Centre of Bioinformatics and Genomics, Biochemistry, Université de Montréal. (Montreal, Canada)

POS095 **QUANTIFYING DYNAMIC BLEBBING IN MAMMALIAN CELL LINES TO PREDICT MIGRATORY BEHAVIOUR**
Netra Unni[1], Anam Qudrat
(1) University of Toronto Faculty of Applied Sciences and Engineering (Mississauga, Canada)

POS096 **REDOX REGULATION OF THE ANTIVIRAL ADAPTOR MAVS ACTIVATION THROUGH FORMATION OF SELF-PERPETUATING FIBERS**
Natalia Zamorano[1], Audray Fortin, Stéfany Chartier, Espérance Mukawera, Nathalie Grandvaux
(1) CRCHUM - Université de Montréal (Montréal, Canada)

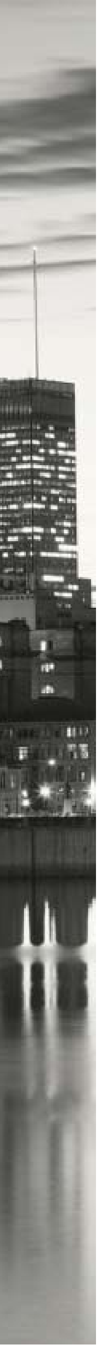
POS101 **THE ANTIFUNGAL PEPTIDE PERIPLANETASIN 2 FROM AMERICAN COCKROACH PERIPLANETA AMERICANA ACTIVATES APOPTOTIC SIGNALING VIA OXIDATIVE STRESS AGAINST CANDIDA ALBICANS**
Dong Gun Lee[1], Heejeong Lee
(1) Kyungpook National University (Daegu, South Korea)

POS102 **ROLE OF CYSTATHIONINE B SYNTHASE MODULE IN TRYPANOSOMA BRUCEI GMP REDUCTASE**
Akira Imamura[1], 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)

POS103 **UNDERSTANDING THE BACILLAMIDE NONRIBOSOMAL PEPTIDE SYNTHETASE SYSTEM**
Camille Marie Fortinez[1], Kristjan Bloudoff, Martin Schmeing
(1) McGill University (Montreal, Canada)

POS104 **CRYPTIC GENETIC VARIATION DETERMINES THE ADAPTIVE EVOLUTIONARY POTENTIAL OF ENZYMES**
Nobuhiko Tokuriki[1], Florian Baier, Colin Jackson
(1) University of British Columbia (Vancouver, Canada)

POS105 **PURIFICATION AND FUNCTIONAL RECONSTITUTION OF TAAR13C INTO NANODISCS FOR THE DEVELOPMENT OF CADAVERINE-DETECTION BIOSENSOR**
Heehong Yang[1], Daesan Kim, Seunghun Hong, Tai Hyun Park
(1) School of Chemical and Biological Engineering, Seoul National University (Seoul, South Korea)



Posters

POS106 **EXPRESSION, PURIFICATION AND FUNCTIONAL RECONSTITUTION OF THE LIGAND-DOMAIN OF UMAMI TASTE RECEPTOR FOR THE DEVELOPMENT OF UMAMI TASTE SENSOR**
Sae Ryun Ahn[1], Ji Hyun An, Il Ha Jang, Jyongsik Jang, Tai 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[1], Rizwan Hasan Khan
(1) Aligarh Muslim University (Aligarh, India)

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

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

POS110 **DISCOVERING LIGHT-SWITCHABLE PROTEIN INTERACTIONS USING PHAGE DISPLAY**
Jakeb Reis[1], Xiuling Xu, Sherin McDonald, Anna Jaikaran, Andrew Woolley, Maruti Uppalapati
(1) Department of Chemistry, University of Toronto (Toronto, Canada)

POS111 **MOLECULAR MODELLING OF THE ORAI CALCIUM CHANNELS**
Tugba Nur Ozturk[1], Guillaume Lamoureux
(1) Concordia University (Montreal, Canada)

POS112 **ENTROPICALLY-CHALLENGED TANDEM-REPEAT PROTEINS: BREAKDOWN OF NEAREST-NEIGHBOUR COOPERATIVITY**
Albert Perez-Riba[1], Alan Lowe, Ewan Main, Elizabeth Komives, Laura Itzhaki
(1) University of Cambridge (Cambridge, United Kingdom)

POS113 **DISTAL RESIDUES MAY MODULATE DYNAMICS OF ORNITHINE TRANSCARBAMOYLASE ACCORDING TO SMALL ANGLE X-RAY SOLUTION SCATTERING**
Jenifer Winters[1], Lisa Ngu, Dr. Lee Makowski, Dr. Penny J. Beuning, Dr. Mary Ondrechen
(1) Northeastern University (Boston, United States)

POS114 **ANCESTRAL RECONSTRUCTION OF LIGAND BINDING PROTEINS: CLUES TO UNDERSTAND PROTEIN SPECIFICITY EVOLUTION**
Saira Maldonado-Puga[1], Alejandro Sosa-Peinado, Jesús Banda-Vázquez
(1) Laboratory of Physicochemistry and Protein Engineering, Biochemistry Department, School of Medicine, UNAM (México City, Mexico)

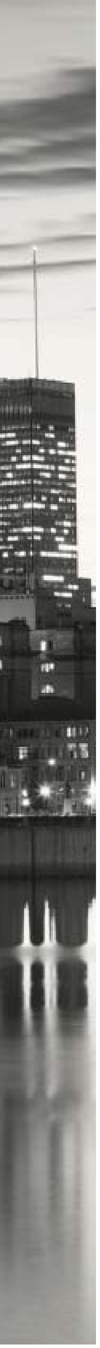
POS116 **CO-CRYSTAL STRUCTURE OF TUBULIN WITH PF-06380101, A NOVEL AURISTATIN ANALOGUE WITH IMPROVED CELL POTENCIES**
Alison Varghese[1], Kevin Parris, Jayvarthan Pandit, Suman Shanker, Cynthia Song, Andreas Madernas
(1) Pfizer, Inc. (Moodus, United States)

POS117 **THE MECHANISMS FOR COUNTING AND HANDOFF BY HUMAN DNA PRIMASE: A ROLE FOR THE 4FE-4S CLUSTER?**
Walter Chazin[1], Jacqueline Barton, Matthew Thompson, Elizabeth O'Brien, Marilyn Holt, Lauren Salay, Aaron Ehlinger
(1) Vanderbilt University (Nashville, United States)

POS118 **SHIFTING THE BOUNDARIES OF EXPERIMENTAL STUDIES IN ENGINEERING ENZYMATIC FUNCTIONS: COMBINING THE BENEFITS OF COMPUTATIONAL AND EXPERIMENTAL METHODS**
Maximilian Ebert[1], Simon Dürr, Armande Ang Houle, Guillaume Lamoureux, Joelle Pelletier
(1) Université de Montréal (Montreal, Canada)

POS119 **THE LEVINTHAL PROBLEM IN AMYLOID AGGREGATION: SAMPLING OF A FLAT REACTION SPACE**
Jianhan Chen[1], Jeremy Schmit, Zhiguang Jia
(1) University of Massachusetts, Amherst (Amherst, United States)

POS120 **DODECYL MELIBIOSE: A NOVEL DETERGENT FOR MEMBRANE PROTEIN WORK**
James Hutchison[1], Zhenwei Lu, Justin Marinko, Catherine Deatherage, Ben Travis, Ritesh Mittal, Charles Sanders
(1) Vanderbilt (Nashville, United States)



Posters

POS121 WHY PROTEIN OLIGOMER COMPLEXES ALLOW MORE PRECISE REGULATION MECHANISMS OVER DIMERS AND MONOMERS?
Dominic Lauzon[1], Alexis Vallée-Bélisle
(1) Laboratory of Biosensors & Nanomachines, Department of Chemistry, University of Montreal (Terrebonne, Canada)

POS122 ANION INHIBITION OF PEPCK MANIFESTED AS SUBSTRATE INHIBITION; USING CRYSTALLOGRAPHIC METHODS TO DETERMINE THERMODYNAMIC DATA
Matt McLeod[1], Todd Holyoak
(1) University of Waterloo (Waterloo, Canada)

POS125 MEMBRANE BINDING OF S100A10 AND ANNEXIN A2 PROTEINS INVOLVED IN CELL MEMBRANE REPAIR
Xiaolin Yan[1], Élodie Boisselier
(1) Laval University (Québec, Canada)

POS126 UBIQUITIN RECEPTORS MEDIATE PROTEASOMAL PROCESSIVITY
Daniel Kraut[1], Mary Cundiff, William Dewey, Eden Reichard, Nicholas Nassif
(1) Villanova University (Villanova, United States)

POS127 MULTI-SCALE MODEL OF MICROBIAL EVOLUTION TO PREDICT THE EMERGENCE OF DRUG RESISTANCE
Anh-Tien Ton[1], Adrian Serohijos, Pouria Dasmeh
(1) Université de Montréal (Laval, Canada)

POS128 PROBING CATION-PI INTERACTIONS OF LYSINE READER PROTEINS USING IN VIVO UNNATURAL AMINO ACID MUTAGENESIS
Stefanie Baril[1], Amber Koenig, Mackenzie Krone, Eric Brustad, Marcey Waters
(1) UNC Chapel Hill (Chapel Hill, United States)

POS129 EXPLORING THE INNOVABILITY POTENTIAL OF A PRIMITIVE ENZYME THAT CONFERS ANTIBIOTIC RESISTANCE
Lorea Alejaldre[1], Joelle Pelletier
(1) Université de Montréal (Montreal, Canada)

POS130 PHOTOCONTROL OF A PROTEIN AFFINITY REAGENT USING AZOBENZENE SWITCHES
Amir Babalhavaeji[1], Andrew Woolley
(1) University of Toronto (Toronto, Canada)

POS131 CHARACTERIZATION OF LIPID BINDING BY THE FUNCTIONAL AMYLOID PROTEIN ORB2A
Maria Soria[1], Silvia Cervantes, Thalia Bajakian, Ansgar Siemer
(1) University of Southern California (Los Angeles, United States)

POS132 PROBING THE DETERMINANTS OF COLLAGEN FLEXIBILITY USING ATOMIC FORCE MICROSCOPY
Aaron Lyons[1], Nancy Forde, Naghmeh Rezaei
(1) Simon Fraser University (Department of Physics) (Burnaby, Canada)

POS133 INTRACELLULAR/SURFACE MOONLIGHTING PROTEINS
Constance Jeffery[1], Wangfei Wang
(1) University of Illinois at Chicago (Belmont, United States)

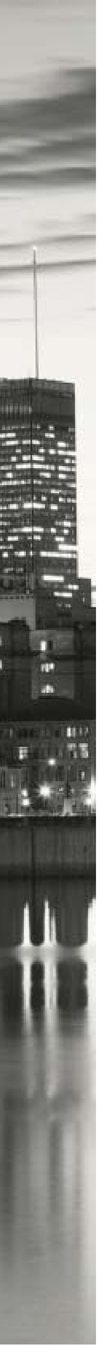
POS134 TUNING THE DYNAMICS OF BIOMOLECULAR SWITCHES USING INDUCED FIT AND CONFORMATIONAL SELECTION MECHANISMS
Carl Prévost-Tremblay[1], Alexis Vallée-Bélisle
(1) Université de Montréal (Charlemagne, Canada)

POS135 IDENTIFYING AND DEVELOPING GROEL/ES CHAPERONIN SYSTEM INHIBITORS AS ANTIBACTERIAL CANDIDATES
Steven Johnson[1], Sanofar Abdeed, Trent Kunkle, Nilshad Salim, Andrew Ambrose, Eli Chapman
(1) IU School of Medicine (Indianapolis, United States)

POS137 X-RAY CRYSTALLOGRAPHY REVEALS MECHANISM FOR TWO GAIN-OF-FUNCTION CLINICAL VARIANT CARBAPENEMASES FROM MACINETOBACTER BAUMANNII
Cynthia June[1], Christopher Russell, Emma Schroder, Rachel Powers, Agnieszka Szarecka, David Leonard
(1) Grand Valley State University (Allendale, United States)

POS138 A CLASS D B-LACTAMASE CLINICAL VARIANT FROM ACINETOBACTER BAUMANNII THAT POSSESSES AN UNUSUALLY HIGH TURNOVER RATE FOR CEPHALOSPORINS
Jonika Forbes-Benjamin[1], Cynthia June, Joshua Mitchell, Rachel Powers, David Leonard
(1) Grand Valley State University (Allendale, United States)

POS139 CHARACTERIZING THE FUNCTIONS OF STRUCTURAL GENOMICS PROTEINS THROUGH COMPUTED CHEMICAL PROPERTIES AND BIOCHEMICAL VALIDATION
Caitlyn Mills[1], Ramya Parasuram, Penny Beuning, Mary Jo Ondrechen
(1) Northeastern University (Boston, United States)



Posters

POS140 NEGATIVE PHOSPHOREGULATION OF NCK1/2 ADAPTOR PROTEINS BY THE TYROSINE KINASE RECEPTOR EPHA4
Ugo Dionne[1], François Chartier, David Bernard, Michel Tremblay, Gerald Gish, Patrick Laprise, Nicolas Doucet, Christian Landry, Nicolas Bisson
(1) CRC, CHU of Quebec Oncology division, Laval University and PROTEO (Quebec, Canada)

POS141 THE NEUROTRANSMITTER NORADRENALINE BINDS A-SYNUCLEIN AND MODULATES ITS STRUCTURE AND AGGREGATION PROPERTIES
Priyanka Singh[1], Rajiv Bhat
(1) Jawaharlal Nehru University (New Delhi, India)

POS142 DESIGN OF OPTOGENETIC TOOLS FOR THE CONTROL OF PROTEIN SYNTHESIS
Huixin (Lulu) Lu[1], Andrew Woolley, Mostafizur Mazumder, Anil Kumar, Xiuling X, Anna Jaikaran
(1) University of Toronto (Toronto, Canada)

POS143 USE OF HALOGENATED DERIVATIVES OF THE FERULIC ACID AS MATRICES IN PROTEOMIC ANALYSIS WITH MATRIX-ASSISTED LASER DESORPTION/IONIZATION TIME OF FLIGHT MASS SPECTROMETRY
Yosuke Kato[1], Takeshi Sakamoto, Narumi Hirosawa, Jun Takayama, Maiyan Xuan, Mari Okazaki, Yasushi Sakamoto
(1) Josai University (Sakado, Japan)

POS144 QUANTIFYING MICROSCOPIC PATHWAY HETEROGENEITY IN PROTEIN FOLDING
Soundhararajan Gopi[1], Sayan Ranu, Athi N. Naganathan
(1) Department of Biotechnology, Bhupat & Jyoti Mehta School of Biosciences, Indian Institute of Technology Madras, (Chennai, India)

POS145 UNDERSTANDING THE MOLECULAR ORIGINS OF TEMPERATURE-INUCED COLLAPSE TRANSITION IN DISORDERED PROTEINS
Sneha Munshi[1], Athi N Naganathan
(1) Department of Biotechnology Bhupat and Jyoyti Mehta School of Bio Sciences Indian Institute of technology Madras (Chennai, India)

POS146 DEVELOPING A DRUG AGAINST TRICHOMONIASIS
Jose Vique[1], Claudia Benitez
(1) Instituto Politecnico Nacional (cdmx, Mexico)

POS147 TUNING THE CONTINUUM OF STRUCTURAL STATES IN THE NATIVE ENSEMBLE OF A REGULATORY PROTEIN
Abhishek Narayan[1], Athi N Naganathan
(1) Department of Biotechnology (Chennai, India)

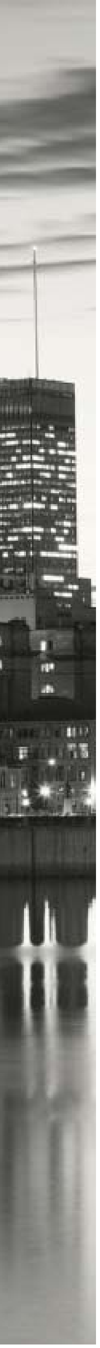
POS148 SPATIAL AND INDEPENDENT REGULATION OF ENZYMATIC AND CHAPERONE-LIKE ACTIVITITES OF A 35 KDA FK506-BINDING PROTEIN FROM PLASMODIUM KNOWLESI
Cahyo Budiman[1], Carlmond Kah Wun Goh, Jovi Silvester, Ping Chin Lee, Tiek Ying Lau, Adam Thean Chor Leow
(1) University of Malaysia Sabah (Kota Kinabalu, Malaysia)

POS149 ANTIBODY FRAGMENT PRODUCTION IN PICHIA PASTORIS WITH HIGHLY ATTENUATED O-GLYCOSYLATION PATTERNS AND WITHOUT ADDITION OF PURE O2
Alexandre Di Paolo[1], Nathalie Pirlot, Laurent Jost, Rudi Piedboeuf, Jean Gudas, David T. Ho, Green Zhang
(1) Kaneka Eurogentec (Seraing, Belgium)

POS150 STRUCTURAL INSIGHTS GAINED INTO SCCH DOMAIN OF YEAST UBIQUITIN ACTIVATING ENZYME E1
Brinda Panchamia[1], Ratna Prabha Chivukula, Mukesh Kumar, Vishal Prashar
(1) The Maharaja Sayajirao University of Baroda (Vadodara, India)

POS151 PROMISCUOUS BUT SELECTIVE: HOW INTRINSICALLY DISORDERED BH3-ONLY PROTEINS REGULATE APOPTOSIS THROUGH BINDING TO BCL-2 LIKE PROTEINS
Liza Dahal[1], Jane Clarke
(1) University of Cambridge (Cambridge, United Kingdom)

POS152 UNFOLDING SIMULATIONS AND STRUCTURAL ANALYSIS PROVIDE CLUES FOR THE ROLE OF ALPHA-BETA LOOPS IN THE STABILITY OF THE TIM BARREL FOLD
Ramakrishna Vadrevu[1], Rajashekar Kadumuri
(1) Associate Professor (Hyderabad, India)



Posters

#PS31

POS153 A COMPARATIVE OVERVIEW BETWEEN IN VITRO AND IN VIVO GLUCOSYLATION OF HUMAN SERUM ALBUMIN: PROTEIN MODIFICATION IN DIABETES MELLITUS
Km Neelofar[1], Jamal Ahmad
(1) Aligarh Muslim University (Aligarh, India)

POS154 THE ROLE OF THE C-TERMINAL HEPTAD REPEAT (CHR) OF HIV-1 GP41 IN FORMATION AND ENLARGEMENT OF FUSION PORES
Zene Matsuda[1], Dehua Liu, Hongyun Wang
(1) Research Center for Asian Infectious Diseases, Institute of Medical Science, The University of Tokyo (Minato-ku, Japan)

POS155 MULTIDOMAIN PROTEIN FOLDING PATHWAYS: DECIPHERING THE COMPLEXITY OF FOLDING REACTIONS IN LARGE PROTEINS
Vipul Kumar[1], Tapan K. Chaudhuri
(1) Indian Institute Of Technology, Delhi (Delhi, India)

POS156 SELECTIVE INHIBITION OF CALCINEURIN ACTIVITY IN PATHOGENIC FUNGII
Sophie Gobeil[1], Leonard Spicer, Ben Bobay, Ron Venters
(1) Duke University Biochemistry Department (Durham, United States)

POS158 DEVELOPMENT OF A CHEMICAL TOOLBOX FOR DISSECTING ACTIVATOR-COACTIVATOR INTERACTIONS IN VIVO
Meghan Breen[1], Anna Mapp
(1) University of Michigan (Ann Arbor, United States)

POS159 A SINGLE MUTATION ENABLES LAO BINDING PROTEIN TO VISIT A CLOSED STATE WITHOUT LIGANDS
Diego S. Granados[1], Alejandro Sosa-Peinado, Jesus Banda-Vazquez
(1) Laboratorio de Fisicoquímica de Proteínas. School of Medicine, UNAM. México. (Mexico City, Mexico)

POS160 SOLUTION SCATTERING AT THE LIFE SCIENCE X-RAY SCATTERING BEAMLINE OF NATIONAL SYNCHROTRON LIGHT SOURCE II
Lin Yang[1], Shirish Chodankar, Vito Graziano
(1) Brookhaven National Laboratory (Upton, United States)

POS161 SOLVING A MYSTERY OF COAGULATION FACTOR XIII: DISSOCIATION OF A HOMODIMER AS PART OF THE ACTIVATION PROCESS
Boris Anokhin[1], Muriel Maurer, Vilius Stribinskis, William Dean
(1) Department of Chemistry, University of Louisville (Louisville, United States)

POS162 CLONING, EXPRESSION, AND CHARACTERIZATION OF PUTATIVE CYCLOOXYGENASES FROM THREE BACTERIAL SPECIES
Barry Selinsky[1], Rebecca Skaf, Alecia Cunniff, Lauren Fahrenkrog
(1) Villanova University (Villanova, United States)

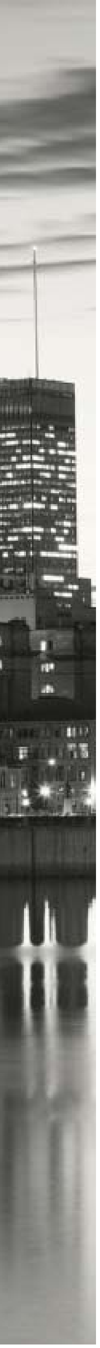
POS164 LEVERAGING RECIPROCITY TO IDENTIFY UNKNOWN ALLOSTERIC SITES IN PTP1B
James Lipchock[1], Patrick Loria, Danica Cui, Patrick Ginther
(1) Washington College (Chestertown, United States)

POS166 STRUCTURAL AND FUNCTIONAL CHARACTERIZATION OF CHIMERIC UBIQUITIN CONJUGATING ENZYME (C-UBC1) IN S.CEREVISIAE
Varsha Raimalani[1], Ratna Prabha
(1) The Maharaja Sayajirao University of Baroda (Vadodara, India)

POS167 EFFECT OF ENVIRONMENTAL STRESS ON GENOMIC INSTABILITY IN THE C-TERMINAL DOMAIN OF RNA POLYMERASE II IN S. CEREVISIAE
Taylor Stewart[1], Tokio Sano, Stephen M. Fuchs
(1) Tufts University, Department of Biology (Medford, United States)

POS168 DEEP CONVOLUTIONAL NETWORKS FOR PROTEIN STRUCTURE QUALITY ASSESSMENT
Georgy Derevyanko[1], Guillaume Lamoureux, Sergei Grudinin
(1) Concordia University (Montreal, Canada)

POS169 BIOID IDENTIFICATION OF NOVEL EFFECTOR PROTEINS IN EPH RECEPTOR SIGNALING
Sara Banerjee[1], Nicolas Bisson
(1) Centre de Recherche sur le Cancer, PROTEO, Division Oncologie, Centre de Recherche du Centre Hospitalier Universitaire (CHU) de Québec (Quebec, Canada)



Posters

POS170 POLYQ TRACTS AS EFFICIENT C-CAPPING ELEMENTS FOR COILED-COILS
Albert Escobedo[1], Busra Topal, Jesús García, Oscar Reina, Camille Stephan-Otto Attolini, Xavier Salvatella
(1) Institute for Research in Biomedicine (IRB Barcelona), The Barcelona Institute of Science and Technology (Barcelona, Spain)

POS171 TUNING THE COURSE OF VIRAL EVOLUTION ON A PROTEIN FITNESS LANDSCAPE USING DROPLET MICROFLUIDICS
Adrian Serohijos[1], Assaf Rotem, Eugene Shakhnovich, David Weitz, Christiane Wobus, James Pipas, Andrew Feldman
(1) University of Montreal (Montréal, Canada)

POS172 ENGINEERING A POLYMERASE FOR THE FORENSIC ANALYSIS OF DAMAGED DNA SAMPLES
Tim Coulther[1], Penny Beuning, Mary Jo Ondrechen
(1) Northeastern University (Boston, United States)

POS173 REFINING THE SEQUENCE SIGNATURE OF BACTERIAL LACCASES
Robert Collins[1]
(1) Eastern Connecticut State University (Willimantic, United States)

POS174 ALLOSTERIC DESTABILIZATION OF NBD1 SUBDOMAINS AND CFTR BY CYSTIC FIBROSIS MUTATIONS
Naoto Soya[1], Gergely Lukacs, Ariel Roldan, Haijin Xu, Ryosuke Fukuda, Tamas Hegedus
(1) McGill University (Montreal, Canada)

POS175 THERMOSTABILIZATION OF VPR, A COLD ADAPTED SUBTILASE, BY PROLINE SUBSTITUTIONS INTO SURFACE LOOPS
Magnus Kristjansson[1], Kristinn Oskarsson, Arnor Aevarsson,
(1) Science Institute, University of Iceland (Reykjavik, Iceland)

POS176 A NOVEL ALGORITHM TO COMPUTE AND VISUALIZE PROTEIN COARSE-GRAINED ENERGY LANDSCAPES FOR FOLDING PREDICTION
David Becerra[1], Zheng Da, Jerome Waldispuhl
(1) School of Computer Science and McGill Centre for Bioinformatics (Montreal, Canada)

POS179 KINETIC STUDY OF APH (3')-IIIA INHABITION MECHANISM BY ISOTHERMAL TITRATION CALORIMETRY (ITC)
Yun Wang[1], Justin Di Trani, Anthony Mittermaier
(1) Department of Chemistry, McGill University (Montreal, Canada)

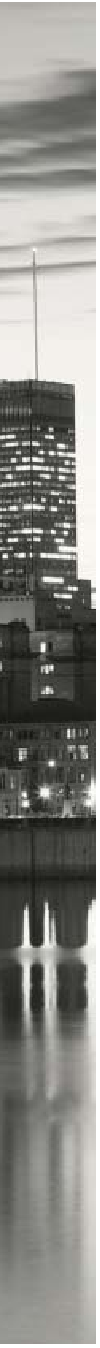
POS181 STRUCTURAL AND FUNCTIONAL ANALYSIS OF THE BACTERIAL CELL DIVISION PROTEINS FTSB AND FTSL
Samuel Craven[1], Deena Mahbuba, Samson Condon, Claire Armstrong, Loren LaPointe, Ambalika Khadria, Alessandro Senes
(1) University of Wisconsin-Madison (Madison, United States)

POS183 BIO-VALORIZATION OF WASTE ENGINE OILS
Manel Ghribi[1], Marc Beauregard, Fatma Meddeb-Mouelhi
(1) University of Québec at Trois-Rivières (Trois-Rivières, Québec, Canada)

POS184 CHARACTERIZATION OF SIGMA ANTI-SIGMA COMPLEXES CENTRAL TO THE IRON HOMEOSTASIS IN PSEUDOMONAS AERUGINOSA
G. Patricia Casas[1], Iain A Lamont, Matthew A Perugini, Megan J Maher
(1) Department of Biochemistry and Genetics, Institute of Molecular Bioscience, La Trobe University (Bundoora, Australia)

POS185 INSIGHT INTO THE ORIGIN OF THE FORMYLATION TAILORING DOMAIN FOUND IN THE LINEAR GRAMICIDIN NONRIBOSOMAL PEPTIDE SYNTHETASE
Ingrid Harb[1], Janice M. Reimer, Olga Ovchinnikova, Jessie Jiang, Chris Whitfield, T. Martin Schmeing
(1) Dept. of Biochemistry, McGill University (Montreal, Canada)

POS186 INTERACTION BETWEEN THE INTRINSICALLY DISORDERED ANDROGEN RECEPTOR N-TERMINAL DOMAIN AND RAP74-CTD AND HOW WE CAN DISRUPT IT
Marta Frigolé-Vivas[1], Xavier Salvatella, Elzbieta Szulc, Eva De Mol, Claudio Di Sanza, Paula Martínez, Maciej Majewski, Carla García, Jesús García, Xavier Barril, Carlos W. Bertoncini, R. Bryn Fenwick, Víctor Buzón, Isabelle Burn-Heath, Gianni De Fabritiis, Iain J. McEwan, Ángel R. Nebreda
(1) Institute for Research in Biomedicine (IRB Barcelona), The Barcelona Institute of Science and Technology (Barcelona, Spain)



Posters

POS187 STRUCTURAL INSIGHTS INTO THE MULTIMODULAR NONRIBOSOMAL PEPTIDE SYNTHETASE
Syed Asfarul Haque[1], Martin Schmeing
(1) McGill University (3649 Promenade Sir William Osler, Canada)

POS188 RATIONAL CONTROL OVER PROTEIN OLIGOMERIZATION THROUGH ENGINEERED DOMAIN SWAPPING
Neha Nandwani[1], Parag Surana, Nahren Mascarenhas, Jayant Udgaonkar, Ranabir Das, Shachi Gosavi
(1) National Centre for Biological Sciences (Bangalore, India)

POS189 UNDERSTANDING THE STRUCTURE AND FUNCTION OF UDP-GLUCOSE: GLYCOPROTEIN GLUCOSYLTRANSFERASE (UGGT), A UNIQUE SENSOR OF MISFOLDED GLYCOPROTEINS IN ER
Meng Yang[1], Daniel Calles, Guennadi Kozlov, Maire Menade, Naoto Soya, Justin Kollman, Yukishige Ito, Kalle Gehring
(1) McGill University (Montreal, Canada)

POS190 DNA DAMAGE SPECIFICITY AND ACTIVITY OF Y-FAMILY DNA POLYMERASES DINB AND POL KAPPA
Nicole Antczak[1], Morgan Packer, Penny Beuning
(1) Northeastern University (Boston, United States)

POS192 HIGH SPECIFICITY PROTEIN-PROTEIN INTERACTION NETWORKS BY COMPUTATIONAL DESIGN
Ravit Netzer[1], Sarel J. Fleishman
(1) Weizmann Institute of Science (Rehovot, Israel)

POS193 TOPOLOGICALLY CONSTRAINED PEPTIDIC SYSTEMS FOR CELL PENETRATION AND TARGETED DRUG DELIVERY
Gaurav Jerath[1], Vibin Ramakrishnan, Prakash Hazam, Ruchika Goyal, Vishal Trivedi, T R Santhosh Kumar
(1) Indian Institute of Technology Guwahati (Guwahati, India)

POS194 CONSERVATION OF CONFORMATIONAL MOTIONS IMPACTING FUNCTION IN AN ENZYME SUPERFAMILY
Chitra Narayanan[1], David N Bernard, Khushboo Bafna, Pratul K Agarwal, Nicolas Doucet
(1) INRS - University of Quebec (Laval, Canada)

POS195 ILLUMINATING THE SPECIFICITY LANDSCAPE OF THE HCV NS3 PROTEASE USING COMPUTATION AND NEXT GENERATION SEQUENCING
Manasi Pethe[1], Aliza Rubenstein, Sagar Khare, Dmitri Zoraine
(1) Chemistry and Chemical Biology, Rutgers University (Piscataway, United States)

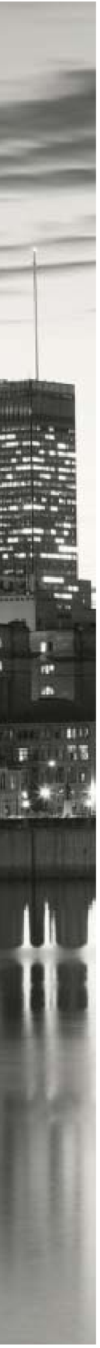
POS196 EVOLUTION OF THE MOLECULAR MECHANISMS OF DEPENDENCY BETWEEN PARALOGOUS GENES WITHIN THE PROTEIN INTERACTION NETWORK
Axelle Marchant[1], Christian. R Landry, Isabelle Gagnon-Arsenault
(1) Département de Biologie ; The Quebec Network for Research on Protein Function, Engineering, and Applications ; Institut de Biologie Intégrative et des Systèmes - Université Laval (Quebec, Canada)

POS197 DEVELOPMENT OF RED LIGHT SWITCHABLE PROTEIN-PROTEIN INTERACTIONS USING PHAGE DISPLAY
Jaewan Jang[1], G. Andrew Woolley
(1) University of Toronto (North York, Canada)

POS198 THE ROLE OF RESIDUES C301 AND C303 IN THE ACTIVE SITE OF HUMAN ALDH2 IN THE INACTIVATION BY LIPID PEROXIDATION PRODUCTS
Luis Francisco Calleja Castañeda[1], José Rodríguez Zavala
(1) Instituto Nacional de Cardiología (Ciudad de México, Mexico)

POS200 HSP40 AND HSP70 ACT AS HOLDASES TO PREVENT THE N/C INTERACTION IN THE ANDROGEN RECEPTOR PRIOR TO ACTIVATION BY ANDROGENS
Marta Marin-Argany[1], Xavier Salvatella, Bahareh Eftekharzadeh, Jennifer Rauch, Daniele Mungianu, Giulio Chiesa, Jesús García, Ángel Nebreda, Jason Gestwicki
(1) Institute for Research in Biomedicine (IRB Barcelona) (Barcelona, Spain)

POS201 DISSECTING THE CATALYTIC FRAGMENT OF PSEUDOMONAS EXOTOXIN A
John Weldon[1], Earl Brooks, Kaleem Coleman, Victor Eromosele, Olubunmi Olakunle, Kavisha Schroff, Alec Ahearn, Jack Sanford, Rodrigo Montoro, Joyce Chun, Michelle Harrison, Ian Geithner, Jocelynn Stewart, Hannah Long, Katlyn Hoffman, Jordan Soumah, Amanda Reeves
(1) Towson University (Towson, United States)



Posters

POS202 THE TRANSACTIVATION DOMAIN OF THE ANDROGEN RECEPTOR DRIVES ITS PHASE SEPARATION
Elzbieta Szulc[1], Jill Bouchard, Tanja Mittag, Xavier Salvatella
(1) IRB Barcelona, Spain (Barcelona, Spain)

POS204 STRUCTURE AND SELF-ASSEMBLY OF ELASTIN-LIKE PEPTIDES: A JOINT MOLECULAR DYNAMICS AND NMR STUDY
Régis Pomès[1], Quang Huynh, Sean Reichheld, Sarah Rauscher, Zhen Hao Wu, Simon Sharpe
(1) Hospital for Sick Children (Toronto, Canada)

POS205 ESTIMATING THE CONTRIBUTION OF SELECTION FOR FOLDING STABILITY TO EPISTASIS IN PROTEIN EVOLUTION
Pouria Dasmeh[1], Adrian Serohijos
(1) Departement de Biochimie, Centre Robert Cedergren en Bioinformatique et Génomique, Université de Montréal (Montreal, Canada)

POS206 HIGHLY EXPRESSED PROTEINS EVOLVE WITH STRONGER EPISTASIS IN E.COLI
Pouria Dasmeh[1], Eric Girard, Adrian Serohijos
(1) Departement de Biochimie, Centre Robert Cedergren en Bioinformatique et Génomique, Université de Montréal (Montreal, Canada)

POS208 TUNING ENZYMATIC ACTIVITY BY COMBINING VIRTUAL DOCKING AND RESIDUE INTERACTION NETWORKS
Yossef Lopez de los Santos[1], Ying Lian Chew Fajardo, Guillaume Brault, Nicolas Doucet
(1) INRS – Institut Armand-Frappier, Université du Québec (Laval, Canada)

POS209 BIOINFORMATICS DISCOVERY OF CHEMICAL DIVERSITY IN ENZYME SUPERFAMILIES
Kai Hu[1], Benjamin Allen
(1) The Pennsylvania State University (University Park, United States)

POS210 STRUCTURAL BASIS FOR SUBSTRATE SEQUENCE SPECIFICITY IN SINGLE DOMAIN HUMAN APOBEC3 CYTIDINE DEAMINASE
Tania Silvas[1], Shurong Hou, Nese KurtYilmaz, Mohan Somasundaran, Brian Kelch, Celia Schiffer
(1) University of Massachusetts Medical School (Worcester, United States)

POS211 IDENTIFICATION OF A CONFORMATIONAL HEPARIN-RECOGNITION MOTIF ON THE PEPTIDE HORMONE SECRETIN: KEY ROLE FOR CELL SURFACE BINDING
Noé Quittot[1], Armelle Tchoumi Nerée, Phuong Trang Nguyen, Steve Bourgault
(1) Université du Québec à Montréal (Montréal, Canada)

POS212 EFFECTS OF MACROMOLECULAR CROWDING ARE MODULATED BY SHAPE OF PROTEIN COMPLEX
Alex Guseman[1], Gerardo Perez Goncalves, Gary Pielak
(1) Department of Chemistry, UNC Chapel HIll (Chapel Hill, United States)

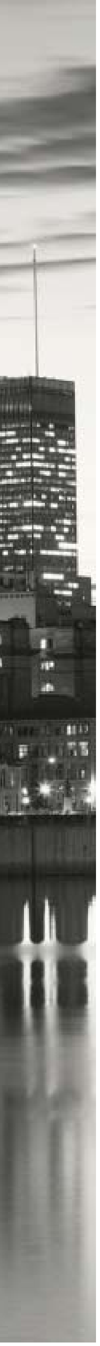
POS213 THE STRUCTURE OF YEAST TRNA LIGASE REVEALS A COMPETITION BETWEEN NON-CONVENTIONAL MRNA SPLICING AND RNA DECAY
Jirka Peschek[1], Peter Walter
(1) UC San Francisco (San Francisco, United States)

POS215 TO ANALYZE PIMT FUNCTION IN GLIOBLASTOMA CELL INVASION
Fatima Belkourchia[1], Richard Desrosiers
(1) UQÀM (Montréal, Canada)

POS216 COSOLUTES AND THE STABILITY OF A DOMAIN-SWAPPED DIMER
Gerardo Perez Goncalves[1], Alex Guseman, Gary Pielak
(1) Department of Chemistry, UNC Chapel Hill (Chapel Hill, United States)

POS217 OPTIMIZING LIGNOCELLULOSIC BIOMASS PROCESSING: A NOVEL AND HIGH THROUGHPUT APPROACH FOR XYLAN POLYSACCHARIDES TRACKING AT THE SURFACE OF FIBERS
Vinay Khatri[1], Fatma Meddeb-Mouelhi
(1) University of Quebec at Trois-Rivieres (Trois-Rivieres, Quebec, Canada)

POS218 ACCELERATING CHARACTERIZATION OF LARGE VARIANT LIBRARIES USING MULTIPLEXING TECHNIQUES FOR INDUSTRIALLY RELEVANT REACTIONS
Olivier Rousseau[1], Joelle Pelletier, Maximilian Ebert, Nicolas Moitessier, Josh Pottel, Sebastian Pechmann
(1) University of Montreal (Montreal, Canada)



Posters

POS219 PREDICTING DELETERIOUSNESS OF GENETIC VARIATIONS IN MEMBRANE PROTEINS
Julia Koehler Leman[1], Evan Baugh, Richard Bonneau
(1) Simons Foundation / NYU (New York, United States)

POS220 ELUCIDATING THE MECHANISM OF LIPID BINDING PROTEIN 8 SHUTTLING OF LYSOSOMAL LIPIDS INTO THE NUCLEUS IN CAENORHABDITIS ELEGANS
Matthew Tillman[1], Meng Wang, Eric Ortlund
(1) Emory University (Atlanta, United States)

POS221 SULFATED GLYCOSAMINOGLYCANS INDUCE AN AMYLOID AGGREGATION OF A NON-PATHOGENIC NEUROPEPTIDE
Mathew Sebastiao[1], Isabelle Marcotte, Steve Bourgault
(1) Université du Québec à Montréal (Montreal, Canada)

POS222 CALPAIN- AND PROTEASOME-DEPENDENT PROTEOLYSIS IN THE CONTROL OF SALMONID FISH GROWTH
Liudmila Lysenko[1], Nadezhda Kantserova, Mikhail Ruchyev, Nina Nemova
(1) IB KarRC RAS (Petrozavodsk, Russia)

POS223 STRUCTURAL, FUNCTIONAL AND EVOLUTIONARY ANALYSIS OF DOMAIN-SWAPPED DIMERIZATION WITHIN THE INTERFERON INDUCED PROTEINS WITH TETRATRICOPEPTIDE REPEATS
Yazan Abbas[1], Bhushan Nagar, Irene Xie, Zixian Li
(1) McGill University (Montreal, Canada)

POS225 TYROSINE NITRATION AND HISTIDINE CARBONYLATION MODULATE Λ6 IMMUNOGLOBULIN LIGHT CHAIN STRUCTURAL STABILITY AND AMYLOIDOGENECITY
Ximena Zottig[1], Steve Bourgault
(1) UQAM | Université du Québec à Montréal (Montréal, Canada)

POS226 HOST MIMICRY BY LEGIONELLA PNEUMOPHILA
Kathy Wong[1], Guennadi Kozlov, John D. Perpich, Miroslaw Cygler, Yousef Abu Kwaik, Kalle Gehring
(1) McGill University (Montreal, Canada)

POS227 MECHANISMS OF ACTIVATION OF NUCLEAR RECEPTOR LIVER RECEPTOR HOMOLOG-1 BY SYNTHETIC AGONISTS AND PEROXISOME PROLIFERATOR-ACTIVATED GAMMA COACTIVATOR 1-A TRANSCRIPTIONAL COACTIVATOR
Denise Okafor[1], Suzanne Mays, Richard Whitby, Devrishi Goswami, Jozef Stec, Autumn Flynn, Michael Dugan, Nathan Jui, Patrick Griffin, Micheal Tuntland, Venkat Dharmarajan, Eric Ortlund
(1) Emory University (Atlanta, United States)

POS228 DEVELOPMENT OF SMALL-MOLECULE-BINDING SYNTHETIC NOTCH RECEPTORS
Remy Peace[1], John Ngo
(1) Boston University (Boston, United States)

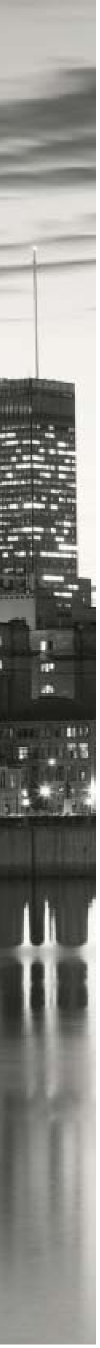
POS229 OLIGOMERIZATION AND PEPTIDE BINDING BY THE SECA SUBUNIT OF PREPROTEIN TRANSLOCASE
Brian Shilton[1], Aliakbar Khalili-Yazdi
(1) The University of Western Ontario (London, Canada)

POS230 EFFECTS OF EVOLUTIONARY DISTANCE ON PROTEIN DYNAMICS, ANTIBACTERIAL ACTIVITY, AND CYTOTOXICITY IN MEMBERS OF THE RIBONUCLEASE 3 SUBFAMILY
David Bernard[1], Myriam Létourneau, Donald Gagné, Marie-Christine Groleau, Éric Déziel, Nicolas Doucet
(1) INRS - Université du Québec (Laval, Canada)

POS231 DESIGNER BIOSENSORS FOR ENGINEERED METABOLIC PATHWAYS AND ENZYME EVOLUTION
Mohamed Nasr[1], David Kwan, Vincent Martin
(1) Centre for Applied Synthetic Biology, Department of Biology, Concordia University (Montreal, Canada)

POS232 STRUCTURAL ANALYSIS OF THE TOBRAMYCIN AND GENTAMICIN CLINICAL RESISTOME REVEALS LIMITATIONS FOR NEXT-GENERATION AMINOGLYCOSIDE DESIGN
Angelia Bassenden[1], Albert Berghuis, Dmitry Rodionov, Shi Kun
(1) McGill University (Montreal, Canada)

POS233 SIGNALING-RELATED CHANGES IN BACTERIAL CHEMORECEPTOR PROTEIN INTERACTION INTERFACES LOCALIZED BY HYDROGEN DEUTERIUM EXCHANGE MASS SPECTROMETRY
Xuni Li[1], Seena Koshy, Stephen Eyles, Lynmarie Thompson
(1) Department of Chemistry in University of Massachusetts Amherst (Amherst, United States)



Posters

POS234 PEPTIDE MAPS OF BLOOD PLASMA PROTEINS (FIBRINOGEN AND PLASMA FIBRIN-STABILIZING FACTOR) WITH OXIDATIVE MODIFICATIONS
Anna Bychkova[1], Alexandra Vasilyeva, Lyubov Yurina, Anna Bugrova, Maria Indeykina, Alexey Kononikhi, Eugene Nikolaev, Mark Rosenfeld
(1) N. M. Emanuel Institute of Biochemical Physics, Russian Academy of Sciences (Moscow, Russia)

POS235 CARDIOPROTECTIVE EFFECT OF PIPERLONGUMININ THROUGH THE ACTIVATION AND STABILIZATION OF THE MITOCHONDRIAL ALDEHYDE DEHYDROGENASE ALDH2
Belem Yoval Sánchez[1], José Rodríguez Zavala
(1) Instituto Nacional de Cardiología (Ciudad de México, Mexico)

POS236 STRUCTURAL AND MUTATIONAL ANALYSIS OF THE NONRIBOSOMAL PEPTIDE SYNTHETASE HETEROCYCLIZATION DOMAIN IMPLICATES A PREVIOUSLY UNEXAMINED ASP-THR DYAD IN CATALYSIS OF THE CYCLODEHYDRATION REACTION
Kristjan Bloudoff[1], Martin Schmeing, Christopher Fage, Mohamed Marahiel
(1) McGill University (Montreal, Canada)

POS238 THE ACTIVITIES OF PATCHED-1 ARE REGULATED BY THE INTERACTIONS OF DISTINCT STRUCTURAL MODULES
Andrew Fleet[1], Jennifer PY Lee, Paul A. Hamel
(1) University of Toronto, Department of Laboratory Medicine and Pathobiology (Toronto, Canada)

POS239 DEVELOPING INHIBITOR AGAINST KINASES INVOLVED IN ANTIBIOTIC RESISTANCE
Tolou Golkar[1], Albert Berghuis
(1) McGill University (Montreal, Canada)

POS240 SURVEY OF THE PROTEOMIC AND TRANSCRIPTOMIC PROFILE OF SEA ANEMONE ANTHOPLEURA DOWII VERRIL (1869) FROM MEXICO
Claudia Rodríguez Almazán[1], Jorge Tonatiuh Ayala Sumuano, Santos Ramírez Carreto, Rosario Vera Estrella
(1) Universidad Nacional Autónoma de México (Cuernavaca, Morelos, Mexico)

POS241 FUNCTIONAL CRIPSR SCREEN IDENTIFIES REGULATOR NETWORKS OF MET RTK
Bruce Huang[1], Morag Park, Elena Kuzmin, Genevieve Morin, Sidong Huang
(1) 1. Department of Biochemistry; 2. Goodman Cancer Research Centre, McGill University (Montreal, Canada)

POS242 CHARACTERIZING PROTEINS USING SAXS ON A HYBRID LABORATORY X-RAY SCATTERING INSTRUMENT
Mike Hawkridge[1], Abraham Schierbeek, Joerg Bolze, Julie Quinn
(1) PANalytical B.V. (Almelo, Netherlands); (2) PANalytical Inc. (Westborough, United States)

POS244 INVESTIGATING RESISTANCE TO PSEUDOMONAS EXOTOXIN A IN DIPHTHAMIDE-DEFICIENT MUTANTS OF HEK293 CELLS
Benjamin Atha[1], John Weldon, Jack Sanford, Lauren Russell
(1) Towson University (Towson, United States)

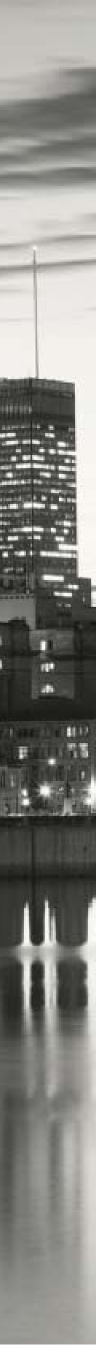
POS245 EXPRESSION OF MARINE ADHESIVE PROTEIN REPEATS USING YEAST SURFACE DISPLAY
Kristina Reinmets[1], Stephen Fuchs
(1) Tufts University (Medford, United States)

POS247 DEVELOPMENT OF A RED GLUTAMATE SENSOR AND EXPLOITING THE EXTRACELLULAR MATRIX FOR ITS TARGETED LOCALIZATION
Rochelin Dalangin[1], Robert Campbell, Jiahui Wu
(1) Department of Chemistry, University of Alberta, Edmonton, Canada (Edmonton, Canada)

POS248 INDUCIBLE GENE EXPRESSION CONTROL USING CRISPR/DCAS9 AND ANTIVIRAL PROTEASE INHIBITORS
Elliot Tague[1], John Ngo
(1) Boston University (Boston, United States)

POS249 BEYOND POINT MUTATIONS – DIRECTED EVOLUTION TOOLS FOR EFFICIENT AND SYSTEMATIC EXPLORATION OF PROTEIN FUNCTIONAL SPACE
Pedro Tizei[1], Emma Harris, Vitor Pinheiro
(1) University College London (London, United Kingdom)

POS250 DESIGN OF ALLOSTERICALLY REGULATED PROTEIN KINASE AND PHOSPHATASE SWITCHES
Matthew Bienick[1], Indraneel Ghosh, Sean Campbell, David Lasansky
(1) University of Arizona- Chemistry and Biochemistry (Tucson, United States)



Posters

POS252 **SEQUENCE BASED ANALYSIS OF LEA PROTEINS EXPRESSED BY ARTEMIA FRANCISCANA**
Brett Janis[1], Michael Menze
(1) University of Louisville (Louisville, United States)

POS253 **ENGINEERING OF A FLUORESCENT PROTEIN BASED CALCIUM SENSOR**
Abhi Aggarwal[1], Robert Campbell, Landon Zarowny
(1) Department of Chemistry, University of Alberta, Edmonton, Canada (Edmonton, Canada)

POS254 **VIRULENT PHASE SEPARATION IN MYCOBACTERIUM TUBERCULOSIS**
Florian Heinkel[1], Joerg Gsponer, Mark Okon, Yossef Av-Gay, Lawrence McIntosh
(1) University of British Columbia (Vancouver, Canada)

POS255 **BIOCHEMICAL AND STRUCTURAL INSIGHTS INTO THE EVOLUTION OF THE E3 UBIQUITIN LIGASE CASITAS B-LINEAGE LYMPHOMA (CBL) AND ITS HIGHLY-CONSERVED MECHANISM OF ACTION FOR UBIQUITYLATION OF TYROSINE KINASE TARGETS**
Jeanine Amacher[1], John Kuriyan, Helen Hobbs, Sarah Mulchand, Deepti Karandur, Aaron Cantor
(1) UC Berkeley (Berkeley, United States)

POS257 **NEW FAST PROBING METHODOLOGY FOR STUDYING DISORDERED PROTEIN REGIONS USING NUCLEAR MAGNETIC RESONANCE SPECTROSCOPY**
Ivo Martins[1], Fábio Almeida, Andre Faustino, Glauce Barbosa, Miguel Castanho, Andrea Da Poian, Nuno Santos, Fabio Almeida
(1) Instituto de Medicina Molecular, Faculdade de Medicina, Universidade de Lisboa (Lisbon, Portugal)

POS258 **CHARACTERIZATION OF A CURIOUS CAMKII ISOFORM**
Ethan McSpadden[1], John Kuriyan
(1) UC Berkeley (Berkeley, United States)

POS259 **FUNCTION AND ENGINEERING OF ENZYMES INVOLVED IN THE GLYCOSYLATION OF NATURAL PRODUCTS**
Fathima Mohideen[1], David Kwan
(1) Department of Biology, Centre for Applied Synthetic Biology, Concordia University (Montreal, Canada)

POS262 **DISTINCT BINDING DYNAMICS OF HCV HELICASE MUTANTS PROVIDES INSIGHT INTO THE MECHANISM OF THE INTERACTION WITH THE NUCLEIC ACID**
Christopher Ablenas[1], Hsiao-Wei Liu, Gonzalo Cosa, Matthias Götte
(1) McGill University (Montreal, Canada)

POS263 **STRUCTURAL AND FUNCTIONAL STUDIES OF FLAVOENZYMES INVOLVED IN NATURAL PRODUCT BIOSYNTHESIS**
Mahder Manenda[1], Julie Barma, Marie-Ève Picard, Yaolong Chen, Changsheng Zhang, Rong Shi
(1) PROTEO, Université Laval (Quebec, Canada)

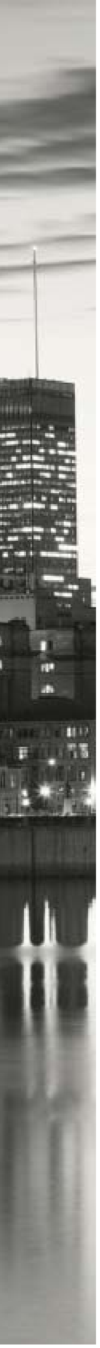
POS264 **GATHERING STRUCTURAL INFORMATION ON A DEPSIPEPTIDE SYNTHETASE INITIATION MODULE**
Diego A Alonzo[1], Clarisse Chiche-Lapierre, T. Martin Schmeing
(1) McGill University (Montréal, Canada)

POS265 **DECONSTRUCTION OF THE RAS SWITCHING CYCLE THROUGH SATURATION MUTAGENESIS REVEALS HOT-SPOTS OF ALLOSTERIC ACTIVATION**
Pradeep Bandaru[1], John Kuriyan, Rama Ranganathan
(1) UC Berkeley (Berkeley, United States)

POS266 **REFOLDING AND PURIFICATION OF UNMODIFIED HUMAN ELONGATION FACTOR 2**
Brian Grossman[1], Jed Weldon, Nirja Patel, Joshua Ostovitz, Nathaniel Donahue
(1) Towson University (Baltimore, United States)

POS267 **COMPUTATIONAL INVESTIGATION OF PROTEIN DISORDER-ORDER TRANSITIONS INDUCED BY MUTATIONS IN HUMAN PROTEOME**
Chen Li[1], Benjamin Porebski, Julia McCoey, Natalie Borg, Geoffrey Webb, Itamar Kass, Malcolm Buckle, Jiangning Song, Adrian Woolfson, Ashley Buckle
(1) Department of Biochemistry and Molecular Biology, Biomedicine Discovery Institute, Monash University (Melbourne, Australia)

POS269 **TOWARDS THE STRUCTURAL STUDIES OF BIFUNCTIONAL AMINO GLYCOSIDE RESISTANCE ENZYME AAC (6')-IE-APH (2'')-IA**
Michal Zielinski[1], Albert Berghuis
(1) McGill University (Montreal, Canada)



Posters

POS270 **STRUCTURAL STUDY OF POLYKETIDE FATE DETERMINATION**
Frederik Teilfeldt Hansen[1], Graham Herberlig, Yi Xiao Jiang, Christopher Boddy, T. Martin Schmeing
(1) McGill University (Montreal, Canada)

POS271 **STRUCTURAL IDENTIFICATION OF PHOSPHORYLATION CODES FOR ARRESTIN RECRUITMENT BY G PROTEIN-COUPLED RECEPTORS**
Parker de Waal[1], X. Edward Zhou, Yuanzheng He, Xiang Gao, Yanyong Kang, Ned Van Eps, Yanting Yin, Kuntal Pal, Devrishi Goswami, Thomas A. White, Anton Barty, Naomi R. Latorraca, Henry N. Chapman, Wayne L. Hubbell, Ron O. Dror, Karsten Melcher, H. Eric Xu
(1) Van Andel Research Institute (Grand Rapids, United States)

POS272 **EXPANSION PATHOLOGY ENABLES SUPER-RESOLUTION OPTICAL INVESTIGATION OF PROTEINS FOR DIAGNOSTIC PATHOLOGY AND RESEARCH**
Octavian Bucur[1], Yongxin Zhao, Humayun Irshad, Andreea Stancu, Astrid Weins, Stuart Schnitt, Martin Pollak, Ananth Karumanchi, Edward Boyden, Andrew Beck
(1) Department of Pathology, Beth Israel Deaconess Medical Center and Harvard Medical School (Boston, United States)

POS273 **LEGIONELLA EFFECTORS INTERFERING WITH HOST CELL PHOSHOPROTEOME: STRUCTURAL INSIGHTS INTO HOST-PATHOGEN INTERACTIONS**
Ksenia Beyrakhova[1], Miroslaw Cygler, Alla Gagarinova, Oleg Tyurin, Caishuang Xu, Lei Li
(1) University of Saskatchewan (Saskatoon, Canada)

POS274 **COMPARING THE FOLDING DYNAMICS OF PRION PROTEINS FROM SPECIES WITH DIFFERENT DISEASE SUSCEPTIBILITY AT THE SINGLE-MOLECULE LEVEL**
Michael Woodside[1], Uttam Anand, Craig Garen
(1) University of Alberta (Edmonton, Canada)

POS275 **FRONTIER MICROFOCUS MACROMOLECULAR CRYSTALLOGRAPHY AT THE NATIONAL SYNCHROTRON LIGHT SOURCE II (NSLS-II)**
Martin Fuchs[1], Wuxian Shi, Babak Andi, Yuan Gao, Jean Jakoncic, Edwin Lazo, Nicolas Guichard, Robert Sweet, Alexei Soares, Vivian Stojanoff, Dileep Bhogadi, Stuart Myers, Bruno Seiva Martins, John Skinner, Lonny Berman, Dieter Schneider, Sean McSweeney
(1) Brookhaven National Laboratory (Upton, United States)

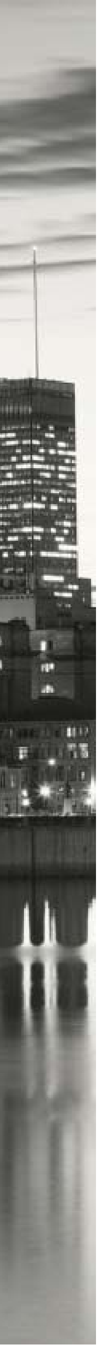
POS276 **SYNTHETIC ANTIBODY REAGENTS FOR STRUCTURE DETERMINATION OF MEMBRANE PROTEINS BY CRYO-EM**
Satchal Erramilli[1], Anthony Kossiakoff, Pawel Dominik, Przemyslaw Dutka, Blazej Skrobek, Tomasz Slezak, Katarzyna Radziwon, Somnath Mukherjee
(1) University of Chicago (Chicago, United States)

POS277 **AUTOMATED HIGH-THROUGHPUT FUCOSYLTRANSFERASE INHIBITION ASSAY ON A CHIP**
Laura Leclerc[1], David Kwan, Steve Shih
(1) Concordia University (Beaconsfield, Canada)

POS278 **UNDERSTANDING THE STRUCTURE AND FUNCTION OF THE CAPSID PROTEIN OF ZIKA, WEST-NILE AND DENGUE VIRUSES, NAMELY THEIR ABILITY TO INTERACT WITH HOST LIPID SYSTEMS**
Ana Martins[1], Ivo Martins, André Faustino, André Nascimento, Filomena Carvalho, Nuno Santos
(1) Instituto de Medicina Molecular, Faculdade de Medicina da Universidade de Lisboa (Lisboa, Portugal)

POS279 **PREDICTION OF PROTEIN AGGREGATION PROPENSITIES: A DEEP LEARNING APPROACH**
Girik Malik[1], Andrzej Kloczkowski, Maksim Kouza, Irina Buhimschi
(1) Nationwide Children's Hospital (Columbus, United States)

POS280 **DIVERSITY AND EVOLUTIONARY ANALYSIS OF IRON-CONTAINING (TYPE-III) ALCOHOL DEHYDROGENASES (FEADHS)**
Adriana Julián-Sánchez[1], Héctor Riveros-Rosas
(1) Bioquímica, Facultad de Medicina, Universidad Nacional Autónoma de México (Mexico, Mexico)



Posters

POS281 CATALYTICALLY IMPORTANT REMOTE RESIDUES OF E. COLI ORNITHINE TRANSCARBAMOYLASE THAT CONTRIBUTE TO ELECTROSTATIC AND DYNAMIC PROPERTIES OF THE ENZYME

Lisa Ngu[1], Jenifer Winters, Kien Nguyen, Kevin Ramos, Nicholas DeLateur, Paul Whitford, Lee Makowski, Penny Beuning, Mary Jo Ondrechen

(1) Northeastern University (Boston, United States)

POS282 DE NOVO DESIGN OF ANTIVIRULENCE THERAPEUTICS BASED ON GENETICALLY ENCODABLE, HYPERSTABLE CONSTRAINED PEPTIDES

Christopher Bahl[1], David Baker

(1) University of Washington (Seattle, United States)

POS283 WHY AND HOW FVFLM PEPTIDES CAN BE USED AS MODEL SYSTEMS TO INHIBIT BETA-AMYLOID AGGREGATION

Maksim Kouza[1], Maksim Kouza, Andrzej Kolinski, Irina Buhimschi, Andrzej Kloczkowski

(1) Battelle Center for Mathematical Medicine, The Research Nationwide Children's Hospital (Columbus, United States)

POS284 INVESTIGATING THE FUNCTIONALITY OF PROCASPASE-6 AND CASPASE-6 BY VARIOUS NUCLEOTIDES

Ishankumar Soni[1], Kevin Dagbay, Jeanne Hardy

(1) Student at UMass-Amherst (Sunderland, United States)

POS285 DYNAMICS OF MEMBRANE PROTEIN-CHAPERONE INTERACTION

Camille McAvoy[1], Fu-Cheng Liang, Emily Miaou, Shu-ou Shan

(1) California Institute of Technology (Pasadena, United States)

POS286 STRUCTURAL AND FUNCTIONAL STUDIES OF PINK1: THE FIRST UBIQUITIN KINASE

Shafqat Rasool[1], Jean-Franois Trempe, Kalle Gehring

(1) McGill University (Montreal, Canada)

POS287 STRUCTURAL, DYNAMIC, AND ELECTROSTATIC INFLUENCES ON CATALYSIS IN WILD TYPE HUMAN PHOSPHOGLUCOSE ISOMERASE AND THE H100L VARIANT

Shanadeen Begay[1], Penny Beuning, Mary Ondrechen

(1) Northeastern University (Jamaica Plain, United States)

POS289 BREAKING DOWN PROTEIN METAMORPHOSIS: PRIMARY DRIVERS BEHIND THE STRUCTURAL TRANSFORMATION OF THE BACTERIAL VIRULENCE FACTOR RFAH

Cesar Antonio Ramirez-Sarmiento[1], Pablo Galaz-Davison, Elizabeth A Komives, Irina Artsimovitch

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

POS290 DIRECT AND ALLOSTERIC MECHANISMS OF KLK4 INHIBITION REVEALED BY STRUCTURAL AND DYNAMICAL CHARACTERIZATION

Blake Riley[1], Olga Ilyichova, Benjamin Porebski, Joakim Swedberg, Simon de Veer, Kei Sit, Itamar Kass, Jonathan Harris, David Hoke, Ashley Buckle

(1) Monash University (Monash University Clayton Campus, Australia)

POS291 INHIBITION OF PANCREATIC LIPASE BY PHENOLIC COMPOUNDS FROM MANGO: ENZYME KINETICS AND MOLECULAR INTERACTIONS

Elena Moreno-Cordova[1], Aldo Arvizu-Flores, Karina Garcia-Orozco, Elisa Valenzuela-Soto, Fernando Ayala-Zavala, Abraham Wall-Medrano, Emilio Alvarez-Padilla, Gustavo González-Aguilar

(1) Centro de Investigación en Alimentación y Desarrollo (Hermosillo, Mexico)

POS292 ENGINEERING THE MECHANICAL SENSITIVITY OF THE NOTCH RECEPTOR

David Sloas[1], John Ngo

(1) Boston University (Boston, United States)

POS293 MECHANISM OF MYRISTOYL SWITCHING BY NMR MEASUREMENTS OF LOCAL STABILITY AND CONFORMATIONAL HETEROGENEITY

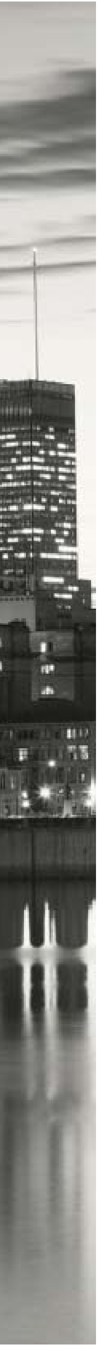
Duncan MacKenzie[1], Elizabeth Meiering, Travis Ko, Purnank Shah, Mikaela Ney

(1) University of Waterloo (Waterloo, Canada)

POS295 BINDING OF (-)-EPIGALLOCATECHIN-GALLATE TO PORCINE TRYPSIN FOLLOWED BY ISOTHERMAL TITRATION CALORIMETRY AND ENZYME KINETICS

Aldo Arvizu-Flores[1], Manuel Carretas-Valdez, Elena Moreno-Cordova, María Moreno-Vásquez, Abril Graciano-Verdugo

(1) Departamente de Ciencias Químico Biológicas, Universidad de Sonora (Hermosillo, Mexico)



Posters

POS296 BIOPHYSICAL CHARACTERIZATION OF THE CHEMOMECHANICAL COUPLING OF F1 ATPASE OF PARACOCCUS DENITRIFICANS
Mariel Zarco - Zavala[1], Duncan G.G. McMillan, Toshiharu Suzuki, Hiroshi Ueno, Rikiya Watanabe, Francisco Mendoza-Hoffmann, José J. García-Trejo, Hiroyuki Noji
(1) Department of Applied Chemistry, Graduate School of Engineering, The University of Tokyo, Tokyo, Japan (Tokyo, Japan)

POS298 IN SILICO STUDIES OF THE CONCENTRATION-DEPENDENT PROTEIN DISSOCIATION FROM DNA
Min-Yeh Tsai[1], Peter Wolynes, Bin Zhang, Weihua Zheng,
(1) Rice University (Houston, United States)

POS299 STRUCTURAL AND FUNCTIONAL CHARACTERIZATION OF POLYSACCHARIDE LYASE FAMILY ENZYMES (PL24 & PL25)
Thirumalai Selvi Ulaganathan[1], Miroslaw Cygler, Ehud Banin, William Helbert
(1) University of Saskatchewan (Saskatoon, Canada)

POS300 A DEEP LEARNING APPROACH FOR THE PREDICTION OF RESIDUES CONSTITUTED IN THE ALLOSTERIC COMMUNICATION PATHS
Andrzej Kloczkowski[1], Girik Malik, Anirban Banerji, Maksim Kouza, Irina Buhimschi
(1) Nationwide Children's Hospital (Columbus, United States)

POS301 A SYNTHETIC DESIGN APPROACH TO UNDERSTANDING SERPIN SPECIFICITY AND THERMOSTABILITY
Emilia Marijanovic[1], James Fodor, Shani Keleher, Benjamin Porebski, Blake Riley, Mary Pearce, David Hoke, Sheena McGowan, Ashley Buckle
(1) Monash University (Monash University Clayton Campus, Australia)

POS303 THE CREATION OF STABLE PROTEIN COATINGS ON MAGNETIC NANOPARTICLES FOR BIOMEDICAL APPLICATIONS
Anna Bychkova[1], Tatiana Danilova, Mariia Lopukhova, Alina Milyutina, Elena Grishechkina, Mark Rosenfeld
(1) N. M. Emanuel Institute of Biochemical Physics, Russian Academy of Sciences (Moscow, Russia)

POS310 DISORDER, EVOLUTION AND PLASTICITY: BIOPHYSICAL SIGNATURES OF THE ARBITRATION OF APOPTOSIS
Basile Wicky[1], Tristan Kwan, Jane Clarke
(1) Department of Chemistry, University of Cambridge (Cambridge, United Kingdom)

POS314 IDENTIFICATION AND OPTIMIZATION OF INHIBITORS OF DIHYDROFOLATE REDUCTASES B, TRIMETHOPRIM-RESISTANT ENZYMES
Jacynthe Toulouse[1], Joelle Pelletier, Dominic Bastien, Delphine Forge, Brahm Yachnin, Daniel Deon, Marc Gagnon, Edward Ruediger, Kévin Saint-Jacques, Thaddeus Edens, Genbin Shi, Xinhua Ji, Amee Manges, Anne Marinier, Albert Berghuis, Jean Jacques Vanden Eynde
(1) University of Montreal (Montreal, Canada)

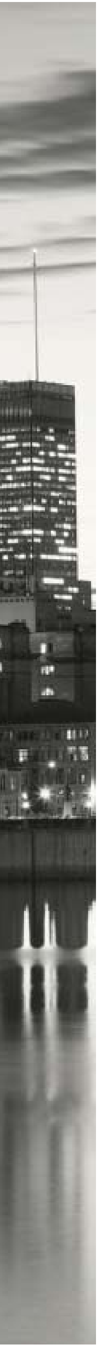
POS315 PRODUCTION OF FUNGAL BIOMASS PROTEIN FROM TRICHODERMA HARZIANUM
Sibtain Ahmed[1], Muhammad Rajoka
(1) University of California San Diego (La Jolla, United States)

POS316 DEVELOPING A SCREENING PLATFORM BY SURFACE PLASMON RESONANCE (SPR) FOR THE CHARACTERIZATION AND DISCOVERY OF ENZYME INHIBITORS
Sarah Melissa Jane Abraham[1], Jacynthe L. Toulouse, Nathalia Bukar, Dominic Bastien, Natalia Kadnikova, Jean-François Masson, Joelle N. Pelletier
(1) University of Montreal (Montreal, Canada)

POS317 MISPACKING AND THE FITNESS LANDSCAPE OF THE GREEN FLUORESCENT PROTEIN CHROMOPHORE MILIEU
Thomas Jordan[1], Chris Bystroff, Shounak Banerjee, Julia Reimertz, Emily Crone, Donna Crone, Christian Schenkelberg
(1) RPI (Troy, United States)

POS318 MONITORING ENZYME ACTIVITY AT THE NANOSCALE WITH DNA PROBES
Scott Harroun[1], Alexis Vallée-Bélisle, Arnaud Desrosiers
(1) Département de Chimie, Université de Montréal (Montréal, Canada)

POS320 DIRECTED EVOLUTION OF Β-GLUCOSIDASE FROM PAENIBACILLUS POLYMYXA
Janeala Morsby[1], Nicholas Panasik
(1) Claflin University (Orangeburg, United States)



Posters

POS321 THE AAA+ CHAPERONE-PROTEASE CLPXP RECOGNIZES AND DEGRADES FTSZ POLYMERS THROUGH A MULTIVALENT RECOGNITION STRATEGY IN ESCHERICHIA COLI
Marissa Viola[1], Jodi Camberg
(1) University of Rhode Island (Kingston, United States)

POS323 DEVELOPMENT OF SCALABLE TOLUATE INDUCTION SYSTEM FOR SMALL MOLECULES PRODUCTION BY E. COLI
Cherry Lin[1], Michael Miller, Geetha Veeramuthu, Jeff Pucci, Shauna Bowden
(1) Dupont (Palo Alto, United States)

POS324 NE-CAT: CRYSTALLOGRAPHY BEAMLINES FOR CHALLENGING STRUCTURAL BIOLOGY RESEARCH
Kay Perry[1], Kanagalaghatta Rajashankar, Malcolm Capel, Igor Kourinov, Anthony Lynch, Frank Murphy, David Neau, Cynthia Salbego, Jonathan Schuermann, Narayanasami Sukumar, James Withrow, Steve Ealick
(1) NE-CAT / Cornell University (Lemont, United States)

POS325 INHIBITOR AGAINST AN ENZYME ALSO WORKED AS AN ACTIVATOR OF ITS ORTHOLOGOUS ENZYME
Nanao Shirono[1], Noriko Nakagawa
(1) SEEDS Program, Osaka University (Toyonaka, Japan)

POS326 BIOPHYSICAL CHARACTERIZATION OF THE INTERACTION BETWEEN ASPASE-2 AND 14-3-3 PROTEIN
Veronika Obsilova[1], Tomas Obsil, Dana Kalabova, Miroslava Alblova, Aneta Smidova, Olivia Petrvalska
(1) Institute of Physiology, The Czech Academy of Sciences, Prague, Czech Republic (Prague, Czech Republic)

POS328 STRUCTURAL CHARACTERIZATION OF COMPLEXES BETWEEN 14-3-3 PROTEIN AND PROTEIN KINASES CAMKK2 AND ASK1
Tomas Obsil[1], Veronika Obsilova, Olivia Petrvalska, Katarina Psenakova, Salome Kylarova, Dana Kalabova
(1) Faculty of Science, Charles University, Prague, Czech Republic (Prague, Czech Republic)

POS329 THE AAA+ CHAPERONE-PROTEASES CLPXP AND LON TARGET MIND FOR PROTEOLYSIS IN E. COLI
Chris LaBreck[1], Jodi Camberg
(1) University of Rhode Island (Kingston, United States)

POS330 SEMI-RATIONAL EVOLUTION OF THE PSEUDOMONAS AERUGINOSA RHAMNOSYLTRANSFERASE 1 SUBUNIT A (RHLA) FOR THE SYNTHESIS OF INDUSTRIALLY RELEVANT RHAMNOLIPIDS
Carlos Eduardo Dulcey[1], Yossef Lopez de los Santos, Éric Déziel, Nicolas Doucet
(1) INRS-Institut Armand-Frappier - Université du Québec (Laval, Canada)

POS332 THERMODYNAMIC ANALYSIS OF ENZYME REACTION: LACTATE DEHYDROGENASE
Shogo Furuya[1], Ai Higashiyama, Noriko Nakagawa
(1) SEEDS Program, Osaka University (Toyonaka, Japan)

POS333 FUNCTIONAL ANALYSIS OF NEW PROTEASES FROM AN EXTREMELY THERMOPHILIC ORGANISM, THERMUS THEROMPHILUS HB8
Yumi Kimura[1], Daisuke Sasaki, Naoya Fujimura, Tadashi Ono, Chinami Sako, Suzuka Yamasaki, Ryoji Masui, Noriko Nakagawa
(1) SEEDS Program, Osaka University (Toyonaka, Japan)

POS334 PEPTIDE BINDERS BASED ON COMPLEMENTARY ARMADILLO REPEAT PROTEIN FRAGMENTS
Oliver Zerbe[1], Erich Michel, Andreas Plückthun,
(1) University of Zurich (Zurich, Switzerland)

POS336 IMPROVING THE STABILITY OF A BOVINE SECRETORY IGA NANOBODY BY RATIONAL DESIGN OF THE FRAGMENT CRYSTALLISABLE CHAIN
Adam Chin-Fatt[1], Rima Menassa
(1) Western University (London, Canada)

POS338 STRUCTURAL BASIS OF INTERACTIONS BETWEEN PRL PHOSPHATASES AND CNNM MAGNESIUM TRANSPORTERS
Guennadi Kozlov[1], Irina Gulerez, Huizhi Zhang, Howie Wu, Kalle Gehring
(1) McGill University (Montreal, Canada)

Posters

POS340 **PROTEIN DYNAMICS AND DNA-BINDING SPECIFICITY OF THE EUKARYOTIC TRANSCRIPTION FACTOR PAX5**
Cecilia Perez-Borrajero[1], Florian Heinkel, Mark Okon, Lawrence P. McIntosh
(1) University of British Columbia (Vancouver, Canada)

POS341 **PEROXIREDOXINS ARE KEY PLAYERS OF THE ENZYMATIC ANTIOXIDANT SYSTEM IN HUMAN SPERMATOZOA**
Maria Fernandez[1], Cristian O´Flaherty, Adel Moawad
(1) McGill University (Montreal, Canada)

POS342 **IDENTIFICATION OF HOTSPOT RESIDUES FOR M. TUBERCULOSIS ALANINE RACEMASE**
Sudipta Majumdar[1], Cuong Diep, Noriko Mikeasky
(1) Indiana University of Pennsylvania (Indiana, United States)

POS343 **RESTRICTED HIV-1 ENV GLYCAN ENGAGEMENT BY LECTIN-ENGINEERED DAVEI PROTEIN CHIMERA IS SUFFICIENT FOR LYTIC INACTIVATION OF THE VIRUS**
Bibek Parajuli[1], Kriti Acharya, Harry Bach, Cameron Abrams, Irwin Chaiken
(1) Drexel University College of Medicine (Philadelphia, United States)

POS344 **USING PHAGE-DISPLAYED PEPTIDE LIBRARIES TO IDENTIFY PEPTIDE LIGANDS BINDING TO BACTERIA AS A MEANS TO CHARACTERIZE THE GUT MICROBIOTA**
Shweta Shah[1], A. Gururaj Rao, Gregory J. Phillips
(1) Roy J. Carver Department of Biochemistry, Biophysics and Molecular Biology, Iowa State University (Ames, United States)

POS345 **STUDY OF THE INTERACTION BETWEEN PARKIN AND ENDOPHILIN A1**
Marjan Seirafi[1], Zlata Plotnikova, Guennadi Kozlov, Jean-Francois Trempe, Kalle Gehring
(1) McGill University (Montreal, Canada)

POS346 **IDENTIFICATION OF SUBSTRATES OF THE PRP19 E3 UBIQUITIN LIGASE IN RESPONSE TO DNA DAMAGE**
Mailyn Yates[1], Alexandre Marechal, Samuel Picard, Jean-Christophe Dubois, Antoine Gaudreau-Lapierre, Pauline Kaczmarek
(1) Universite de Sherbrooke (Sherbrooke, Canada)

POS348 **STRUCTURAL INSIGHTS INTO THE REPLICATION MACHINERY OF MENANGLE VIRUS**
Melissa Webby[1], Richard Kingston, Nicole Herr, Jeremy Keown, Michael Schmitz, Esther Bulloch
(1) University of Auckland (Auckland, New Zealand)

POS349 **STRUCTURAL AND BIOPHYSICAL INVESTIGATIONS ON SIGMA4 DOMAIN TO REVEAL HOW RNA POLYMERASE HOLOENZYME IS RECRUITED TO PMRA BOX PROMOTERS**
Chinpan Chen[1], Yuan-Chao Lou, Yi-Fen Kao
(1) Institute of Biomedical Sciences, Academia Sinica, Taipei (Taipei, Taiwan)

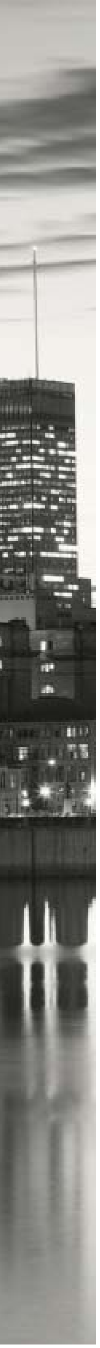
POS350 **OPTICAL DISSECTION OF THE ASSEMBLY AND COOPERATIVITY OF A CLASS C G PROTEIN-COUPLED RECEPTOR**
Joshua Levitz[1], Deo Singh, Victor Vivcharuk
(1) Weill Cornell Medicine (New York, United States)

POS351 **HSP90 OF ESCHERICHIA COLI MODULATES ASSEMBLY OF FTSZ, THE TUBULIN HOMOLOG IN E. COLI**
Anuradha Balasubramanian[1], Monica Markovski, Sue Wickner
(1) National Cancer Institute/ NIH (Bethesda, United States)

POS352 **ASSESSMENT OF THE EFFECTS OF POLLUTANTS IN THE GREAT LAKES ON THE HUMAN PROTEOME**
Emmalyn Dupree[1], Costel Darie, Bernard Crimmins, Thomas Holsen, James Pagano, Brooke Thompson, Krista Christensen, Michelle Raymond
(1) Clarkson University, Biochemistry & Proteomics Group, Department of Chemistry & Biomolecular Science (Potsdam, United States)

POS353 **MASS SPECTROMETRY BASED PROTEOMIC INVESTIGATION OF INDUCED OBSTRUCTIVE SLEEP APNEA (OSA) IN RAT ATRIA**
Devika Channaveerappa[1], Costel C. Darie, Jacob Lux, Kelly L. Wormwood, Meredith McLerie, Brian K. Panama
(1) Clarkson University (Potsdam, United States)

POS354 **INCLUSION BODY FORMATION OF CU,ZN-SUPEROXIDE DISMUTASE 1 IN ESCHERICHIA COLI**
Dalia Naser[1], Hilary Simon
(1) University of Waterloo (Waterloo, Canada)



POS355 **A PHOSPHORYLATION AND UBIQUITYLATION CIRCUITRY DRIVES HOMOLOGOUS RECOMBINATION ON RPA-SSDNA**
Jean-Christophe Dubois[1], 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**
Marius Mihasan[1], Costel Darie, Cornelia Babii, Roshanak Aslebagh
(1) Biochemistry & Proteomics Group, Department of Chemistry & Biomolecular Science, Clarkson University (Potsdam, United States)

POS357 **CHARACTERIZATION OF MONOBODY INTERACTIONS WITH A FLUORIDE ION CHANNEL BY FLUORESCENCE ANISOTROPY**
Abraham Cheloff[1], Daniel Turman, Christopher Miller
(1) Department of Biochemistry, HHMI, Brandeis University (Waltham, United States)

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
(1) McGill University (Sainte Anne de Bellevue, Canada)

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
(1) INRS-Institut Armand-Frappier University of Quebec (Laval, Canada)

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
(1) Institute of Biotechnology, UNAM (Cuernavaca, Mexico)

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)

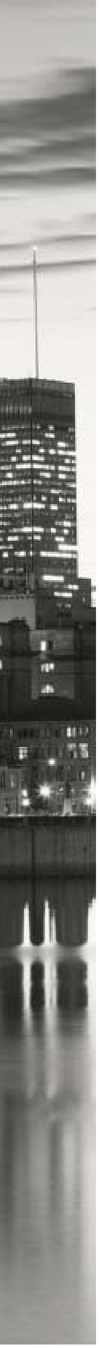
POS363 **INVESTIGATING TRIM5A RING AND B-BOX SELF-ASSOCIATION AND ITS ROLE IN ANTIRETROVIRAL SIGNALLING**
Joy Yang[1], David C. Goldstone, Jeremy R. Keown
(1) School of Biological Sciences, University of Auckland (Auckland, New Zealand)

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 AMYLOIDOGENIC FORMS OF TRANSTHYRETIN (TTR) WITH POTENTIAL O TREAT TTR-RELATED CARDIOMYOPATHY AND POLYNEUROPATHY**
Natalie J. Galant[1], Jeffrey N. Higaki, Punam Ghosh, Kevin C. Hadley, Stephen J. Tam, Ken Flanagan, Tarlochan Nijjar, Ronald Torres, Jose R. Tapia, Joshua Salmans, Robin Barbour, Wagner Zago, Gene G. Kinney, Avijit Chakrabartty
(1) University Health Network, University of Toronto (Toronto, Canada)

POS367 **POLYAMINES ENHANCES AGGREGATION OF FOLDED PROTEINS: A CASE STUDY ON BOVINE CARBONIC ANHYDRASE**
Rimpy Kaur Chowhan[1], Laishram Rajendrakumar Singh
(1) Dr. B. R. Ambedkar Center For Biomedical Research, University of Delhi, India (Delhi, India)

POS368 **DESIGNING PROTEIN POLYHEDRA USING A GENERALIZABLE SYMMETRY-BASED APPROACH**
Ajitha Cristie-David[1], Neil Marsh
(1) University of Michigan (Ann Arbor, United States)



Posters

POS369 GENOMIC TARGETING OF EPIGENETIC PROBES USING A CHEMICALLY TAILORED CAS9 SYSTEM

Glen Liszczak[1], Tom Muir

(1) Princeton University (Princeton, United States)

POS370 EXTENSION PROTEIN ENGINEERING (EPE), A TECHNIQUE FOR THE ENGINEERING OF NOVEL PROTEINS

Matthew Dominguez[1], Elliott Stollar

(1) Eastern New Mexico University (Portales, United States)

POS371 A SYNTHETIC TWO-COMPONENT SYSTEM REDIRECTS ONCOGENIC SIGNALING TO THERAPEUTIC OUTPUTS

Hokyung Kay Chung[1], Michael Lin

(1) Stanford University (Stanford, United States)

POS372 DESIGN AND DEPLOYMENT OF ENHANCED SPLIT INTEINS

Adam Stevens[1], Tom Muir, Giridhar Sekar, David Cowburn

(1) Princeton University (Princeton, United States)

POS373 EXPLORING AMYLOID-LIKE AGGREGATION USING A MUTANT DOMAIN OF A SPIDROIN AS A SOLUBILITY TAG

Médoune Sarr[1], Nina Kronqvist, Mara Reifenrath, Gefei Chen, Anna Rising, Jan Johansson

(1) Division for Neurogeriatrics, Center for Alzheimer Research, Department of NVS, Karolinska Institutet (Huddinge, Sweden)

POS374 ENGINEERING A NON-ANTIBODY SCAFFOLD FOR BINDING TO THERAPEUTIC TARGETS

Peter Chandler[1], Ashley Buckle, Blake Riley, Sebastian Broendum, David Hoke

(1) Department of Biochemistry and Molecular Biology, Biomedicine Discovery Institute (Melbourne, Australia)

POS375 STRUCTURE OF A COMPLEX BETWEEN THE AUTOANTIGEN GAD65 AND A HUMAN AUTOANTIBODY

Liah Clark[1], James S. Green, Benjamin T. Porebski, Nicholas J. McKenzie, Blake T. Riley, Itamar Kass, Nathan P. Cowieson, David E. Hoke, Ashley M. Buckle

(1) Department of Biochemistry and Molecular Biology, Biomedicine Discovery Institute (Clayton, Australia)

POS376 TRACKING HEME LOADING OF A PROTEIN IN LIVE CELLS BY FLUORESCENCE-LIFETIME IMAGING MICROSCOPY (FLIM)

Samaneh Dastpeyman[1], Ann M English

(1) Concordia University and PROTEO (Montreal, Canada)

POS377 CONFORMATIONAL CHANGES AND FLEXIBILITY OF THE ARKA BINDING ABP1SH3 DOMAIN

Kristina Foley[1], 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 Chek[1], Sun-Yong Kim, Tomoyuki Mori, Mohd. Razip Samian, Kumar Sudesh, Toshio Hakoshima

(1) Nara Institute of Science and Technology (NAIST) (Ikoma, Japan)

POS379 NUP62 COILED-COIL MOTIF PROVIDES PLASTICITY FOR TRIPLE HELIX BUNDLE FORMATION

Pravin Dewangan[1], Radha Chauhan, Parshuram Sonawane, Ankita Rai Chouksey

(1) National Centre for Cell Science (Pune, India)

POS380 IMPORTANCE OF CYSTEINES IN SURFACTANT PROTEIN B ANALOGUES FOR TREATMENT OF PREMATURE NEWBORN RABBITS

Oihana Basabe Burgos[1], Marie Hägerstrand-Björkman, Bim Linderholm, Anna Rising, Jan Johansson, Tore Curstedt

(1) Division for Neurogeriatrics, Center for Alzheimer Research, Department of NVS, (Huddinge, Sweden)

POS381 THE RAVA-VIAA CHAPERONE-LIKE SYSTEM MODULATES THE ACTIVITY OF RESPIRATORY CHAIN COMPLEXES

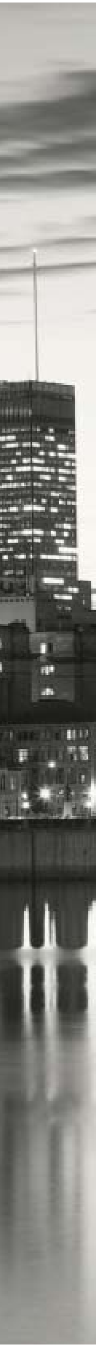
Vaibhav Bhandari[1], Keith Wong

(1) University of Toronto (Brampton, Canada)

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 Zaidi[1], Rajiv Bhat

(1) Jawaharlal Nehru University, New Delhi, India (New Delhi, India)



Posters

POS383 QUALITATIVE AND QUANTITATIVE STUDY OF AMYLOID-LIKE STRUCTURES IN URINE OF PREGNANT WOMEN WITH PREECLAMPSIA USING DIAZO DYES

Victoria Sergeeva[1], Anna Bugrova, Natalia Starodubtseva, Alexey Kononikhin, Maria Indeykina, Zulphia Khodzhaeva, Kamilla Muminova, Igor Popov, Vladimir Frankevich, Eugene Nikolaev, Gennadiy Sukhikh

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

POS385 BRI2 BRICHOS MOLECULAR CHAPERONE ACTIVITY IS DECOUPLED FROM ITS ABILITY TO INHIBIT AMYLOID FIBRIL FORMATION

Gefei Chen[1], Axel Abelein, Axel Leppert, Simone Tambaro, Henrik Biverstål, Jenny Presto, Jan Johansson

(1) Karolinska Institutet (Stockholm, Sweden)

POS386 ENGINEERING ANTIVIRAL LECTINS BY COMPUTER-GUIDED DESIGN AND EVOLUTION

Giovanna Ghirlanda[1], 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 Williams[1], Thomas Smith

(1) University of Texas Medical Branch (Galveston, United States)

POS388 COMPUTATIONAL DESIGN OF NOVEL ENZYMES GUIDED BY EVOLUTIONARY DATA

Gideon Lapidoth[1], Sarel Fleishman

(1) Weizmann institute of science (Rehovot, Israel)

POS389 CHARACTERIZATION OF THE INTERACTIONS OF A LIGNOSTILBENE-A,B-DIOXYGENASE WITH BOTH RESVERATROL AND LUTEIN SUBSTRATES

Anthony Zara[1], Fang Huang, John Allingham, Michele Loewen

(1) Queen's University (Kingston, Canada)

POS390 ELUCIDATING THE MOLECULAR MECHANISMS UNDERLYING THE VIRAL HIJACKING OF HUMAN PROTEIN-PROTEIN INTERACTIONS

Jae-Hyun Cho[1], Qingliang Shen, Danyun Zeng, Jie Shi, Baoyu Zhao, Wonmuk Hwang, Pingwei Li

(1) Department of Biochemistry and Biophysics, Texas A&M University, College Station, United States)

POS391 TIMOLOL AND PENTOSE PHOSPHATE PATHWAY ENZYMES

N. Nuray Ulusu[1], Muslum Gok, Belma Turan

(1) Koç University Faculty of Medicine Department of Biochemistry (Istanbul, Turkey)

POS392 ENERGETICS OF SHEATH CONTRACTION IN CONTRACTILE INJECTION SYSTEMS

Alec Fraser[1], Petr Leiman

(1) University of Texas Medical Branch (Galveston, United States)

POS393 INTRACELLULAR CHECKS AND BALANCES: NOT AN INFINITE ACCOUNT

Ipsita Roy[1], 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 Hjörleifsson[1], Bjarni Ásgeirsson

(1) Science institute, University of Iceland (Kopavogur, Iceland)

POS395 MODELING CYSTEINE AND METHIONINE BINDING TO AROMATIC RESIDUES

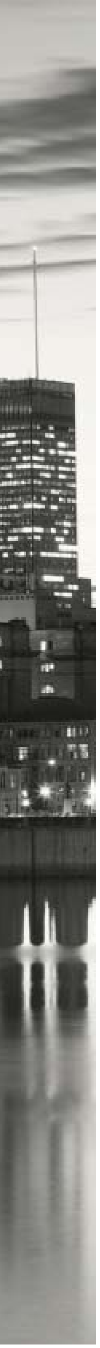
Esam Orabi[1], Ann English

(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 Parmar[1], Ann M. English, Gilles H. Peslherbe

(1) PROTEO and Centre for Research in Molecular Modeling, Department of Chemistry and Biochemistry, Concordia University (Montreal, Canada)



Posters

POS400 INTEIN ZYMOGENS: CONDITIONAL ASSEMBLY AND SPLICING OF SPLIT INTEINS VIA TARGETED PROTEOLYSIS
Josef Gramespacher[1], Tom Muir
(1) Princeton University (Princeton, United States)

POS401 ESSENTIAL PHENYLALANINE-ANION COORDINATION IN A FLUORIDE-SPECIFIC ION CHANNEL
Senmiao Sun[1], Nicholas Last, 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
Harmeen Deol[1], Elizabeth Meiering
(1) University of Waterloo (Waterloo, Canada)

POS403 STRUCTURAL BASIS OF SELECTIVE INHIBITION OF PKG-IA BY A NEW BALANOL DERIVATIVE, N46
Liying Qin[1], 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 Martín[1], Javier R Ambrosio Hernández, Lorena Valencia Caballero
(1) Departamento de Anfiteatro, Facultad de Medicina
Universidad Nacional Autónoma de Mexico
(Ciudad de Mexico, Mexico)

POS405 MACROMOLECULAR CROWDING EFFECTS ON BIOMOLECULAR RECOGNITION: PROGRESS TOWARD BUILDING ACCURATE YET EFFICIENT COMPUTATIONAL MODELS
Mala Radhakrishnan[1], 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 Frappier[1], Amy Keating
(1) Massachusetts Institute of Technology (Cambridge, United States)

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

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

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

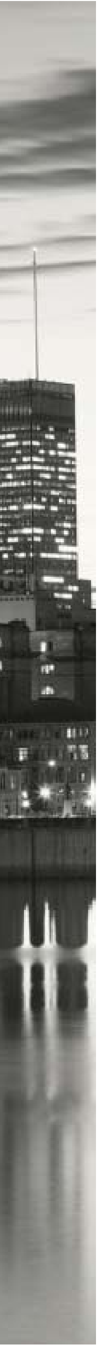
POS411 PROBING ALLOSTERIC COMMUNICATION WITH LONG-RANGE RIGIDITY PROPAGATION ACROSS PROTEIN NETWORKS
Adnan Sljoka[1]
(1) Kwansei Gakuin University (Kyoto-Shi, Japan)

POS412 PHOSPHORYLATION OF ANABAENA SENSORY RHODOPSIN TRANSDUCER: A PUTATIVE SIGNALING STATE IN SENSORY RHODOPSIN MEDIATED PROTEIN-PROTEIN CROSS TALK
Vishwa Trivedi[1], 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 Lopes[1], Ann English, Heng Jiang
(1) PROTEO and the Centre for Biological Applications of Mass Spectrometry, Department of Chemistry and Biochemistry, Concordia University (MONTRÉAL, Canada)

POS414 THE TRANSMEMBRANE PROTEIN OTOFERLIN IS A CALCIUM SENSITIVE SCAFFOLD LINKING SNARES AND CALCIUM CHANNELS
Colin Johnson[1], Nicole Hams
(1) Oregon State University (Corvallis, United States)

POS415 CHARACTERIZATION OF RECOMBINANT HUMAN MITOCHONDRIAL PROCESSING PEPTIDASE
Andrew Bayne[1], Jean Francois Trempe
(1) McGill University (Montreal, Canada)



Posters

POS416 THE INCREDIBLE STABILITY OF POSTFUSION HCMV GLYCOPROTEIN B
Ellen White[1], Yuhang Liu, Senguil 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
Viktoriia Baibakova[1], Anna Bugrova, Viktoriia Sergeeva, Natalia Zakharova, Kamilla Muminova, Natalia Starodubtseva, Alexey Kononikhin, Maria Indeykina, Igor Popov, Zulphia Khodzhaeva, Vladimir Frankevich, Evgeny Nikolaev, Gennadiy Sukhikh
(1) Moscow Institute of Physics and Technology (Dolgoprudny, Russia)

POS418 DISORDER-TO-ORDER TRANSITIONS IN THE REGULATION OF SYNAPTIC VESICLE RELEASE
David Eliezer[1]
(1) Weill Cornell Medicine (New York, United States)

POS419 DISCOVERING QUALITY DRUG SEEDS BY PRACTICAL NMR-BASED FRAGMENT SCREENING
Yann Ayotte[1], Jayadeepa Rajamani Murugesan, Francois Bilodeau, Sacha Larda, Patricia Bouchard, Nathalie Drouin, Mélissa Morin, Steven LaPlante
(1) INRS - Institut Armand-Frappier (Laval, Canada)

POS420 STRUCTURAL DYNAMICS OF SUFS CYSTEINE DESULFURASE INVESTIGATED BY BACKBONE AMIDE HYDROGEN/DEUTERIUM EXCHANGE MASS SPECTROMETRY
Patrick Frantom[1], Dokyong Kim, Harsimran Singh, Yuyuan Dai, Guanchao Dong, Laura Busenlehner, Wayne Outten
(1) The University of Alabama (Tuscaloosa, United States)

POS421 CHARACTERIZING A PEPTIDE THERAPEUTIC DERIVED FROM THE CHOLESTEROL RECOGNITION AMINO ACID CONSENSUS (CRAC) MOTIF OF A BACTERIAL TOXIN
Evan Koufos[1], Angela Brown, Anxela Sinani, Joanne Huang
(1) Lehigh University (Bethlehem, United States)

POS422 SPECTROSCOPY OF CISD PROTEINS
Mary Konkle[1], Audrey Rex, Michael Menze, Nilay Chakraborty
(1) Ball State University (Charleston, United States)

POS423 CHAPERONE–CLIENT-INTERACTIONS: FROM BASIC PRINCIPLES TO ROLES IN HEALTH AND DISEASE
Sebastian Hiller[1], Björn Burmann, Irena Burmann, Roland Riek, Silvia Campioni, Juan Gerez, Pratibha Kumari, Stefan Rüdiger, Magdalena Wawrzyniuk, Lichun He
(1) Biozentrum, University of Basel (Basel, Switzerland)

POS425 NMR CHARACTERIZATION OF O-GLCNAC MODIFIED CKIIA
Jacob Brockerman[1], Mark Okon, Lawrence McIntosh
(1) University of British Columbia (Vancouver, Canada)

POS426 THE ROLE OF ELECTROSTATIC INTERACTIONS IN THE ABP1 SH3 DOMAIN
Benjamin Lantz[1], Matthew Dominguez
(1) Eastern New Mexico University (Albuquerque, United States)

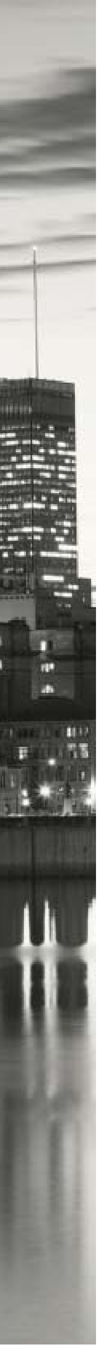
POS427 EFFECTS OF TRIMETHYLAMINEN-OXIDE (TMAO) ON THE CONFORMATION OF PEPTIDES AND MINIPROTEINS
Cristiano Dias[1], Zhaoqian Su
(1) New Jersey Institute of Technology (Newark, United States)

POS428 EFFECT OF ELONGIN B C-TERMINUS ON CORRELATED MOTIONS IN HIV COMPLEX LIEZA CHAN, ELISE TIERNEY, JOHN GROSS, AND KATHERINE BALL
Lieza Chan[1], Elise Tierney, Katherine Ball, John Gross
(1) Skidmore College (Saratoga Springs, United States)

POS429 COLD-ADAPTED ADP-DEPENDENT SUGAR KINASE: BIOPHYSICAL AND EVOLUTIONARY STUDY OF ITS FLEXIBILITY
Victoria Guixe[1], Ricardo A Zamora, Cesar A Ramirez-Sarmiento, Victor Castro-Fernandez, Pablo Villalobos, Elizabeth Komives
(1) Universidad de Chile (Santiago, Chile)

POS430 IMPROVING RNA MODIFICATION MAPPING SEQUENCE COVERAGE THROUGH A NONSPECIFIC RNASE U2-E49A VARIANT
Beulah Solivio[1], Balasubrahmanyam Addepalli, Patrick Limbach
(1) University of Cincinnati (Cincinnati, United States)

POS431 THE STRUCTURAL BASIS FOR PARKIN-MEDIATED MITOCHONDRIAL QUALITY CONTROL
Marta Vranas[1], Jean-François Trempe
(1) McGill University (Montreal, Canada)



POS432 EVOLUTION OF MULTI-DOMAIN CONFORMATIONAL ENSEMBLES FROM THE TYROSINE KINASE FAMILY
Helena Gomes Dos Santos[1], Jessica Siltberg-Liberles
(1) Florida International University (Miami, United States)

POS433 PHOSPHATE AFFECTS THE QUATERNARY STRUCTURE OF ALANINE RACEMASE FROM MYCOBACTERIUM TUBERCULOSIS
John C Ford[1], Shannon A. Stirling, Jaeju Ko, Sudipta Majumdar
(1) Indiana University of Pennsylvania (Indiana, United States)

POS434 CHARACTERIZATION OF THE ROLE OF HSP70 SYSTEM AND HSPB1 ON DISAGGREGASE ACTIVITY IN HUMANS
Conrado de Campos Gonçalves[1], Jason C. Young, Carlos H. I. Ramos
(1) McGill University/ University of Campinas (Montreal, Canada)

POS435 SELECTIVE INHIBITION OF E. COLI DNA AND RNA TOPOISOMERASE
Dev Arya[1], Nihar Ranjan
(1) Clemson University (Clemson, United States)

POS436 TRADE-OFF BETWEEN GPCR FOLDING AND FUNCTIONAL VERSATILITY
Daniel Estevez Prado[1], Tilman Flock, Alexander S Hauser, Ramanujan S Hegde, M. Madan Babu
(1) MRC Laboratory of Molecular Biology (Cambridge, United Kingdom)

POS437 ON THE DYNAMICS OF INTERLEUKIN-36RA; A KEY PLAYER IN PSORIASIS
Nicholas Tiee[1], Patricia Jennings, Kendra Hailey
(1) University of California San Diego, Dept of Chemistry and Biochemisty (La Jolla, United States)

POS438 AN IMPROVED METHOD TO PURIFY AND ACTIVATE WILD-TYPE AND CHIMERIC BOTULINUM NEUROTOXINS (BONTS)
Sulyman Barkho[1], Min Dong
(1) Boston Children's Hospital (Boston, United States)

POS439 CHARACTERIZATION OF THE DOMAIN SWAPPING MECHANISM OF THE FORKHEAD DOMAIN OF HUMAN FOXP1 AT A SINGLE-MOLECULE LEVEL
Jorge Babul[1], Exequiel Medina, Hugo Sanabria, César A. Ramírez-Sarmiento
(1) Facultad de Ciencias, Universidad de Chile (Santiago, Chile)

POS440 CONFORMATIONAL FLEXIBILITY OF INTRINSICALLY DISORDERED HIV-1 VIF PROTEIN
Elise Tierney[1], K. Aurelia Ball, Lieza Chan
(1) Skidmore College (SARATOGA SPRINGS, United States)

POS441 MECHANISMS OF ACTIVATION AND SUBSTRATE RECOGNITION BY PINK1, A UBIQUITIN KINASE IMPLICATED IN MITOCHONDRIAL QUALITY CONTROL AND PARKINSON'S DISEASE
Jean-François Trempe[1]
(1) McGill University (Montréal, Canada)

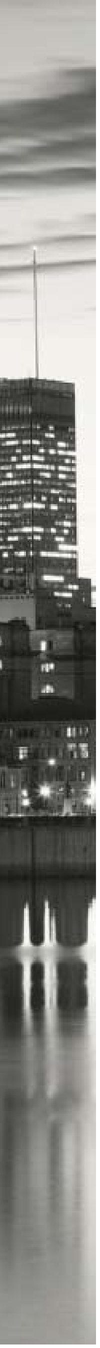
POS442 ON THE UNDERSTANDING OF THE LOW CATALYTIC ACTIVITY OF TIM MONOMERIC MUTANTS
Janet Garduño[1], Edgar Vázquez-Contreras, María Elena Chánez-Cárdenas
(1) UAM-C (México, Mexico)

POS443 SMALL MOLECULE INHIBITION OF HSP70 INVOLVING ITS INTERACTION WITH SUBSTRATE
Yogita Patel[1], Jason Young, Michael Wong, Gabriela Chiosis
(1) McGill University (Montreal, Canada)

POS444 X-RAY CRYSTAL STRUCTURES OF THE INFLUENZA A M2 PROTON CHANNEL BOUND TO AMANTADINE, RIMANTADINE, AND INHIBITING COMPOUNDS
Jessica Thomaston[1], William DeGrado
(1) UCSF (San Francisco, United States)

POS445 THE ROLE OF DNAJB1 IN CHAPERONE-MEDIATED DISAGGREGATION IN THE MAMMALIAN SYSTEM
Kipunsam Lee[1], Jason Young, Yogita Patel, Michael Wong
(1) McGill University (Montreal, Canada)

POS446 CAS9 AS A TARGET FOR DYNAMICS-BASED RATIONAL DESIGN
Kendra Hailey[1], Giulia Palermo, Patricia Jennings
(1) University of California, San Diego (La Jolla, United States)



Posters

POS447 DEVELOPMENT OF A HIGH-THROUGHPUT ASSAY TO DETECT FATTY ACID DECARBOXYLASE ACTIVITY
Jama Hagi-Yusuf[1], David Kwan
(1) Centre for Applied Synthetic Biology, Concordia University (Montréal, Canada)

POS449 STRUCTURAL AND FUNCTIONAL INSIGHT INTO THE EPIGENETIC REGULATOR SMCHD1
Kelan Chen[1], Richard Birkinshaw, Alexandra Gurzau, Jarrod Sandow, Peter Czabotar, Renwick Dobson, Grant Pearce, Isabelle Lucet, Marnie Blewitt, James Murphy
(1) The Walter and Eliza Hall Institute of Medical Research (Parkville, Australia)

POS450 STRUCTURAL STUDIES OF THE R2TP COMPLEX
Thiago Seraphim[1], Walid Houry
(1) Department of Biochemistry, University of Toronto (Toronto, Canada)

POS451 FLUOROGENIC SENSORS FOR CARBONYLATION IN LIVE CELLS
Kamalika Mukherjee[1], Tak Chio, Anthony Sorrentino, Dan Sackett, Susan Bane
(1) Massachusetts General Hospital and Harvard Medical School (Charlestown, United States)

POS452 BIOCHEMICAL CHARACTERIZATION OF THE A233N MUTANT OF TRYPSIN III FROM MONTEREY SARDINE (SARDINOPS SAGAX CAERULEA)
Manuel Carretas-Valdez[1], Aldo Arvizu-Flores, Francisco Cinco-Moroyoqui, Marina Ezquerra-Brauer, Enrique Marquez-Rios, Rogerio Sotelo-Mundo, Francisco Castillo-Yañez
(1) Departamento de Investigación y Porsgrado en Alimentos, Universidad de Sonora (Hermosillo, Mexico)

POS453 CONTRIBUTION OF GLOBAL DYNAMICS TO CATALYSIS BY HORSE LIVER ALCOHOL DEHYDROGENASE
Bryce Plapp[1], Karthik Shanmuganatham, Rachel Wallace, Ann Lee
(1) The University of Iowa (Iowa City, United States)

POS455 INVESTIGATING NOVEL ALLOSTERIC MODULATORS OF GLUTAMATE DEHYDROGENASE 1
Emma Scaro[1], Mary Konkle, Sarah Gisondi, Michael Menze, Nilay Chakraborty
(1) Eastern Illinois University (Charleston, United States)

POS456 FUNCTIONAL EVOLUTION OF PENTAMERIC LIGAND-GATED ION CHANNELS IN HELMINTHS
Jennifer Noonan[1], Robin N. Beech
(1) Institute of Parasitology, MacDonald Campus, McGill University (Sainte-Anne-de-Bellevue, Canada)

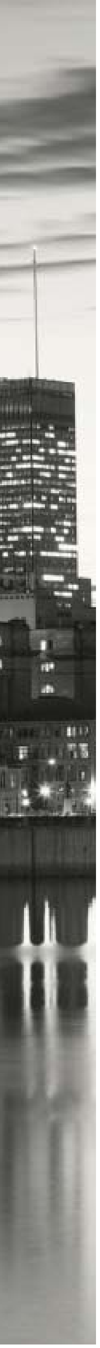
POS457 DNA-PROTEIN CONJUGATES FOR ELECTROCHEMICAL BIOSENSING APPLICATIONS
Xiaomeng Wang[1], Alexis Vallée-Bélisle
(1) Université de Montréal (Montréal, Canada)

POS459 NIH FUNDING OPPORTUNITIES AND RESOURCES
Aaron Pawlyk[1]
(1) NIDDK/NIH (Bethesda, United States)

POS460 INHIBITION OF PROTEIN EXPRESSIONS (5-LIPOXYGENASE) BY ZILEUTON IN CISPLATIN-INDUCED RENAL TOXICITY
Salim Alrejaie[1], Osama Alkhamees
(1) KSU (RIYADH, Saudi Arabia)

POS462 TARGETED PROTEOMICS IDENTIFICATION OF POST-TRANSLATIONALLY MODIFIED KRAS FORMS
Oleg Chertov[1], William Gillette, Shelley Perkins, Esposito Dominic, Elena Chertova, Joseth Knotts, Simona Colantonio, Anna Maciag, Andrew Stephen
(1) NCI RAS Initiative, Cancer Research Technology Program, Frederick National Laboratory for Cancer Research, Leidos Biomedical Research, Inc (Frederick, United States)

POS463 STRUCTURES OF UREASE ACCESSORY PROTEINS AND THEIR INSIGHTS INTO UREASE MATURATION IN HELICOBACTER PYLORI
Man Hon Yuen[1], Kam Bo Wong, Yu Hang Fong, Yap Shing Nim
(1) The Chinese University of Hong Kong, School of Life Science (Hong Kong, China)



Posters

POS464 STRUCTURAL BASIS FOR AMINO-ACIDS RECOGNITION AND TRANSMEMBRANE SIGNALING BY DOUBLE CACHE SENSING DOMAIN OF P. FLORESCENCE CHEMORECEPTOR CTAA
Abu Iftiaf Md Salah Ud-Din[1], Anna Roujeinikova
(1) Infection and Immunity Program, Monash Biomedicine Discovery Institute, Department of Microbiology, Monash University (Clayton, Australia)

POS465 ENDOCYTIC PROTEINS DISPLAY PRION-LIKE BEHAVIOR THAT SUPPORTS ENDOCYTIC SITE ASSEMBLY
Ruben Claudio Aguilar[1], McKeith Pearson II, Arpita Sen
(1) Purdue University (West Lafayette, United States)

POS466 AN EVOLUTIONARY TREND TOWARDS KINETIC STABILITY IN THE FOLDING TRAJECTORY OF RNASES H
Shion Lim[1], Susan Marqusee, Eric Bolin, Kathryn Hart, Michael Harms
(1) University of California Berkeley (Berkeley, United States)

POS467 HIDDEN STRUCTURAL CODES IN PROTEIN INTRINSIC DISORDER
Gonzalo de Prat Gay[1], Silvina Borkosky, Leonardo Alonso, Ignacio Sanchez
(1) Fundacion Instituto Leloir-Conicet (Buenos Aires, Argentina)

POS468 THE STRUCTURE AND MECHANISM OF A VIRAL GENOME PACKAGING MOTOR
Janelle A. Hayes[1], Brendan J. Hilbert, Nicholas P. Stone, Caroline M. Duffy, Banumathi Sankaran, Brian A. Kelch
(1) Biochemistry & Molecular Pharmacology, University of Massachusetts Medical School (Worcester, United States)

POS469 TOWARDS THE STRUCTURAL CHARACTERIZATION OF PERIPHERAL MYELIN PROTEIN 22 IN MODEL MEMBRANE BY NMR SPECTROSCOPY
Geoffrey Li[1], Charles Sanders, Melanie Ohi
(1) Department of Biochemistry, Vanderbilt University (Nashville, United States)

POS470 COMPUTATIONAL MODELING OF THE INTERFACE BETWEEN A MULTI-JUNCTION DNA MOTIF AND T7 ENDONUCLEASE I
Benjamin Walcott[1], Tom Jing, Ian Huntress, Megan Kizer, Joseph Bromley, Keith Fraser, Christopher Bystroff, Xing Wang
(1) Rensselaer Polytechnic Institute (Troy, United States)

POS471 SEARCH FOR A SUITABLE INHIBITOR OF ALS-LINKED SUPER OXIDE DISMUTASE 1 AMYLOID
Shashank Deep[1], Nidhi Bhatia
(1) Indian Institute of Technology, Delhi, India (New Delhi, India)

POS472 STEADY-STATE KINETICS OF THE DEGRADATION OF INSULIN BY INSULIN-DEGRADING ENZYME USING CIRCULAR DICHROISM SPECTROSCOPY
Valerie Ivancic[1], Claire Krasinski, Donald Spratt, Noel Lazo
(1) Clark University (Worcester, United States)

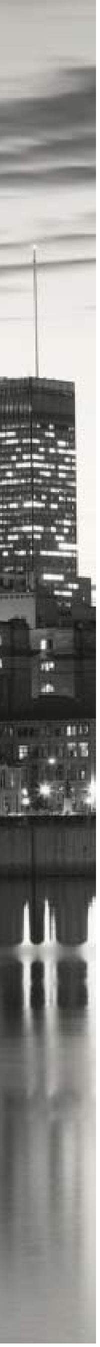
POS473 CONTRIBUTION OF THE CHROMOSOMAL CCDAB OPERON TO BACTERIAL DRUG TOLERANCE
Kritika Gupta[1], Raghavan Varadarajan, Arti Tripathi
(1) Indian Institute of Science (Bangalore, India)

POS474 STRUCTURAL AND FUNCTIONAL ROLES OF DYNAMICALLY CORRELATED CONSERVED RESIDUES IN THYMIDYLATE KINASE
Santosh Chaudhary[1], Kanagaraj Sekar, Jeyaraman Jeyakanthan
(1) Indian Institute of Science (Bengaluru, India)

POS475 NMR STUDIES OF THE INHIBITION OF INSULIN FIBRIL FORMATION BY ROSMARINIC ACID
Qiuchen Zheng[1], Noel Lazo
(1) Clark University (Worcester, United States)

POS476 ORIGIN OF NEGATIVE RELATIONSHIP BETWEEN THERMODYNAMIC STABILITY AND ACTIN BINDING FUNCTION OF TANDEM CH DOMAINS
Krishna Mallela[1], Surinder Singh, Swati Bandi
(1) University of Colorado Skaggs School of Pharmacy and Pharmaceutical Sciences (Aurora, United States)

POS477 FUNCTIONAL IMPLICATIONS OF CONFORMATIONAL DYNAMICS IN E.COLI UDP-GALACTOSE 4-EPIMERASE (EGALE)
Noopur Singh[1], Devapriya Choudhury, Aparna Dixit, Pratibha Tiwari, Swastik Phulera
(1) Jawaharlal Nehru University (New Delhi, India)



Posters

POS478 PROTEIN-PROTEIN INTERACTION ANALYSIS IN CRUDE BACTERIAL LYSATES USING COMBINATIONAL METHOD OF 19F SITE-SPECIFIC INCORPORATION AND 19F NMR

Changlin Tian[1], Dong Li
(1) University of Science and Technology of China (Hefei, China)

POS479 THE EFFECT OF SMALL PEPTIDES ON THE AGGREGATION OF AMYLOIDOGENIC SEQUENCES

Sarah Petty[1], Andrew Mullin, Sam Michelhaugh, Benjamin Fitzgerald, Christopher Fernandez, Phallika Mon, Mary Stuckey, Michelle Schefter
(1) College of the Holy Cross (Worcester, United States)

POS480 ARGINASE OF HELICOBACTER GASTRIC PATHOGENS UTILIZES A UNIQUE NON-CATALYTIC TRIAD FOR CATALYSIS; A POSSIBLE STRATEGY TO DEVELOP SPECIFIC INHIBITORS

Apurba Sau[1], Ginto George, Nikunj Raninga, Mamata Kombrabail
(1) National Institute of Immunology (New Delhi, India)

POS481 PROTEIN DYNAMICS AND CONFORMATIONAL DISEASE: MULTI-TIMESCALE CHARACTERISATION OF ALPHA-1-ANTITRYPSIN BY NMR

Alistair Jagger[1], Christopher Waudby, Lisa Cabrita, John Christodoulou, James Irving, David Lomas
(1) University College London (London, United Kingdom)

POS482 COMPUTED PROTON BINDING PROPERTIES CORRELATE WITH ENZYME ACTIVITIES OF D-MANNONATE DEHYDRATASES

Jaeju Ko[1], Mary Ondrechen
(1) Indiana University of Pennsylvania (Indiana, United States)

POS483 CLUSTERING OF IG-LIKE DOMAINS DURING CRTAM-NECL2 INTERACTION

Juan Carlos Barragan-Galvez[1], Vianney Ortiz-Navarrete
(1) National Autonomous University of Mexico (Mexico City, Mexico)

POS484 UNIQUE CLEAVAGE SPECIFICITY OF NOVEL COLD ADAPTIVE TRYPSINS FROM NORTH ATLANTIC COD (GADUS MORHUA) BASED ON MULTIPLEX SUBSTRATE PROFILING

Gunnar Sandholt[1], Ágústa Guðmundsdottir, Bjarki Stefansson
(1) University of Iceland (Hafnarfjordur, Iceland)

POS485 CRYSTAL STRUCTURE OF ACID CERAMIDASE

Ahmad Gebai[1], Bhushan Nagar, Alexei Gorelik, Katalin Illes
(1) McGill University (Montreal, Canada)

POS486 A DYNAMIC KAIA-KAIC INTERACTION MAINTAINS THE OSCILLATION OF THE KAIABC CIRCADIAN CLOCK

Sen Liu[1], Qiang Chen
(1) China Three Gorges University (Yichang, China)

POS487 DRUG DELIVERY SYSTEM FOR ANTI-CANCER DRUG PACLITAXEL USING HUMAN LIPOCALIN-TYPE PROSTAGLANDIN D SYNTHASE

Kosuke Furuta[1], Masatoshi Nakatsuji, Yoshiaki Teraoka, Yuya Sano, Takashi Inui
(1) Graduate School of Life & Environmental Sciences, Osaka Prefecture University (Sakai-shi, Japan)

POS488 NATIVE BINDING INTERACTIONS AT THE TRANSITION STATE FOR ASSOCIATION BETWEEN THE TAZ1 DOMAIN OF CBP AND THE DISORDERED TAD-STAT2 ARE NOT A REQUIREMENT

Ida Lindström[1], Jakob Dogan
(1) Stockholm University (Stockholm, Sweden)

POS489 DECIPHERING THE ROLE OF ANGPTL8 AND ITS VARIANTS IN INSULIN RESISTANCE AND LIPID METABOLISM BY PROTEOMICS

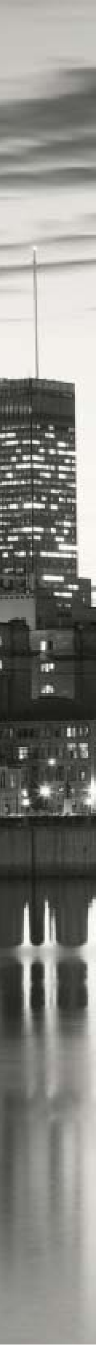
Mohamed Abu-farha[1], Preethi Cherian, Irina Al-khairi, Jehad Abu-baker
(1) Dasman Diabetes Institute (Kuwait, Kuwait)

POS490 STRUCTURAL FLEXIBILITY OF AN ENZYME UPON THE BINDING OF A LIGAND AT AN ACTIVE SITE: USING ESTIMATES OF ENTROPY OVER ENSEMBLES OF CONTACT MATRICES

Zaahirah Qazi[1], Christian Blouin, Stephen L. Bearne
(1) Graduate Student (Halifax, Canada)

POS491 UNRAVELING A NEW ROLE FOR BACTERIOFERRITIN (BFRB) IN PSEUDOMONAS AERUGINOSA: A STEP TOWARD RATIONAL TARGETING OF BACTERIAL IRON HOMEOSTASIS

Huili Yao[1], Mario Rivera, Achala Hewage
(1) The University of Kansas (Lawrence, United States)



Posters

POS494 EXPLORATION OF THE FOLDING SPACE OF AMYLOID-B: IDENTIFYING SPECIFIC STRUCTURAL FEATURES FROM MULTIPLE MOLECULAR DYNAMICS SIMULATIONS
Simiao Lu[1], Christian Blouin
(1) Dalhousie University (Halifax, Canada)

POS495 SELF ASSEMBLY OF COLLAGEN MIMETIC PEPTIDES
Deepti Mahapatra[1]
(1) University (Christchurch, New Zealand)

POS496 HSPB1 AND HSC70 ENGAGE DISTINCT TAU SPECIES AND HAVE DIFFERENT INHIBITORY EFFECTS ON AMYLOID FORMATION
Hannah Baughman[1], Amanda Clouser, Rachel Klevit, Abhinav Nath
(1) University of Washington Department of Medicinal Chemistry (Seattle, United States)

POS498 EXAMINING THE EFFECT OF UBIQUITINATION ON THE ENERGETICS OF SUBSTRATE PROTEINS
Emma Carroll[1], Susan Marqusee
(1) UC Berkeley (Berkeley, United States)

POS499 MODULATION OF TDP-43 PHASE SEPARATION
Yulong Sun[1], Kevin Hadley, Jacob Brady, Avi Chakrabartty
(1) University of Toronto (Toronto, Canada)

POS500 IDENTIFICATION OF HYDROXYPROLINE-CONTAINING HAIRPIN-LIKE PEPTIDE ECAMP1 FROM BARNYARD GRASS (ECHINOCHLOA CRUSGALLI L.) SEEDS: STRUCTURE DETERMINATION AND COMPARATIVE FUNCTIONAL ANALYSIS
Eugene Rogozhin[1]
(1) Shemyakin-Ovchinnikov Institute of Bioorganic Chemistry Russian Academy of Sciences (Moscow, Russia)

POS501 STRUCTURAL BASIS FOR IDENTIFICATION OF THE INTERFACE OF THE TERMINAL DOMAIN OF COV N PROTEIN DIMER AS A TARGET FOR DRUG DEVELOPMENT
Ming-Hon Hou[1], Chai-Ning Hsu
(1) Institute of Biotechnology and Institute of Genomics and Bioinformatics, National Chung Hsing University (Taichung, Taiwan)

POS502 UNDERSTANDING HOW B-SYNUCLEIN ALTERS A-SYNUCLEIN FIBRIL FORMATION
Xue Yang[1], Jean Baum
(1) Rutgers, The State University of New Jersey (Piscataway, United States)

POS503 A SIMULATION-GUIDED FLUORESCENCE CORRELATION SPECTROSCOPY TOOL TO INVESTIGATE THE PROTONATION DYNAMICS OF CYTOCHROME C OXIDASE
Ulrike Alexiev[1], Alexander Wolf, Constantin Schneider, T-Y Kim, Kristina Kirchberg, Pierre Volz
(1) Freie Universität Berlin (Berlin, Germany)

POS504 A NOVEL AFFINITY CHROMATOGRAPHY METHOD FOR THE PURIFICATION OF RECOMBINANT BINDER OF SPERM PROTEINS
Samin Sabouhi[1], Bruno Prud'homme, Puttaswamy Manjunath
(1) University of Montreal (Montreal, Canada)

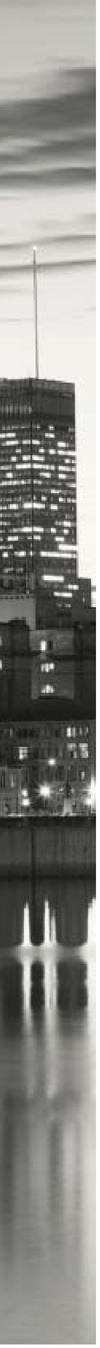
POS505 NOVEL METAL-SPECIFIC INHIBITION OF HISTONE DEACETYLASE 8
Hannah Foley[1], Kelsey Diffley, Christian Perez, Seth Cohen, Carol Fierke
(1) University of Michigan (Ann Arbor, United States)

POS506 USING NATIVE ION MOBILITY MASS SPECTROMETRY TO INVESTIGATE MEMBRANE PROTEIN – LIPID INTERACTIONS
John Patrick[1], Arthur Laganowsky, Xiao Cong, Yang Liu, Wen Liu
(1) Texas A&M University (College Station, United States)

POS507 ANTIBODY-ANTIGEN INTERACTIONS STUDIES USING NUCLEAR MAGNETIC RESONANCE SPECTROSCOPY
Gaohua Liu[1], Alan Gibbs, Ruth Steele, Gaetano Montelione, Rong Xiao
(1) Nexomics Biosciences, Inc. (Bordentown, United States)

POS508 INSIGHTS INTO PROTEIN UNFOLDING TRANSITION STATES FROM MODELING PROTEIN DENATURATION
John Strahan[1], Sheila Jaswal, Paul Cohen
(1) Amherst College Department of Chemistry (Amherst, United States)

POS509 INVESTIGATING THE MECHANISMS AND DETERMINANTS OF THE INTERACTIONS OF AMYLOID-FORMING PEPTIDES WITH MEMBRANES
Eleanor Vane[1], Abhinav Nath
(1) Department of Medicinal Chemistry, University of Washington (Seattle, United States)



Posters

POS510 FROM FOLDING TO FUNCTION: INVESTIGATING THE STRUCTURAL DYNAMICS UNDERLYING THE EVOLVED PLASTICITY OF FOLDING-ASSISTED LANDSCAPES
Max Paul[1], Sheila Jaswal, Katie Ventre, Abel Samanez, Catherine Amaya, Kendall Melvin, Kimberly Burnett
(1) Amherst College Biochemistry and Biophysics Program (Amherst, United States)

POS511 POST-TRANSLATIONAL CONTROL OF SYNTHETIC NOTCH RECEPTORS USING BIOTIN LIGASE
Jeffrey McMahan[1], John Ngo
(1) Boston University (Boston, United States)

POS512 N-HXMS: A NEW METHOD TO MAP PROTEIN FOLDING LANDSCAPES UNDER NATIVE CONDITIONS
Minjee Kim[1], Sheila Jaswal, Jacob Witten
(1) Amherst College Department of Chemistry (Amherst, United States)

POS513 PROBING THE FOLDING LANDSCAPE OF ALPHA 1-ANTITRYPSIN
Upneet Kaur[1], Weiwei Kuo, Daniel Deredge, Haiping Ke, Eugenia Clerico, Lizz Bartlett, Patrick Wintrode, Lila Gierasch, Anne Gershenson
(1) Department of Biochemistry, University of Massachusetts Amherst (Amherst, United States)

POS514 MODULATION OF TDP-43 AGGREGATION BY IONIC COSOLUTES
Kevin Hadley[1], Yulong Sun, Alison Medina Cruz, Ying Dai, Avi Chakrabartty
(1) University Health Network (Toronto, Canada)

POS515 SOLUTION STRUCTURE OF THE ARC CAPSID LIKE DOMAIN
Kaare Teilum[1], Lau Dalby Nielsen, Simon Erlendsson
(1) University of Copenhagen (Copenhagen N, Denmark)

POS516 NOVEL NON-HYDROXAMATE INHIBITION OF HISTONE DEACETYLASE 8
Kelsey Diffley[1], Carol Fierke, George Murphy III
(1) University of Michigan - Ann Arbor (Ann Arbor, United States)

POS517 SMGGDS-607 REGULATION OF SMALL GTPASE PRENYLATION IS NUCLEOTIDE-DEPENDENT
Desirée García-Torres[1], Carol Fierke, Benjamin Jennings
(1) University of Michigan (Ann Arbor, United States)

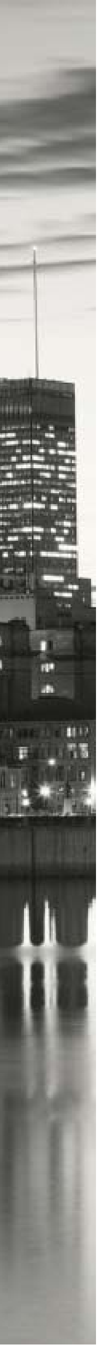
POS518 CHARACTERIZATION OF THE C-GLYCOSYLTRANSFERASE IROB UTILIZING A NOVEL COUPLED ENZYME ASSAY EMPLOYING E. COLI UDP-GLUCOSE DEHYDROGENASE
Cory Campbell[1], Peter Pawelek
(1) Department of Chemistry & Biochemistry, Concordia University (Montreal, Canada)

POS519 IMPACT OF PERTURBING THE BFRB:BFD INTERACTION ON PSEUDOMONAS AERUGINOSA BIOFILMS
Anabel Soldano[1], Mario Rivera
(1) The University of Kansas (Lawrence, United States)

POS520 IMPROVEMENT RELATIVE QUANTITATION OF THE A- AND B-ASPARTIC ACID ISOFORM OF AMYLOID-B PEPTIDE USING MALDI-CID-TOF/TOF MS
Igor Popov[1], Stanislav Pekov, Maria Indeykina, Alexey Kononikhin, Roman Levin, Ilyas Khaliullin, Evgeny Nikolaev
(1) Moscow Institute of Physics and Technology (Dolgoprudny, Russia)

POS521 IDENTIFICATION OF BIOLOGICALLY RELEVANT BINDING PARTNERS OF SH3 DOMAINS USING COMPENSATORY MUTATION APPROACH
Yun Zhu[1], Alan Davidson
(1) Department of Molecular Genetics, University of Toronto (Toronto, Canada)

POS522 THE SIS FOLD GLCN6P DEAMINASE: MECHANISMS OF COOPERATIVITY AND ALLOSTERY
Jorge Angel Marcos Viquez[1], Andrea Celeste Medina García, Mario L. Calcagno Montans, Ismael Bustos Jaimes, Annia Rodríguez Hernández, Adela Rodríguez Romero
(1) National Autonomous University of Mexico (Mexico City, Mexico)



Posters

POS523 **HIGH-PRESSURE NMR STUDIES OF HIF-2/LIGAND INTERACTIONS: A VIEW OF SMALL MOLECULE REGULATION VIA BINDING TO PROTEIN CAVITIES**
Donald Gagne[1], Kevin H. Gardner, Donald Gagne, James M. Aramini, Bruce A. Johnson
(1) CUNY - Advanced Science Research Center (New York, United States)

POS524 **NEW CONCEPTS FOR DESIGNING NOVEL MULTI-FUNCTIONAL ANTI-SICKLING HEMOGLOBINS FOR GENE THERAPY OF SICKLE CELL DISEASE**
Savita Bhutoria[1], Craig Branch, Seetharama A Acharya
(1) Division of Hematology, Department of Medicine and of Physiology and Biophysics, Albert Einstein College of Medicine (Bronx, New York, United States)

POS525 **CATALYTIC MECHANISM OF THE SALMONELLA TYPHIMURIUM EFFECTOR ACETYLTRANSFERASE AVRA**
Jonathan Labriola[1], Bhushan Nagar
(1) McGill University (Montreal, Canada)

POS526 **CHARACTERIZATION OF DISEASE-ASSOCIATED SMALL HEAT SHOCK PROTEIN MUTANTS**
Christopher Woods[1], Rachel Klevit
(1) University of Washington (Seattle, United States)

POS527 **DISSECTING THE MECHANISM OF BACTERIAL AMIDASE ACTIVATION BY ENVC**
Paola di Lello[1], Yiming Xu, Kevin Clark, Rina Fong, Bob Lazarus, Patrick Lupardus, Man Wah Tan
(1) Genentech (South San Francisco, United States)

POS528 **CHARACTERIZATION OF A FUNGAL CUTINASE/ACETYL ESTERASE WITH A DISORDERED DOMAIN**
Felipe Venegas[1], Justin Powlowski
(1) Concordia University (Montreal, Canada)

POS530 **MAPPING BETA TURN GEOMETRY AND ITS SIDE-CHAIN DETERMINANTS**
Nicholas Newell[1]
(1) Independent Researcher (Reading, United States)

POS531 **DISCOVERING HISTONE DEACETYLASE SUBSTRATES USING THE HDAC TOOLBOX**
Katherine Leng[1], Carol Fierke, Noah Wolfson, Carol Ann Castañeda, Eric Sullivan, Jeffrey Lopez
(1) University of Michigan (Ann Arbor, United States)

POS532 **COARSE-GRAINED MODEL OF FRAGMENTS OF AMYLOID-BETA PEPTIDE**
Apichart Linhananta[1], Robert Girardin
(1) Lakehead University (Thunder Bay, Canada)

POS533 **STRUCTURAL INSIGHTS INTO THE CATALYTIC MECHANISM OF PHENOLIC ACID DECARBOXYLASE**
Marie-Ève Picard[1], Rong Shi
(1) Université Laval (Québec, Canada)

POS534 **IN-SILICO IDENTIFICATION OF SOD1 EXPOSED DIMER INTERFACE WHICH BINDS A NOVEL COMPUTATIONALLY DESIGNED HTB1 BINDING PROTEIN IN ALS SOD1 MUTANTS**
Efrat Ben-Zeev[1], Niv Papo, Victor Banerje, Ofek Oren, Ran Taube, Stanislav Engel
(1) The Nancy and Stephen Grand Israel National Center for Personalized Medicine, Weizmann Institute of Science (Rehovot, Israel)

POS535 **REDOX DEPENDENT STRUCTURAL CHANGES IN NITROGENASE FROM GLUCONACETOBACTER DIAZOTROPHICUS**
Cedric P. Owens[1], Faith E. H. Katz, Cole H. Carter, Victoria F. Oswald, F. Akif Tezcan
(1) Schmid College of Science and Technology, Chapman University (Orange, United States)

POS537 **MECHANISM OF RNA RECOGNITION BY THE M2-1 TRANSCRIPTION ANTITERMINATOR FROM RESPIRATORY SYNCYTIAL VIRUS**
Gonzalo de Prat Gay[1], Ivana G. Molina, Sebastian A. Esperante, Lucia B. Chemes
(1) Fundación Instituto Leloir (Buenos Aires, Argentina)

POS539 **RAF ISOFORM DEPENDENT BINDING OF ONCOGENIC KRAS MUTANTS**
Ryan Thurman[1], Natalie Hewitt, Tikvah Hayes, Samuel George, Channing Der, Sharon Campbell
(1) University of North Carolina, Department of Biochemistry and Biophysics (Chapel Hill, United States)

THE PROTEIN SOCIETY

32nd Annual Symposium

Boston

July 9 - 12, 2018

SAVE THE DATE

TRAVEL AWARDS | CONTRIBUTED TALKS | YOUNG INVESTIGATOR TALKS

BOSTON, MASSACHUSETTS
JULY 9 - 12, 2018