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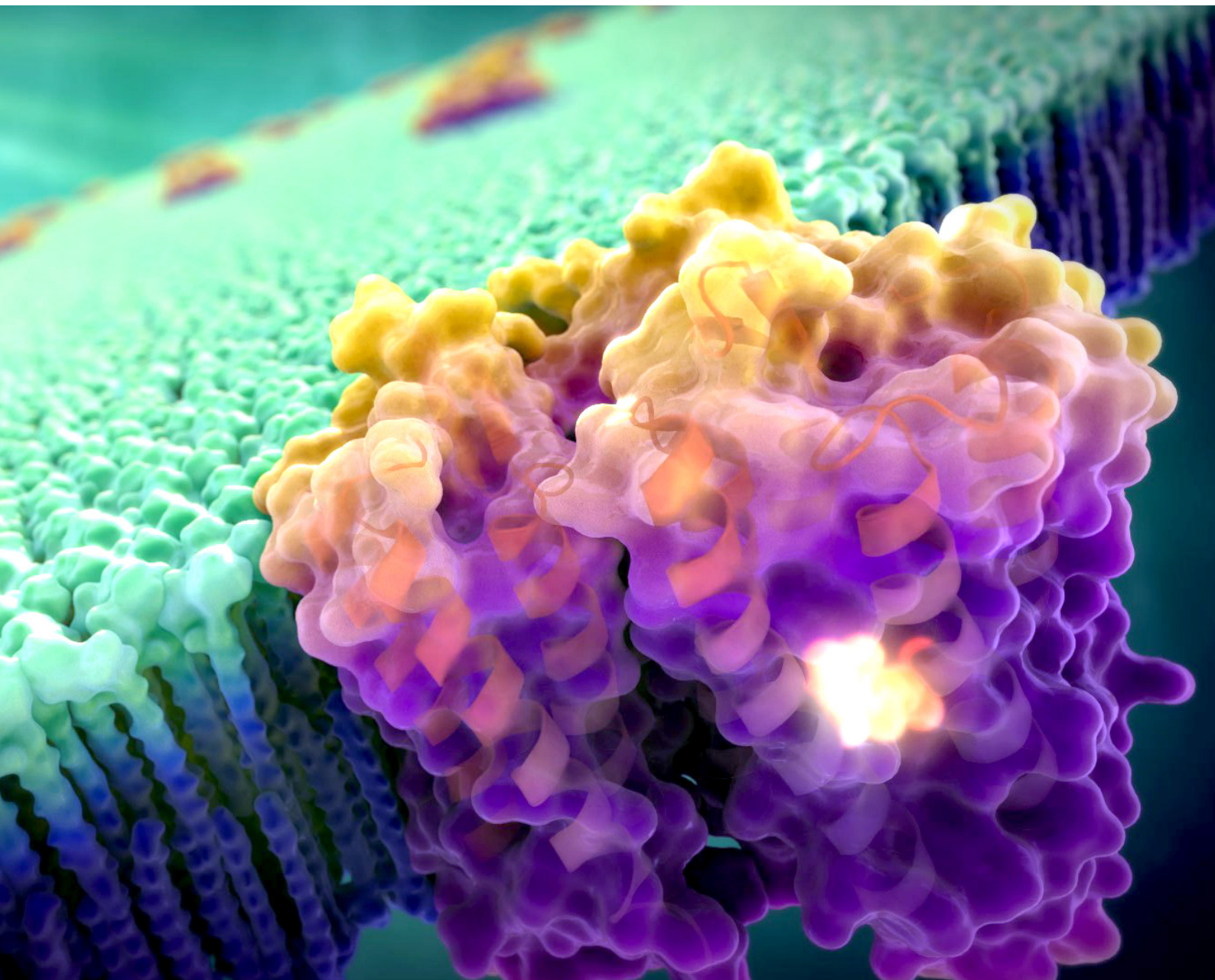
630th Conference

Scientific Program

6th International Conference on

STRUCTURAL BIOLOGY

August 22-23, 2016 New Orleans, USA



Hosting Organization: Conference Series LLC

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Scientific Program

Day 1 August 22, 2016

08:00-08:30 Registrations

Hall C

conferenceseries.com 08:30-09:00 Opening Ceremony

Keynote Forum

Introduction

09:00-09:40 **Title: Comprehensive prediction of drug-protein interactions and side effects for the human proteome**
Jeffrey Skolnick, Georgia Institute of Technology, USA

Symposium on "New technologies in structural studies by cryoEM"

Session Introduction

Session Chair: Qiu-Xing Jiang, University of Florida, USA

Session Co-Chair: Kenneth A Taylor, Florida State University, USA

09:40-10:05 **Title: The structure of Zika virus**
Michael G Rossmann, Purdue University, USA

10:05-10:30 **Title: Random spherically constrained (RSC) single particle cryo-EM for structures of membrane proteins in a membrane environment**

Liguo Wang, University of Washington, USA

10:30-10:55 **Title: ChemiC: Chemically functionalized nanometer-thick carbon films for cryo-EM studies of biological complexes**
Qiu-Xing Jiang, University of Florida, USA

Group Photo

Networking & Refreshments 10:55-11:15

11:15-11:40 **Title: Deciphering intermolecular interactions in complex heterogeneous systems**
Kenneth A Taylor, Florida State University, USA

11:40-12:05 **Title: Breathing life into static images: Combining electron cryotomography and coarse-grained simulations to explore mechanisms of eukaryotic cell division machinery *in vivo***

Matthew T Swulius, California Institute of Technology, USA

12:05-12:30 **Title: Advanced machine-learning algorithms for improving high-performance cryo-EM data analysis**
Youdong Jack Mao, Harvard Medical School, USA

Lunch 12:30-13:15

Keynote Forum

13:15-13:55 **Title: A personal history of structural virology**
Michael G Rossmann, Purdue University, USA

Sessions: Structural Biology | 3 D Structure Prediction | Computational Approaches

Session Introduction

Session Chair: Fumio Hirata, Toyota Physical & Chemical Research Institute, Japan

Session Co-Chair: John H Miller, Victoria University of Wellington, New Zealand

13:55-14:15 **Title: Tubulin structural interactions with small molecule microtubule-stabilizing agents**
John H Miller, Victoria University of Wellington, New Zealand

14:15-14:35 **Title: Molecular behavior of a higher-order complex of multiple transcription factors on enhancer site upon phosphorylation**

Kazuhiro Ogata, Yokohama City University Graduate School of Medicine, Japan

14:35-14:55 **Title: Structure, fluctuation, and function of biomolecules in solution explored by the 3D-RISM/RISM theory**
Fumio Hirata, Toyota Physical & Chemical Research Institute, Japan

14:55-15:15 **Title: Discovery of a GTP sensor using a structural reverse genetic approach**

Toshiya Senda, High Energy Accelerator Research Organization (KEK), Japan

15:15-15:35 **Title: Structural and synthetic biology of aminoacyl-tRNA synthesis and translation**
Shigeyuki Yokoyama, RIKEN Structural Biology Laboratory, Japan

Sessions: Signalling Biology | Drug Designing | Sequencing

Session Introduction

Session Chair: Takeshi Kikuchi, Ritsumeikan University, Japan**Session Co-Chair:** Elizabeth J Goldsmith, University of Texas Southwestern Medical Center at Dallas, USA

- 15:50-16:10** **Title: Development of anti-HIV double variable domain antibodies that bind both gp120 and gp41 on the envelope protein**
Seth Pincus, Children's Hospital and Louisiana State University School of Medicine, USA
- 16:10-16:30** **Title: The excursion model for MAP kinase signaling in health and disease**
Elizabeth J Goldsmith, University of Texas Southwestern Medical Center at Dallas, USA
- 16:30-16:50** **Title: Sequence analysis on the information of folding nuclei in proteins with interesting 3D properties**
Takeshi Kikuchi, Ritsumeikan University, Japan
- 16:50-17:10** **Title: Ligand binding preferences of pathogenesis-related class 10 (pr-10) allergens**
Barry K Hurlburt, United States Department of Agriculture, USA
- 17:10-17:30** **Title: Genomes repetitive sequences in progressive evolution**
Olga I Podgornaya, Far Eastern Federal University, Russia

Special Session on "Prediction of protein-protein interaction in the Twilight Zone"

Session Introduction

Session Chair: Thomas Scior, Benemérita Universidad Autónoma de Puebla, Mexico

- 17:30-18:00** **Title: Prediction of protein-protein interaction in the twilight zone of low homology for the modulation of an ion channel: An analogy approach**
Thomas Scior & Ángel Islas, Benemérita Universidad Autónoma de Puebla, Mexico

Panel Discussions

Day 2 August 23, 2016**Hall C****Keynote Forum**

- 09:00-09:40** **Title: The use of soft X-ray diffraction for native-SAD and for chromatic exploration of uncharted aspects of metals in macromolecules: A new pilot program at the APS**
Bi-Cheng Wang, University of Georgia and Advanced Photon Source, USA
- 09:40-10:20** **Title: How do voltage sensors in trans-membrane channels work?**
Robert Stroud, University of California, San Francisco, USA

Special Session on "Modularity and metastability: Structural aspects of nanomedicine"

Session Chair: R Holland Cheng, University of California, Davis, USA**Session Co-Chair:** Toshiya Senda, High Energy Accelerator Research Organization (KEK), Japan

- 10:20-10:40** **Title: Modularity and metastability: Structural aspects of nanomedicine**
R Holland Cheng, University of California, Davis, USA
- 10:40-11:00** **Title: Structure and function of the C-terminal ID region of onco-protein CagA**
Toshiya Senda, High Energy Accelerator Research Organization (KEK), Japan

Networking & Refreshments 11:00-11:20

- 11:20-11:40** **Title: Talin - Insights into mechanosignalling and integrin activation**
Vesa P Hytonen, University of Tampere, Finland
- 11:40-12:00** **Title: Individual-Particle Electron Tomography (IPET): An approach to study flexible protein structure and dynamics**
Gang Ren, Lawrence Berkeley National Laboratory, USA
- 12:00-12:20** **Title: Integrated methods enable re-engineering of transcription factors allowing cell fate modification**
Prasanna R Kolatkar, Hamad bin Khalifa University, Qatar
- 12:20-12:40** **Title: A comprehensive strategy to obtain high quality crystals**
Miki Senda, High Energy Accelerator Research Organization (KEK), Japan
- 12:40-13:00** **Title: Symmetry ambiguity and its implications to the molecular functions of the MAVS prion-like filaments**
Qiu-Xing Jiang, University of Florida, USA

Lunch 13:00-13:40

- 13:40-14:00** **Title: Crystal structure of a human Fab in complex with a dominant antigen from Neisseria meningitidis**
Jacinto López-Sagaseta, GlaxoSmithKline Vaccines S.r.l., Italy

14:00-14:20 Title: **The atomic structures of Dragon grouper nervous necrosis virus from cryo-em in comparing with x-ray diffractions**

Chan-Shing Lin, National Sun Yat-sen University, Taiwan

Sessions: Molecular Modelling | Complexity Arenas in Structural Biology | Structural Biology in Cancer

Session Introduction

Session Chair: Irena Roterman-Konieczna, Jagiellonian University, Poland

Session Co-Chair: Jyh-Yeuan Lee, University of Texas Southwestern Medical Center at Dallas, USA

14:20-14:40 Title: **Impact of the water environment on protein folding**

Irena Roterman-Konieczna, Jagiellonian University, Poland

14:40-15:00 Title: **ABCG5/ABCG8: Structural role in ABC transporter-mediated sterol transport**

Jyh-Yeuan Lee, University of Texas Southwestern Medical Center at Dallas, USA

15:00-15:20 Title: **The molecular effects of processing on the peanut allergens**

Soheila J Maleki, United States Department of Agriculture, USA

15:20-15:40 Title: **Structural analysis of PTPN3-p38 γ interactions by chemical cross-linking coupled with mass spectrometry**

Tzu-Ching Meng, Academia Sinica, Taiwan

Networking & Refreshments 15:40-16:00

16:00-16:20 Title: **Predicting the binding free energy of the inclusion process of Cyclodextrin derivatives and small molecules by means of MM/3D-RISM method**

Masatake Sugita, Ritsumeikan University, Japan

16:20-16:40 Title: **Is molecular docking the holy grail of computational modelling?**

Ihosvany Camps, Federal University of Alfenas, Brazil

16:40-17:00 Title: **Proton tunneling accelerates ATP hydrolysis in Eg5 kinesin**

Sunyoung Kim, Louisiana State University School of Medicine & Health Sciences Center, USA

17:00-17:20 Title: **Molecular docking of potent inhibitors of oncoproteins using Swiss dock and visualization by UCSF chimera**

Mohammed Ahmed Mohammed Mansour, Tanta University, Egypt

Poster Presentations from 17:20-18:00

P01 Title: **In silico development of new acetylcholinesterase inhibitors**

Ihosvany Camps, Federal University of Alfenas, Brazil

P02 Title: **Cation roles in the structure of a fish nodavirus observed in Electron Cryo-Microscopy and X-Ray diffraction**

Chan-Shing Lin, National Sun Yat-sen University, Taiwan

P03 Title: **Estimation of binding free energy based on the MM/3D-RISM method for the Pim1-ligand system**

Takeshi Haesegawa, Ritsumeikan University, Japan

P04 Title: **Motor domain β -sheet motifs contribute to diversification of kinesin-microtubule interactions**

Jessica Richard, Louisiana State University School of Medicine & Health Sciences Center, USA

P05 Title: **SATB2 suppresses invadopodia formation in colorectal cancer cells via palladin inhibition**

Mohammed Ahmed Mohammed Mansour, Tanta University faculty of Science, Egypt

P06 Title: **Folding region predictions by amino acid analysis of lysozyme superfamily proteins**

Takuto Nakashima, Ritsumeikan University, Japan

P07 Title: **Small spatial motifs within a surface-exposed loop in kinesin motor proteins codes for mechanochemical coupling**

Rebecca Buckley, Louisiana State University School of Medicine & Health Sciences Center, USA

Panel Discussion and Certificate Distribution

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9th International Conference on

Structural Biology

September 18-19, 2017 Zurich, Switzerland

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