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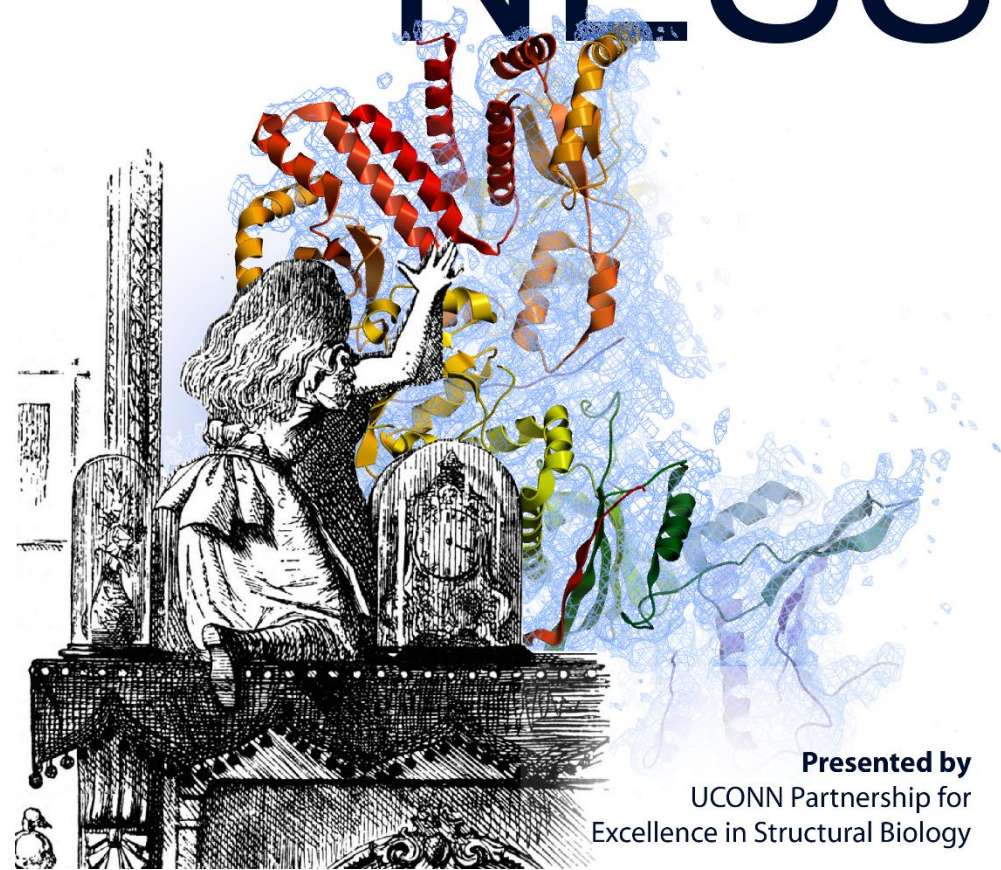
Carolyn Teschke
Victoria Robinson
Irina Bezsonova



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OCTOBER 28, 2017
UCONN, STORRS

NESS



Presented by
UCONN Partnership for
Excellence in Structural Biology

Through the Looking Glass:
Inspecting Biological Processes
by Cryo-EM

PROGRAM

9:00 AM Registration

Morning Session

Chaired by Carol Teschke

9:50 AM Welcome by UConn Vice-President for Research,
Dr. Radenka Maric

10:00 AM **James Conway**, University of Pittsburgh
*"Visualizing Capsid Structures Shared
by Bacteriophages and Herpesvirus"*

10:45 AM **Kristin Parent**, Michigan State University
*"Cryo-EM to Determine the Capsid Binding
Mechanism for Phage's Auxiliary "Dec" Protein"*

11:15 AM **Tatyana Polenova**, University of Delaware
*"Structure and Dynamics of HIV-1 Capsid
Assemblies by an Integrated Approach"*

11:45 AM Lunch and Poster Contest

Afternoon Session

Chaired by Andrei Alexandrescu

1:45 PM **Simon White**, University of Connecticut
"Packaging Signals in a DNA Virus"

2:15 PM **Andrei Korostelev**, University of Massachusetts
"Visualizing Translation by Ensemble Cryo-EM"

2:45 PM Coffee Break

Promoted Short Talks

Chaired by Sanchari Banerjee, post-doctoral fellow

3:00 PM **Min Luo**, Harvard Medical School
*"Structure Basis for R-loop Formation and
Substrate Targeting in Type I CRISPR-Cas
System"*

3:20 PM **Katherine DiScipio**, UConn Health
*"A Novel Mutant of the HSV-1 ssDNA Binding
Protein Icp8 that Lacks Annealase Activity"*

3:40 PM **Amedee Des Georges**, City University of New
York
*"Functional Study of the Ryanodine Receptor by
Cryo-electron Microscopy"*

Late Afternoon Session

Chaired by Irina Bezsonova

4:00 PM **Chuck Sindelar**, Yale
*"Structural Studies of Biomolecular Assemblies
that Drive Motility"*

4:30 PM **Vikki Robinson**, University of Connecticut
*"Unusual Features of Translational GTPase BipA
Highlighted by CryoEM"*

5:00 PM Closing Remarks

5:30 PM Dinner at Nathan Hale Inn

POSTERS		
#	AUTHORS	TITLE
1	Wayne Mitchell, Emily Ng, Kevin Boyd, Jeffrey D. Tamucci, Murugappan Sathappa, Adrian Coscia, Daniela Morales, Kuo-Chih Shih, Eric R. May, Hazel S. Szeto, Nicholas Eddy, Nathan N. Alder	The Mechanism of Action of SS-31 (Elamipretide): a Novel Therapeutic for Mitochondrial Dysfunction
2	Kunica Asija and Carolyn M Teschke	The Role of E-Loop in the Maturation of Bacteriophage P22
3	Sanchari Banerjee and Carolyn Teschke	Elucidation of the Protein Conformational Changes During Assembly of P22 Bacteriophage Coat Protein
4	Victor Beaumont, Danica Cui, Patrick Loria	Functional Implications of Loop Dynamics of Vaccinia H1-Related PTP
5	Helen Belato	Structure of Cementing Protein "Decorator"
6	T. Bregnard and I. Bezsonova	Does Arsenic Trioxide Perturb the Structural integrity of the PML Protein?
7	B. Case, S. Hartley, D. Jeruzalmi and M. Hingorani	Coordinated Actions of Four Atpase Sites on Uvra2 During initiation of Nucleotide Excision Repair
8	C.B. Mayo, H. Erlandsen and J.L. Cole	Mechanism for Activation of the Antiviral Kinase PKR
9	Andrew W. Malaby*, Sanchaita Das*, Srinivas Chakravarthy, Thomas C. Irving, Osman Bilsel, and David G. Lambright	Structural Dynamics Control Allosteric Activation of Cytohesin Family Arf Gtpase Exchange Factors
10	Amedee Des Georges, Oliver B Clarke, Ran Zalk, Ali Dashti, Abbas Ourmazd, Wayne a Hendrickson, Andrew R Marks, Joachim Frank	Functional Study of the Ryanodine Receptor by Cryo-Electron Microscopy

POSTERS		
#	AUTHORS	TITLE
11	K. A. Discipio, S. Weerasooriya, A. Darwish, P. Bai, and S. K. Weller	A Novel Mutant of the Hsv-1 ssDNA Binding Protein Icp8 That Lacks Annealase Activity
12	Heidi Erlandsen	The University of Connecticut Biophysics Core
13	Alexavier Estrada	Analysis of Trimethoprim Resistant Gram-Negative Plasmid-Encoded Dihydrofolate Reductase
14	A. Feinstein, J.L. Cole, E.R. May	Molecular Dynamics investigations into a Front-to-Front Dimer of Human PKR
15	Christl Gaubitz, Osman Bilsel, Brian Kelch	Structural Analysis of the Clamp Loaders, Guardians of Genome Stability
16	Kimberley H. Gibson, Elsie Wunder, Jun Liu, Felipe Trajtenberg, Alejandro Buschiazzi, Albert Ko, and Charles V. Sindelar.	Novel Architecture and Composition of a Bacterial Flagellum in the Spirochete Leptospirabiflexa
17	A. Groshong, M. Caimano, A. Dey and J. Radolf	Peptide Uptake Is Essential for B. Burgdorferi Growth and Is Facilitated Via a Complex and Precisely
18	B. Hajian, E. Scocchera, C. Shoen, M. Cynamon, D. Wright	Propargyl-Linked Antifolates are inhibitors of Drug-Sensitive and Drug-Resistant Mycobacterium Tuber
19	Yunfeng Li, Kai Jin, Bing Hao	Structural Basis of the Phosphorylation-independent Recognition of Cyclin D1 By the SCFFBXO31 Ubiqui
20	A. Jecrois, N. Kurt-Yilmaz, C. Schiffer, W. Royer	Structural Regulation of Irf3 Activation and Association with Co-Activators of the Enhanceosome
21	A. Kaplan	Structural Characterization of a Shape Shifting Toxin Domain

POSTERS		
#	AUTHORS	TITLE
22	T. Karginov, G. Valles, and I. Bezsonova	Structural tools For Clinical Problems: Usp7 and P53, a Critical Regulatory Complex in Cancer
23	E. Kessler, H. Awad, J. Liu, and M. Hingorani	Investigating the Link Between Mutations in Muts DNA Repair Protein and Lynch Cancer Syndrome
24	Florian Leidner, Nese Kurt Yilmaz, Janet Paulsen, Yves A. Muller, and Celia A. Schiffer	Hydration Structure and Dynamics of Inhibitor-Bound HIV-1 Protease
25	Yunfeng Li, Kai Jin, Bing Hao	Structural Basis of the Phosphorylation-independent Recognition of Cyclin D1 by the SCFFBXO31 Ubiqui
26	Socheata Lim, Alessandro A. Rizzo, Esmael M. Alyami, Penny J. Beuning, and Dmitry M. Korzhnev	the Mechanism of B-Clamp Loading Onto DNA
27	Gordon J. Lockbaum, Florian Leidner, Linah Rusere, Ellen Nalivaika, Mina Henes, Klajdi Kosovrasti, Akbar Ali, Nese Kurt-Yilmaz, Celia A. Schiffer	Structural Analysis of DRV-Analogs Against Primary Resistance Mutations in HIV-1b Protease
28	Min Luo	Structure Basis For R-Loop Formation and Substrate Targeting in Type I CRISPR-Cas System
29	Ashley Matthew, Florian Leidner, Nese Kurt-Yilmaz, Akbar Ali, and Celia A. Schiffer	Elucidating the Structural and Dynamic Mechanisms of Resistance Against HCV Protease inhibitors
30	Tina Motwani, Ravi K. Lokareddy, Carmen A. Dunbar, Juliana R. Cortines, Corynne L. Dedeo, Martin F. Jarrold, Gino Cingolani, Carolyn M. Teschke	Scaffolding Protein: an Engineer of the Portal Ring Complex in Bacteriophage P22

POSTERS		
#	AUTHORS	TITLE
31	R.L. Newcomer, C.M. Teschke, & A.T. Alexandrescu	Structure and Function of the Phage L Decorator Protein: a Platform For "Nano-Lego" Design
32	Jocelyn C Newton, Gerald Jogl, John M Sedivy	Exploring the Mechanisms of LINE-1 inhibition By Nucleoside Reverse Transcriptase inhibitors.
33	J.G. Pattis, M.D. Ward, E.R. May	Insights into the Lassa Virus Nucleoprotein RNA Binding Mechanism and Ribonucleoprotein Contacts
34	A. K. Pozhidaeva and L. M. Gierasch	the Conformational Landscape of E. Coli Hsp70 Chaperone Dnak is Modulated by Cochaperone Grpe
35	A. A. Rizzo and D. M. Korzhnev	Kdcalc: a GUI-Based Java Application to Extract the Kd and $\Delta\omega$'s From An NMR Titration
36	N. Shatery Nejad, C. M. Eton	Single Molecule Fret Ruler
37	R. Sheth, W. Barr, O. Chatterji, J. Glickman, K. Thayer, D. Krizanc and M. Weir	An Mrna-Rrna Base-Pairing Model For Efficient Protein Translation
38	Dale Smith, Alfredo Gallegos, Dannie Kihara, Istvan Pelczar, Jannette Carey	Nuclear Magnetic Resonance Behavior of Water in Deuterated Methanol
39	B Song, M Hingorani	Positioning of the 5' Flap Junction in the Active Site Limits the Rate of FEN1-Catalyzed DNA Cleavage
40	N. Stone, B. Hilbert, D. Hidalgo, K. Halloran, and B. Kelch	Elucidating the Molecular Mechanisms of Viral Maturation Using a thermophilic Bacteriophage
41	T. N. Tripler, A. Kaplan, A. Alexandrescu, and C. Teschke	Structure-Function Conservation and Divergence in P22-Like Phage Coat Protein I-Domains
42	G. Valles, D. Korzhnev and I. Bezsonova	Dynamical and Structural Characterization of Usp7's Catalytic Domain

POSTERS

#	AUTHORS	TITLE
43	K. Thayer and M. Weir	Molecular Dynamics of the 530 Loop of the Ribosome
44	R. Whitehead, C. Teschke, A. Alexandrescu	Scaffolding Proteins: Conserved Structural Properties and Role in Viral Assembly
45	A. N. Matthew, J. Zephyr, C. J. Hill, M. Jahangir, A. Newton, C. J. Petropoulos, W. Huang, N. Kurt-Yilmaz, C. A. Schiffer, and A. Ali	Flexible P2 Quinoxalines Hepatitis C Virus NS3/4A Protease inhibitors to Target Resistant Variants
46	Cassie Zerbe	Interaction of PKR with Viral RNAs EBER1 and VAI