

The 10th New England Cryo-EM Symposium

Friday, October 27, 2023 and Saturday, October 28, 2023

Schedule for Friday, October 27th, 2023 YSM Marsh Lecture Hall

8:15 am - 8:45 am	Registration and Breakfast				
8:45 am - 9:00 am	Opening Remarks:				
	Jack "Kai" Zhang Assistant Professor of Molecular Biophysics & Biochemistry Yale University			Joel Butterwick Assistant Professor of Pharmacology Yale University	
Session 1a:	Hosted by Shenping Wu, Research Scientist, Yale University				
		Speaker	Lab	Institution	Title
9:00 am - 9:20 am	Talk 1	Yong Xiong	Yong Xiong	Yale University	Visualizing human translation dynamics inside cells using in situ single-particle cryo-EM
9:20 am - 9:40 am	Talk 2	Jianbin Ruan	Jianbin Ruan	UConn Health Center	An unexpected regulation of Gasdermin pore formation revealed by cryo-EM
9:40 am - 10:00 am	Talk 3	Sayan Bhattacharjee	Joachim Frank	Columbia University	Mechanism of HflX-mediated recycling of E. coli ribosome studied by time-resolved cryo-EM
10:00 am - 10:20 am	Talk 4	Johannes Elferich	Nikolaus Grigorieff	UMass Chan Medical School	Workflows for In-Situ Structural Biology Using DeCo-LACE and cisTEM
10:20 am - 10:40 am	Coffee Break				
Session 1b:	Hosted by Qinhui Rao, Associate Research Scientist, Yale University				
10:40 am - 11:00 am	Talk 5	Tianming Fu	Tianming Fu	Ohio State University	Expect the unexpected: how protein oligomerization governs mechanosensitivity
11:00 am - 11:20 am	Talk 6	Bonnie Su	Seychelle Vos	MIT	Distinct Negative Elongation Factor conformations regulate RNA polymerase II promoter proximal pausing
11:20 am - 11:40 am	Talk 7	Ling Xu	Anna Pyle	Yale University	Structural insights into intron branching and retrotransposition
11:40 am - 12:10 pm	Keynote Speaker	Xiangxi Wang	Xiangxi Wang	Institute of Biophysics, Chinese Academy of Sciences	Viral structure, antibody spectrum and vaccine design
12:10 pm - 2:00 pm	Lunch and Poster Session				

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Session 2a:		Hosted by Boyuan Ma, Postgraduate Associate, Yale University			
2:00 pm - 2:20 pm	Talk 9	Marty Taylor	Marty Taylor	Harvard University	Structural analysis and inhibition of human LINE-1 ORF2 protein reveals novel adaptations and functions
2:20 pm - 2:40 pm	Talk 10	Allen Guo	CEO of Shuimu	Shuimu BioSciences	Development of Cryo-EM Technologies at Shuimu BioSciences
2:40 pm - 3:00 pm	Talk 11	Roy Lederman	Roy Lederman	Yale University	Approaches for Exploring the Geometry of Molecular Conformations in Cryo-EM
3:00 pm - 3:20 pm	Talk 12	Le Xiao	Hao Wu	Harvard University / Boston Children's Hospital	Cryo-EM structures of the active NLRP3 inflammasome disc
3:20 pm - 3:40 pm	Coffee Break				
Session 2b:		Hosted by Ling Xu, Postdoctoral Fellow, Yale University			
3:40 pm - 4:00 pm	Talk 13	Steve Bonilla	Steve Bonilla	Rockefeller University	Using Cryo-EM to Solve the Structures of Conformationally Heterogeneous RNAs
4:00 pm - 4:20 pm	Talk 14	Emmanuel Smith	JEOL USA	JEOL USA	High-Throughput Single Particle Analysis using the JEOL CRYO ARM
4:20 pm - 4:40 pm	Talk 15	Chunyan Wang	Jun Liu	Yale University	A newly recognized small protein plays a critical role in bacteriophage T7 assembly
4:40 pm - 5:00 pm	Talk 16	Friederike Benning	Luke Chao	Harvard University	Helical reconstruction of VP39 reveals principles for baculovirus nucleocapsid assembly
5:00 pm - 6:30 pm	Best Poster Award and Happy Hour				

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Schedule for Saturday, October 28th, 2023 Bass 305

8:30 am - 9:00 am	Breakfast and Discussion				
Session 3a:	Hosted by Victor Gomes, Graduate Student, Yale University				
9:00 am - 9:20 am	Talk 17	Wenwei Li	Walter Mothes	Yale University	HIV-1 Env trimers asymmetrically engage CD4 receptors in membranes
9:20 am - 9:40 am	Talk 18	Kexin Zhang	Nikolaus Grigorieff	UMass Chan Medical School	A Better Metric for Template Matching of Cellular Cryo-EM Images
9:40 am - 10:00 am	Talk 19	Bogdan Toader	Roy Lederman	Yale University	SGD for high-resolution cryo-EM reconstruction
10:00 am - 10:20 am	Talk 20	Michael Grunst	Walther Mothes	Yale University	Structure and Inhibition of SARS-CoV-2 Spike Refolding in Membranes
10:20 am - 10:40 am	Coffee Break				
Session 3b:	Hosted by Shuhui Wang, Postdoctoral Associate, Yale University				
10:40 am - 11:00 am	Talk 21	Nikhil Malvankar	Nikhil Malvankar	Yale University	Cryo-EM "sequencing" reveals structures of microbial nanowires secreted by unique bipartite pili
11:00 am - 11:20 am	Talk 22	Ximena Zottig	Nikolaus Grigorieff	UMass Chan Medical School	Viral Translational Control Strategies Visualized with 2D Template Matching
11:20 am - 11:40 am	Talk 23	Seven Guo	Jun Liu	Yale University	Capturing and modeling the structural dynamics of the bacterial flagellar motor
11:40 am - 12:00 pm	Talk 24	Jack "Kai" Zhang	Jack "Kai" Zhang	Yale University	In-situ cryo-EM/ET at sub-2 Å
Session EX:	Led by cryo-EM/ET experts at UMass and Yale				
12:00 pm - 1:00 pm	Free discussion driven by open questions with all attendees involved; Snacks available				
1:00 pm	Closing remarks:				
	Jack "Kai" Zhang Assistant Professor of Molecular Biophysics & Biochemistry Yale University		Joel Butterwick Assistant Professor of Pharmacology Yale University		