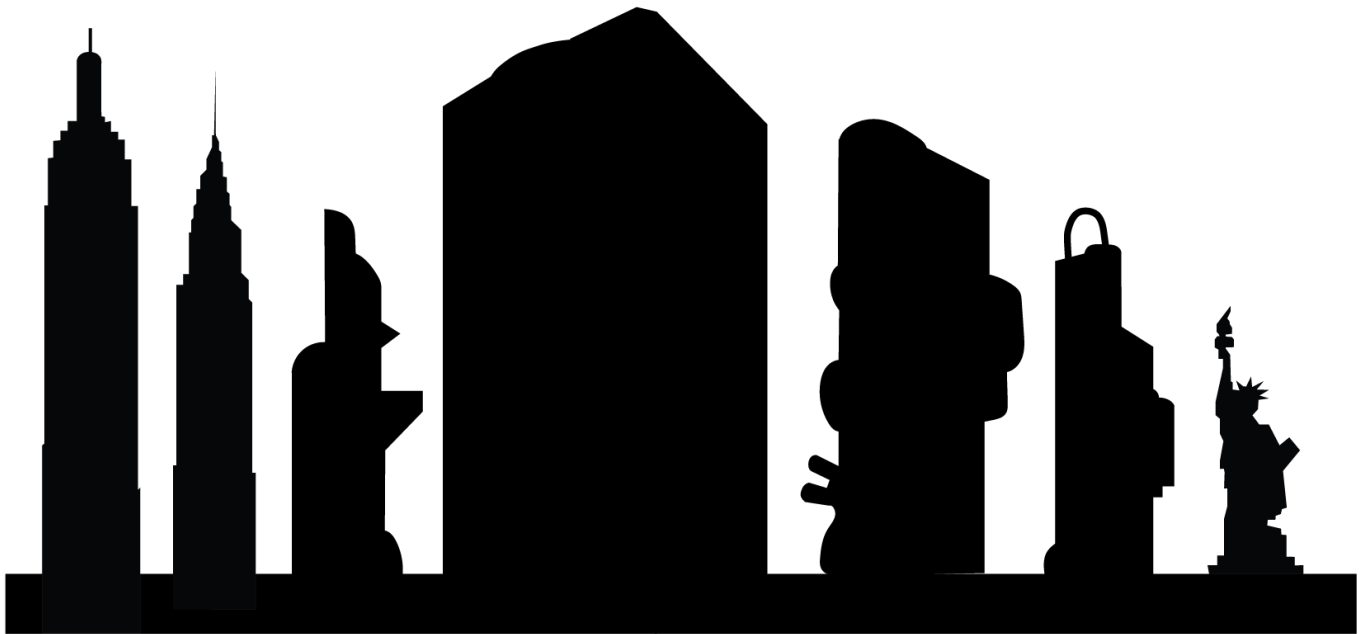


# **The 5<sup>th</sup> Annual NY Area CryoEM Meeting**



**Wednesday, June 25<sup>th</sup>, 2025  
NYU Langone Medical Center  
550 1st Ave.  
New York, NY 10016**

## Program

9:00 – 9:30 Coffee & Pastries - Alumni Hall Vestibule (main hallway)

9:30 – 9:40 **Welcoming remarks:** William Rice (NYU Langone) & Francesca Vallese ( CUNY ASRC)

### Session 1: Ion Channels & Transporters (Alumni Hall B) (Moderator: Da-Neng Wang)

9:40 – 10:00 Shanti Pal Gangwar (Columbia University)  
*Title: Gating and Regulation of Kainate Receptors*

10:00 – 10:20 Jacqueline Ehrlich (Cornell University-Ithaca)  
*Title: A molecular mechanism of Pannexin 1 ion channel permeation*

10:20 – 10:40 Ryan Morgan (Columbia University)  
*Title: Time-resolved cryo-EM of lipid-linked sugar transfer*

10:40 – 11:00 Coffee break - Alumni Hall Vestibule (main hallway)

### Session 2: Lipid Metabolism & Membrane Remodeling (Alumni Hall B) (Moderator: Filippo Mancia)

11:00 – 11:20 Yaqi Liu (Weill Cornell)  
*Title: Structural Insights into Key Steps in Mycobacterial Cell Envelope Biosynthesis: Lipid-Linked Mannosylation and Terminal Arabinosylation*

11:20 – 11:40 Halil Aydin (New York University)  
*Title: Cardiolipin Dynamics Promote Mitochondrial Membrane Remodeling*

11:40 – 12:00 Kathryn Gunn (Stony Brook University)  
*Title: Slicing Away at the Mystery of Lipase Storage Using Cryogenic Electron Tomography*

12:00 – 12:30 Flash talks (Moderator: Rie Nygaard)

12:30 – 1:30 Lunch - Alumni Hall Multi-purpose room (2nd floor of Alumni Hall)

### Invited speaker: (Alumni Hall B) (Moderator: Bill Rice)

1:30 – 2:00 Edward Twomey (Johns Hopkins University)  
*Title: Conformational Ensembles of Ligand-gated Ion Channels*

### Session 3: Technical Advances in Cryo-EM and Cryo-ET (Alumni Hall B) (Moderator: Pilar Cossio)

2:00 – 2:20 Michael Elbaum (Weizmann Institute of Science)  
*Title: Cryo-STEM in 2D, 3D, 4D, and more*

2.20 – 2.40 Alex de Marco (NYSBC)  
*Title: Nanocrates to address preferential orientation*

2:40 — 3:00 Coffee break - Alumni Hall Vestibule (main hallway)

**Session 4: Host-Pathogen Interaction, Immunity & Epigenetic Inheritance (Alumni Hall B)**  
**(Moderator: Xiangpeng Kong)**

- 3.00 – 3.20            James Lee (The Rockefeller University)  
                              *Title:            Viral immune evasion of antigen presentation*
- 3:20 – 3.40            Puja Majumder (Memorial Sloan Kettering Cancer Center)  
                              *Title:            A CARF-TIR effector forms filament networks to degrade NAD+ during the type III CRISPR-Cas anti-viral response*
- 3.40 – 4:00            William Mallen (Columbia University)  
                              *Title:            Cryo-electron tomography of mammalian spermatozoa*
- 4:00 – 4:15      Feedback and discussion of future meetings!
- 4:15 – 6:00      Poster session & Happy hour - Alumni Hall Vestibule (main hallway)

*We gratefully acknowledge support from the following corporate sponsors:*

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## Poster presentations:

1. **Ed Eng**, "Scaling transformative cryoEM technologies for biomedical researchers"
2. **Keith Hamilton**, "Missing title"
3. **Joshua Mendez**, "CryoEM access and training at New York Structural Biology Center (NYSBC)"
4. **Eugene Chua**, "Square beams for optimal tiling in TEM"
5. **Qinyu Zhu**, "Mechanistic studies of human phosphate transporters"
6. **Elena Riel**, "Characteristics of THIK-1 K2P channel gating"
7. **Ruoxi Wu**, "Structural insights into RNA cleavage by a novel family of bacterial RNases"
8. **Huan Li**, "The vault particle is enclosed by a C13-symmetric cap with a positively charged exterior"
9. **Pujun Xie**, "A fiducial-assisted strategy compatible with resolving small MFS transporter structures in multiple conformations using cryo-EM"
10. **Thomas Whitbread**, "Leveraging the Air-water Interface to Study Pancreatic Lipase"
11. **Joseph Closson**, "Structural Insights into the Assembly of a Novel Hypoxia Inducible Factor Complex"
12. **Lorenzo Maso**, "Deciphering the molecular basis for pan-HLA recognition of divarasib-modified pMHCs by newly discovered hit-to-lead antibody AETX-R302"
13. **Deepika Jaiswal**, "Structural Mapping of Early Plasmablast-Derived SARS-CoV-2 Antibodies"
14. **Nandish Kumar Khanra**, "Structure of the human TWIK-2 potassium channel and its inhibition by pimozone"
15. **Appy Bhattacharya**, "Comprehensive conformational and colloidal stability of biopolymers with Prometheus Panta"
16. **Zhengshan Hu**, "Protein Engineering Enables Cryo-EM Investigation of Small GTPase Structure and Interaction"
17. **Mohammed Hoque**, "Structures of endogenous TCR/CD3 complexes"
18. **Emmanuel Afriyie**, "Structural basis of nanobody-mediated recruitment of NEDD4 E3 ligase to target ion channels"
19. **Swati Pant**, "The pentameric chloride channel BEST1 is activated by extracellular GABA"
20. **Maria Rafiq**, "n-Decyl- $\beta$ -d-Maltopyranoside (DM) is an effective detergent to overcome strong preferred orientation for cryo-EM studies of NPM"
21. **Geoffrey Woollard**, "InstaMap: instant-NGP for cryo-EM density maps"
22. **Stephannie Rosario-Garrido**, "Investigating the Metal Dependence of the Glycosyltransferase ArnT Involved in Bacterial Polymyxin Resistance"
23. **James A. Tranos**, "Structure Function Studies of a Bacterial Membrane Protein that Confers Polymyxin Resistance"
24. **Pankaj Parihar**, "Effects of Jordan syndrome mutations on PPP2R5D holoenzyme structure, behavior and cellular signaling barcodes"
25. **Luke Evans**, "Counting Particles Could Give Wrong Probabilities in Cryo-EM"
26. **Abhilash Sahoo**, "Predicting problems caused by the air-water interface in cryo-electron microscopy: Insights from molecular dynamics simulations"
27. **Weifeng Lu**, "Structural characterization of DNA-PK complexes in the context of nucleosomes"
28. **Hang Yang**, "Structural Insights into Nucleosome Eviction by the Mammalian SWI/SNF Chromatin Remodeler"
29. **Suhail Dawood**, "New Developments in CryoSPARC"
30. **Rocky Lu**, "Coarse-Grained Modeling of Bacterial Adhesion Pili"