



BSG Winter Meeting 2024

New Advances and Future Directions in Structural Biology

MRC-LMB Cambridge

Friday, December 6th

Organisers: Andrew Carter (MRC LMB)/Simon Newstead (University of Oxford)

10:30 – 11:00 registration (inc. coffee & pastries)

10:50 – 11:00 - Introductory remarks

11:00 – 12:45 Session 1

(11:00 – 11:25) Matteo Allegretti (MRC-LMB) *“The macromolecular architecture of male germ cell nuclei revealed by electron cryo tomography in vivo”* (20 + 5)

(11:25 – 11:40) Poster speaker – Holly Monkhouse (CIMR) *“Structural characterisation of a lipid-processing complex”* (10 + 5)

(11:40 – 12:05) Kelly Nguyen (MRC LMB) *“Replenishing the ends: Structural mechanisms of human telomerase.”* (20 + 5)

(12:05 – 12:20) Poster speaker - Quentin Smith (MRC LMS) *“Structural basis of negative supercoiling induced CRISPR/Cas9 off-target activity”*. (10 + 5)

(12:20 – 12:45) Tracey Gloster (University of St Andrews) *“Structure and function of carbohydrate processing enzymes.”* (20 + 5)

(12:45-13:00) Wrap up discussion for the morning session and introduction to the town hall discussion.

(13:00 – 14:15) Lunch & Poster Session (90)

Session 2 (2:30) (14:15 – 16:00)

(14:15 - 14:40) Harry Low (Imperial) *“ESCRT-III-like proteins in bacteria: their role in membrane stress and repair.”* (20 + 5)

(14:40 – 14:55) Poster speaker - Ben Nash (UEA) *“Structural basis for extracellular reduction of dimethyl sulfoxide by Shewanella oneidensis revealed by CryoEM”* (10 + 5)

(14:55 – 15:20) **BSG Early Career Prize** - Lindsay Baker (University of Oxford) (20 + 5)

(15:20 – 15:45) *Helen Cooper* (University of Birmingham) *“Native ambient mass spectrometry: In situ analysis of proteins and their complexes in tissue.”* (20 + 5)

(15:45 – 16:00) Coffee (15)

(16:00 – 17:00) Town Hall Discussion – Future directions for structural biology

Interactive discussion on selected opportunities in structural biology.

Our invited speakers will discuss the following topics and take questions from the audience.

- *How do we see as the future interface between machine learning and academia evolving?*
- *What are the best approaches to understanding dynamics, flexibility and transient interactions in biological systems?*
- *How do we get from molecular scale to understanding systems and disease?*
- *The importance of national facilities in supporting UK based structural biology and biophysics.*
- *What do we think are the best ways to support graduate training and funding for structural biology in the UK?*

[Slido will also be available.](#)

(17:00 – 18:00) Drinks & Poster prizes. 17:00 – 18:00

18:00 End of the meeting

18:30 Dinner for speakers

Thank you to our generous sponsors:



