



UNSW
SYDNEY



2024 SBMS Seminar Series

Date: Wednesday 20 November 2024

Time: 3pm – 4pm

Location: [AGSM Boral Theatre](#)

Title: Dissecting the molecular mechanisms that regulate intracellular membrane fusion

Speaker: Mary Munson, Professor and Vice Chair for Diversity and Inclusion in the Biochemistry & Molecular Biotechnology Department, and the Associate Vice Provost for Equity in Science in the Office of Health Equity, at the University of Massachusetts Chan Medical School in Worcester, MA.



Abstract: In eukaryotic cells, membrane-bound vesicles carry protein and membrane cargo to the plasma membrane for exocytosis. The precise spatial and temporal regulation of vesicle fusion is achieved by a large multi-subunit tethering complex called the exocyst complex.

Exocyst interacts with the SNARE membrane fusion proteins and a variety of regulatory proteins. Our *in vitro* biochemical and biophysical studies indicate that exocyst provides extensive chaperoning functions across the entire process of SNARE complex assembly and fusion. Exocyst proceeds through a series of activating conformational changes in order to efficiently tether vesicles, bind to SNAREs and accelerate membrane fusion.

Bio: Mary Munson, PhD – Professor and Vice Chair for Diversity and Inclusion in the Biochemistry & Molecular Biotechnology Department, and the Associate Vice Provost for Equity in Science in the Office of Health Equity, at the University of Massachusetts Chan Medical School in Worcester, MA; President-Elect for the American Society for Cell Biology (ASCB) for 2025.

Dr. Munson has a PhD from the Department of Molecular Biophysics and Biochemistry at Yale, and was a postdoctoral fellow at Princeton before joining UMass Chan Medical School. She has an active biochemistry, cell biology and structural biology research lab that has been continually NIH-funded since 2005, and has been active in promoting and supporting diversity, equity, and inclusion in her lab, department, university, and in her field. She co-leads an Investigator Career Advancement Program (iCAP) for supporting and mentoring new tenure-track junior faculty, especially those from backgrounds under-represented in medicine; she also is driving an effort at UMass Chan to develop a Center for Advanced Mentorship Practices (CAMP), which will bring together and support mentorship programs and mentor training across campus. She was the former chair/co-chair of the ASCB Women in Cell Biology (WICB) committee (2019-2023), and is currently co-PI on the NIH-funded ASCB MOSAIC award to support the transition of postdoctoral K99/R00 MOSAIC scholars into research-intensive faculty positions through mentorship, professional skills training workshops, and an annual Inclusivity Summit to promote institutional change.

For her achievements, she has been recognized by several UMass Chan graduate school awards for curriculum development and student mentoring, the UMass Chan Chancellor's Award for Advancing Institutional Excellence in Diversity and Inclusion (2022), and the UMass Chan Women's Faculty Committee's Outstanding Mentoring to Women Faculty Award (2023). She was recently awarded a 2024 Zenith Award by the Association for Women in Science (AWIS). She was also elected as a 2022 Fellow of ASCB, and a 2023 Fellow of the American Association for the Advancement of Science (AAAS).

Mary Munson will be available to meet with researchers – please contact Till (till.boecking@unsw.edu.au) with your availability if you are interested to discuss shared research interests with her.

We look forward to seeing you at the seminar!

Enquiries: SBMS Seminar Convenors Claire Sayers, Daniel Fernandez Ruiz and Peter Newman.

✉ [SBMS Research Seminar Organisation](#)