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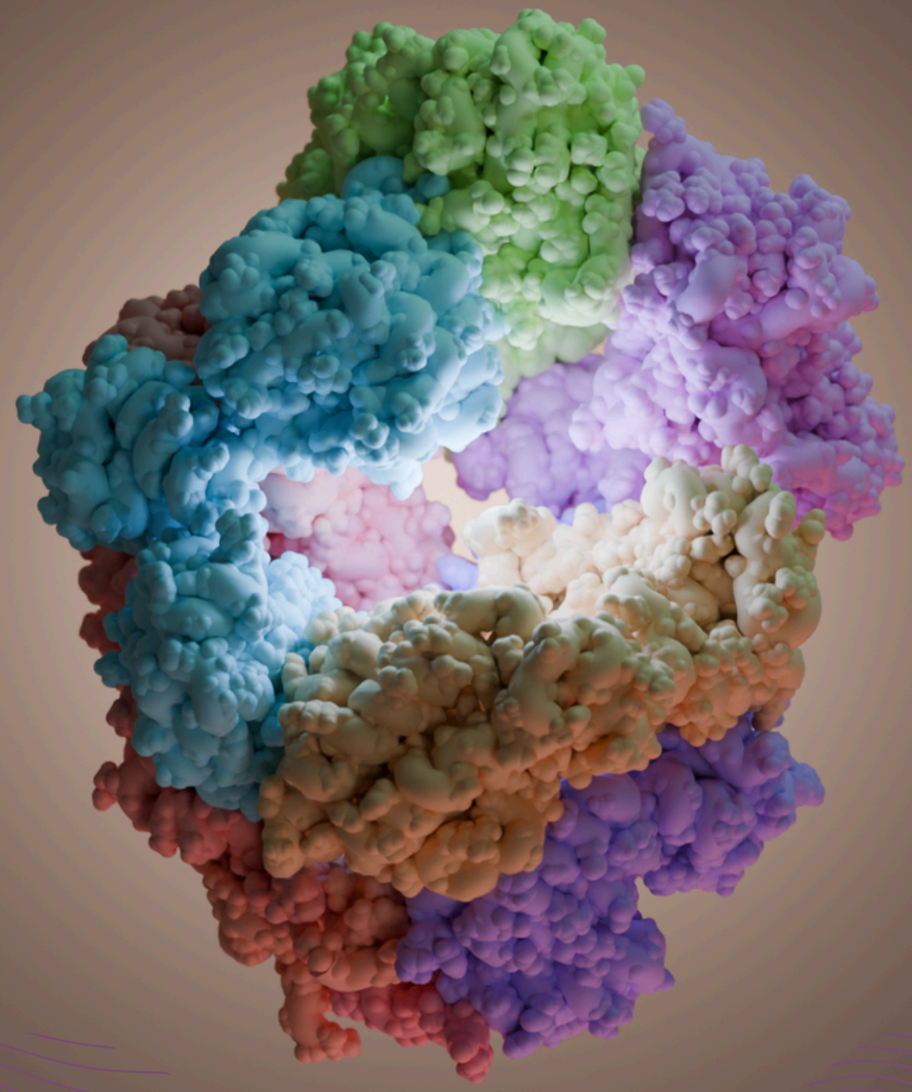
CeMMP

# ARC Centre for Cryo-electron Microscopy of Membrane Proteins Research Symposium 2026



**WEDNESDAY 2ND & THURSDAY 3RD DECEMBER 2026**

IN-PERSON ONLY, BIO21 INSTITUTE AUDITORIUM, PARKVILLE

# PROGRAM | Wednesday 2nd December

***Registration | 9:00 AM - 9:20 AM***

***Welcome Note | 9:20 AM - 9:30 AM***
Prof. Patrick Sexton, ARC CCeMMP Director

***Opening Keynote | 9:30 AM - 10:30 AM | Chair: Dr. Michaela Kaoullas***
**Assoc. Prof. Alisa Glukhova, Walter and Eliza Hall Institute**
*Title: TBA*

***Session 1: Receptors and Therapeutics | 10:30 AM - 11:20 PM | Chair: Dr. Michaela Kaoullas***
**10:30 AM - 10:55 AM**
Thomas Ficker, University of Wollongong
*Structural basis of small-molecule modulation of the human Kv7.5 channel*
**10:55 AM - 11:20 AM**
Dr. Ania Beyger, Monash University
*Towards isoform-selective drug design at CXCR3*

***Morning tea & poster viewing | 11:20 AM - 11:50 AM***

***Session 2: Microbial Systems and Pathogenesis | 11:50 PM - 1:10 PM | Chair: Inamur Rahman***
**11:50 PM - 12:15 PM**
Raymond Wirawan, Monash University
*The cryo-EM structure of binary pesticidal pore-forming proteins, Vpb1 and it's independent homologue, Vpb4*
**12:15 PM - 12:40 PM**
Milad Reyhani, The University of Melbourne
*A host-breaching attachment organelle and a 7 Å virus structure in a nested DPANN archaeal system*
**12:40 PM - 12:55 PM**
Jieyu Song, The University of Queensland
*A new antiphage defence pathway identified through structural analyses and phage resistance screens*
**12:55 PM - 1:10 PM**
A/Prof. Michael J. Landsberg, The University of Queensland
*Exploring the capacity to modify bacterial pore-forming toxins for biotechnological applications*

***Lunch & poster viewing | 1:10 PM - 2:10 PM***

***Session 3: Membrane Signalling and Pharmacology | 2:10 PM - 3:20 PM | Chair: Dr. Sandra Gostynska***
**2:10 PM - 2:25 PM**
Dr. Felix M. Bennetts, Monash Institute of Pharmaceutical Sciences
*Characterising P2X1 receptor antagonists by cryo-EM and pharmacology for non-hormonal male contraception*
**2:25 PM - 2:50 PM**
Mayada Mazher, The University of Melbourne
*TMEM120A protein in mechanical pain: linking lipids, biophysics and ion channel modulation*
**2:50 PM - 3:05 PM**
Dr. Sarah Piper, Monash Institute of Pharmaceutical Sciences
*Splice up your life – Structure and function of PAC1 receptor splice variants*
**3:05 PM - 3:20 PM**
Dr. Bryan Y.J. Lim, University of Melbourne
*Towards unravelling the transport cycle of the pneumococcal manganese importer PsaBC by cryo-EM*

***Afternoon tea & poster viewing | 3:20 PM - 3:50 PM***

***Session 4: Molecular Recognition and Protein Function | 3:50 PM - 5:00 PM | Chair: Dr. Rocio Finol Urdaneta***
**3:50 PM - 4:15 PM**
Sandaru M. Ileperuma, University of Alberta, Canada
*Identification of inhibitors of the Pseudomonas aeruginosa NADH:ubiquinone oxidoreductase (NQR) that hinder virulence factors*
**4:15 PM - 4:30 PM**
Dr. Josh Benton, Monash University
*The structural basis of perforin-1 and perforin-2 oligomerisation*
**4:30 PM - 4:45 PM**
Sathya Muthusamy, University of Melbourne
*Structure of the autotransporter adhesin RadD from Fusobacterium nucleatum*
**4:45 PM - 5:00 PM**
David Safadi, University of Wollongong
*GABAB receptor activation by analgesic conotoxins*

***Social function & networking | Welcome to Brunswick | 6:00 pm - 9:00 pm***

# PROGRAM | Thursday 3rd December

***Morning Keynote | 9:00 AM - 10:00 AM | Chair: Sathya Muthusamy***
**Assit. Prof. Oleg Sitsel, Okinawa Institute of Science and Technology**
*Title: Uncovering the mysterious secretion mechanism of Tc toxins*

***Session 5: Membrane Protein Mechanisms | 10:00 AM - 10:50 AM | Chair: Sathya Muthusamy***
**10:00 AM - 10:25 AM**
Dr. Han Chow Chua, University of Sydney
*The sodium leak has finally been plugged*
**10:25 AM - 10:50 AM**
Zubair Jashim, University of Melbourne
*The elusive non-canonical inhibition of sodium channels by canonical inhibitors*

***Morning tea & poster viewing | 10:50 AM - 11:20 AM***

***Session 6: Structural Methods and Technology | 11:20 AM - 12:40 PM | Chair: Dr. Solace Roche***
**11:20 AM - 11:45 PM**
Dr. Joshua M. Hardy, WEHI
*nf-boltz-2: Leveraging nextflow for efficient and local structure prediction with Boltz-2*
**11:45 PM - 12:10 PM**
A/Prof. Chuchu Wang, Nanyang Technological University, Singapore
*Structure and Topography of the Synaptic V-ATPase–Synaptophysin Complex*
**12:10 PM - 12:25 PM**
Dr. Sylvain Trépout, Ramaciotti Centre for CryoEM, Monash University
*High-resolution subtomogram averaging of sparse data*
**12:25 PM - 12:40 PM**
Dr. Hamish G. Brown, University of Melbourne
*Whole cell and lamella acquisition with rectangular beam montage cryo-electron tomography*

***Lunch & poster viewing | 12:40 PM - 1:40 PM***

***Closing Keynote | 1:40 PM - 2:40 PM | Chair: Dr. Daniel Fox***
**Prof. Andrew Ellisdon, Monash University**
*Title: The lysosome as a metabolic hub: coordinating lipid and nutrient sensing at the organelle surface*

***Session 7: Molecular Machines & Cellular Architecture | 2:40 PM - 3:30 PM | Chair: Dr. Daniel Fox***
**2:40 PM - 3:05 PM**
Dr. Winnie Tan, WEHI
*Nucleosome recognition and DNA compaction by the MORC2 remodeller*
**3:05 PM - 3:30 PM**
Shubha Udupa, The University of Melbourne
*Cryo-electron tomography reveals the molecular anatomy of bacterial conjugative junctions*

***Afternoon tea | 3:30 PM - 3:45 PM***

***Node Leader Round Table Discussion | 3:45 PM - 4:15 PM | Chair: Dr. Sarah Piper***

***Prizes & Closing Remarks | 4:15 PM - 4:30 PM | Prof. Patrick Sexton, ARC CCeMMP Director***

***Prizes***

***CCeMMP Poster Prize - Sponsored by NanoSoft***
*Winner receives $350 (AUD) and Runners-Up receives $150 (AUD)*
***Short-talk Presentation Prize***
*Winner receives $400 (AUD) and People's Choice receives $100 (AUD)*
***Oral Presentation Poster Prize - Sponsored by Thermo Fisher Scientific***
*Winner receives $550 (AUD) and Runners-Up receives $250 (AUD)*

*View Abstracts:*