

## ECS 2024 Cambridge

17<sup>th</sup> International meeting of the European Calcium Society in Cambridge, UK  
1<sup>st</sup> – 4<sup>th</sup> September 2024

<https://cambridge2024.calciumsociety.com/>

### Invited lectures:

Opening lecture                      **Annette Dolphin** (University College London) chaired by Sandip Patel  
Claude Klee Lecture                **Martha Cyert** (Stanford, USA) chaired by Jim Putney  
Sir Michael Berridge Lecture      **Gaiti Hasan** (NCBS, India) chaired by Andres Guse

### Sunday, 1<sup>st</sup> September

- 12:30 – 14:00      **Registration**  
Check-In and set-up posters
- 14:00 – 14:15      **Welcome and Introduction**  
**Sandip Patel**
- 14:15 – 15:15      **Annette Dräger Opening Lecture**  
Speaker **Annette Dolphin** (UCL): Lessons in drugs and trafficking from voltage-gated calcium channels  
Chair **Sandip Patel** (UCL)
- Session 1**            **Plasma membrane – ER junctions: hubs for local and global calcium signalling**  
Chair **Indu Ambukdar** (NIH/NIDCR)
- 15:15 – 15:40      **Genevieve Dupont** (Université Libre de Bruxelles): Computational insights into the molecular mechanism of T cells microdomains formation
- 15:40 – 16:05      **Björn Diercks** (University Medical Center Hamburg-Eppendorf): Initial Ca<sup>2+</sup> microdomains in T cells
- 16:05 – 16:30      **Isabella Derler** (Johannes Kepler University Linz): Photocrosslinking: a novel tool to study Orai1 channel dynamics
- 16:30 – 16:45      *Session discussion*  
**Coffee/Tea break**
- Session 2**            **Functional and dysfunctional states of calcium binding proteins**  
Chair **Daniele Dell'Orco** (University of Verona)
- 17:15 – 17:40      **Alessandra Astegno** (University of Verona)
- 17:40 – 18:05      **James Ames** (University of California at Davies): Regulation of L-type Calcium Channels by Calmodulin and CaBP1
- 18:05 – 18:17      Short talk selected from abstract submissions
- 18:17 – 18:29      Short talk selected from abstract submissions
- 18:29 – 18:45      *Session discussion*
- 18:45 – 21:30      **Welcome reception**

## Monday, 2<sup>nd</sup> September

8:30 – 9:00

Refreshments

### Session 3

#### Organelle-cross talk

Chair **Mohamed Trebak** (University of Pittsburgh)

9:00 – 9:25

**Rajender Motiani** (Regional Centre for Biotechnology): Calcium driven inter-organelle crosstalk: A master regulator of vertebrate pigmentation

9:25 – 9:50

**Jen Liou** (UT Southwestern Medical Center): Regulation of receptor-induced PIP2-Calcium Signaling at ER-PM junctions by Nir proteins

9:50 – 10:15

**Anna Raffaello** (University of Padova): New modulators of mitochondrial calcium uptake

10:15 – 10:30

Session discussion

Coffee/Tea break

### Session 4

#### Calcium signalling in disease

Chair **Kahled Machaca** (Weill Cornell Medicine - Qatar)



**Weill Cornell  
Medicine-Qatar**

11:00 – 11:25

**Greg Monteith** (University of Queensland): Pathways to targeting calcium channels for cancer therapy

11:25 – 11:50

**Mohamed Trebak** (University of Pittsburgh): Calcium signaling through Orai channels in health and disease

11:50 – 12:02

Short talk selected from abstract submissions

12:02 – 12:14

Short talk selected from abstract submissions

12:14 – 12:30

Session discussion

12:30 – 13:00

#### Flash Talks 1

Chair **Ana Rossi** (University of Cambridge)

Lunch with Poster Session 1

### Session 5

#### New calcium imaging technologies

Chair **Robert Campbell** (University of Tokyo), co-chair **Shosei Imai**

14:30 – 14:55

**Hod Dana** (Case Western Reserve University): Development and application of a high-sensitivity version of the calcium-sensitive activity integrator CaMPARI

14:55 – 15:20

**Claire Deo** (EMBL): Chemigenetic molecular tools for photoacoustic imaging of neural activity

15:20 – 15:32

Short talk selected from abstract submissions

15:32 – 15:44

Short talk selected from abstract submissions

15:44 – 16:00

Session discussion

Coffee/Tea break

## Session 6 **Advances in NAADP signalling**

Chair **Eugen Brailiou** (Temple University)

- 16:30 – 16:55 **Jonathan Marchant** (Medical College of Wisconsin): Characterizing the role of Jupiter microtubule-associated homolog 2 (JPT2) in NAADP-evoked  $\text{Ca}^{2+}$  release from acidic  $\text{Ca}^{2+}$  stores.
- 16:55 – 17:20 **Jiusheng Yan** (University of Texas): Crosstalk between NAADP and  $\text{PI}(3,5)\text{P}_2$  signaling mediated by Lsm12 and two-pore channels
- 17:20 – 17:45 **Yongjuan Zhao** (CUHK-Shenzhen): Unraveling the Biosynthesis and Degradation of Cyclic ADP-Ribose: Implications for Neuronal Function and Neurodegeneration
- 17:45 – 18:00 *Session discussion*

## **jECS session**

This session will consist of two speakers selected at the jECS meeting.



Chair **Gaia Gherardi** (University of Padova)

18:00 – 18:12 **Speaker 1** – TBA

18:12 – 18:24 **Speaker 2** – TBA

18:24 – 18:30 *Session discussion*

**19:30**

**Dinner, Bar & Posters**

The college bar is open during and following dinner.

**Tuesday, 3<sup>rd</sup> September**

**8:30 – 9:00** Refreshments

**Session 7** **New discoveries in the structure and function of calcium transport ATPases**  
Chair **Agnes Enyedi** (Semmelweis University, Hungary), co-chair **Sarolta Tóth**

9:00 – 9:25 **Jason Bruce** (The University of Manchester): Fuelling PMCA in pancreatic diseases

9:25 – 9:50 **Elizabeth Cartwright** (University of Manchester): The pathophysiological role of PMCA in heart failure and hypertension

9:50 – 10:15 **Dirk Montag** (Leibniz Institute for Neurobiology): The PMCA - neuroplastin liason is essential for hearing and associative learning and memory

10:15 – 10:30 *Session discussion*

Coffee/Tea break

**Session 8** **The role of allosterity in calcium signalling**  
Chair **David Weber** (University of Maryland)

11:00 – 11:25 **Gary Shaw** (University of Western Ontario): Coupling of Binding Sites in S100 Proteins

11:25 – 11:50 **Speaker TBA**

11:50 – 12:02 Short talk selected from abstract submissions

12:02 – 12:14 Short talk selected from abstract submissions

12:14 – 12:30 *Session discussion*

Free time

16:30 – 17:30 General assembly

17:30 – 18:30 **Claude Klee Lecture**  
Speaker **Martha Cyert** (Stanford, USA):  
Discovering new mechanisms for calcineurin signaling  
Chair **Jim Putney**



**19:30** **BBQ, Bar & Posters**  
The BBQ takes place in the college gardens. The college bar is open during and following dinner.

## Wednesday, 4<sup>th</sup> September

8:30 – 9:00 Refreshments

### Session 9 Artificial intelligence

Chair **Jonathan Marchant** (Medical College of Wisconsin), co-chair **Sushil Kumar**

9:00 – 9:25 **Andreas Bender** (University of Cambridge): Artificial Intelligence in Chemical and Biology and Drug Discovery – Methods, Applications, and Pitfalls

9:25 – 9:50 **Lukas Friedrich** (Merck Healthcare KGaA): Industrial Applications of Machine Learning in Early Drug Discovery

9:50 – 10:02 Short talk selected from abstract submissions

10:02 – 10:16 Short talk selected from abstract submissions

10:16 – 10:30 *Session discussion*

Coffee/Tea break

### Session 10 Annexins and the S100 proteins

Introduced by **Ursula Rescher** (University of Münster), co-chair **Inga Pauels**

11:00 – 11:25 **Jesper Nylandsted** (Danish Cancer Society Research Centre, Copenhagen): Ca<sup>2+</sup>-Guided Plasma Membrane Repair Mediated by Annexin Proteins

11:25 – 11:50 **Axel Brakhage** (Leibniz Institute for Natural Product Research and Infection Biology): Pathogenic fungus hijacks human S100A10 (p11) to redirect fungal-containing phagosomes to non-degradative pathway

11:50 – 12:02 Short talk selected from abstract submissions

12:02 – 12:14 Short talk selected from abstract submissions

12:14 – 12:30 *Session discussion*

### 12:30 – 13:00 Flash Talks 2

Chair **Martin Bootman** (The Open University)

Lunch with Poster Session 2

### Session 11 Calcium signalling at membrane contact sites

Chair **Nicolas Demaurex** (University of Geneva), co-chair **Raphaël Néré**

14:30 – 14:55 **Jennifer Rieusset** (Claude Bernard University Lyon): ER-mitochondria interactions and calcium coupling in metabolic health and diseases.

14:55 – 15:20 **Raz Palty** (Israel Institute of Technology): STIM1 recruitment and signaling at ER-PM contact sites

15:20 – 15:45 **Alex van Vliet** (MRC Laboratory of Molecular Biology in Cambridge): Autophagy Initiation through (rapid) membrane contact sites

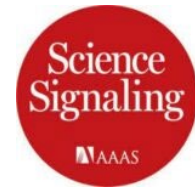
15:45 – 16:00 *Session discussion*

Coffee/Tea break

## Session 12

### Late Breaking Session

Chair **Geert Bultynck** (KU Leuven), co-chair **Femke Speelman-Rooms**



16:30 – 17:30 Speakers TBA

17:30 – 18:30 **Sir Michael Berridge Lecture**

Speaker **Gaiti Hasan** (NCBS, India): Integration of neuromodulatory inputs by intracellular  $\text{Ca}^{2+}$  signaling for systemic growth and behaviour

Chair **Andreas Guse**

18:30 **Concluding Remarks and Awards** by the local organising committee

19:30 **Gala Dinner**

The gala dinner takes place in the new dining hall. The college bar is open following dinner.