

### TALKS

#### Table of Contents

#### PLENARY LECTURES

##### Saturday 29 June

- 3 Opening Plenary Lecture
- 3 FEBS Datta Lecture

##### Sunday 30 June

- 3 FEBS Sir Hans Krebs Lecture
- 4 FEBS 2024 Special Plenary Lecture
- 4 The FEBS Journal Lecture
- 4 Molecular Oncology Lecture

##### Monday 1 July

- 5 IUBMB Lecture
- 5 FEBS Theodor Bücher Lecture

##### Tuesday 2 July

- 5 EMBO Lecture
- 5 FEBS Letters Lecture
- 6 FEBS Open Bio Lecture
- 6 PABMB Lecture

##### Wednesday 3 July

- 7 FEBS 2024 Special Lecture
- 7 FEBS/EMBO Women in Science Award Lecture
- 7 FEBS 60th Anniversary Lecture

#### SYMPOSIA

##### Sunday 30 June

- 8 Methods and Progress in Structural Biology – Part A
- 10 Cutting Edge Approaches for Sustainable and Environmental Biotechnology
- 12 Biochemistry of Physical Activity and Health – Part A
- 14 Genome Editing and Gene Therapy – Part A
- 15 Translational Proteomics
- 17 Cancer Epigenome and Transcriptome
- 19 Bio-based Polymers for Engineered ‘Green’ Materials

##### Monday 1 July

- 21 Functional Foods and Human Health – Part A
- 23 Enzymes and Cell Therapies
- 25 New Insights into Cellular Organelles
- 26 Biochemical Strategies for Cultural Heritage
- 28 Targeting Metabolism in Cancer
- 30 Enzyme Engineering: The Future is Now
- 32 Long ncRNA and microRNA Networks
- 34 Biochemistry of Physical Activity and Health – Part B

##### Tuesday 2 July

- 35 Post-translational Modification of Membrane Proteins
- 37 Towards Sustainable Use of Natural and Renewable Resources
- 38 Young Scientists Session A: Biosensors
- 40 Digital Twins for Precision Medicine
- 42 Functional Foods and Human Health – Part B
- 44 G protein Coupled Receptor-mediated Nutrient Sensing

- 46 Genome Editing and Gene Therapy – Part B

##### Wednesday 3 July

- 47 Methods and Progress in Structural Biology – Part B
- 49 Redox Biochemistry
- 52 Young Scientists Session B: Biochemistry for Drug Repurposing
- 54 The D-side in Health: D-amino acids in Pathological States
- 55 From Brain Molecules to Brain Functions and Diseases
- 57 Impacts of Climate Change on Nutrition and Health
- 59 Liquid–Liquid Phase Separation
- 61 Marine Biochemistry

#### SPECIAL SESSIONS

##### Sunday 30 June

- 62 Science and Society: Private and Public Funds in Translational Research
- 63 From Passive Students to Active Learners: Reimagining Education with Student-Centred Tools and Unlocking Engagement in the Digital

#### SPEED TALKS

##### Sunday 30 June

- 63 Advanced Methods of Structural Biology
- 65 Proteomics and Metabolomics
- 66 Cutting Edge Approaches for Sustainable and Environmental Biotechnology
- 67 Bio-based Polymers for Engineered ‘Green’ Materials
- 67 Towards Sustainable Use of Natural and Renewable Resources
- 68 Immunobiochemistry
- 69 Other Topics
- 70 Enzyme and Cell Therapies (Medicinal Biochemistry)
- 71 Epigenome and Transcriptome
- 72 Cancer and Metabolism

##### Monday 1 July

- 73 Membrane Biochemistry
- 74 Cellular Organelles
- 75 Proteomics and Metabolomics
- 76 Protein Phase Separation and New Organelles
- 77 Redox Biochemistry
- 77 Molecular Mechanisms of Functional Foods and Their Bioactive Compounds
- 78 Nutraceuticals Effects on Cell Metabolism and Chronic Diseases
- 79 Impacts of Climate Change on Nutrition and Health
- 79 Other Topics
- 80 Cancer Biochemistry
- 80 Cancer and Metabolism
- 81 Cancer Biochemistry
- 82 Cancer and Metabolism

##### Tuesday 2 July

- 82 Marine Biochemistry
- 83 Cutting edge approaches for sustainable and environmental biotechnology
- 84 Enzyme Engineering and Biotechnology
- 84 Long ncRNA and microRNA Networks
- 85 Biochemistry for Drug Repurposing
- 86 G protein Coupled Receptors
- 86 Molecular Basis of Diseases - Part B
- 88 Bioinformatics and AI for Precision Medicine
- 89 D-amino acids and Pathological States
- 90 Neurobiochemistry

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#### About these abstracts

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#### Indexing

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**Tuesday 2 July****17:00–19:00, Red Room****From Passive Students to Active Learners: Reimagining Education with Student-Centred Tools and Unlocking Engagement in the Digital****SS-02-1****Enhancing learning through student-centered teaching methods**

S. Petchey

*University of Zurich, Kantonsschulstrasse 3, 8001 Zurich, Switzerland*

Student-centered teaching is a pivotal strategy for enhancing learning outcomes and fostering a more inclusive and responsive educational environment. But what does this kind of teaching look like? And how can we learn to teach in this manner? The presentation and workshop will introduce structured tools that facilitate student-centered teaching by helping us adequately consider student prior knowledge and recognize what makes certain content difficult to learn. Participants will gain insights into creating and using powerful analogies that engage students and facilitate their understanding of complex subjects. In addition, the session will provide strategies to promote conceptual change, equipping educators to guide students in revising misconceptions and building an accurate knowledge base.

**SS-02-2****Design a learning community to catalyze active learning**

F.M. Fung

*Department of Chemistry, National University of Singapore, Singapore, Singapore*

Because of today's interconnected social landscape, the application of technology-enabled education has become widely recognized. Surprisingly, the primary challenge of digital teaching and learning lies in its social dimension. The current methods of digital instruction have resulted in diminished student-faculty interactions due to the absence of non-visual cues and a longer response time for inquiries. Moreover, the reduced physical connections among peers have hindered collaborative learning and raised concerns about students' mental well-being. There is mounting evidence indicating that students from different socio-economic backgrounds are disproportionately affected, exacerbating educational inequalities. In this context, we propose a framework to build learning communities with the thoughtful utilization of popular digital platforms as a simple and cost-effective method.

**SPEED TALKS****Sunday 30 June****13:10–13:30, Silver Room****Advanced Methods of Structural Biology****SpT-01-4****How to self assemble: oligomeric structures of septin complexes and sub-complexes from *Ciona intestinalis***D. Mendonça<sup>I</sup>, S. Morais<sup>I</sup>, A. Pinto<sup>I</sup>, D. Leonardo<sup>I</sup>, N. Valadares<sup>II</sup>, R. Portugal<sup>III</sup>, B. Klaholz<sup>IV</sup>, R. Garratt<sup>I</sup>, A.P. Araujo<sup>I</sup><sup>I</sup>*Institute of Physics of São Carlos, University of São Paulo, São Carlos, Brazil*, <sup>II</sup>*Institute of Biological Sciences, University of Brasília, DF, Brazil*, <sup>III</sup>*Brazilian Nanotechnology National Laboratory, CNPEM, Campinas, SP, Brazil, Campinas, Brazil*, <sup>IV</sup>*Centre for Integrative Biology (CBI), IGBMC, 67404 Illkirch, France, Illkirch, France*

Over recent years much has been learnt about septin filament assembly and the specific interfaces that must spontaneously form in order to correctly build oligomers, filaments and higher-order assemblies. The latter seem to be essential for the vast majority of septin functions in membrane remodeling, bacterial entrapment and barrier formation. Most of this information has derived from mammalian systems although much of our current understanding appears to be transferable to other species, including schistosomes, fruit flies and fungi. In the current work we investigate the structures of septin complexes and sub-complexes from the sea squirt *Ciona intestinalis*, an interesting model system possessing only one member of each of the four animal septin subgroups (SEPT2, SEPT6, SEPT7 and SEPT9), thereby eliminating the redundancy seen in many species. We obtained single-particle cryo-EM structures for the octameric, hexameric and central tetrameric particles at 9, 3.3 and 2.7 Å, respectively. This has enabled us to better understand the features of the inter-subunit interfaces, essential for spontaneous assembly. In the upper part of the G-interface we rationalize the need for an Asx residue within switch II based on its unusual  $\phi/\psi$  angles and in the lower part, the cluster of intercalated aromatic residues which has been largely unappreciated until now. At the NC-interface we fully describe the Hook-Loop region for this first time. This appears to be essential for each subunit to embrace its neighbor, thereby, together with a polybasic helix ( $\alpha 0$ ), lending stability to the NC-interface and determining inter-subunit separation. Taken together, this study gives novel insights into the assembly of the septin oligomers, which is an elegant example of subtle molecular recognition. This work was supported by FAPESP through grants 2020/02897-1, 2021/08158-9, 2018/20209-5, 2023/06866-1.