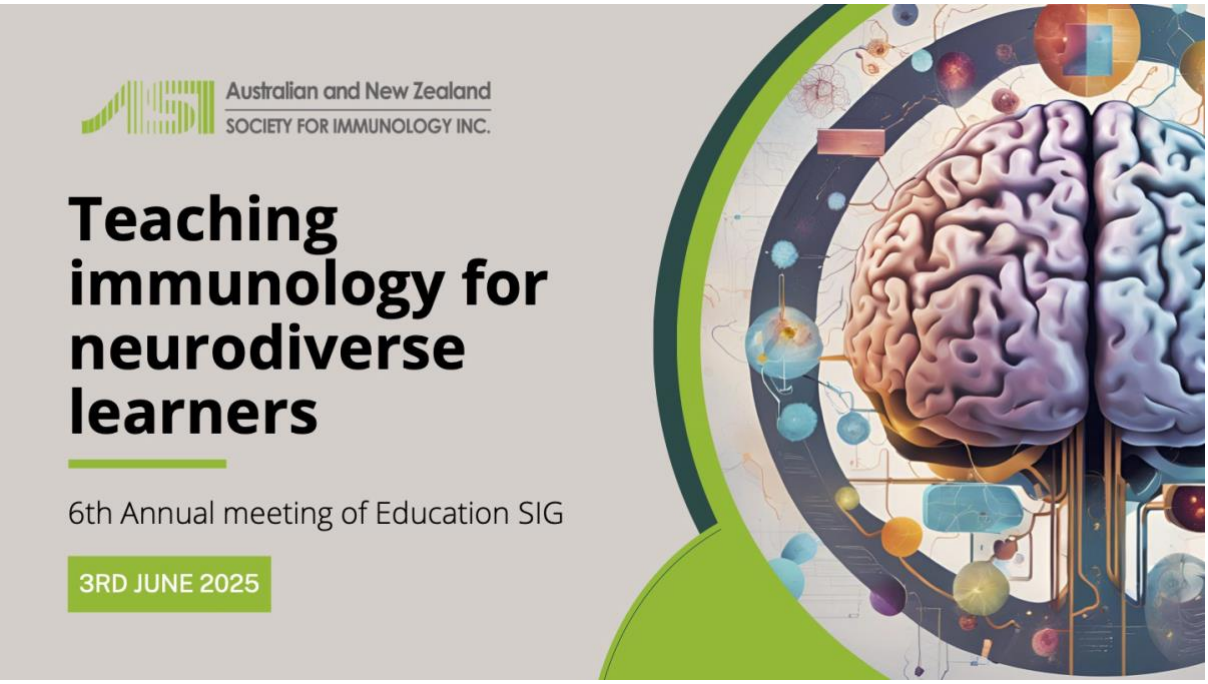
2025 ASI Education SIG conference Program



DATE: 3 June 2025

TIME: 11:00am - 1:00pm AEST

VENUE: This is a 100% virtual event (Zoom link to be provided)

Acknowledgment to Country

The ASI Education Special Interest group acknowledge the Traditional Custodians of the lands on which we live, learn, and work, including the Aboriginal and Torres Strait Islander peoples of Australia, and the Māori as tangata whenua of Aotearoa New Zealand.

We pay our deepest respects to Elders past and present, and recognise the enduring connection of Aboriginal, Torres Strait Islander, and Māori peoples to land, waters, skies, and knowledge systems. Their contributions to science, education, and cultural understanding continue to enrich our shared journey.

As we engage in teaching and scientific inquiry, we invite all to reflect on our shared responsibility to honour and respect this land, its stories, and the wisdom of its First Peoples. May we walk together in a spirit of learning, respect, and reconciliation.

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Session 1: Invited Speakers (11 to 11:50 am)

Chair: Odilia Wijburg

Keynote speaker: Associate Professor Sofia Mavropoulou

Queensland University of Technology, Brisbane, Queensland

Title: Beyond barriers: Universal strategies to enhance engagement and success for neurodivergent learners in tertiary education

Presenter bio: Sofia Mavropoulou is an Associate Professor in Inclusive Education in the School of Education at the Faculty of Creative Industries, Education, and Social Justice, QUT. As the Study Area Coordinator for Inclusive Education in the Master of Education program and Vice Chair of the Faculty Equity Committee, Sofia collaborates with colleagues to strengthen inclusive teaching practices. Leveraging her extensive experience as a coordinator and educator in undergraduate and postgraduate courses as well as her role as co-Leader of the Inclusion and Exclusion Research Program at QUT's Center for Inclusive Education, Sofia endeavors to employ evidence-informed practices to develop and sustain inclusive learning environments for all students, especially those with disability.

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Session 2: 'Snapshot of teaching practice' session (12 to 1 pm AEST)

Three oral presentations, 15 mins each, from ASI ED SIG members, followed by panel Q&A session with speakers.

Chairs: Maria Demaria and Daniel Clarke

Presentation 1: Associate Professor Maurizio Costabile

Title: Simulating Innate immunity: Enhancing Undergraduate Learning through a Virtual Neutrophil Chemotaxis Assay

Maurizio Costabile[a],* and Gareth Denyer[b]

[a]University of South Australia, Clinical and Health Sciences, Adelaide, South Australia, Australia, 5000.

[b]University of Sydney, School of Life and Environmental Sciences, Sydney, New South Wales, 2006.

Abstract: Neutrophils are key innate immunity cells. Following injury, neutrophils follow a chemotactic gradient to phagocytose pathogens. Several well controlled events are required, and defects at any stage present as an immune deficiency. At UniSA, immunology is taught to Laboratory Medicine students. This cohort must understand how neutrophil activity is assessed in a diagnostic laboratory. We cannot demonstrate neutrophil chemotaxis due to a lack of equipment, time and patient cells with a chemotactic defect. To overcome these issues, we developed a computer simulation which authentically replicated the testing process using multiple chemoattractants and virtual patients with varying levels of deficiency. The simulation provided students with an opportunity to measure both random and directed migration and a reference range to determine the immune status of the patients. We used a mixed methods approach to collect student feedback using a Likert style questionnaire, and free text responses, as well as assessment scores for a laboratory report. Student feedback was overwhelmingly positive, and this approach was found to increase their level of understanding. All students successfully completed the written report achieving high grades. We suggest that authentic computer simulations can effectively teach laboratory concepts in instances where a hands-on demonstration is not possible.

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Presentation 2: Associate Professor Helen McGuire

Title: From Implementation to Impact: Leveraging Student-AI Interactions to Enhance Learning and Teaching

Helen McGuire 1, Angela Sun 2

1 Faculty of Medicine and Health, The University of Sydney

2 Faculty of Science, The University of Sydney

Abstract:

Our approach leverages AI-enabled formative assessment in Medical Microbiology & Immunology teaching, analysing over 30,000 student interactions across a large cohort. Through systematic evaluation of student responses and AI-generated feedback, the framework identifies specific knowledge gaps, terminology misuse and answer composition patterns. This evidence-based approach enables targeted curriculum refinement and personalised learning support, offering a scalable model for AI integration in higher education assessment practices.

Presentation 3: Associate Professor Danica Hickey

Title: Inclusive learning environments for large cohort practical learning in Biomedical Sciences

Danica Hickey

Queensland University of Technology, School of Biomedical Sciences

Abstract:

The introduction of Biomedical Science teaching 'Superlab' to simultaneously teach 120-150 students is a tangible way to maximise student lab time while managing academic workload. These environments provide many benefits, including an engaging and fun atmosphere for learning and building student peer networks. However, this busy, high-energy setting can be challenging for neurodivergent or anxious learners, leading to increased absenteeism and attrition.

Based on direct student feedback, we developed and delivered a modified environment (ME) practical lab initiative as an alternative learning environment. This initiative is based on a 4 R framework: **Reduce numbers, Reduce light, Reduce noise, and Redirect distraction**. The ME lab option was voluntarily attended by 7-10% of the unit cohort, including both equity and non-equity plan students. Attendance in ME was maintained, unlike the attrition seen in non-ME classes. Overall, student feedback was supportive of the initiative, and a key positive outcome was that it differed from all other classes or previous years.

Offering an ME environment option in 'Superlab' practical teaching environments supports diverse learners.

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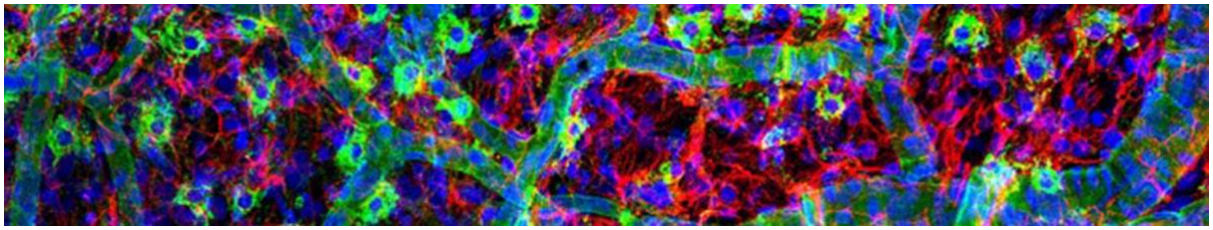

ASI CHEERS-BUCHAN EDUCATION AWARD

We are committed to advancing Immunology education and teaching

Application round:
30th June to 28th July 2025

Purpose

First awarded in 2020, this award has been created in alignment with our society's mission to 'advance the science and education of Immunology'.
The ASI Education Award aims to recognise members who have made significant contributions to the advancement of Immunology education.
The awardee promotes good immunology literacy by demonstrating their outstanding efforts in the education and teaching of students undertaking undergraduate and/or postgraduate coursework.

Eligibility

- All ASI members are eligible to apply.
- Applicants must have been full (not interim) Ordinary or Student members of ASI in the year preceding the application
- Applicants must have paid their membership subscription before April 1st of the year of application

Application procedure

1. Click here to download the application form.
2. Include a CV (max 2 pages) in the format outlined in the application form.
3. Save your file as "LASTNAME YYYY_Education" as a single pdf file.
4. Log in to your member profile and click on 'Applications' to upload your file.

Assessment Criteria

Degree to which funds and recognition by ASI will make a major difference to career advancement. Preference will apply to outstanding individuals not already recognised by awards of this stature, taking into account the prior achievements relative to opportunity (CV), and evidence of their commitment to teaching. The selection of the awardee will be made by the ASI Executive committee (or their delegates). The committee reserves the right not to make an award.

Value

AUD 1000 to be used toward advancing your career in immunology-related education.

An award ceremony with a formal presentation of the award would normally be part of the closing ceremony at the ASI Annual Scientific Meeting. Winners will be invited to present at the education SIG session in the annual general meeting.