# ASBTE NEWSLETTER

## Jul 2024

## The Australasian Society for Biomaterials and Tissue Engineering

INSIDE THIS ISSUE:



From the President,

Dear ASBTE Community,

I am deeply grateful for the opportunity to serve as your ASBTE President. Giving back to a community that has given me so much is an honour.

I would like to extend my heartfelt thanks to the previous executive committee for their exceptional service, particularly to our past President (and current Vice President), **A/Prof Khoon Lim**, whose tireless efforts have significantly shaped and grown our Society. I also want to acknowledge **Prof Kris Kilian**, who is stepping off the committee but has made invaluable contributions over the past year, particularly through his insightful leadership of the awards portfolio.

Congratulations to the newly elected executive committee. A special welcome to **Prof Ferry Melchels**, who is rejoining the ASBTE community after over a decade away from Australia. I also want to thank and congratulate our IUSBSE and Asian Biomaterials Federation delegates, STA Liaison Officer, State, ECR, and student representatives. Please refer to the newsletter below for information on all your ASBTE representatives.

Reflecting on the **World Biomaterials Congress** held in Daegu, South Korea, it was truly inspiring to witness the significant impact our community is making on the global stage. From delivering outstanding scientific presentations and symposia to fostering local and international collaborations, the spirit of our community was truly on display. And it couldn't have been more evident than when some fifty Aussies & Kiwis (and international friends) descended on a Korean pub 😊

Looking ahead to 2024/2025, we will continue to support our members through various initiatives. These include the **annual ASBTE conference to be held in Brisbane from 22-24 April 2025** (save the date & keep an eye out for member updates), continued support for our student & ECR members through multiple awards and mentoring initiatives, and our engagement with other biomaterials societies from around the world. We are especially proud of the efforts of our student/ECR representatives, led by Executive Committee member **Dr Mark Allenby**, to enrich the ASBTE community and provide feedback on ASBTE's strategic direction.

***Jelena Rnjak-Kovacina, President***

Mark Allenby

**Jelena Rnjak-Kovacina**
(President)

**Khoon Lim**
(Vice-President)

**Yu Suk Choi**

**Ferry Melchels**

**Anna Waterhouse**
(Treasurer)

**Veronica Glattauer**
(Executive Officer)

**Jessica Frith**

| International Union of Societies for Biomaterials Science and Engineering (IUSBSE) Delegates | Asian Biomaterials Federation (ABF) Delegates | Science and Technologies Australia (STA) Liaison Officer |
|---|---|---|
| Penny Martens | Sally McArthur | Kelly Tsang |
| Tim Woodfield | Justin Cooper-White | |

**State Representatives**

- Elena M. De-Juan-Pardo (WA)

**ECR Representatives**

- Kate Firipis (VIC)
- Shouyuan Jiang (NSW)
- Max Yavitt (NZ)
- Michael Vernon (WA)

**Student Representatives**

- Danielle Vahala (WA)

# ASBTE delegates and state/ECR/student reps

## IUSBSE delegates

Penny Martens

Tim Woodfield

## ABF delegates

Sally McArthur

Justin Cooper-White

## State reps

Elena M.
De-Juan-Pardo

## STA liaison

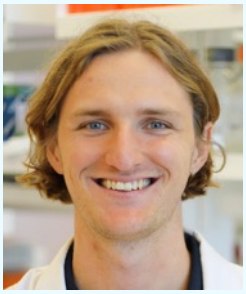
Kelly Tsang

## ECR reps

Kate Firipis

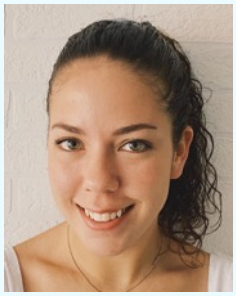
Shouyuan Jiang

Max Yavitt



Michael Vernon

## Student reps



Danielle Vahala

# Meet the new exec member

**Ferry Melchels, UniSA**

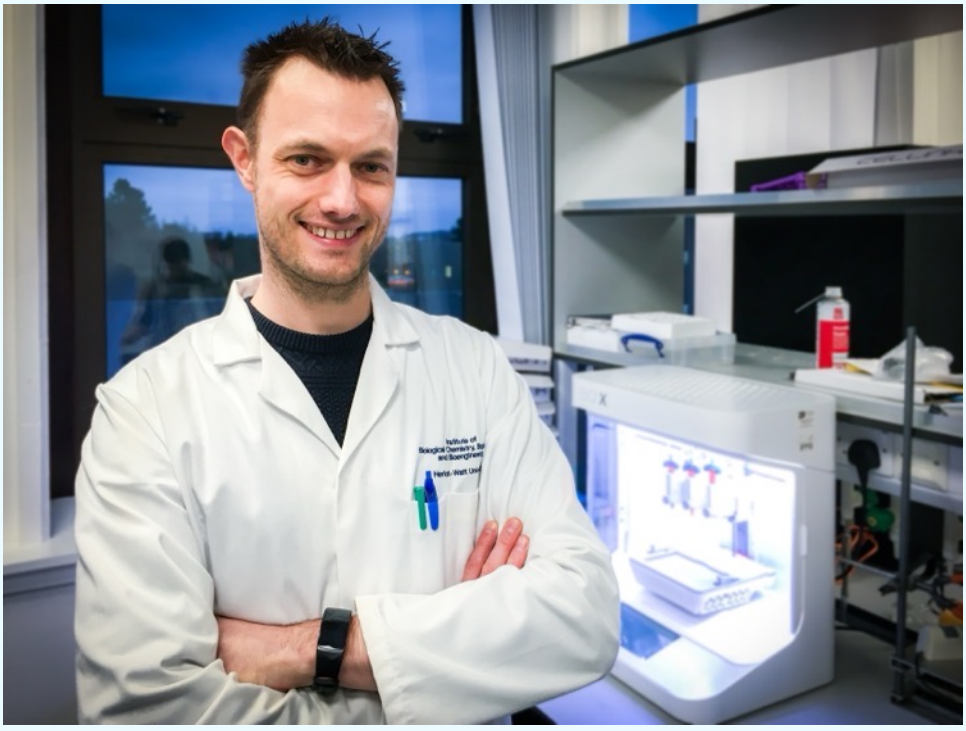
Some will recognise Ferry from his time as an ASBTE member from 2010 – 2013, when he was a postdoc at QUT. After a decade of absence, he returned to Australia last year to take up the position of research professor in the Future Industries Institute at the University of South Australia.

Ferry holds an MSc (2005) in chemical engineering and PhD (2010) in biomaterials from the University of Twente (The Netherlands). He was a Marie Curie post-doctoral fellow between two of the pioneering institutes in biofabrication; Queensland University of Technology and University Medical Center Utrecht (The Netherlands). He held his first PI position at Heriot-Watt University in Edinburgh (UK) from 2015-2023.

Ferry's main interests lie in the development of polymeric biomaterials for 3D printing, tissue engineering, and the delivery of drugs and vaccines. He is a recipient of the Patrick Neill Medal for Early Career Researchers in the Life Sciences from the Royal Society of Edinburgh, and the Mid-Career Investigator Award from the International Society for Biofabrication.

Besides home brewing the best beers on the weekend, his future aim is to continue advancing materials-based technology platforms for biomedical applications.

**https://people.unisa.edu.au/Ferry.Melchels**



# New FBSE member induction at WBC

ASBTE is very excited to introduce 4 new ”Fellow, Biomaterials Science and Engineering”


Andrea O’Connor’s research is in the area of biomaterials and tissue engineering, with a particular focus on the development of porous and antimicrobial materials. She has demonstrated outstanding research impact in clinical translation of medical implants and ongoing mentorship to support careers in STEMM.


Sally McArthur is a research leader in the field of biointerface engineering whose research uses engineering principles to improve human wellbeing. She has enormous impact as a mentor and role model for young scientists and contributed to improved health and economic benefits for society.


Helmut Thissen stands out due to his fundamental contributions to the field of biomaterials science and engineering, his strong industry focus and the associated multiple successful biomedical products, and his extensive service to the biomaterials community, for example as President of the ASBTE and mentor of many talented young scientists.


Steven Wise is an internationally recognised leader in cardiovascular biomaterials. He has developed innovative therapies in cardiovascular medicine, including small-diameter vascular grafts, blood vessel models, and nanotherapies. Steve is a dedicated mentor, collaborator, and member of the biomaterials community.

# ASBTE AGM at WBC

AGM 2024 Roundup

The Society's 34th Annual General Meeting was held during the World Biomaterials Congress in Daegu Korea, with attendance of around 40 society members.

The meeting opened with confirmation of the previous AGM minutes, with no additional comments.

An awards ceremony then followed with acknowledgement of awards for the conference travel (8 awardees) and lab travel (4 awardees). It was great pleasure to announce the ASBTE 2024 award winners, with **Emerging Leadership Award presented to Mark Allenby** and **Research Excellence Award to Helmut Thissen**. Congratulations to all the recipients!

Annual reports of the committee were presented and confirmed (President: Khoon Lim, Vice President: Jelena Rnjak-Kovacina, Executive Officer: Veronica Glattauer, Newsletter: Yu Suk Choi, Website and social media: Jess Frith, Awards: Kris Kilian, ECR initiatives: Mark Allenby) including STA report from our society delegate, Kelly Tsang.

Financial statement was presented by Treasurer Anna Waterhouse. Membership subscriptions were confirmed to continue at current rates.

Election of new committee members followed, with nominations received for open positions. A voting ballot was held for Ordinary members as 5 nominations were received for only 4 available positions.

New elected members,

**President: Jelena Rnjak-Kovacina**

**Vice President: Khoon Lim**

**Executive officer: Veronica Glattauer**

**Treasurer/Secretary: Anna Waterhouse**

**Ordinary members: Ferry Melchels, Jess Frith, Mark Allenby, and Yu Suk Choi.**

We congratulate the new committee and a huge shoutout to leaving member **Kris Kilian** for excellent service to the Society, and to outgoing President **Khoon Lim** for his excellent leadership.

**Kelly Tsang** continues as STA presentative and ACT representative. **Penny Martens** and **Tim Woodfield** will stay with roles as IUSBSE delegates. **Sally McArthur** and **Justin Cooper-White** will continue as delegates on the Asian Biomaterials Federation.

Final item for discussion was the planning for ASBTE 2025 conference, which will be held in Brisbane 22 – 24 April 2025. A professional conference organiser has been appointed along with a local organising committee.

Veronica Glattauer

# ASBTE at WBC


ASBTE 2024 Travel Award
Conference travel
Christopher Chong
Tiffany Goh
Melanie Stamp
Shirin Nour
Stephanie Belen
Shaveen Sasank
Eovahmi Vehadi
Yong Hwee (Joe) Tan
Lab travel
Asrar Elahi
Chloe de Nys
Kaliyanashis Paul
Christopher Chong
12th World Biomaterials Congress
WBC2024
12th World Biomaterials Congress

# ASBTE Award 2024

## ASBTE Award of Research Excellence 2024

### Helmut Thissen


Helmut has provided service to the ASBTE (reflected by his roles as Executive Officer, Vice-President, President and IUSBSE Representative) as well as an exemplary commitment as a supervisor and mentor for many early career scientists (more than 40 Honours & Masters students, more than 20 PhD students and more than 15 postdoctoral fellows).

Throughout his career in the interdisciplinary field of biomaterials science, which spans 2 continents and more than 25 years, Dr Thissen has made key contributions to the understanding of processes at the interface between biomolecules, cells and tissues on the one hand and material surfaces on the other. Specifically, his research has been focused on technologies for the control of biointerfacial interactions in the context of biomedical devices, ranging from biosensors to implantable medical devices. Several of the scientific advances that he has contributed to, such as the concept of high density polymer grafting to reduce biofouling (e.g. Biomaterials 23 (2002) 2043, >650 citations) or multifunctional antimicrobial device coating technologies (e.g. Trends in Biotechnology 32 (2014) 82, >330 citations), are now textbook knowledge and have found a broad range of industrial applications.

While his strong academic track record is reflected by approx. 200 journal publications and book chapters, more than 7,400 citations and a h-index of 45 (Google Scholar), his main focus throughout his career has been on the translation of biomedical device technologies. Examples for the successful translation range from ophthalmic device technologies to biosensors and from antimicrobial coatings to pathology devices. This strong translational focus is also reflected by more than 10 patent families (comprising more than 70 patents), his authorship on approx. 200 confidential industry reports, as well as his contributions to establishing and directing CSIRO's key infrastructure in this field, the Biomedical Materials Translational Facility (BMTF), which operates an ISO 7 cleanroom and a PC2 facility under a quality management system (ISO 9001 & ISO 17025) to serve the MedTech industry. His translational focus is also reflected by multiple awards, including the CSIRO Medal for Research Achievement and the Newton Turner Award for Exceptional Senior Scientists.

His broad contributions to the field are further reflected by the volume of funding that he has attracted (more than $25,000,000), his contributions as a CSIRO Research Team Leader, his contributions as Program Leader of the Cooperative Research Centre (CRC) for Polymers, his contributions as a Standards Australia "Surgical implants" committee member, and his contributions as an Adjunct Professor at Monash University and National Taiwan University.

Importantly, Dr Thissen is also highly respected internationally. This is reflected by more than 100 invited and keynote lectures at international conferences and symposia, by his extensive international collaborations with other scientists (particularly in Asia and Europe), by hosting more than 15 high profile international sabbatical visitors and by his role in organising and chairing more than 25 national and international conferences and symposia. His international standing in the field is also reflected by his recent election as a Fellow of Biomaterials Science and Engineering (FBSE).

# ASBTE Award 2024

**ASBTE Emerging Leadership Award 2023**

**Mark Allenby**

Mark first joined ASBTE in 2018, when he first attended the Sydney strategy day. He was elected to the ASBTE executive in 2022- 2023 and re-elected in 2023-2024, in charge of membership and EMCR portfolios. He organises hugely successful regional research symposia each year in addition to his other executive responsibilities. The eight annual symposia (2 years, 4 regions) that Mark has organised have engaged 400 participants (50/showcase) and nearly 100 EMCR presentations (12/showcase). Mark works on these events in close collaboration with the ASBTE representative committee, they are extremely popular non-conference events showcasing the ASBTE's national standing.

Further, Mark has organised 3 biannual mentorship rounds which have engaged >100 mentors and mentees across nearly 200 pairings ranging from professors mentoring senior lecturers on topics such as promotion packages to senior PhDs mentoring MPhil students on career paths. Prior to his executive roles, Mark has been a QLD representative for ASBTE (2020-22), an invited speaker, and symposia chair for ASBTE events, including prior ASBTE regional showcases and the ASBTE Pandemic Primetime Series.

Mark is an excellent researcher focussing on cell culture, imaging and simulation platforms to understand the effect of biochemical and mechanical factors on tissue behaviour. At 6 yrs post-PhD, Mark has 44 publications and 910 citations. Of his last 10 publications, 6 are corresponding authorships and 7 are in top-10% journals (Clarivate). Mark has authored two book chapters, and was an invited speaker at Georgia Tech, Ohio State, TERMIS-WC, and others. Mark is considered a rising authority in tissue engineering holding a DECRA in cell therapy biomanufacturing and an Advance Queensland Fellowship in medical device biofabrication. His translational contributions raised $2.8m total funding including $520k industry cash. End-user funding includes $200k for blood bioreactors with Ramaciotti Foundation and Red Cross, $270k for vascular surgery biofabrication with Metro North Hospitals and 3D industries.

Mark is already a research leader whose intelligent, team-playing and supportive approach will set him up to become a global leader in his space; and one whom is liked and respected by all around him. Mark leads his independent research laboratory of 2 postdocs, 4 PhDs, and honours researchers and has mentored his HDRs to win start-up awards (Bionics Queensland; 2020, see channel 10 TV and the Brisbane Times, the Women in Technology Rising Star Award (2021), faculty ECR grants ($25k; 2023), and safety awards (2022-2023). Mark has 3 and 4 HDR completions as principal and associate supervisor, now in academia and industry (QUT, Rice University, Convergence Medical). Mark has a substantial academic leadership position at UQ as Convenor of Biomedical Engineering, he led UQ through our first Engineers Australia industry accreditation and curriculum redesign. In 2023, Mark received the TERMIS-AP's Young Investigator Award and was shortlisted RegMedNet's Rising Star.

# ASBTE conference attendance award for WBC 2024

**Tiffany Goh**

Thank you ASBTE for this award and the generous support to attend the World Biomaterials Congress 2024 in South Korea! I leave WBC feeling inspired and motivated by the exciting innovations in the biomaterials community. As a final-year PhD student, the opportunity to present the culmination of my PhD research to the preeminent conference in our field was a particularly significant milestone which I am sincerely grateful for. The international networking opportunities provided valuable connections and insightful advice that have undoubtedly benefitted my future career goals.



**Christopher Chong**

My sincere gratitude to the ASBTE for their generous travel grant to aid my attendance at WBC 2024 in Daegu, South Korea, and to present my PhD work in a short talk "Self-assembled peptide nanomaterials for cartilage tissue engineering“. This was my first oral short talk of my PhD research at any conference, and to showcase this work on the WBC platform was a tremendous honour.

The conference was filled with exciting opportunities to learn, meet and network with biomaterials researchers from around the world, and hear from experts such as Hala Zreiqat, Jason Burdick, Nicholas Peppas and Tim Woodfield who have catalysed my own tissue engineering interests. The conference has spurred me to more deeply consider the complex interactions of stem cells within fibrillar scaffolds, and how this cells-materials interplay can influence stem cell phenotypes and best modulate regenerative tissue goals.

**Melanie Stamp**

Receiving the ASBTE conference travel award allowed me to present my research to an audience of experts and engage with an amazing community through informal discussion while broadening my horizon and learning more about the current technologies in biomedical engineering. I had the chance to network and build new connections that will lead to international collaboration and visit the cultural side of South Korea. For these reasons, I thank the ASBTE for this great opportunity.

# ASBTE conference attendance award for WBC 2024

**Ebrahim Vahabli**


Attending WBC2024, one of the leading and most prestigious conferences in the biomaterials field, has been one of the greatest and most memorable opportunities of my PhD journey.

This invaluable experience was enriched by the presence of esteemed scholars and insightful, groundbreaking talks from the best experts in my specific field of work.

The ASBTE award provided crucial and generous financial support, greatly facilitating my attendance and covering the various travel expenses, making it possible for me to fully engage in this extraordinary event.

This attendance has significantly contributed to my professional growth and development in biomaterials research.


**Shaveen Sasanka Bogahapitiya Gamage**

I presented my PhD research work at the 12th World Biomaterials Congress in Daegu, South Korea. The ASBTE conference travel award made my trip to the conference financially possible. It was an exciting opportunity to showcase my work on selenium nanoparticles against antimicrobial resistance to a wider audience. Thanks to this award I also got to see many incredible biomaterials-based research projects presented at the conference.

**Stephanie Belen Michelena Tupiza**

Winning the conference travel award was a pivotal moment for me. As someone from a third-world country with limited research resources, attending a global conference was a dream come true. Not only did I get to present my project, but I also had the chance to immerse myself in the vibrant scientific community. Witnessing firsthand what other researchers were working on and where the field was heading was incredibly inspiring. The experience was transformative, both academically and culturally. I not only learned about cutting-edge research but also had the opportunity to explore Korean culture and cuisine.

# ASBTE conference attendance award for WBC 2024

**Yong Hwee (Joe) Tan**

The World Biomaterials Congress runs every four years and I am privileged to have the opportunity to present my work to the amazing scientists in our field and create valuable connections for potential scientific collaborations. Receiving this conference travel award not only defrays the cost of travel, but more importantly, provides valuable redirection of funds for progression of my research. This award validates sufficient progress in my candidature, and an important milestone of presenting in a conference of this magnitude.

**Shirin Nour**

Receiving the ASBTE conference travel award to present my research at the prestigious World Biomaterial Congress (WBC) was a meaningful recognition of my work and I am grateful for that. This opportunity provided me with a global platform to share my PhD research findings with leading experts in the Biomaterials field. Engaging with international peers and mentors at the congress inspired new ideas, built valuable connections, and enhanced my understanding of cutting-edge developments in Tissue Engineering and Regenerative Medicine. This experience was undoubtedly an exciting step in my academic journey and am looking forward to employing this new hindsight in my future endeavours.


## ASBTE membership and website

### ASBTE on Twitter

**The ASBTE handle @ASBTE1provides the latest news and discussions for society members.** If you are on Twitter, use @ASBTE1 to publicise your publications, awards, and grant successes that you want to share with the society members. Please follow us on Twitter: https://x.com/ASBTE1

### ASBTE on LinkedIn

**The ASBTE group on LinkedIn provides the latest news and discussions for society members.** If you are a LinkedIn member, search for "ASBTE - The Australasian Society for Biomaterials and Tissue Engineering" in groups and request to join the group. Or type in the following web address: www.linkedin.com/groups?home=&gid=6512061

## ASBTE membership and website

www.asbte.org

You can now sign up for **1, 2, or 3 year ASBTE Standard Membership** at https://www.asbte.org/shop

Any member wishing to supply news items, links, PhD scholarships, job listings, or other relevant information to the ***website*** should contact Jess Frith, jessica.frith@monash.edu

## ATA Scientific

## Biomaterials Bites

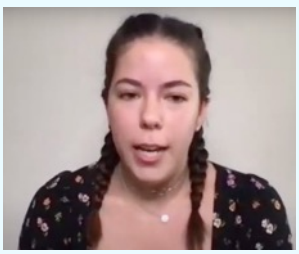
**Biomaterials Bites- find out more about ASBTE members**

This year we have interviewed more of our members for the Biomaterials Bites series. These are short interviews, designed for you to enjoy over a coffee break and find out more about the variety of research conducted by ASBTE members, as well as surprising insights into the personalities behind it.

Recent interviews include:

- Danielle Vahala – a PhD student at UWA
- Christoph Meinert- founder and CEO of Gelomics
- Rae Moses – a Research Associate at Melbourne University who is developing 3D wound models with innovative methods based on the 3Rs (reduction, replacement and refinement)
- Andrea O'Connor - who was awarded the ASBTE Award of Research Excellence in 2022

These can all be found on our Youtube channel, or via the ASBTE website https://www.asbte.org/biomaterial-bites. If you would like to be our next interviewee, please contact jess Frith (Jessica.frith@monash.edu).





Jess Frith

## ASBTE 2025 meeting


We are excited to announce that Brisbane will host the highly anticipated ASBTE 2025 conference. The ASBTE 2025 promises to be a pivotal gathering, showcasing the latest advancements and fostering collaboration. Stay tuned for further details as preparations for this event unfold 😊!

Organising committee of ASBTE 2025 meeting

# Upcoming conferences

| Conference | Dates | Location | Link |
|---|---|---|---|
| ASBTE | 22-24 Apr 2025 | Brisbane, Australia | Save the date! |
| BMES BIOMEDICAL ENGINEERING SOCIETY | 23-26 Oct 2024 | Baltimore, USA | https://www.bmes.org/future-annual-meetings |
|   | 28-31 Oct 2024 | Fremantle, Australia | https://awtrsmbsanz2024.smallta lkevents.com.au/ |
|   | 10-13 Nov 2024 | Fukuoka, Japan | https://www.biofabrication2024.org/sponsorship_exhibition.html |
| ascb an international forum for cell biology™ | 14-18 Dec 2024 | San Diego, USA | https://www.ascb.org/meetings-events/future-ascb-meetings/ |
|   | 7-11 Sep 2025 | Torino, Italy | https://esb2025.org/ |
| 2025 TERMIS-AP CONFERENCE October 16-19, 2025 · Wuhan, China | 16-19 Oct 2025 | TERMIS-AP | https://ap2025.termis.org/ |

*ASBTE NEWS* is a biannual newsletter that covers news from The Australasian Society for Biomaterials & Tissue Engineering. If you have a news item that you wish to be included please contact the editor Yu Suk Choi (yusuk.choi@uwa.edu.au) or Executive Officer Veronica Glattauer (veronica.glattauer@csiro.au).

2024 Jul issue edited by Yu Suk Choi