THE AUSTRALASIAN SOCIETY FOR BIOMATERIALS & TISSUE ENGINEERING

ASBTE *NEWS*

July 2022

INSIDE THIS ISSUE:

From the president,

Dear ASBTE friends and colleagues,

I can't believe that we're already in July and half of 2022 is already gone. It has been great that the world has finally opened up again and we are able to travel again to meet friends and family.

I am so pleased that I was able to attend our **Annual Conference** in Melbourne in April. For the first time in 4 years, we finally had our in-person ASBTE conference, with a full 3 days of amazing science and networking. Huge thanks to the conference local organising committee chaired by **Prof Andrea O'Connor** and **Prof Neil Cameron** for a fantastic conference organisation. Huge congratulations to all our conference presenters, especially our early career researchers. It was really awesome to see all the great research that you guys have been working on for the past 2 years!

I want to thank the members who attended the **2022 ASBTE Annual General Meeting**, where the general election decided the 2022/2023 ASBTE executive committee members and various regional support positions. I want to congratulate **Dr Mark Allenby** for being elected onto the committee as an Ordinary Member, and **Prof Penny Martens** for taking over the IUSBSE delegate role. A list of the executive team and their roles can also be found in this newsletter.

2022/2023 Goals and Focus areas

The ASBTE executive is committed to continue support our members with a range of initiatives. This year, we have the biggest cohort of our student and ECR representatives as part of the team, which will come up with a number of exciting developments for our members. Some ongoing focus areas:

- Holding a **2023 ASBTE Conference** in Christchurch, New Zealand – 12-14 April 2023 (Save the date!).
- Re-launching our **Lab-travel Grant scheme** for funding international or national lab visits
- Continuing to strengthen **student/ECR engagement** in our local state/region bases by organising events.
- Continuing our **mentoring and outreach** activities.
- Exploring ways to engage with other **Biomaterials Societies**.

More information about these are coming soon to your email boxes and online.

Finally, I want to thank ASBTE members for continuously supporting the society. Your membership is important to help the society grow and thrive. Please remember to renew your memberships at the end of the year, and encourage your colleagues in Biomaterials and Tissue Engineering to join. If you have any ideas or feedback for the society, please do not hesitate to get in touch with members of the Exec Committee or your state representatives.

It is a great honour to be elected as President and I look forward to explore and create new opportunities for our members. I wish you all well, and looking forward to an amazing year ahead for us all.

Khoon Lim, President

ASBTE Committee Members

Khoon Lim
(President)

Bryan Coad
(Vice-President)

Veronica Glattauer
(Executive Officer)

Jelena Rnjak-Kovacina
(Treasurer)

Anna Waterhouse

Jessica Frith

Yu Suk Choi

Mark Allenby

(Ordinary members)

International Union of Societies for Biomaterials Science and Engineering (IUSBSE) Delegates
Penny Martens
Tim Woodfield

Science and Technologies Australia (STA) Liaison Officer
Kelly Tsang

State Representatives

- Elena M. De-Juan-Pardo (WA)
- Farhad Soheilmoghaddam (QLD)

ECR Representatives

- Alessia Longoni (NZ)
- Ziyu Wang (NSW)
- Gabriel Huynh (VIC)
- Ashley Murphy (QLD)
- Ilze Donderwinkel (QLD)
- Huan Ting Ong (WA)

Student Representatives

- Danielle Vahala (WA)
- Samuel Maher(WA)
- George McColgan (WA)
- Gretel Major (NZ)
- Asawari Parulekar (QLD)
- Aswathi Gopalakrishnan (QLD)
- Taryn Smith (QLD)

Student Representatives

- Jasneil Singh (NSW)
- Tiffany Goh (NSW)
- Johnny Wong (NSW)
- Stephanie Doyle (VIC)
- Thuy Phuong Thi Nguyen (VIC)
- Mohammad Ali Ahmadipour (VIC)

ASBTE 2022 Conference Recap

The 27th ASBTE Annual Conference was held at Melbourne Connect in Victoria from 20 to 22 April 2022. With more than 210 local and international delegates, including more than 100 students, there was a real buzz and excitement after a long break between ASBTE conferences. The organizing committee would like to thank the generous sponsors and exhibitors who supported the conference and helped to make it at successful and enjoyable as possible, including our gold sponsors, The University of Melbourne, Monash University, RMIT University and Cellink.

The conference kicked off with a very well attended early career research and development workshop, with thanks to Daniel Heath and Amy Gelmi for organising a great session. This was followed by inspiring plenary lectures, rapid fire talks from eight early career researchers, and a packed program of oral and poster presentations. Topics addressed included recent developments in research, clinical and commercial translation encompassing tissue engineering and scaffolds, drug delivery, bionanomaterials and biointerfaces, stem cells and cell therapy, mechanobiology, antimicrobial materials, and biofabrication. Plenary speaker, Megan Munsie also challenged the audience to think deeply about the ethical implications of stem cell and tissue engineering research and developments.
Congratulations to all the presenters on the excellent quality of the talks and poster presentations, especially to the very many students and early career researchers who had not previously attended an in person conference. The judges had a difficult task to select winners of presentation awards from over 70 oral presentations and 60 poster presentations by students and early career researchers. The award winners were:

- **Outstanding ECR Oral Presentation: Dr Richard Tan (University of Sydney)**
- **ECR Oral Presentation Runner Up: Dr Rachael Wood (University of Canterbury)**
- **Outstanding Student Oral Presentation: Gretel Major (University of Otago)**
- **Student Oral Presentation Runner Up: Samuel Cheeseman (RMIT University)**
- **Outstanding ECR Poster Presentation: Dr Ulises Aregueta (UNSW Sydney)**
- **Outstanding Student Poster Presentation: Nick Huettner (Queensland University of Technology)**
- **Student Poster Presentation Runner Up: Jessie Clare (Swinburne University of Technology)**
- **Student Poster Presentation Runner Up: Long Nguyen (University of Melbourne)**
- **Outstanding Rapid Fire Presentation: Like Hipwood (Queensland University of Technology)**
- **Rapid Fire Presentation Runner up: Clara Liu Chung Ming (University of Technology Sydney)**

ASBTE 2022 Annual Conference Organising Committee
Professor Andrea O'Connor, University of Melbourne
Professor Neil Cameron, Monash University
Dr Brooke Farrugia, University of Melbourne
Dr Amy Gelmi, RMIT University
Ms Veronica Glattauer, CSIRO
A/Professor Daniel Heath, University of Melbourne
A/Professor Khoon Lim, University of Otago
A/Professor Jelena Rnjak-Kovacina, University of New South Wales

Andrea O'Connor

ASBTE 2022 Conference Recap

Winners of ASBTE Conference Travel Awards

Prof. Thomas Scheibel joined online from Germany for his keynote lecture on engineering spider silk biomaterials (with session chair: Veronica Glattauer)

ECR Rapid Fire Presenters addressed audience questions on their work

ASBTE 2022 Conference Recap

A/Prof. Khoon Lim presented the ASBTE Emerging Investigator lecture

The conference dinner at the State Library

ASBTE 2022 AGM

AGM 2022 Roundup

The Society's 32nd Annual General Meeting was finally held face to face after 2 years of disruptions due to the worldwide pandemic. It was held during the ASBTE conference in Melbourne with enthusiastic attendance (around 50 people) by the membership. The meeting was chaired by Bryan Coad in his role as president of the Society.

The meeting opened with confirmation of the previous minutes, and committee reports (President, Bryan Coad; Executive Officer, Veronica Glattauer; Newsletter, Yu Suk Choi; Website and Social media, Jess Frith; Awards, Anna Waterhouse; ECR initiatives, Daniel Heath; STA report, Kelly Tsang).

Financial statement was presented by Treasurer Jelena Rnjak-Kovacina, with minor comments around the TERMIS-AP fee associated with TERMIS 2019 conference. Highlighting good profits received for the conference contributing to our healthy financial position. Membership subscriptions were confirmed to continue at current rates.
Election of new committee members followed, with single nominations received for open positions, all were unanimously elected. Congratulations to all!

New elected members,
President, Khoon Lim
Vice President, Bryan Coad
Executive officer, Veronica Glattauer
Treasurer/Secretary, Jelena Rnjak-Kovacina
Ordinary members, Anna Waterhouse, Jess Frith, Mark Allenby, and Yu Suk Choi.

Bryan Coad thanked outgoing member Daniel Heath and welcomed Mark Allenby to committee. New President, Khoon Lim thanked Bryan Coad for his outstanding contributions as President.
Kelly Tsang continues as STA presentative and ACT representative.

This year we welcomed Penny Martens, new to the role, along with Tim Woodfield to take the positions of IUSBSE delegates. Helmut Thissen has stepped down and was thanked for his commitment and involvement for the past years.

The ASBTE is proud to have representation from our students, ECRs and State reps. This year again many volunteers came forth. Gabriel Huynh, Stephanie Doyle, Thuy Phuong Thi Nguyen, Mohammad Ali Ahmadipour, Ziyu Wang, Jasneil Singh, Tiffany Goh, Johnny (Kuan Un) Wong, Farhad Soheilmoghaddam (state), Ashley Murphy, Ilze Donderwinkel, Aswathi Gopalakrishnan, Asawari Parulekar, Taryn Smith, Elena De Juan Pardo (state), Ting (Huan) Ong, Samuel Maher Dani (Danielle) Vahala, George McColgan, Alessia Longoni, Gretel Major

After 15 years a refresh of our Society's Logo was undertaken with a call for new designs. Many entries were received and considered by the executive committee with a final decision made with an entry from Angus Weekes. The Logo was presented at the AGM and proposed to the membership to adopt as the new logo. This was unanimously decided, and new logo now adopted. Congratulations Angus!

Brief discussions followed with planning for next year's Conference in New Zealand, with all looking forward to again share exciting science.
Finally, Khoon was congratulated as incoming President of the Society and huge thanks passed on to Bryan for his role as President in the past few years.

Meeting was closed and noted to have been one of our shortest!

Veronica Glattauer

ASBTE 2022 Conference Travel Awards

On behalf of ASBTE, CONGRATULAITONS to our Conference Travel Award Winners for 2022

Name	Institute
Hien Tran	UNSW
Habib Joukhdar	UNSW
Michael Maier	UMelb
Hazem Alkazemi	UMelb
Laura Vettori	UTS
Jasneil Singh	USyd
Jiankun Yang	UQ
Angus Weekes	QUT
Linyang Liu	USyd
Kuan Un Wong	USyd
Jun Hong	USyd

Name	Institute
Sattwikesh Paul	QUT
Dhyey Shah	UNSW
Raquel Sanchez Diaz	QUT
Naomi Paxton	QUT
Shouyuan Jiang	UNSW
Gretel Major	UOtago
Julien Clegg	QUT
Matthew Moore	USyd
Clara Liu Chung Ming	UTS
Jordan Davern	QUT
Lu Fu	UNSW

Name	Institute
Bob Lee	Victor Chang Cardiac Research Institute
Mohammed Al-Baadani	Wenzhou Medical University
David Hennes	The Ritchie Centre, Hudson Institute, VIC
Christopher Chong	La Trobe, VIC
Paul Kallyanashis	Hudson Institute, VIC
Eileen Wallace	UWollongong

Anna Waterhouse

Meet the new exec member

Mark Allenby, UQ

What is your area of research?

Our group is called the BioMimetic Systems Engineering Laboratory, and we combine *Tissue Engineering*, *Biomedical Image Analysis*, and *Computational Biology* to study and solve biological and medical problems by mimicking physiological systems. Some of our current applications include blood vessel engineering, stromal culture systems, and blood cell therapy manufacturing. Other recent industry-applied work includes bioreactor engineering and upstream bioprocess modelling to design, characterise, optimise, automate, or control advanced culture systems to manufacture cell and tissue therapies.

What technological skill sets do you have?

Our group tries to bridge both experimental and computational work. This has been advantageous for us because tissue engineering and biomaterials research often focusses on lab work, and we find that by bringing in our own computational models and programmed analyses we are able to derive new mechanistic understandings and predict optimal future conditions for our experiments, saving time and money. Individually, I have undergraduate degrees in mathematics and chemistry and postgraduate degrees in chemical engineering where I engineered new biomaterials reactor systems to generate cell and tissue therapies.

What career advice would you give your younger self?

I'm a pretty anxious person. I easily get stressed when I feel like there is a lot to do or if I have a temporary setback, and young Mark found it difficult to separate his personal life from these professional anxieties. Especially during my PhD would often take my work, and these stresses, home with me, and stay awake at night worrying about them. And I think this can be a problem for many PhDs, ECRs, and academics generally. I would advise my younger self to do your best work at work, but then ensure you isolate personal time every day that distances your mind from work. For me this includes social sports, catching up with friends, jogging, or recently, spending time with my growing family.

Meet the new Reps

ECR representatives

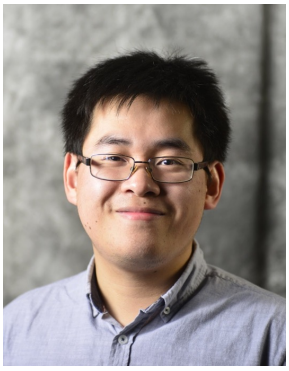
Ziyu Wang(NSW)

I am a postdoctoral researcher in the Weiss Lab at the Charles Perkins Centre, the University of Sydney. My research focuses on the use of biomimetic and biodegradable materials for the healing and regeneration of soft tissues. My current projects include developing an immunomodulatory band-aid for accelerating chronic wound healing and constructing shape-transforming cardiac patches for immediate cardiac function after implantation with improved cardiac tissue regeneration. These projects employ multidisciplinary approaches that encompass advanced engineering fabrication techniques, in vitro cell and in vivo animal models, and imaging mass cytometry combined with bioinformatics to evaluate tissue regeneration capabilities induced by the implants.

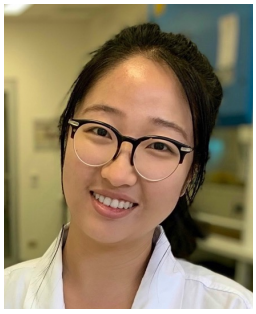
Ilze Donderwinkel (QLD)

I am currently a Postdoctoral Research Fellow at the University of Queensland after having recently completed my PhD at Monash University. My research focusses on the development of novel polymer-based bioinks using a high-throughput system that enables screening of a library of polymer-based bioinks for their physicochemical and mechanical properties. My research interests lie at the interface between biomaterial scaffolds and cellular interactions, with the aim to bring tissue engineering closer to the clinic.

Gabriel Huynh (VIC)



I am currently a Postdoctoral Research Fellow at the Commonwealth Scientific and Industrial Research Organisation (CSIRO) in the Biochemical Sensing Team. My current work focusses on developing new label-free optical biosensors which can be easily integrated into commercially available tissue culture plasticware for real-time, rapid detection and assessment for cell health and potential culture contamination. Before working at CSIRO, I completed my PhD at Monash University where I worked on developing fluorescence-based nanoparticle-based biosensors (nanosensors) to visualised spatial and temporal changes within 2D and 3D cell culture systems to aid in understanding and development of better informed scaffold designs.



Huan Ting Ong (WA)

Huan Ting Ong is a Postdoctoral Research Fellow at the Ear Science Institute Australia. She completed her PhD at the University of Western Australia in 2021, where she investigated stem cells and their potential roles in wound healing of the human eardrum, specifically studying the cell-cell and cell-material interactions during wound healing using RNAseq and proteomic analyses. She also explored various cultures of these stem cells such as on materials, 3D spheroid cultures, and under hypoxia, to regulate factors produced by stem of which could be used to promote eardrum repair in chronic perforations. Currently, her research focuses on the commercialisation development of silk-based biomaterials under the BioMedTech Horizon (BMTH) grant with Dr Filippo Valente, and the functionalisation of silk as a drug delivery platform for use in chronic middle ear diseases.

Meet the new Reps

ECR representatives

Alessia Longoni (NSW)

I studied Biotechnology in Italy. After the completion of her PhD at University Medical Center Utrecht in 2020, I joined the Light Activated Biomaterials group working at University of Otago, Christchurch. Since my Bachelor's degree, I focused on bone and cartilage tissue engineering. My expertise lies in stem cell biology, their use in combination with biomaterials to promote tissue regeneration, and the development of decellularization/devitalization protocols. In the past years, I also grew an interest in the translational aspects of tissue engineering. In particular, I investigated the suitability of using different in vivo models for preclinical studies. My current projects include the engineering of bioactive scaffolds for the treatment of large bone defects and the revascularization of the necrotic femoral head.

Student Representatives

Taryn Smith (QLD)

I am a second-year PhD candidate at the University of Queensland, supervised by Profs. Cooper-White and Wolvetang. The purpose of my PhD is to understand why patients who receive life-saving surgical decompression following a traumatic brain injury (TBI) often experience poor functional outcomes, and to develop a therapeutic to reduce these detrimental effects.

To achieve this goal, the primary aim of my thesis is to examine the effects of dynamic hydrostatic pressures on neural cells in the context of TBI. Using my background in chemical and biological engineering, I will investigate these pressure phenomena by culturing cells within microfluidic devices of my own design. Furthermore, I aim to evaluate the effectiveness of an anti-inflammatory hydrogel as a potential therapeutic for reducing neural damage caused by trauma. Ultimately, we hope that this research will lead to improved functional outcomes in the millions of patients around the world who experience TBIs and other forms of acquired brain injuries.

George McColgan (WA)

I am a first year PhD student at The University of Western Australia and the Harry Perkins Institute of Medical Research supervised by Yu Suk Choi, Elena de Juan Pardo, Rodney Dilley, and Shirley Jansen. I completed my honours in neuroscience at UWA in 2021. For my PhD study I will explore vascular tissue engineering. Specifically, how vascular differentiation of adipose stem cells can be driven by both biochemical and biomechanical cues. I will also examine how these cells can be utilised, along with hydrogel/polymer scaffold composites, to create tissue engineered vascular grafts for arterial bypass.

Stephanie Doyle (VIC)

I am a final year PhD student with a joint position between RMIT University, School of Engineering and St Vincent's Hospital Melbourne, ACMD. My research is focused on expanding the capabilities of the 3D fabrication of biomaterials. The goal of my PhD to apply this knowledge to create biological reinforcement scaffolds for bone-cartilage tissue engineering. I completed my honours degree in Biomedical Engineering at RMIT University in 2018 before starting my PhD.

Meet the new Reps

Student Representatives

Thuy Nguyen (VIC)

I am currently a third-year PhD student at Monash University. I completed a Master in Biomaterials at Gachon University, South Korea, in 2019. Over two years studying there, I studied using alginate hollow microfibers lining with endothelial cells (HUVECs) to create mimicking blood vessels. I commenced my PhD in 2020 at Monash University. Here, I work on a project using microfluidics to produce human bone mesenchymal stromal/stem cells (hBMSCs)-laden microgels to construct engineered tissues, specifically for cartilage regeneration.

Articular cartilage is the hyaline type of connective tissue of the joints that play a crucial role in body movement. However, the degenerated articular cartilage has limited capacity for self-repair, current treatments mostly relate to complicated surgeries, but still cannot provide a fully functional regenerated cartilage tissue. Therefore, I am keen on developing an optimized cell-laden microgel system that is capable to be injected locally into a target defect area and could be a promising strategy for cartilage regeneration.

Johnny Wong (NSW)

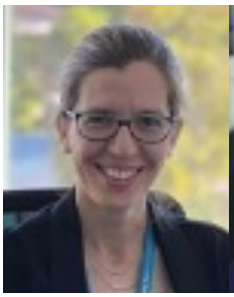
I am a third-year PhD student at the University of Sydney, working under the supervision of Dr Giselle Yeo and Prof. Marcela Bilek. I completed my Master of Science in Biochemical and Biomedical Sciences at The Chinese University of Hong Kong and my Bachelor's in Biology at The University of York, UK. My PhD project focuses on developing a synthetic 3D porous expansion platform for human mesenchymal stem cells utilising plasma technology. The main aim is to grow stem cells more efficiently and cost-effectively while maintaining the cell quality of downstream clinical and research applications. I hope this platform can help lower the technical boundaries for future stem cell therapies.

Mohammadali Ahmadipour (VIC)

I am a first-year MD candidate at Deakin University with a Background in Biomedical and Chemical engineering. I have Master of applied science in Tissue engineering from the institute of biomedical engineering at university of Toronto. My project was about finding alternative donor pool to meet the gap between supply and demand for lung transplantation. During my masters, I designed novel protocols and bioreactor systems to further enhanced the process of lung regeneration in ex vivo. By obtaining untranslatable donor lung scaffold, removing the cells from the airways and vasculature while subsequently repopulate the scaffolds with recipient derived cells, we hope to make transplantable allografts that do not require post op immunosuppressor drugs. After completion of my masters I repurposed my project to model respiratory diseases and lung cancer in ex vivo for screening therapeutics in ex vivo as a superior 3D assay prior animal trials and clinical phase

Meet the new Reps

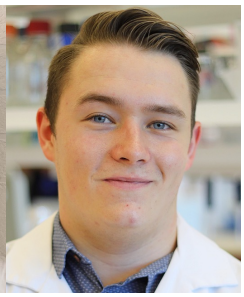
Continuing Reps

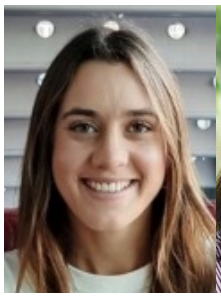

Elena M. De-Juan-Pardo


Farhad Soheilmoghaddam


Ashley Murphy


Danielle Vahala

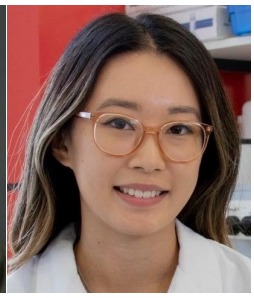

Samuel Maher


Gretel Major


Asawari Parulekar


Aswathi Gopalakrishnan


Jasneil Singh


Tiffany Goh

Website and social media

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

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://twitter.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 Award 2022

ASBTE Award of Research Excellence

Prof. Andrea O'Connor

The ASBTE Award of Research Excellence 2022 has been awarded to Prof. Andrea O'Connor. This award recognizes a member of ASBTE who has made a significant contribution to the discipline of biomaterials and tissue engineering.

Major contribution to the discipline of biomaterials and tissue engineering

Professor 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 for medical implants. Her knowledge impact in this area is demonstrated by her strong publication and citation record in the field. Andrea has published >100 peer-reviewed journal articles in top journals in the field, including Nature, Biomaterials, Biofabrication and Advanced Healthcare Materials. Her work has been cited over 4,500 times, with a h-index of 36 and i10 index 86. Andrea also published 5 book chapters, including a chapter on tissue engineering for the major reference work 'Plastic Surgery' edited by Neligan and Gurtner (2018). Andrea's work has been supported by >$20M in grants as a chief investigator, including funding from the ARC (>$11M, 5 Discovery Projects, 1 Linkage Project, 2 Industry Transformation Training Centres, 1 International Researcher Exchange Award and 5 LIEF grants), NHMRC, Cancer Council Victoria, the Victorian government, as well as industry funding.

Recognition by the International Scientific Community

Andrea has presented her work at >230 national and international conferences. Recent examples include plenary lectures at the Australian Biomedical Engineering Conference (2021) and the Biomimetics in Bioengineering Conference (2021), as well as a keynote lecture at the International Conference on BioNano Innovation (2020). She is a fellow of the Intuition of Chemical Engineers and was a Fulbright postdoctoral research fellow at the Massachusetts Institute of Technology (USA, 1995-96). She contributes to her field through a range of professional roles, including most recently as the Industry Interface Member of the Centre for Commercialisation of Regenerative Medicine Australia (2018-19) and a Steering Committee member of the Regenerative Medicine Industry Interface (2017). She was also a member of the ASBTE Executive Committee for three years (2005-08).

Contributions to Technology Innovations and Commercialisation

Andrea's work contributes significantly to technology innovations and commercialization of research. She has 3 provisional and 1 PCT patents and her patent has been cited more than twice of the average in Australia. She has key collaborations across a range of industries, including with Anatomics, Cooke Medical, CSL Bioplasma, GlaxoSmithKline Australia and Burra Foods Australia. Andrea led the engineering team on the world-first Neopec clinical trial of breast reconstruction using tissue engineering. She has accepted invitations to serve on key national bodies involved in research translation and commercialisation, including on the Centre for Commercialisation of Regenerative Medicine Australia Industry Interface Committee, Regenerative Medicine Industry Interface steering committee and Neopec Pty Ltd management committee. Similarly, she contributes in this area within the University of Melbourne, serving on the Aikenhead Centre for Medical Discovery Translational Research Advisory Committee and on the Graeme Clark Institute Advisory Committee. Andrea also uses her expertise to consult within the medical device field, including for Rhinomed, Anatomics, LBT Innovation and Shine Lawyers among others, demonstrating her impact across fields and industries.

ASBTE Award 2022

ASBTE Award of Research Excellence

Prof. Sally McArthur

The ASBTE Award of Research Excellence 2022 has been awarded to Prof. Sally McArthur. This award recognizes a member of ASBTE who has made a significant contribution to the discipline of biomaterials and tissue engineering.

Major contribution to the discipline of biomaterials and tissue engineering

Professor McArthur has contributed a substantial body of research across multiple disciplines with significant translational focus. Traditional research metrics exemplify the research excellence characterising her career, with around 120 publications and an H-index of 39. This is underpinned by exceptional performance in attracting close to $40 million in prestigious grants and completing over 20 PhD candidates. However, her major contributions are best illustrated by highlighting the translational nature of her research, in which she demonstrates excellence in fundamental understanding of the biointerface and applies this to improving medical device performance.

Professor MacArthur's research has contributed significantly to generating new knowledge on the role of surface chemistry in controlling biological interactions such as protein adsorption. Her research has contributed to improved biocompatibility and infection resistance of contact lenses and other ocular devices. She continues to provide understanding of the fundamental surface science underpinning bacterial adhesion and biofilm formation on devices. In addition to this, Professor McArthur continues to expand her impact in other areas of biomaterials and tissue engineering research through, for example, development of pro-angiogenic strategies that can be applied to enhance perfusion of 3D tissue constructs.

Recognition by the International Scientific Community

Professor McArthur is recognised as an international expert in surface modification and biointerfaces. She has worked as a tenured academic in lead institutions in the discipline in the United Kingdom and Australia and is Visiting Professor at leading institutions in China and Switzerland. Professor McArthur has been invited to speak at many international conferences over her career, and most recently was invited to present at the prestigious Gordon Conference in Biointerface Science. She is the Editor of Biointerphases, and since taking up this role in 2017, has worked to expand the cultural and gender representation in this key venue for the discipline. Alongside this, she has also been on the editorial board of Scientific Reports and a referee for Nature Materials, contributing to upholding quality of disciplinary outputs.

Contributions to Technology Innovations and Commercialisation

Professor McArthur is committed to translation of her research into practice, taking on a role between 2016 and 2021 as a CSIRO Research+ Science Leader in Manufacturing. This role brought her closer to intensive industry engaged research and aligned well with her values. She has also over the years established consultancies and strong collaborations with several MedTech companies, including Aquadiagnostic, MiniFab, BlueChiip and Optiscan. She is recognised as a leader in translational research through appointments such as Non-Executive Director of NIRTek, a MedTech start-up company spun out from Baker and Swinburne research that has developed IP around an intracoronary device to detect atherosclerotic plaques stability in situ using near infra-red light.

ASBTE Award 2022

ASBTE Award Emerging Leadership Award

Dr. Amy Gelmi

The ASBTE Award of Research Excellence 2022 has been awarded to Dr. Amy Gelmi. This award recognizes a member of ASBTE who has demonstrated outstanding contributions to the Society and potential in developing, maintaining and promoting the goals of the Society and the wider Biomaterials/Tissue Engineering communities.

Since her return to Australia as a Vice Chancellor's Research Fellow at RMIT, Dr Gelmi has been a dedicated and active member of ASTBE. Her service to the society has been in the form of organising professional development workshops for students and ECRs, showing her leadership and dedication to mentorship. For instance, she took it upon herself to organise a Melbourne-based half day workshop on CV and interview prep prior to the pandemic.

During the pandemic, she organized and helped to run the ASBTE Research Showcase and the ASBTE Virtual Catchup in 2022. At the Research Showcase, she provided help in organising and run the research presentations, and she was solely responsible for organising the morning professional development session on preparing job application materials. Additionally, she aided in organising the ASBTE Virtual Catchup in 2022, and she ran the discussion group about the benefits and challenges associated with overseas experience. She was on the organising committee for the ASBTE 2022 conference.

Beyond her significant contributions to ASBTE in terms of service, leadership, and mentorship, Amy is an excellent scientist and has contributed to the advancement of the disciplines of biomaterials and tissue engineering. Specifically, she received excellent research training, including time at the Stevens Lab at Imperial College London; she has 30 peer reviewed publication in high well regarded journals (e.g., Small, Advanced Heathcare Materials, ACS Nano, Biomaterials, Nature Comm, etc.); an h-index of 17, illustrating the impact of her work; and several of her contributions have been invited, illustrating her profile in the field. Her excellence in science also resulted in her being awarded the prestigious Vice Chancellor's Fellowship at RMIT and securing a highly competitive ARC Discovery Project.

Getting to know other Biomaterials Societies

The ASBTE is partnered with 10 other biomaterials societies around the world. In this feature, we profile one of the oldest Biomaterials Societies, and one with many similarities to the ASBTE: the Canadian Society for Biomaterials (CBS).

If considering visiting a Canadian Biomaterials lab, or seeking international partners for grants, please let the ASBE executive committee know if we can facilitate a connection. And finally, a reminder that your ASBTE membership will usually qualify you to discounted registration rates for partner societies' conferences. The next annual CBS conference in Canada will likely be in May, 2023.

Bryan Coad, Past President

Q & A with the Canadian Society for Biomaterials (CBS)

1. When and where was your society founded and by whom?

The Canadian Biomaterials Society (CBS) was founded in 1971 and is one of the first biomaterials societies in the world. Those that contributed to establishment of the CBS were Dennis Smith and Walter Zingg from the University of Toronto, along with others including Robert Jackson, Robert Salter, James Guillet, and Henry Garside. The first annual meeting was held in 1972 and meetings have been held since then.

2. Can you please tell us a brief history and notable achievements of your society and/or members?

- Like Canada itself, the CBS / SCB (La Société Canadienne des Biomatériaux) is officially bilingual. Abstract submissions and presentations at the annual conference may be made in either English or French.
- CBS is a member of the international community of biomaterials societies as represented by the International Union of Societies of Biomaterials Science and Engineering (IUS-BSE).
- As of 2020, 18 members have been awarded Fellowship to the International College of Fellows of Biomaterials Science and Engineering.
- The CBS hosted the 5th World Biomaterials Congress (WBC) in Toronto in 1996 and the 10th World Biomaterials Congress in Montreal in 2016.
- We currently have 8 active local student chapters from across the country, with the newest chapter being the Toronto Student Chapter.
- Each year, the society provides travel awards to students who demonstrate excellence in their field. This applies to the World Congress, the Canadian conferences, and on occasion the American Society for Biomaterials annual meetings.
- Awards are also provided for conference presentations and a visiting scholarship enabling travel between Canadian biomaterials labs.

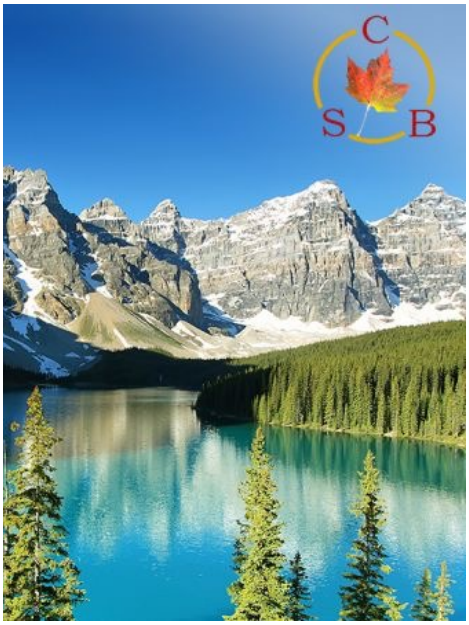
Getting to know other Biomaterials Societies

3. How often do you meet for scientific meetings?

- Our society hosts a national scientific conference annually, typically in May, except for years when a WBC is held.
- There have been 37 meetings held across the country since the first in 1972.
- Last year in 2021 the first online meeting was hosted by the University of Waterloo and this year in 2022 a hybrid meeting took place online and in Banff, Alberta.

4. How many current members (full, associate, students and etc) do you have?

- We have over 280 current members.
- Of these members, 112 are regular members and 165 are student members.



The 2022 CBS conference was held in beautiful Banff, Alberta

5. Have you had special activities (e.g. zoom conference) during the pandemic if travelling has been restricted?

- Our CBS Mentorship and Professional Development Program has been ongoing during the pandemic and is a program specifically designed to connect professionals outside of academia with graduate students and postdoctoral fellows coming from the Canadian biomaterials community. In 2022, a similar program was launched for undergraduate students.
- Our student chapters have continued to host numerous events, including COVID-19 related and other research talks, industry seminars, biomaterials challenges for undergraduate and graduate students, online conferences, and other events.
- Last year in 2021 the first online meeting was hosted by the University of Waterloo and this year in 2022 a hybrid meeting took place online and in Banff, Alberta.

6. Please highlight a few active members (recent award winners at different career stages).

- The Lifetime Achievement Award is to honour a distinguished member of the Canadian biomaterials research community who has made significant long-term and transformative research contributions impacting the field at both a national and international
    - 2020 Award Winner: J. Paul Santerre (University of Toronto)
    - 2016 Award Winner: John L. Brash (McMaster University)
- The Early Career Investigator Award is to recognize the research achievements of a Canadian biomaterials researcher within the early stages of his/her career as a Principal Investigator.
    - 2020 Award Winner: Marc A. Gauthier (Institut national de la recherche scientifique - INRS)
    - 2016 Award Winner: Todd R. Hoare (McMaster University)

Science meets Parliament

Science meets Parliament (SmP) started with a broad outlook on Australia ranking 86th globally in terms of science research commercialisation. It was encouraging to know that this is the best time to be a scientist in Australia and the government is keen on boosting research commercialisation opportunities. Nobel Laureate Professor Peter Doherty emphasized on how important it was to deliver science wisely and engaging everyone with respect, even the ones who might not be convinced about scientific outcomes.

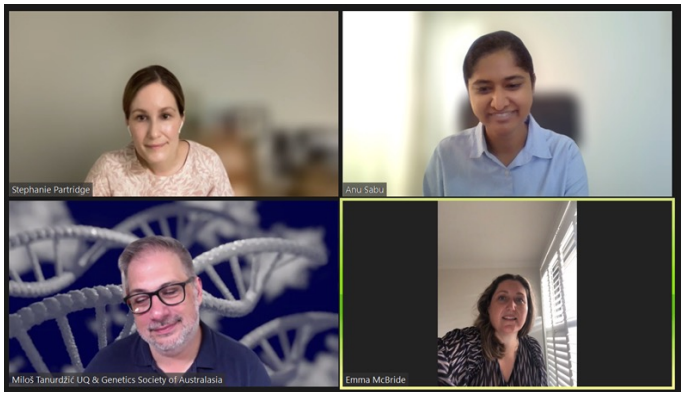
Things to be mindful about when talking about science to the public or parliamentarians:

- Be concise and accurate
- Know your subject and audience, be clear about what you are asking
- Be calm and purposeful when delivering the ask

Ahead of meetings with MPs and Senators, a stellar panel shared a lifetime of tips on how to prepare well to get the most from those opportunities. Key takeaways:

- Approach it with the aim of building a long-term relationship.
- Make the conversation memorable.
- Don't be under confident. You are the expert in your field!
- Practice your pitch.

As part of SmP 2022, I had the opportunity to share my research with parliamentarian Ms Emma McBride MP along with fellow researchers Dr Stephanie Partridge and Dr Milos Tanurdzic. We discussed how science could be brought to local people through different community projects and awareness programmes.



SmP concluded with a fabulous session on Commercialisation Masterclass with Australia's Chief Scientist Dr. Cathy Foley and esteemed panellists, Prof Mark Hutchinson, Associate Prof Jia-Yee Lee and Prof Sharath Sriram. They discussed the importance of telling your story in 1-2 sentences, delivering its worth and having an appropriate business structure for it to succeed. Some of the key takeaways for me personally were:

- Be able to talk to people, and negotiate your way.
- No one ever wants what we designed, directly. It always needs modification or repurposing to suit the customer's needs.
- Always best to under promise and over deliver.
- Failure is a viable option.

Annu Sabu

ASBTE Logo Design Competition

The ASBTE has a new logo

We are excited to announce that the ASBTE has a new logo. A competition was run at the start of the year inviting submissions for a new logo - many thanks to all those that took the time to design something. The winning entry was designed by Angus Weekes, a PhD student at QUT, and confirmed as the new logo for our society following a vote at the annual general meeting on 21st April. This will replace the existing logo which was adopted when the name of our society was changed from the "Australasian Society for Biomaterials" to "Australasian Society for Biomaterials and Tissue Engineering" in 2007. The new logo retains several key features of the 2007 design, including the Southern Cross design with stars representing cells connected together with the help of biomaterials. The new logo also incorporates a geometric map of Australia and NZ to denote the centres of research networked together by the ASBTE. Look out for the new logo on our newsletter, Twitter profile and website going forward.

Jess Frith

Biomaterial Bites

We have started a new initiative to showcase the fantastic people that make up our society: **Biomaterial Bites** is a series of 5-minute videos that you can watch to find out more – perfect to watch on your coffee break. We would love to highlight the diversity of our members, at all career stages, locations and research interests so if you would like to participate, please contact Jessica.frith@monash.edu

Previous interviews can be found on the ASBTE website: https://www.asbte.org/biomaterial-bites or our youtube channel:

#1 Bryan Coad, youtube.com/watch?v=QcsFareWUtU&t=10s&ab
#2 Penny Martens, youtube.com/watch?v=SQZ_8EEC3iM&ab
#3 Khoon Lim, youtube.com/watch?v=AB1HcE3lF9M
#4 Ashley Murphy, youtube.com/watch?v=SO5f4OCO1As&t=3s&ab
#5 Gretel Major, youtube.com/watch?v=bwwkhcLyPaY&ab
#6 Kelly Tsang, youtube.com/watch?v=ZpladXfjnk0&t=11s&ab_channel=ASBTE

Spotlight on Conferences

Conference	Dates	Location	Link
	4-8 Sep 2022	Bordeaux, France	https://www.esbbordeaux2022.org/
	5-8 Oct 2022	Jeju, Korea	https://www.termis.org/chapters-asia-pacific
	7-12 Aug 2022	Ventura, USA	https://www.grc.org/additive-manufacturing-of-soft-materials-conference/2022/
	6-9 Nov 2022	Sydney, Australia	https://ausmb.org/Mechanobiology2022.html
	11-14 Dec 2022	Brisbane, Australia	https://ppc17.com.au/
	19-22 Apr 2023	San Diego, USA	https://biomaterials.org/2023-SFB-Annual-Meeting
	26-31 May 2024	Daegu, Korea	http://wbc2024.com/
termis	25-28 Jun 2024	Seattle, USA	https://termis.org/World-Congresses

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).

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