

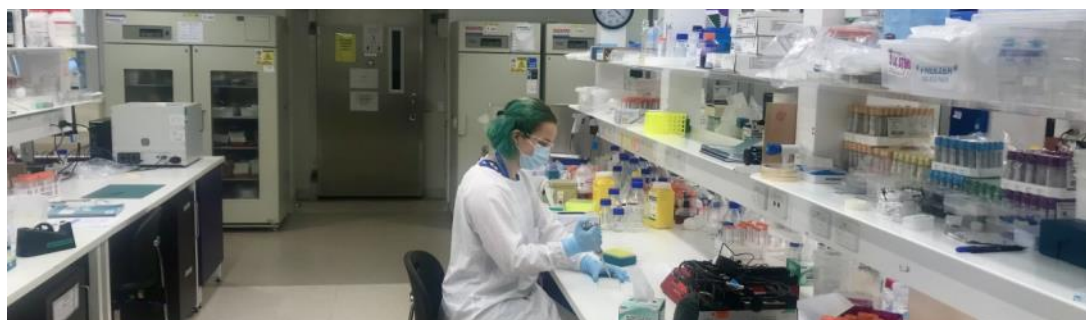


# ASBTE NEWS

DECEMBER 2020

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Dear ASBTE friends and colleagues,

When summing up 2020 and the COVID-19 pandemic, I'll quote Canadian Prime Minister Justin Trudeau: "It really sucks".

COVID-19 has had an enormous impact on many ASBTE members this year, particularly on our sizable membership base who were locked-down in Melbourne. All members have experienced at least some degree of career disruption and loss of research productivity. But, **our community is resilient** and we have also discovered new ways to network, research and study online: for example, the successful **ASBTE Pandemic Primetime series** and our **first virtual AGM**. For most, it will be good riddance 2020. But, for some, there have been bright lights as well, as we celebrate with them notable publications, promotions, new appointments, and successful grant/award/fellowship applications.

**WBC.** Every four years, a highlight for Biomaterials Societies is the **World Biomaterials Congress**. As I write this in late November 2020, many ASBTE members are eagerly awaiting the start of the first Virtual WBC, and an experimental format. Helmut Thissen (our IUSBSE representative) said that the participation from delegates from Australia and New Zealand is high (nearly 80 registrants). So one positive note about the virtual congress is increased accessibility which, no doubt, has allowed many of our members (especially PhD students) to attend and present work to a global audience, when they might otherwise not have attended. Finally, I would like to say congratulations to the **11 recipients of ASBTE awards to attend the virtual WBC conference**.

**Activities for 2021.** The COVID and travel situation seems to change day to day, making it impossible to plan for a face-to-face **Australia/New Zealand annual conference and AGM in 2021**. The ASBTE Executive committee is meeting regularly to assess the situation, and will soon decide the most prudent way to hold these important events, and their dates. In the meantime, planning has already started for new events in 2021 such as **online workshops and programs that will be of interest to students and ECRs**. Also, in this newsletter we are announcing nominations for **2021 ASBTE awards**.

**Staying in touch.** With so much changing rapidly, it is important that members stay in touch. The latest developments will be communicated in **member update emails** and **newsletters**. But, if you have **ideas/suggestions/feedback**, please do not hesitate to get in touch with members of the executive, or your state/ECR reps (listed on our website <https://www.asbte.org/people>)

**Let's look after each other.** Every ASBTE member will know someone who has had a tough year with grant rejections, forced redundancies, or had physical/mental health issues related to recent events. Some have been impacted directly. **ASBTE is a strong and congenial community**. As we wind up the year and get into holiday season, let's take some time to reach out to colleagues and lend our support to those who have had a bit of a rough year.

*It is my sincere hope that everyone has a good holiday break and takes some time to relax and recharge.*

Take care,  
Bryan

**Bryan Coad, President**

## ASBTE Committee Members



**Bryan Coad**  
(President)



**Penny Martens**  
(Vice-President)



**Veronica Glattauer**  
(Executive Officer)



**Jelena Rnjak-Kovacina**  
(Treasurer)



**Khoon Lim**



**Anna Waterhouse**



**Daniel Heath**



**Jessica Frith**

(Ordinary members)

### International Union of Societies for Biomaterials Science and Engineering (IUSBSE) Delegates

Helmut Thissen

Tim Woodfield

### Science and Technologies Australia (STA) Liaison Officer

Kelly Tsang

Vipul Agarwal

#### State Representatives

- Nathalie Bock (QLD)
- Yu Suk Choi (WA)
- Kelly Tsang (ACT)

#### ECR Representatives

- Farhad Soheilmoghaddam (QLD)
- Katie Sizeland (NSW)
- Aaron Gilmour (NSW)
- Ash Murphy (VIC)
- Amy Gelmi (VIC)
- Thomas Michl (SA)
- Paul Joyce (SA)
- Gabriella Lindberg (NZ)

#### Student Representatives

- Maureen Ross (QLD)
- Behzad Shiroud Heidari (WA)
- Ilze Donderwinkel (VIC)
- Hazem Alkazemi (VIC)
- Bram Soliman (NZ)

## World Biomaterials Congress



This year's World Biomaterials Congress was held virtually from Glasgow, UK. The conference included 8 Educational Pre-Congress workshops, 10 workshops included in registration, 5 plenaries and a range of special and sponsored symposium including hearing from journal editors.

During the Opening Ceremony, newly elected Fellows to the International College of Fellows of Biomaterials Science & Engineering were announced.

### **Congratulations to ASBTE members who were elected:**

- Justin Cooper-White
- Veronica Glattauer
- Tim Woodfield

Access to all sessions will be available on demand early in the new year. Registration to the conference additionally provides access to the World Biomaterials Community, details of which are listed below.



## World Biomaterials Community

Further information from WBC 2020:

We invite you to join the [World Biomaterials Community](https://connect.worldbiomaterialscommunity.org/). Whether you want to ask your peers a question, form some new connections in the biomaterials field, or browse exclusive content, the World Biomaterials Community is the place to be.

New for 2020, the World Biomaterials Community is an online platform solely dedicated to knowledge-sharing, educational development, and general networking. You will find features such as discussion forums, blogs, and on-demand video content accessible 24/7, 365 days a year. With 2020 proving to be the year of adaption, we're keen for you to join us to establish a digital legacy in the biomaterials industry.

Sign up now for free - <https://connect.worldbiomaterialscommunity.org/>.

## ASBTE Mentoring Program Launched



### ASBTE Mentoring Pilot

In 2020, ASBTE has trialled a mentoring scheme. The mentoring scheme was one of the outcomes from the 2019 Society Planning day. It was a key initiative and seen as a way to help our more junior academics, create more collaborations, and in 2020, just generally feel more connected.

We had 8 people interested in being mentees, and 8 people interested in being mentors. All mentees were matched with 2 potential mentors based on their goals. We ended up matching 7 mentees with 5 mentors. Mentoring relationships started in early Aug and are on-going.

Early reports back from the mentees are that things are going well. Two quotes from the mentees:

*Initially I only sought career advice, but it's actually quite useful to have someone outside my lab group that can help me navigate issues within the lab.*

*Overall I have really benefitted from xxx's mentoring so fully support more rounds of the mentoring program going ahead!*

We will follow up with both mentors and mentees towards the end of the year. If everything is still going well, then we will also be looking to run another round in 2021. So keep an eye on your inbox if you are interested in joining in.

**Report by Penny Martens, Oct 2020**

## Message to Members

We would like to pay our respect to Professor Jan Chlopek, former President of the Polish Society for Biomaterials. Prof Chlopek passed away recently after a month-long struggle with COVID-19.

**From Prof Helmut Thissen**

## Meet the ASBTE Members

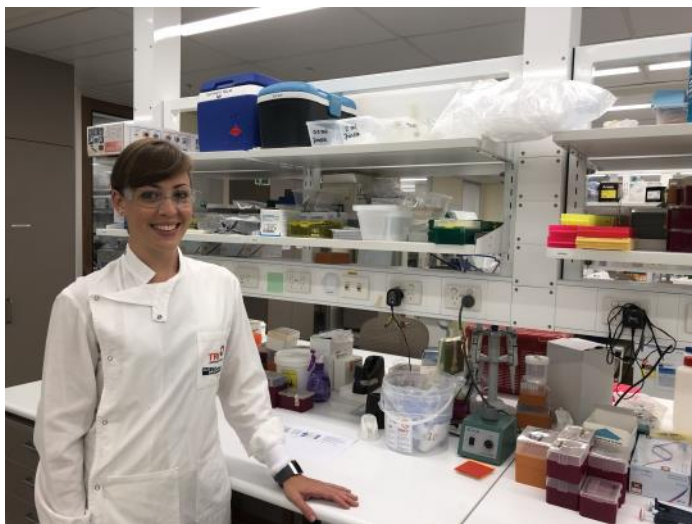
### Launching our new 'Meet the ASBTE Members' segment.

If you would like to highlight your research or skills in the next ASBTE Newsletter, please email [anna.waterhouse@sydney.edu.au](mailto:anna.waterhouse@sydney.edu.au)

#### Nathalie Bock, QUT

##### 1. What is your area of research?

My current research is about developing biomimetic 3D cell culture model systems using advanced biomaterials and tissue engineering technologies, to study bone and cancer biology and bone metastases. Examples include mimicking bone marrow tissue using hydrogels and osteoblastic mineralized tissue using fibre-based scaffolds, which better recapitulates key bone signalling and functions than traditional 2D cultures. We then use those 'bone-mimics' to study interactions with breast and prostate cancer cells or tissues, also grown in 3D hydrogels.



##### 2. What technological skill sets do you have?

I have a MSc in Materials Science and Engineering, with a specialty in Biomaterials, including chemical and process engineering among others. Throughout my PhD, I learned polymer microparticle fabrication to encapsulate drugs for controlled delivery and so I learned various characterisation techniques, including drug release, DSC, in vitro cell culture assays, ELISA etc. The core technology used for particle manufacturing was electrospraying, which is useful for other applications such as bioprinting. My skill set also includes additive manufacturing techniques such as solution electrospinning and melt electrowriting, quite useful in tissue engineering and regenerative medicine. As I transitioned to cancer research for my postdoc, I learned further molecular analysis tools, such RT-qPCR, Western blots/protein arrays and the art of complex co-cultures and 3D cultures. I have also developed imaging and image analysis skills, including the use of various microscopy techniques (live epifluorescence, spinning disc confocal and Imaris software).

##### 3. What career advice would you give your younger self?

It is important to get as much exposure as possible outside the lab, including regularly going to conferences but also getting exposed early and continuously to clinicians. It is indeed very important to define what the medical needs are and work in that direction. This doesn't preclude fundamental work, but at least it imprints itself within a real medical need and questions whether our research has the capacity to be actually translated. The same goes for industry; get involved early. Although developing a medical product may not be the goal of a PhD, getting acquainted to industry and their needs provides a reality check as to what biomaterials and tissue engineering can really achieve in that arena.

## Congratulations: Grants and Awards



### **Professor Laura Poole-Warren, University of New South Wales**

Congratulations to Professor Laura Poole-Warren for being awarded an ARC Linkage Grant, \$704,384, titled: "Understanding Platinum Dissolution in Biomedical Stimulating Electrodes."

<https://artdesign.unsw.edu.au/whats-on/news/unsw-sydney-awarded-over-25-million-government-funding-for-critical-research>



### **Dr Khoon Lim, University of Otago Christchurch**

Congratulations to Dr Khoon Lim for being awarded two grants:

- Royal Society of New Zealand Catalyst Fund – Biofunctionalising titanium implants: combining plasma treatments with hydrogels.

Trans-Tasman collaborative grant with Dr Behnam Akhavan at the University of Sydney to engineer the next generation biofunctional orthopaedic implants.

- University of Otago Translational Research Grant – Patient-specific engineered adipose tissue grafts for soft tissue reconstruction

This grant allows us to investigate new chemistry to structurally-enhance fat grafts for breast cancer patients undergoing breast reconstruction, to repair contour defects and negate the need for artificial implants, tissue



### **Associate Professor Megan Lord, University of New South Wales**

Congratulations to Associate Professor Megan Lord for being awarded an ARC Linkage Grant, titled "Understanding glycopolymer interactions with the extracellular matrix."

<https://research.unsw.edu.au/projects/glycopolymer-interactions-blood-vessels>

In collaboration with Synedgen Inc, this project aims to advance knowledge of the biochemical and biophysical structure of the endothelial glycocalyx, a dynamic cell surface extracellular matrix rich in proteoglycans and glycosaminoglycans. It will be the first to explore how charged glycopolymers interact with this dynamic interface with the goal to develop a model of the glycocalyx lifecycle with implications for the discovery of effective treatments for vascular conditions.

## Congratulations: Grants and Awards



### Associate Professor Jess Frith, Monash University

Congratulations to Associate Professor Jess Frith for being awarded an ARC Discovery Project Grant, titled: "Photoreversible hydrogels to study stem cell memory and fate," with John Forsythe (Monash University) and Rocky Tuan (Chinese University of Hong Kong).

The aim of the project is to develop hydrogels whose stiffness can be increased or decreased at will by the simple application of light. Using these we will examine how mechanical cues alter the structure and organisation of the nucleus and how this ultimately regulates mesenchymal stem cell (MSC) fate. We hope that this will generate new biomaterials that are useful in many different contexts, as well as information that can be used to better control MSC fate for tissue regeneration.



### Dr Jelena Rnjak-Kovacina, University of New South Wales

Congratulations to Dr Jelena Rnjak-Kovacina for being awarded the NSW Premier's Prizes for Science & Engineering: NSW Early Career Researcher of the Year (Physical Sciences)

<https://www.chiefscientist.nsw.gov.au/events/nsw-premiers-prizes-for-science-and-engineering/2020-category-winners>

Photo: Left to right: Ewa Goldys, Leadership in Innovation in NSW award, Dr Jelena Rnjak-Kovacina, Prof Laura Poole-Warren.

## ASBTE Membership Reminder

If you are due membership renewal for upcoming year 2021, visit **Membership Portal** on the **Home Page**: <https://www.asbte.org/>

Just go to **Join/Renew** tab and you are in the **SHOP**

Standard memberships are \$80 per year

Student memberships are \$40 per year

We now offer the option of purchasing 1, 2, or 3-year memberships

## Nomination: ASBTE Emerging Investigator Award

### Call for Nominations:

### ASBTE Emerging Investigator Award 2021

The Committee of the Australasian Society for Biomaterials and Tissue Engineering invites nominations for the ASBTE Emerging Investigator Award. This award recognises an early career researcher, who has demonstrated outstanding research contributions and potential in regards to a future distinguished career in the field of biomaterials and/or tissue engineering. This award will be given every second year.

#### Nomination Process and Selection Criteria

Any member of the Society in good standing may nominate candidates for the award. The deadline for the nomination is 31 March 2021.

Selection criteria include:

The early career researcher must be a current member of the ASBTE and must have been a continuous member of the society for a minimum of two full years prior to the submission deadline.

The nominee must be less than ten years post PhD at the close of nomination. (including career interruption)

The award is determined by a selection committee appointed by the ASBTE Committee and chaired by the Society President.

The following information must accompany each nomination:

- Name and affiliation of the nominating ASBTE member, and one international member of the Biomaterials field.
- A 1 page (maximum) statement from the nominating member and international expert describing the reasons for the nomination.
- Name, contact details, and affiliation of the nominee.
- A copy of the PhD certificate of the nominee showing the date awarded.
- A 1 page (maximum) personal statement from the nominee articulating their vision and/or plans for the biomaterials and tissue engineering field in the future.
- A 3 page (maximum) Curriculum Vitae of the nominee, including a brief description of the main field of professional activity, memberships of professional organisations, awards already received, a list of publications and patents, a list of plenary/keynote lectures at international conferences, a list of contributions to technology translation and commercialisation, and other relevant information.

The Award: The award consists of an inscribed medal and a cheque for \$1,000 and will be presented at the next ASBTE annual meeting, where the awardee will be invited to make a keynote speech on their research.

Please send nominations addressing the selection criteria above to the attention of the ASBTE President Dr. Bryan Coad [bryan.coad@adelaide.edu.au](mailto:bryan.coad@adelaide.edu.au) on or before **31 March 2021**.

## Nomination: ASBTE Award of Excellence

### Call for Nominations:

### ASBTE Award of Excellence 2021

The Committee of the Australasian Society for Biomaterials and Tissue Engineering invites nominations for the ASBTE Award of Excellence 2021.

#### Nomination Process and Selection Criteria:

Any member of the Society in good standing may nominate candidates for the award. The deadline for the nomination is 31 March 2021. The successful candidate will be announced at the next ASBTE meeting.

The award is determined by the selection committee chaired by the Society President. The award will consist of an inscribed medal and will be presented at the next ASBTE annual meeting. Only 1 award will be presented.

#### The following information must accompany each nomination:

Name and affiliation of three nominating members and statements from each nominator describing the reasons for nomination (1-2pages). It is an expectation that the criteria as stated in the guidelines are clearly articulated by the nominations.

Name, address and affiliation of the nominee

A Curriculum Vitae of the nominee, as far as is known, including education, membership of professional organizations, honours already received, main field of professional activity and a list of publications

#### Guidelines for the Selection Committee:

The ASBTE Award for Excellence recognizes a member of the Australasian Society for Biomaterials and Tissue Engineering who has made a significant contribution to the Society and has an outstanding record in developing, maintaining and promoting the goals of the Society. The selection panel may rank each nominee on the following criteria and make a judgement as to the best candidate to receive the award:

- Nominees major contribution to ASBTE: (50 points)
  - Service to the society over a significant period of time
  - Contribution towards a positive change in the society
  - Contribution towards ASBTE's international standing and outreach to other international societies

## Nomination: ASBTE Award of Excellence

- Nominees major contribution to the discipline of biomaterials and tissue engineering: (25 points)
  - Publications in peer reviewed journals
  - Citations and h index
  - Books and book chapters
  - International Society Fellowships
  - Invitations to present plenary/keynote lectures in international conferences
- Leadership/mentoring roles: (15 points)
  - Number of PhD students or research scientists mentored
  - Number of post-doctoral scientists
  - Leadership positions in university and/or industry
- Other Achievements/contributions: (10 points)
  - The selection panel may consider any other achievements/contributions cited in the nomination that may be recognized to demonstrate nominee's contributions to the discipline.

Please send nominations addressing the selection criteria above to the attention of the ASBTE President Dr. Bryan Coad [bryan.coad@adelaide.edu.au](mailto:bryan.coad@adelaide.edu.au) on or before **31 March 2021**.

## ASBTE Twitter: @ASBTE1



For those that don't know, the ASBTE is on Twitter! Follow us @ASBTE1 for all the latest news and events from our community. Don't forget to let us know, or simply tag the society, if you have a publication, presentation, award or anything else you would like us to share

## ASBTE Website [www.asbte.org](http://www.asbte.org)

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](mailto:jessica.frith@monash.edu)




## Spotlight on Conferences

CONFERENCE	DATES	LOCATION	WEBSITE
 <p><b>CTERM 2021</b> The 5th Conference on Tissue Engineering and Regenerative Medicine 第五届组织医学与再生医学国际学术研讨会 January 8-10, 2021 Sanya, China</p> <p><b>The 5th Conference on Tissue Engineering and Regenerative Medicine (CTERM 2021)</b></p>	January 8 - 10, 2021	Sanya, China	<a href="https://www.janconf.org/conference/CTERM2021/">https://www.janconf.org/conference/CTERM2021/</a>
 <p><b>termis WORKSHOP</b></p> <p><b>CELL-MATRIX INTERACTION AND MECHANOBIOLOGY IN REGENERATIVE MEDICINE</b></p> <p><b>TERMIS-EU Workshop</b></p>	March 5 - 6, 2021	Brno, Czech Republic	<a href="https://www.termis.org/chapter-meetings/all">https://www.termis.org/chapter-meetings/all</a>
 <p><b>Biomedical Engineering-2021</b> March 22-24, 2021   Valencia, Spain</p> <p><b>3rd World Conference and Expo on Biomedical Engineering</b></p>	March 22—24, 2021	Valencia, Spain	<a href="https://www.scientificfederation.com/biomedical-engineering/">https://www.scientificfederation.com/biomedical-engineering/</a>
 <p><b>BEIS-2021</b> APRIL 19-21, 2021   BOSTON, MA</p> <p><b>2nd Biomedical Engineering &amp; Instrumentation Summit</b></p>	April, 19—21, 2021	Boston, Massachusetts, USA	<a href="https://biomedical.unitedscientificgroup.org/">https://biomedical.unitedscientificgroup.org/</a>
 <p><b>2021 ANNUAL MEETING &amp; EXPOSITION</b> SOCIETY FOR BIOMATERIALS <b>CHICAGO</b> APRIL 21-24, 2021 HILTON CHICAGO, IL</p> <p><b>Society for Biomaterials 2021 Annual Meeting &amp; Exposition</b></p>	April 21—24, 2021	Virtual	<a href="https://biomaterials.org/publications/news/sfb-2021-virtual-abstract-deadline-dec-4">https://biomaterials.org/publications/news/sfb-2021-virtual-abstract-deadline-dec-4</a>
 <p><b>NER'21</b> 4 - 6 May, 2021 NER Virtual Conference International IEEE EMBS Conference on <b>NEURAL ENGINEERING</b></p> <p><b>10th International IEEE EMBS Conference on Neural Engineering</b></p>	May 4 - 6, 2021	Virtual	<a href="https://neuro.embs.org/2021/">https://neuro.embs.org/2021/</a>

## Spotlight on Conferences

CONFERENCE	DATES	LOCATION	WEBSITE
 <p><b>ICABRM 2021: 15. International Conference on Advanced Biomaterials for Regenerative Medicine</b></p>	May 17 - 18, 2021	Sydney, Australia	<a href="https://waset.org/advanced-biomaterials-for-regenerative-medicine-conference-in-may-2021-in-sydney">https://waset.org/advanced-biomaterials-for-regenerative-medicine-conference-in-may-2021-in-sydney</a>
 <p><b>TERMIS 5th World Congress</b></p>	May 31 - June 4, 2021	Maastricht, The Netherlands	<a href="https://www.termis.org/wc2021">https://www.termis.org/wc2021</a>
 <p><b>6th Annual Conference and Expo on Biomaterials</b> June 09-10, 2021 Berlin, Germany</p>	June 09 - 10, 2021	Berlin, Germany	<a href="https://biomaterials.insightconferences.com/">https://biomaterials.insightconferences.com/</a>
 <p><b>ISSCR Annual Meeting</b></p>	June 23 - 26, 2021	Hamburg, Germany	<a href="https://www.isscr.org/meetings-events/annual-meetings/isscr-annual-meeting-2021">https://www.isscr.org/meetings-events/annual-meetings/isscr-annual-meeting-2021</a>
 <p><b>Gordon Research Conference – Biomaterials and Tissue Engineering</b></p>	July 18 - 23, 2021	Holderness, New Hampshire, USA	<a href="https://www.grc.org/biomaterials-and-tissue-engineering-conference/2021/">https://www.grc.org/biomaterials-and-tissue-engineering-conference/2021/</a>
 <p><b>43rd Annual International Conference of the IEEE Engineering in Medicine and Biology Society</b></p>	July 26 - 30, 2021	Guadalajara, Mexico	<a href="https://embc.embs.org/2021/#">https://embc.embs.org/2021/#</a>

## Spotlight on Conferences

CONFERENCE	DATES	LOCATION	WEBSITE
 <p><b>Society for Biomaterials and Japanese Society for Biomaterials Joint Symposium</b></p>	July 29 -31, 2021	Honolulu, HI, USA	<a href="https://biomaterials.org/events-future-meetings/2021-hawaii-joint-symposium-sfb-jsb">https://biomaterials.org/events-future-meetings/2021-hawaii-joint-symposium-sfb-jsb</a>
	August 29 - September 1, 2021	Toronto, Canada	<a href="https://www.termis.org/am2021">https://www.termis.org/am2021</a>
 <p><b>International Symposium, "Stem Cells: From Basic Science to Clinical Translation,"</b></p>	October 27 - 29, 2021	Tokyo, Japan	<a href="https://www.isscr.org/meetings-events/international-symposia/tokyo-2021-symposium">https://www.isscr.org/meetings-events/international-symposia/tokyo-2021-symposium</a>

## 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](http://www.linkedin.com/groups?home=&gid=6512061)

**ASBTE NEWSLETTER** 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 Anna Waterhouse ([anna.waterhouse@sydney.edu.au](mailto:anna.waterhouse@sydney.edu.au)) or Executive Officer Veronica Glattauer ([veronica.glattauer@csiro.au](mailto:veronica.glattauer@csiro.au)).