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‘Lost But Not Forgotten’ Artwork Created By: Jared.L.Coolwell 2022 ©

Style: Modern Australian Aboriginal Art.

Firstly I would like to acknowledge the Yugambeh people and the Kombumerri tribe whose land we preside on and all past, present and future elders. Gowanda Many years before, their world would change, there was a man named Gowanda, amongst the tribe who was famous for his great training of dogs, that would help the men hunt wallaby, kangaroo, emu and other animals. When it was his time to pass, due to his great teaching ways, he was turned in to a dolphin. Then one day many years later a boy from the tribe saw a dolphin swimming amongst the waves, he knew it was Gowanda so he fun to tell the rest of the tribe. They knew it must be him as he had a white top fin so he could be recognised by them. He had become a dolphin to teach the younger dolphins lore for helping their land brothers and sisters. On Quandamooka country it is taught that when you slap your spear or sticks on the water, dolphins when available, will drive the fish into the spears of men or the nets of women and children. Then in return the tribe would give thanks and share. This is the lore Gowanda teaches the younger dolphins even to this day. He waits to hear the songs of his tribe, the slaps of the spear and sticks, calling to him for his help once more from his land brothers and sisters. This painting is representation of recorded significant sites around the convention centre. Campsite with the fire in the centre and multi-colour U shapes represent us at the convention centre and the many different people you will find here. The site with a red line and Mirrabooka (southern cross) is a recorded burial site. The area is called Kombumerri Park and is the closet site to the convention centre. It was recorded as a site after 1965 the Broadbeach residents found human bones appearing in soil sold by a local landscaper excavating the Broadbeach wetlands. Further excavation of the park done by Laila Haglund, who had testing done, dated the bones to be 1,200 years old. When the local elders were asked what they wished to be done with the bones they asked if they could be placed back from where they come from and are now located unmarked in the park placed back as close to their original sites that permits. Thanks to Laila Haglund and her recordings. The site with yellow line was recorded as a large gathering area for the local tribes. Every so often other tribes would come from great distances and visit here for feasting, dancing, sharing news, celebration of marriages, etc. This was also supported by a large mitten that’s was recorded, found in the early 1900’s when John Elliot built a sugar mill on the location which was called the Bundall Sugar Mill and is now a historical museum. The campsite with with U shapes with white feet was recorded in the 1900’s, by early settlers of the area, as where the local tribe would do dancing. The campsite with with U shapes, white feet and a campfire is Jebribillum Bora Ring. This was a place for initiation, ceremony, dancing and feasting. The Bora Ring is still there fenced off with a war memorial dedicate to serving indigenous men and women from 1914 to 1991. The dolphin is Gowanda, who even to this day, watches over all who reside on his country. They may be gone and some maybe lost but we will never forget them. ‘Lost but not forgotten’

We would like to take a moment to say thank you all for inviting us back. We love sharing indigenous art, culture and knowledge with you all. Jared and Letitia.

Please take note spelling of names may vary due to dialect or the use of the English alphabet. Based on the Yungambeh language.

Written By Jared Coolwell (artist) and Letitia Lennon (manager) Co-Owners of J.L.Coolwell & L.M.Lennon Est.2016 ©2022
Jared Coolwell Aboriginal Arts

M: 0497050155
E: jaredcoolwellart@gmail.com

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WELCOME FROM THE ANZBMS – MEPSA – ANZORS COMMITTEE

The Program and Local Organising Committee Chairs, and the Presidents of the Australian and New Zealand Bone and Mineral Society (ANZBMS), the Molecular & Experimental Pathology Society of Australasia (MEPSA) and the Australian & New Zealand Orthopaedic Research Society (ANZORS) extend the warmest welcome to you at our first ever combined Annual Scientific Meeting on the stunning Gold Coast, Australia, from the 1st to the 4th of August, 2022.

Whether you are a young investigator, clinician, basic scientist, allied health professional, or industry representative, there is much for you at this year’s meeting.

The Program Organising Committee, co-chaired by Ayse Zengin, Peter Simm and Hong Zhou, have put together an exciting program of cutting-edge science in musculoskeletal health and tissue pathology that will appeal to both clinician and basic scientists.

Key session themes include:
- Comparative Biology
- Infection, Immunity and Inflammation
- Models of Human Disease
- Photobiology
- Insights from allied health and consumer groups
- Therapeutics
- Lifecourse managements of musculoskeletal health
- Musculoskeletal and Regenerative Biology
- Biomechanics
- Musculoskeletal Imaging
- Innovation in Bioengineering and Orthopaedics
- Translational Orthopaedics
- Vitamin D

Come along and pick a team at the Therapeutics versus Exercise debate – sure to spark some fireworks.

On the social, networking and career development front, we’ll have the traditional Bones and Brews networking event, a speed networking session, a Clinical Cases in Metabolic Bone Diseases Seminar dinner, and a career development lunch ‘Building Resilience in STEM’. Along with the always popular Welcome Function with plenary posters, the Conference Gala Dinner is always a meeting highlight where you can catch up with friends and colleagues, celebrate award recipients, and dance the night away to a live band.

We can’t wait to re-establish face-to-face connections, networks and alliances for scientific discourse – the true purpose, indeed definition, of a scientific meeting.

Welcome all.

Belinda Beck
LOC Chair

SOCIETY SECRETARIATS

ANZBMS
Ivore Johnson
ijohnson@anzbms.org.au
www.anzbms.org.au

MEPSA
Katie Dixon
katie.dixon@sydney.edu.au
www.mepsa.org

ANZORS
Martina Barzan
m.barzan@griffith.edu.au
www.anzors.org.au

Conference Secretariat – ASN Events
Jim Fawcett
Jim.f@asnevents.net.au
www.asn.events
LOCAL ORGANISING COMMITTEE

Dr Kylie Alexander
Mater Research
ANZBMS

Dr Martina Barzan
Griffith University
ANZORS

Prof Belinda Beck (Chair)
Griffith University
ANZBMS

Dr Melissa Cantley
University of Adelaide & SAHMRI
ANZBMS

Miss Kaitlyn Flynn
University of Queensland
ANZBMS

Dr Amy Harding
Griffith University
ANZBMS

Dr Peter Pivonka
Queensland University of Technology
ANZBMS

A/Prof James Wells
The University of Queensland
MEPSA

Dr Grant Parnell
University of Sydney
MEPSA POC Co-Chair

A/Prof Nathan Pavlos
University of Western Australia
ANZORS POC

A/Prof Egon Perilli
Flinders University Adelaide
ANZORS POC Co-Chair

Prof Hong Zhou
University of Sydney
ANZBMS POC Co Chair

PROGRAM ORGANISING COMMITTEE

Dr Martina Barzan
Griffith University
ANZORS POC Co-Chair

Prof Scott Byrne
The University of Sydney
MEPSA POC Co-Chair

Dr Katie Dixon
University of Sydney
MEPSA POC Co-Chair

Prof. Gustavo Duque
University of Melbourne
ANZBMS Meetings Chair

A/Prof Peter Simm
Royal Children’s Hospital Melbourne
ANZBMS POC Co-Chair

Dr Ayse Zengin
Monash University Australia
ANZBMS POC Co-Chair

EARLY CAREER COMMITTEE CHAIRS

Dr Melissa Cantley
University of Adelaide & SAHMRI
ANZBMS

Dr Jiao Jiao Li
University of Technology Sydney
ANZORS & ANZBMS

EARLY CAREER COMMITTEE MEMBERS

Dr Kara Anderson
Deakin University
ANZBMS

Dr Emma Buckels
University of Auckland
ANZBMS

Dr Bridie Mulholland
University of Wollongong
ANZBMS

Dr Niloufar Ansari
Monash Institute of Pharmaceutical Sciences
ANZBMS

Dr Jack Dalla Via
Edith Cowan University
ANZBMS

Dr Pamela Rufus-Membere
Deakin University
ANZBMS

Dr Lena Batoon
University of Michigan & University of Queensland
ANZBMS

Dr John Kemp
University of Queensland
ANZBMS

Dr Hanh Nguyen
Monash Health & Western Health
ANZBMS

Dr Albert Kim
Garvan Institute of Medical Research
ANZBMS
### ANZBMS OFFICE BEARERS 2022

**ANZBMS President**  
Prof Mark Forwood

**ANZBMS President Elect**  
Prof Gustavo Duque

**ANZBMS Honorary Secretary**  
Prof Mark Cooper

**ANZBMS Treasurer**  
A/Prof Rachel Davey

**ANZBMS Past President**  
Prof Natalie Sims

**ANZBMS Councillors**  
Dr Melissa Cantley, A/Prof Cherie Chiang, A/Prof Dawn Coates, A/Prof Josh Lewis & Dr Michelle McDonald

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### PAST ANZBMS OFFICE BEARERS 1988-2022

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<tr>
<th>YEAR</th>
<th>PRESIDENT</th>
<th>VICE PRESIDENT</th>
<th>SECRETARY</th>
<th>TREASURER</th>
<th>COUNCILLORS</th>
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<tr>
<td>1990 -</td>
<td>T.J. Martin</td>
<td>M.Hooper</td>
<td>A. Need, R. Prince, J. Eisman, I. Reid, K. Ibbertson, D. Fraser, P. Sambrook, E. Seeman</td>
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<td>Steering Group</td>
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<td>Inaugural Council</td>
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<td>1993-95</td>
<td>J. Eisman</td>
<td>I. Reid</td>
<td>N. Kent</td>
<td>J. Wark</td>
<td>P. Sambrook, A. Need, R. Prince, D. Perry-Keene, E. Seeman</td>
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<td>2007-09</td>
<td>P. Sambrook</td>
<td>R. Mason</td>
<td>M. Gillespie</td>
<td>R. Price</td>
<td>P. Nash, N. Fazzalari, M. Kotowicz, T. Cundy</td>
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<td>2017 – 19</td>
<td>P. Croucher</td>
<td>N. Sims</td>
<td>P. Anderson</td>
<td>N. Pavlos</td>
<td>A. Pettitt, R. Daly, M. Cooper, J. Cornish, M. Forwood, E. Duncan</td>
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<td>M. Forwood</td>
<td>G. Duque</td>
<td>M. Cooper</td>
<td>R. Davey</td>
<td>M. Cantley, C. Chiang, D. Coates, J. Lewis, M. McDonald</td>
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ANZBMS AWARD SPONSOR

AMGEN

ROGER MELICK YOUNG INVESTIGATOR AWARD

This award is presented to commemorate the contribution of Dr Roger Aziz Melick to endocrinology and student education. Roger Melick died in November 1986 after a long battle with cancer. He trained in endocrinology with Fuller Albright, in Boston, and joined The Royal Melbourne Hospital as the third member of the foundation Department of Medicine. He was appointed Dean of the Clinical School in April 1979 and he was forced to retire because of his illness during 1986. Roger Melick was particularly known for his kindness, consideration and empathy for both patients and students. The prize is awarded annually to young members of the Society working towards a higher degree (including FRACP).

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<td>Vicky Kartsogiannis</td>
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<td>Janelle Barry</td>
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<td>Liza-Jane Raggatt</td>
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<td>David Good</td>
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<td>Nicola Lee</td>
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<td>Irene Zinonos</td>
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<tr>
<td>2012</td>
<td>Farzin Takyar</td>
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<td>2013</td>
<td>Asiri Wijenayaka</td>
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<td>2014</td>
<td>Hua Ying</td>
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<td></td>
<td>Irina Kulina</td>
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<tr>
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<td>Niloufar Ansari</td>
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<td>Christina Vrahnas</td>
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<td>Mahmoud Bakr</td>
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CHRISTOPHER AND MARGIE NORDIN YOUNG INVESTIGATOR POSTER AWARD

This Award is named in honour of the outstanding and major clinical investigations into disorders of bone and mineral metabolism made by Professor Christopher Nordin and his contributions to the ANZBMS. Professor B.E Christopher Nordin was a senior specialist at the Institute of Medical and Veterinary Science in Adelaide, and the man credited with drawing the medical community's attention back to the link between calcium deficiency and osteoporosis (brittle bones).

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<td>Anne Nelson</td>
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<td>Rouha Granfar</td>
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<td>Laura Gregory</td>
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<td>Alvin Ng</td>
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<td>Marie-Luise Wille</td>
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<td>Yu Wen Su</td>
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<td>Masato Koike</td>
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<td>Dzenita Muratovic – Clinical</td>
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<td>Amy Ribet</td>
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CHRISTINE AND T JACK MARTIN RESEARCH TRAVEL GRANT

This grant is offered by the ANZBMS in memory of Christine Martin and to honour the outstanding and major scientific contributions of Professor T Jack Martin to bone and mineral research and his contributions to associates and trainees in teaching, research, and administration.

2003 Vicky Kartsogiannis 2009 Bich Tran 2016 Audrey Chan
2004 Kerrie Sanders 2010 Garry Williams 2017 Alexander Rodriguez
2005 Susan Allison 2011 Julie Quach 2018 Thao Ho-Le
2006 Mark Forwood 2012 Ashika Chhana 2019 Sabashini Ramchand
2007 Brya Matthews 2013 Yohann Bala 2020 *Not Awarded
2008 Michelle McDonald 2021 *Not Awarded

ANZBMS BONE HEALTH FOUNDATION GRANT

2021 Michelle McDonald, Fran Milat

AMGEN / ANZBMS OUTSTANDING ABSTRACT AWARD

The Council of ANZBMS wishes to recognise the high standard of bone and mineral research presented at the Annual Scientific Meeting. The Program Organising Committee will award a prize to the basic and clinical abstracts receiving the highest scores.

2003 Rob Will, Amanda Devine
2004 Christine Rodda
2005 Markus Seibel, Julian Quinn
2006 Yosuke Kawasaki, Julie Kuliwaba, Stella Foley, Dana Bliuc, Jonathan Gooi, Hugh Zhang
2007 Colin Dunstan, Richard Prince, Maria Chiu, Natalie Sims, Paul Baldock, Ian Parkinson, Hong Zhou
2008 Robert Kalak, Andrew Grey
2009 Vicky Kartsogiannis, Nguyen Nguyen
2010 Markus Seibel, Emma Walker, Iris Wong, Sarah

2008 Brennan, Jasreen Kular, Markus Seibel
2011 Ian Reid, Asiri Wijenayaka
2012 Ego Seeman, Rachel Johnson
2013 Peter Ebeling, Rossana Nogueira, Simon Junankar, Narelle McGregor, Jinwen Tu
2014 Allison Pettit, Paul Baldock, Jinwen Tu, Roger Zebaze, Kirtan Gandaz
2015 Allison McDonald, Michelle Pettit, Audrey Chan, Le Phong Thao Ho, Ayano Nakayama
2016 Nicola Lee, Steven Watson, Emma Walker
2017 Natalie Hyde, Michelle McDonald
2018 Victoria D Leitch, Emma M Wade, Michelle M McDonald, Ego Seeman
2019 Ian Reid, Nathan Pavlos
2020 Kai Chen, Robin Daly
2021 Sandra Iuliano, Peter Ebeling, Audrey Chan, Victoria Leitch, Tsuyoshi Isojima
2022 Dana Bliuc, Ryan Chai, Alexander Corr, Albert Kim, Alexander Rodriguez
2023 Charles Inderjeeth, Michael J Rogers, Minghao Zheng, Brya Matthews, John Eisman

ANZBMS CLINICAL RESEARCH EXCELLENCE AWARD

MSD, through the Merck Research Labs have a long history in bone research and continue to achieve clinical innovations in this field. While the scientists at Merck are dedicated to exploring new ways to address health problems, they also recognize that the best scientific discoveries often emerge from collaboration with clinical researchers outside Merck laboratories. This award is offered to recognise and support clinicians in or within 10 years of postgraduate training who are contributing to clinical research in the field of bone-related disorder.

2012 Belal Khan 2015 Hahn Nguyen 2018 Jasna Aleksova
2013 Syndia Lazarus 2016 Thach Tran 2019 Alexander Rodriguez
2014 Masakazu Kogawa 2017 Weiwen Chen
ANZBMS KAYE IBBERTSON AWARD FOR BONE AND MINERAL MEDICINE

This Award is named in honour of the outstanding career and major investigations into skeletal disorders made by Professor Kaye Ibbertson, and his contributions to the ANZBMS.

<table>
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<tr>
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<td>Paul Baldock</td>
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<td>2011</td>
<td>Susannah O’Sullivan</td>
</tr>
<tr>
<td>2012</td>
<td>Emma Duncan</td>
</tr>
<tr>
<td>2013</td>
<td>Tara Brennan-Speranza</td>
</tr>
<tr>
<td>2014</td>
<td>Nicole Yu</td>
</tr>
<tr>
<td>2015</td>
<td>Joshua Lewis</td>
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<tr>
<td>2016</td>
<td>Michelle McDonald</td>
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<td>Feitong Wu</td>
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<tr>
<td>2018</td>
<td>Dawn Aitken</td>
</tr>
<tr>
<td>2019</td>
<td>Fran Milat</td>
</tr>
<tr>
<td>2020</td>
<td>David Scott</td>
</tr>
<tr>
<td>2021</td>
<td>John Kemp</td>
</tr>
</tbody>
</table>

SOL POSEN RESEARCH AWARD

This Award is named in honour of Professor Sol Posen who was one of the pioneers in the field of bone and mineral endocrinology in this country. Sol Posen’s contributions span the range from basic biochemistry – his citation classic in Clinical Chemistry described the first means of distinguishing alkaline phosphatase of bone origin – to clinical studies in metabolic bone disease, including Paget’s disease, osteoporosis, hyperparathyroidism and tumour-induced osteomalacia. He attended meetings and journal clubs, where his presence was marked, as ever, by his propensity to ask incisive questions.

<table>
<thead>
<tr>
<th>Year</th>
<th>Winner</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006</td>
<td>Nathan Pavlos</td>
</tr>
<tr>
<td>2007</td>
<td>Aaron McDonald</td>
</tr>
<tr>
<td>2008</td>
<td>Haotian Feng</td>
</tr>
<tr>
<td>2009</td>
<td>Ming-Kang Chang</td>
</tr>
<tr>
<td>2010</td>
<td>Tak Sum Cheng</td>
</tr>
<tr>
<td>2011</td>
<td>Kylie Alexander</td>
</tr>
<tr>
<td>2012</td>
<td>Julie Quach</td>
</tr>
<tr>
<td>2013</td>
<td>Farzin M Takyar</td>
</tr>
<tr>
<td>2014</td>
<td>Heath McGowan</td>
</tr>
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<td>2015</td>
<td>Dana Bllic</td>
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<td>2016</td>
<td>Paul Lee</td>
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<tr>
<td>2017</td>
<td>Thao P. Ho-Le</td>
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<td>2018</td>
<td>Nicola Lee</td>
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<td>2019</td>
<td>Kai Chen</td>
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<td>2020</td>
<td>Jungie Gao</td>
</tr>
<tr>
<td>2021</td>
<td>Niloufar Ansar</td>
</tr>
</tbody>
</table>

PHILIP SAMBROOK AWARD

The Professor Philip Sambrook Award is presented annually to an outstanding early career researcher to honour the major clinical and scientific contributions by Professor Philip Sambrook to the field of rheumatology and osteoporosis. Successful applicants must be passionate about bone research, results driven and committed to giving back to the community.

<table>
<thead>
<tr>
<th>Year</th>
<th>Winner</th>
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</thead>
<tbody>
<tr>
<td>2012</td>
<td>Gustavo Duque</td>
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<td>Emma Duncan</td>
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<td>2014</td>
<td>Kirtan Ganda</td>
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<td>2015</td>
<td>Sharon Brennan-Olsen</td>
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<td>2016</td>
<td>Jinwen Tu</td>
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<tr>
<td>2017</td>
<td>Jansa Aleksova</td>
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<tr>
<td>2018</td>
<td>Feitong Wu</td>
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<tr>
<td>2019</td>
<td>Sabashini Ramchand</td>
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<tr>
<td>2020</td>
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<tr>
<td>2021</td>
<td>*Not Awarded</td>
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</tbody>
</table>

ANZBMS INTERNATIONAL TRAVEL AWARD

This award is offered by the ANZBMS to support travel to attend the IBMS Herbert Fleisch Workshop.

The objective of this workshop is to provide a Gordon-conference style forum for students, post-docs and early stage principal investigators to present work in progress, discuss thoroughly and network with peers, and get constructive feedback from experienced senior scientists.

<table>
<thead>
<tr>
<th>Year</th>
<th>Winners</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td>Tara Brennan-Speranza, Ashika Channa, Christina, Vrahnas</td>
</tr>
<tr>
<td>2015</td>
<td>Campbell Macgregor, Megan Thomas, Scott Youlten</td>
</tr>
<tr>
<td>2018</td>
<td>Babtunde Ayodele, Dzenita Muratovic</td>
</tr>
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</table>

ANZBMS – MEPSA – ANZORS Annual Scientific Meeting Delegate Booklet 2022 8 | P a g e
ANZBMS CAREER ACHIEVEMENT AWARD

This esteem award recognises outstanding and major scientific or clinical contributions, and excellence in teaching and service to and within the bone and mineral field. The award will be widely publicised and presented annually during the society’s Annual Scientific Meeting. The awardee will receive free registration to the Annual Scientific Meeting and invitations to the annual and the president’s dinner the year the award is received.

2014 Jillian Cornish, Ego Seeman  
2015 Howard Morris  
2016 Jack Martin  
2018 John Eisman  
2019 Ian Reid  
2021 David Findlay

ANZBMS GAP FELLOWSHIP

In recent years, funding for mid-career researchers has become increasingly difficult to obtain, jeopardising the future career of many of our colleagues in bone and mineral research. The ANZBMS has therefore created a new Fellowship Award with the intention to bridge shortfalls in salary funding for outstanding mid-career scientists.

2016 Allison Pettit  
2017 Nicki Lee  
2018 Dana Bluc

ANZBMS HIGHEST RATED STUDENT ABSTRACT AWARD

The prize, of a single free registration, will be awarded to the student first author of the abstract that receives the highest score from the scoring committee.

2017 Junjie Gao  
2018 Marija Simic  
2019 Kotaro Tanimoto  
2020 Lena Batoon  
2021 Shoichiro Tani  
2022 Tian Nie

ANZBMS LIFE MEMBERS

Professor Henry Kaye Ibbertson (deceased)  
Associate Professor Jane Moseley  
Professor B.E.C Nordin (deceased)  
Dr Solomon Posen (deceased)  
Professor Thomas J. Martin  
Dr Donald Gutteridge  
Associate Professor Michael Hooper  
Professor John Eisman  
Professor Ego Seeman  
Professor Jillian Cornish  
Professor Rebecca Mason

ANZBMS INTERNATIONAL TRAVEL AWARD

2018 Babtunde Ayodele, Dzenita Muratovic

B.O.N.E PROGRAM

2019 Michelle McDonald  
2020 Kylie Alexander
SCAN BEFORE OR AFTER A BREAK? THEIR FUTURE IS IN YOUR HANDS.

6 out of 10 Patients with osteoporosis aren’t being treated for it.¹ ¹ ²
DEXA Scan all your at-risk patients over 50 without delay.’

PBS information: Authority required (STREAMLINED) as treatment for osteoporosis. Criteria Apply. Refer to PBS Schedule for full Authority Required information.

Refer to full Product Information before prescribing; available from Amgen Australia Pty Ltd, Ph: 1800 803 638 or at www.amgen.com.au/Prolia.Pi

For more information on Prolia® or to report an adverse event or product complaint involving Prolia®, please contact Amgen Medical Information on 1800 803 638 or visit www.amgenmedinfo.com.au.

PROLIA® MINIMUM PRODUCT INFORMATION. INDICATIONS: Treatment of osteoporosis in postmenopausal women (PMO) to reduce risk of vertebral, non-vertebral and hip fractures. Treatment to increase bone mass in men with osteoporosis at increased risk of fracture. Treatment to increase bone mass in women and men at increased risk of fracture due to long-term systemic glucocorticoid therapy. CONTRAINDICATIONS: Hypocalcaemia. Hypercalcemia to denosumab, CHO-derived proteins or any component. Pregnancy and in women trying to get pregnant. PRECAUTIONS: Contact hypocalcaemia prior to initiating therapy. Monitor calcium in patients predisposed to hypocalcaemia. Adequate intake of calcium and vitamin D is important. Severe renal impairment. Concomitant use of calcimimetic drugs may increase risk of hypocalcaemia. Skin infections. Evaluate patients for risk factors for osteonecrosis of the jaw; use with caution in these patients. Rare reports of atypical femoral fractures. Multiple vertebral fractures may occur following discontinuation. In glucocorticoid-induced osteoporosis, fractures occur at a higher BMD than PMO. Hypercalcemia in pancreatic patients with osteogenesis imperfecta. Prolia is not indicated in pancreatic patients. ADVERSE EFFECTS: Common: hypercholesterolaemia, eczema, fracture, back pain, arthralgia, nasopharyngitis, pain in extremity, osteoarthritis, bronchitis, hypertension, headache, dyspepsia, urinary tract infection, upper abdominal pain, bone pain and alopecia. DOSAGE AND ADMINISTRATION: Single subcutaneous injection of 60 mg, once every 6 months. Ensure adequate intake of calcium and vitamin D. No dose adjustment required in the elderly or in renal impairment. PRESENTATION: Pre-filled syringe with automatic needle guard. Minimum Pi Version 5. Refer to full Product Information before prescribing – available from Amgen Australia Pty Ltd. Ph: 1800 803 638 or at www.amgen.com.au/Prolia.Pi

MEPSA OFFICE BEARERS 2022

<table>
<thead>
<tr>
<th>MEPSA President</th>
<th>Prof Scott Byrne</th>
</tr>
</thead>
<tbody>
<tr>
<td>MEPSA Secretary</td>
<td>Dr Katie Dixon</td>
</tr>
<tr>
<td>MEPSA Treasurer</td>
<td>Dr Wayne Reilly</td>
</tr>
<tr>
<td>MEPSA Past President</td>
<td>A/Prof Terry Piva</td>
</tr>
</tbody>
</table>

PAST MEPSA OFFICE BEARERS 1999-2022

<table>
<thead>
<tr>
<th>YEAR</th>
<th>PRESIDENT</th>
<th>VICE PRESIDENT / PRESIDENT ELECT</th>
<th>SECRETARY</th>
<th>TREASURER</th>
</tr>
</thead>
<tbody>
<tr>
<td>1999 - 2000</td>
<td>Vivienne Reeve</td>
<td>Geoff Grigg / Don MacPhee</td>
<td>Sue Thomas</td>
<td>Geoff Dandie</td>
</tr>
<tr>
<td>2001 - 2002</td>
<td>Vivienne Reeve</td>
<td>Geoff Grigg / Don MacPhee</td>
<td>Gary Halliday</td>
<td>Geoff Dandie</td>
</tr>
<tr>
<td>2002 - 2003</td>
<td>Vivienne Reeve</td>
<td>Geoff Grigg / Don MacPhee</td>
<td>Gary Halliday</td>
<td>Geoff Dandie</td>
</tr>
<tr>
<td>2003 - 2004</td>
<td>Vivienne Reeve</td>
<td>Liza Snow</td>
<td>Gary Halliday</td>
<td>Geoff Dandie</td>
</tr>
<tr>
<td>2004 - 2005</td>
<td>Geoff Dandie</td>
<td>Liza Snow</td>
<td>Michael Davies</td>
<td>Tim Rayner</td>
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<td>2005 - 2006</td>
<td>Geoff Dandie</td>
<td>Liza Snow</td>
<td>Michael Davies</td>
<td>Tim Rayner</td>
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<td>2006 - 2007</td>
<td>Geoff Dandie</td>
<td>Liza Snow</td>
<td>Terry Piva</td>
<td>Tim Rayner</td>
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<td>2007 - 2008</td>
<td>Geoff Dandie</td>
<td>Liza Snow</td>
<td>Terry Piva</td>
<td>Tim Rayner</td>
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<td>2008 - 2009</td>
<td>Liza Snow</td>
<td>Des Richardson</td>
<td>Terry Piva</td>
<td>Munif Allanson</td>
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<td>2009 - 2010</td>
<td>Liza Snow</td>
<td>Des Richardson</td>
<td>Terry Piva</td>
<td>Munif Allanson</td>
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<td>2010 - 2011</td>
<td>Liza Snow</td>
<td>Scott Byrne</td>
<td>Terry Piva</td>
<td>Wayne Reilly</td>
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<td>2011 - 2012</td>
<td>Terry Piva</td>
<td>Scott Byrne</td>
<td>Shalini Muthusamy</td>
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<tr>
<td>2012 - 2013</td>
<td>Terry Piva</td>
<td>Scott Byrne</td>
<td>Shelley Gorman</td>
<td>Wayne Reilly</td>
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<tr>
<td>2013 - 2014</td>
<td>Terry Piva</td>
<td>Scott Byrne</td>
<td>Shelley Gorman</td>
<td>Wayne Reilly</td>
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<tr>
<td>2014 - 2015</td>
<td>Terry Piva</td>
<td>Scott Byrne</td>
<td>Shelley Gorman</td>
<td>Wayne Reilly</td>
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<tr>
<td>2015 - 2016</td>
<td>Scott Byrne</td>
<td>Shelley Gorman</td>
<td>Katie Dixon</td>
<td>Wayne Reilly</td>
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<tr>
<td>2016 - 2017</td>
<td>Scott Byrne</td>
<td>Shelley Gorman</td>
<td>Katie Dixon</td>
<td>Wayne Reilly</td>
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<tr>
<td>2017 - 2018</td>
<td>Scott Byrne</td>
<td>Shelley Gorman</td>
<td>Katie Dixon</td>
<td>Wayne Reilly</td>
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<tr>
<td>2018 - 2019</td>
<td>Scott Byrne</td>
<td>Shelley Gorman</td>
<td>Katie Dixon</td>
<td>Wayne Reilly</td>
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<tr>
<td>2019 - 2020</td>
<td>Scott Byrne</td>
<td>Shelley Gorman</td>
<td>Katie Dixon</td>
<td>Wayne Reilly</td>
</tr>
<tr>
<td>2020 - 2022</td>
<td>Scott Byrne</td>
<td>Shelley Gorman</td>
<td>Katie Dixon</td>
<td>Wayne Reilly</td>
</tr>
</tbody>
</table>

AWARDS OF THE MOLECULAR AND EXPERIMENTAL PATHOLOGY SOCIETY OF AUSTRALIA

THE KUMAR AWARD

Named in honour of Prof Rakesh K Kumar, is for the best oral presentation by a postgraduate research student at the conference.

<table>
<thead>
<tr>
<th>YEAR</th>
<th>NAME OF AWARD WINNER</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>Terrence Poon, Suzanne Sime, Bernadette Bellette, Ritu Gupta</td>
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<tr>
<td>2001</td>
<td>Nita Agar, Munif Allanson, Samantha Mead</td>
</tr>
<tr>
<td>2002</td>
<td>Louise Dunn, Lisa Kaminskas, Matthew Knox</td>
</tr>
<tr>
<td>2003</td>
<td>Kristan Herbert, Karen Tsang, Gemma Williams</td>
</tr>
<tr>
<td>2004</td>
<td>Heidi Lim, Heather McGee, Keryn Simons, Eleni Yiassmidis</td>
</tr>
<tr>
<td>2005</td>
<td>Siva Dharabu, Katie Dixon, Geetha</td>
</tr>
<tr>
<td>2006</td>
<td>Heath McGee, Vanessa Sequeira</td>
</tr>
<tr>
<td>2007</td>
<td>Georgia Frost, Paul Sou, Cesar Tovar</td>
</tr>
<tr>
<td>2008</td>
<td>Megan Whitnall, Gabriella Brown</td>
</tr>
<tr>
<td>2009</td>
<td>Sula Thanos, Amy Suthers, Shruti Saptarshi</td>
</tr>
<tr>
<td>2010</td>
<td>Gabriella Brown, Royce Ng</td>
</tr>
<tr>
<td>2011</td>
<td>Katharine Herbert</td>
</tr>
<tr>
<td>2012</td>
<td>Felix Marsh-Wakefield</td>
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<tr>
<td>2013</td>
<td>Artur Shariev</td>
</tr>
<tr>
<td>2014</td>
<td>Clara Choi</td>
</tr>
<tr>
<td>2015</td>
<td>Amanda Patchett</td>
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<td>2016</td>
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<tr>
<td>2018</td>
<td>Rachael Ireland</td>
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<td>2019</td>
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THE MULLER AWARD

Named in honour of Prof H Konrad Muller, is for the best oral presentation by a postdoctoral researcher at the conference, dependent on the number of eligible presentations.

<table>
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<td>2002</td>
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<td>Scott Byrne</td>
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<td>2005</td>
<td>Louise Dunn</td>
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<td>Roslyn Malley</td>
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<td>2011</td>
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<td>Angela Ferguson</td>
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<td>Katharine Herbert</td>
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<td>2019</td>
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<tr>
<td>2020</td>
<td>Anneliese Gorman</td>
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THE MACPHEE AWARD

Named in honour of the late Prof Donald G MacPhee (obituary), is for the best poster presentation at the conference, dependent on the number of poster presentations.

<table>
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<th>Year</th>
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<td>2004</td>
<td>Heather McGee</td>
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<td>2005</td>
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<td>2006</td>
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<td>2007</td>
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<td>2008</td>
<td>James Musyoka</td>
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<td>2009</td>
<td>Gabby Brown</td>
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<td>2010</td>
<td>Cesar Tovar</td>
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<td>2011</td>
<td>Andrew Farrell</td>
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<td>2012</td>
<td>Natasha Kolesnikoff</td>
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<tr>
<td>2013</td>
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<td>2018</td>
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MEPSA LIFE MEMBERS

<table>
<thead>
<tr>
<th>Year</th>
<th>Name</th>
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<tbody>
<tr>
<td>2002</td>
<td>Konrad Muller</td>
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<td>2005</td>
<td>Geoff Grigg</td>
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<td>2008</td>
<td>Vivienne Reeve</td>
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<td>2017</td>
<td>Gary Halliday</td>
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<td>2017</td>
<td>Rakesh Kumar</td>
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<tr>
<td>2017</td>
<td>Liza Snow</td>
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<td>2017</td>
<td>Gregory Woods</td>
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<td>2020</td>
<td>Rebecca Mason</td>
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ANZORS OFFICE BEARERS 2022

<table>
<thead>
<tr>
<th>Role</th>
<th>Name</th>
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</thead>
<tbody>
<tr>
<td>ANZORS President</td>
<td>A/Prof Nathan Pavlos</td>
</tr>
<tr>
<td>Secretary</td>
<td>Dr Martina Barzan</td>
</tr>
<tr>
<td>Treasurer</td>
<td>Dr Dane Turner</td>
</tr>
<tr>
<td>Immediate Past President</td>
<td>A/Prof Egon Perilli</td>
</tr>
<tr>
<td>New Zealand Representative</td>
<td>Dr David Musson</td>
</tr>
<tr>
<td>Committee Members</td>
<td>A/Prof David Ackland</td>
</tr>
<tr>
<td></td>
<td>A/Prof Dominic Thewlis</td>
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<tr>
<td></td>
<td>Prof Hala Zreiqat</td>
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<tr>
<td></td>
<td>Prof Bogdan Solomon</td>
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<td>A/Prof John Costi</td>
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<td>A/Prof Justin Fernandez</td>
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<tr>
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<td>Dr Zufu Lu</td>
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<tr>
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<td>A/Prof Saulo Martelli</td>
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<tr>
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<td>Prof Gerald Atkins</td>
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<td>Prof Jiake Xu</td>
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<td>Dr Pazit Levinger</td>
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<td></td>
<td>Prof Peter Pivonka</td>
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<td>Prof Thor Besier</td>
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<tr>
<td></td>
<td>Prof Cory Xian</td>
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<tr>
<td></td>
<td>Dr Ramin Rohanizadeh</td>
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<td>A/Prof Tania Crotti</td>
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PAST ANZORS OFFICE BEARERS 1996-2024

<table>
<thead>
<tr>
<th>YEAR</th>
<th>PRESIDENT</th>
<th>SECRETARY</th>
<th>TREASURER</th>
<th>IMMEDIATE PAST PRESIDENT</th>
<th>NEW ZEALAND REPRESENTATIVE</th>
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</thead>
<tbody>
<tr>
<td>1996</td>
<td>David Wood</td>
<td></td>
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<tr>
<td>1997</td>
<td>David Wood</td>
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<td>Peter Choong</td>
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<td>Bill Walsh</td>
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<td>David Haynes</td>
<td>Hala Zreiqat</td>
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<td>Hala Zreiqat</td>
<td>John Costi</td>
<td>Jiake Xu</td>
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<td>2013 - 2015</td>
<td>Jiake Xu</td>
<td>Dominic Thewlis</td>
<td>Nathan Pavlos</td>
<td>Hala Zreiqat</td>
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<tr>
<td>2016 - 2018</td>
<td>Dominic Thewlis</td>
<td>Egon Perilli</td>
<td>Nathan Pavlos</td>
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<tr>
<td>2019 - 2021</td>
<td>Egon Perilli</td>
<td>Tania Crotti</td>
<td>David Ackland</td>
<td>Dominic Thewlis</td>
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<tr>
<td>2022 - 2024</td>
<td>Nathan Pavlos</td>
<td>Martina Barzan</td>
<td>Dane Turner</td>
<td>Egon Perilli</td>
<td>David Musson</td>
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AWARDS OF THE AUSTRALIAN AND NEW ZEALAND ORTHOPAEDIC RESEARCH SOCIETY

DAVID FINDLAY ECR AWARD WINNERS

<table>
<thead>
<tr>
<th>YEAR</th>
<th>WINNER</th>
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<tbody>
<tr>
<td>2015</td>
<td>Geoffrey Handsfield</td>
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<tr>
<td>2016</td>
<td>Rami Al-Dirini</td>
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<tr>
<td>2017</td>
<td>Claudia di Bella</td>
</tr>
<tr>
<td>2018</td>
<td>Junje Gao</td>
</tr>
<tr>
<td>2019</td>
<td>Dale Robinson</td>
</tr>
<tr>
<td>2020</td>
<td>*Not Awarded</td>
</tr>
<tr>
<td>2021</td>
<td>Carina Blaker</td>
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ECR AWARD WINNERS

<table>
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<tr>
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<tr>
<td>2011</td>
<td>Egon Perilli</td>
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<tr>
<td>2012</td>
<td>Pazit Levinger</td>
</tr>
<tr>
<td>2013</td>
<td>Mariana Kersh</td>
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<td>2014</td>
<td>John Arnold, Claire Jones</td>
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PHD STUDENT AWARD WINNERS

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<tr>
<td>2011</td>
<td>Diana Perriman</td>
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<td>2012</td>
<td>Melissa Cantley</td>
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<td>2013</td>
<td>Jiao Jiao Li</td>
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<tr>
<td>2014</td>
<td>Bay Sie Lim</td>
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<tr>
<td>2015</td>
<td>Audrey Chan</td>
</tr>
<tr>
<td>2016</td>
<td>Vonne M van Heeswijk</td>
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<tr>
<td>2017</td>
<td>Bryant Roberts</td>
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<tr>
<td>2018</td>
<td>Jacob Kenny</td>
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<tr>
<td>2019</td>
<td>Sophie Rapagna</td>
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<tr>
<td>2020</td>
<td>*Not Awarded</td>
</tr>
<tr>
<td>2021</td>
<td>Amy Ribet</td>
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MINGHAO ZHENG ORTHOPAEDIC INNOVATION AWARD WINNERS

<table>
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<td>Jacob Kenny</td>
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<td>2019</td>
<td>Martina Barzan</td>
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<tr>
<td>2020</td>
<td>*Not Awarded</td>
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<tr>
<td>2021</td>
<td>Scott Bolam</td>
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YOUNG INVESTIGATOR AWARD

<table>
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<th>YEAR</th>
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<tr>
<td>1997</td>
<td>Andrew Zannettino</td>
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<td>1998</td>
<td>Scott Mackie</td>
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<td>1999</td>
<td>John Costi</td>
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</table>

THE ONE TO WATCH AWARD

<table>
<thead>
<tr>
<th>YEAR</th>
<th>WINNER</th>
</tr>
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<tbody>
<tr>
<td>2018</td>
<td>Sophie Rapagna</td>
</tr>
</tbody>
</table>
VENUE
Gold Coast Convention and Exhibition Centre
2684 – 2690 Gold Coast Highway
Broadbeach, QLD 4218
Phone: +61 7 5504 4000

VENUE LAYOUT

THE REGISTRATION DESK
The registration desk is located in Foyer G located on the first floor. Any enquiries can be directed to ASN staff located at the registration desk except those regarding accommodation which should be dealt directly with your hotel.

The registration desk office hours are:

- Monday 1st August: 12:00PM – 6:00PM
- Tuesday 2nd August: 7:00AM – 6:30PM
- Wednesday 3rd August: 8:00AM – 7:00PM
- Thursday 4th August: 8:30AM – 4:00PM

LOADING YOUR ORAL PRESENTATION AT THE CONFERENCE
Oral presenters should bring their talk on a USB, saved in a format for display on a PC within the room (i.e. PowerPoint). You will need to load your presentation directly into the room in which you are presenting. A technician will be on hand to assist with any transfer / loading issues and to help you check your presentation. Please note there are no Macintosh computers in the presentation room – please format your USB drives appropriately (FAT32).

REGISTRATION
Conference delegates receive the following services as part of their registration:

- Access to the sessions of your choice
- Conference book
- Use of the Conference App
- Morning and/or afternoon tea for the days of nominated attendance
- Lunches on the days of nominated attendance
- Welcome Function (Monday 1st August)
- Conference Dinner (Wednesday 3rd August)

NAME TAGS
Delegates are required to wear their name tags to all scientific and catered sessions. Delegates should note that within their name tag pouch will be the specific function tickets they have purchased.

POSTER VIEWING
Delegates with posters can find the correct position for their poster by locating the appropriate abstract number on the display panels. The Plenary posters are displayed within the Foyers E & F and general posters are also displayed within the Foyers E & F, both located on the first floor. Use the program reference (or ANZBMS – MEPSA – ANZORS smart phone APP) to identify your abstract number and poster position. Presenters should stand next to their poster during allocated poster sessions. All posters (located in Foyers E & F) can be mounted on Monday afternoon and must be removed by lunch on Thursday.
ANZBMS – MEPSA – ANZORS POSTER SESSIONS
There are three official poster sessions at this year’s meeting:
ANBZMS Plenary Poster session – 6.00PM – 7.30PM, Monday 1st August, (Foyers E & F)
Poster session 1 – EVEN NUMBERS – 4.00PM – 5.00PM, Tuesday 2nd August, Foyers E & F (During Afternoon Tea)
Poster session 2 – ODD NUMBERS – 10.00AM – 11.00AM, Wednesday 3rd August (During Morning Tea)

SOCIAL FUNCTIONS

Welcome Function
Date: Monday 1st August 2022
Time: 6.00PM – 7.30PM
Price: Complimentary with Full Conference Registration
Location: Gold Coast Convention and Exhibition Centre
Additional ticket: $70.00
*Additional tickets for partners can be purchased in advance or at the registration desk.

ECIC Career Development Lunch
Date: Tuesday 2nd August 2022
Time: 12.30PM – 2.00PM
Price: $25.00
Location: Room 7 & 8. Lunch provided.

ECIC ‘Bones & Brews’ Networking Dinner
Date: Monday 1st August 2022
Time: 7.30PM – 10.30PM
Location: Kurrawa Surf Club – “Beachside”
Cost: $40.00
Student/ECR cost: $25.00
*This is a ticketed function; tickets can be purchased in advance or at the registration desk.

Clinical Cases in Metabolic Diseases Seminar
Date: Tuesday 2nd August 2022
Time: 7.30PM – 8.00PM
Price: $35 (Trainee or Student), $50 (others)
Location: Room 7 & 8.
Dinner and drinks provided

ANZBMS – MEPSA – ANZORS Conference Dinner
Date: Wednesday 3rd August 2022
Time: 7.30PM - Late
Price: $80 (Student/ECR), $120 (Other)
Location: Central Room A
*This is a ticketed function; tickets can be purchased in advance or at the registration desk. Pre-dinner drinks served from 7.15pm.

RECORDING & STREAMING OF SESSIONS AT ANZBMS – MEPSA – ANZORS 2022
All sessions within rooms 5 & 6 and 7 & 8 will be recorded and live streamed at the conference. If you do not wish to have your presentation recorded, please advise ASN Staff at the registration desk. Details on accessing the live stream and recordings have been previously sent to your email.

LECTURE ROOMS
All lectures for the joint meeting will run on level 1 at the Convention Centre. Rooms 4, 5 -6, 7 & 7-8 will be used for the duration of the conference.

The conference lecture rooms are supported by

AMGEN®

DIETARY REQUIREMENTS
If you requested a special meal, please make yourself known to the venue staff and advise your name and special request.

SMOKING
Smoking is not permitted in the venue.

MOBILE PHONES
Please ensure your mobile phone is turned off or on silent during any session you attend.

INSURANCE
The hosts and organisers are not responsible for personal accidents, any travel costs, or the loss of private property and will not be liable for any claims. Delegates requiring insurance should make their own arrangements.

DISCLAIMER
The hosts, organisers and participating societies are not responsible for, or represented by, the opinions expressed by participants in either the sessions or their written abstracts.
WI-FI INTERNET
Gold Coast Convention and Exhibition Centre provides complimentary Wi-Fi and signage will be placed around the venue and at the registration desk for access.

CONFERENCE APP
The App is displayed in a simple and easy to read format on your phone, iPad, or even your computer. To get the ‘App’, please open the following link in your internet browser on your phone, iPad or laptop: http://anzbms-mepsa-anzors-2022.m.asnevents.com.au/

Alternatively, scan the QR code below.

You will be prompted to add an icon onto your device home screen. The Smartphone/Mobile Device ‘App’ will allow you to:

- View the full conference program
- View all abstracts for the conference
- View the author listing
- Save your favourite sessions and plan your day
- Take notes which will then be saved and downloaded from your registration profile.
- To use most of these functions, you will be prompted to ‘log in’ each day.
INVITED PLENARY SPEAKERS

ANZBMS PLENARY SPEAKERS
Dr Andrew Burghardt  
University of California, USA

Dr Timo Damm  
University of Kiel, Germany

Dr Monika Frysz  
University of Bristol, United Kingdom

MEPSA PLENARY SPEAKERS
Prof. Robert Scrugg  
School of Population Health,  
University of Auckland, New Zealand

Em. Prof. Antony Young  
King’s College London,  
United Kingdom

INVITED SYMPOSIUM SPEAKERS

ANZBMS SYMPOSIUM SPEAKERS
Prof. Belinda Beck  
Griffith University, Australia

Prof. Peter Ebeling AO  
Monash University, Australia

A/Prof. Joshua Lewis  
Edith Cowan University, Australia

Ms Sandy Bevc  
XLH Australia

Dr Jenny Harrington  
Adelaide Women’s and Children’s Hospital, Australia

A/Prof. Michelle McDonald  
Garvan Institute of Medical Research, Australia

Prof. Mark Cooper  
University of Sydney, Australia

Prof. Anne-Marie Hill  
The University of Western Australia, Australia

Mrs Anne Trinh  
Monash Health, Australia

Prof. Robin Daly  
Deakin University, Australia

A/Prof. A/Prof. Michelle McDonald

MEPSA SYMPOSIUM SPEAKERS
Dr Anneliese Ashhurst  
University of Sydney, Australia

Dr Jazmina Gonzalez Cruz  
University of Queensland  
Diamantina Institute, Australia

Dr Angela Ferguson  
The University of Sydney /  
Centenary Institute, Australia

Prof. Ronald Sluyter  
Illawarra Health and Medical Research Institute, Australia

Mr Furkan Ince  
The University of Sydney, Australia

Ms Jacqueline Marshall  
University of Technology Sydney, Australia

ANZORS SYMPOSIUM SPEAKERS
Prof. Thor Besier  
University of Auckland, New Zealand

Prof. Ross Crawford  
Queensland University of Technology, Australia

Prof. David Findlay  
University of Adelaide, Australia

Dr Nathalie Bock  
Queensland University of Technology, Australia

A/Prof. Claudia di Bella  
University of Melbourne, Australia

Dr Kathryn Stok  
University of Melbourne, Australia
## MONDAY 1ST AUGUST 2022

### PROGRAM AT A GLANCE

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
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<tbody>
<tr>
<td>7:30am - 10:00am</td>
<td>Plenary Session, EOC Vision and Mission, and Other Informed Plastic Surgery Topic</td>
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<tr>
<td>10:00am - 1:00pm</td>
<td>Lunch</td>
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<td>1:00pm - 7:00pm</td>
<td>Abstracts and EOC Members Update, EOC Governance and Reporting</td>
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### TUESDAY 2ND AUGUST 2022

<table>
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<td>1:00pm - 7:00pm</td>
<td>Abstracts and EOC Members Update, EOC Governance and Reporting</td>
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<tr>
<td>7:30am - 11:30pm</td>
<td>ANZBMS Opening</td>
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<tr>
<td>12:00pm - 2:00pm</td>
<td>LUNCH</td>
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<tr>
<td>2:00pm - 4:00pm</td>
<td>ANZBMS/GMEPAS/ANZORS Symposium: Introducing Symposium</td>
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<tr>
<td>4:30pm - 6:30pm</td>
<td>Coffee Break</td>
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<tr>
<td>6:30pm - 8:30pm</td>
<td>Dinner</td>
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<tr>
<td>8:30pm - 10:30pm</td>
<td>ANZORS Plenary Talks</td>
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<tr>
<td>10:30pm - 12:00am</td>
<td>Opening Tea and Plenary Talks (contd)</td>
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**THURSDAY 4 August 2022**
PROGRAM

MONDAY 1ST AUGUST 2022

Registration Opens
12:00PM - 6:00PM  
Foyer G

MEPSA AGM
12:30PM - 3:00PM  
Room 4
Lunch boxes provided for attendees of this session inside Rooms 4.

ECIC Speed Networking: bridging the gap between EMCRs and Seniors
4:00PM - 5:30PM  
Room 7

Welcome Function + ANZBMS Plenary Posters
6:00PM - 7:30PM  
Foyer E & F

Bones & Brews
7:30PM - 10:30PM  
Kurrawa Surf Club
TUESDAY 2ND AUGUST 2022

Registration Opens
7:00AM - 6:30PM

ANZBMS Therapeutics Breakfast Discussion Session
7:30AM - 9:00AM
Rooms 7 & 8
Chairs: Belinda Beck & Richard Prince

7:30 AM  Belinda Beck
The role of high intensity supervised exercise intervention in osteoporosis therapy.

7:55 AM  Madhuni Herath
A local (ANZ) perspective on the management of primary hyperparathyroidism.

8:20 AM  Richard Prince
The pharmaceutical prescription for prevention of fracture in Australia 2022.

ANZBMS-MEPSA-ANZORS Plenary: MSK Imaging
9:00AM - 10:30AM
Rooms 5 & 6
Chairs: Ayse Zengin & Kathryn Stok

9:00 AM  Andrew Burghardt
Emerging approaches to investigate musculoskeletal health from HR-pQCT imagery abs# 1

9:30 AM  Joshua Lewis
VFA's: You "aorta" look beyond vertebral fractures. abs# 2

10:00 AM  Timo Damm
AI-driven image classification of radiographic data for prospective fracture prediction – global state and current work at the i²Lab. abs# 3

Morning Tea
10:30AM - 11:00AM
ANZBMS/AMGEN Outstanding Abstracts
11:00AM - 12:15PM Rooms 5 & 6
Chairs: Natalie Sims & David Scott

11:00 AM **Charles Inderjeeth**
Treating osteoporosis and dementia with anti-dementia medication acetylcholinesterase inhibitors may have therapeutic benefits on osteoporotic bone by attenuating osteoclastogenesis and bone resorption *abs# 4*

11:15 AM **Michael J Rogers**
Bisphosphonates may boost immune responses to pulmonary infection by acting on tissue-resident macrophages in the lung *abs# 5*

11:30 AM **Minghao Zheng**
Endothelial cells require mitochondrial transfer from osteocytes to promote vascularization in cortical bone *abs# 6*

11:45 AM **Brya Matthews**
Epidemiology of fractures in different ethnic groups across the lifespan in New Zealand *abs# 7*

12:00 PM **John Eisman**
Fracture risk in women with osteoporosis treated with gastro-resistant (ec) risedronate versus immediate release risedronate or alendronate: a claims data analysis in the United States *abs# 8*

Session sponsored by *AMGEN®*

ANZBMS Highest Rated Student Abstract
12:15PM - 12:30PM Rooms 5 & 6
Chairs: Natalie Sims & David Scott

12:15 PM **Tian Nie**
Estradiol increases bone mass and strength in a pre-clinical mouse model of male-to-female transition during adulthood *abs# 9*
ANZORS-MEPSA Symposium: Musculoskeletal and regenerative biology
11:00AM - 12:30PM
Chairs: Nathan Pavlos & Rachel W. Li

11:00 AM  **David Findlay**
RANKL discovery: a model for basic science research? *abs# 10*

11:30 AM  **Amy Ribet**
Sugar transporter Slc37a2 regulates bone metabolism via a dynamic tubular lysosomal network in osteoclasts *abs# 11*

11:42 AM  **Dzenita Muratovic**
Structural and cellular characterisation of the osteochondral tissue in hip and knee osteoarthritis. *abs# 12*

11:54 AM  **Kieran J Bennett**
Strain Distributions Within the Proximal Tibia Calculated Using Digital Volume Correlation of Micro-CT Images *abs# 13*

12:06 PM  **Carina Blaker**
Functional group differences in the biomechanical and biochemical properties of human hand tendons *abs# 14*

Lunch
12:30PM - 2:00PM
Foyer E & F

Amgen Lunchtime Symposium: Clinical experience with romosozumab in Australia
12:35PM - 1:45PM
Chair: Dr Cherie Chiang

**Prof Jackie Center**
Endocrinologist, Garvan Institute of Medical Research, St Vincent’s Hospital, Sydney

**Clinical Prof Charles Inderjeeth**
Rheumatologist & Geriatrician, North Metropolitan Health Service and University of Western Australia, Perth

*Lunch boxes provided for attendees of this session outside of Rooms 5 & 6.*

*Session sponsored by AMGEN®*
ECIC Career Development Lunch: Building Resilience in STEM: Bouncing forward not just back from adversity
12:30PM - 2:00PM
Rooms 7 & 8
Chairs: John Kemp, Bridie Mulholland & Melissa Cantley
Identify your response to adversity in these tough times
Learn the 4-step Resilience method to regain control
Develop a simple plan to take back control and thrive in your career and life.

Lunch boxes provided for attendees of this session outside Rooms 7 & 8.

Session sponsored by

ANZBMS Roger Melick Young Investigator Award Symposium
2:00PM - 3:36PM
Rooms 5 & 6
Chairs: Jillian Cornish & Andrew Burghardt

2:00 PM  Martha Blank
EphrinB2 and lysosomes in osteocytes are essential for collagen arrangement in the extracellular matrix abs# 15

2:12 PM  Ahmed AA Al Saedi
MicroRNA cargo of extracellular vesicles released by skeletal muscle negatively regulates the bone quality in obese mice abs# 16

2:24 PM  Kaitlyn A Flynn
Identifying genes involved in hip osteoarthritis and describing the cells in which they are differentially expressed abs# 17

2:36 PM  Eugenie Macfarlane
Skeletal glucocorticoid signalling plays a critical role in bone loss driven by circadian rhythm disruption abs# 18

2:48 PM  Ruth Frampton
Asymptomatic vertebral fractures predict subsequent clinical fracture in both men and women abs# 19

3:00 PM  Huy G Nguyen
Identification of asymptomatic vertebral fracture using Artificial Intelligence (AI) abs# 20

3:12 PM  Alexander H Seeto
Bayesian Network Meta-Analysis of All-Cause Mortality in Trials of Osteoporosis Therapies abs# 21

3:24 PM  Elisabeth Ng
A low serum alkaline phosphatase may signal the presence of hypophosphatasia in patients with reduced bone mineral density or fragility fractures abs# 22
ANZBMS Abstracts
3:36PM - 4:00PM Rooms 5 & 6
Chairs: Jillian Cornish & Andrew Burghardt

3:36 PM  Grahame J Elder
Patients on dialysis are at lower risk for mortality when treated with non-calcium-based phosphate binders. *abs# 23*

3:48 PM  Jeffrey Hassall
The proportion of patients who reach the BMD surrogate threshold effect on romosozumab: a post hoc analysis of the randomised FRAME and ARCH phase 3 trials *abs# 24*

ANZORS ECR Award talks
2:00PM - 2:36PM Rooms 7 & 8
Chairs: Carina Blaker & Dane Turner

2:00 PM  Peilin Chen
Fabrication of bio-textile collagen rope for ACL regeneration *abs# 25*

2:12 PM  Azadeh Nasseri
Comparative Effects of Surgical And Non-Surgical Therapy on Hip Contact Force For Femoroacetabular Impingement Syndrome *abs# 26*

2:24 PM  Javad Tavakoli
Intervertebral disc-on-a-chip: a precision-engineered platform for low back pain studies *abs# 27*

Minghao Zheng Orthopaedic Innovation Award talks
2:36PM - 3:00PM Rooms 7 & 8
Chairs: Scott Bolam & Dane Turner

2:36 PM  Jiao Jiao Li
On stem cell therapy for osteoarthritis: An *in vitro* investigation to explain clinical outcomes *abs# 28*

2:48 PM  Megan J Roser
Vertebral Body Tethering Functions as an Internal Brace for Patients with Adolescent Idiopathic Scoliosis *abs# 29*

ANZORS Oral Abstracts
3:24PM - 4:00PM Rooms 7 & 8
Chair: Dermot O'Rourke

3:24 PM  William S du Moulin
Mechanical effects of semitendinosus tendon harvesting on knee function *abs# 30*

3:36 PM  Ashvin Thambyah
Stribeck curves of cartilage-on-cartilage shearing: a comparison of healthy versus mildly degenerate tissue *abs# 31*

3:48 PM  Hans A Gray
A six-dimensional envelope to describe failure in an amputated femur with an osseointegrated implant under external loads *abs# 32*
MEPSA Symposium: Infection, Immunity and Inflammation I
2:00PM - 4:00PM
Room 4
Chairs: Rachael Ireland & Scott Byrne

2:00 PM  Scott Byrne
Harnessing peptide-based therapy to control inflammatory disease abs# 33

2:30 PM  Jack W Rawlings
Immunomodulatory human peptide RP23 alleviates atopic dermatitis-like inflammation in an oxazolone-induced murine model of disease abs# 34

2:50 PM  Zhen Zeng
Understanding CD8⁺ T cell killing mechanisms in UV-induced tumour models abs# 35

3:10 PM  Wendong Gao
Targeting hematoma regulation via platelet membrane coating for advanced clot-immunomodulation abs# 37

3:40 PM  Rouha MS Granfar
The effects of GCSF in human and murine osteoclast differentiation and mature function models abs# 214

Afternoon Tea + Even Numbered Poster Session
4:00PM - 5:00PM
Foyer E & F

ANZBMS-MEPSA-ANZORS Plenary: Musculoskeletal Management: insights from consumer groups & allied health
5:00PM - 6:00PM
Rooms 5 & 6
Chairs: Albert Kim & Belinda Beck

5:00 PM  Sandy Bevc
Understanding the burden of disease for those living with X-Linked Hypophosphatemia: a consumer perspective. abs# 38

5:30 PM  Anne-Marie Hill
Fall prevention – how to translate into client management of bone health abs# 39

Session sponsored by Kyowa Kirin
ANZBMS Abstracts
6:00PM - 7:00PM  
Chairs: Albert Kim & Belinda Beck

6:00 PM  **Craig F Munns**  
Understanding the burden of disease for those living with X-Linked Hypophosphatemia: a consumer perspective  
*abs# 40*

6:12 PM  **Agnieszka Arthur**  
Mice lacking ephrinB1 in the osteogenic lineage display craniomaxillofacial abnormalities  
*abs# 41*

6:24 PM  **Charles Inderjeeth**  
Lupus patients have increased fracture risk, recurrent fracture risk and 5 year mortality  
*abs# 42*

6:36 PM  **Kylie A Alexander**  
Gram negative bacterial infections drive neurogenic heterotopic ossification after spinal cord or brain injury in mice and humans  
*abs# 43*

6:48 PM  **Liyan Wang**  
A case of hypophosphatasia treated with asfotase alfa  
*abs# 44*

ANZORS Symposium: Innovation in Bioengineering and Orthopaedics
5:00PM - 6:30PM  
Chairs: Jillian Cornish & Mark Taylor

5:00 PM  **Nathalie Bock**  
Bioengineering humanized bone microenvironment models for cancer research applications.  
*abs# 45*

5:30 PM  **Faseeh Zaidi**  
Wearable sensors show differences in functional outcomes between robotic and conventional total knee arthroplasty  
*abs# 46*

5:42 PM  **Praveen Krishna**  
Comparing statistical shape modelling and contralateral mirroring in regenerating hemipelvis surface geometry  
*abs# 48*

5:54 PM  **Lan Xiao**  
Gold Nanocluster-induced Immunomodulation for Tissue regeneration via Mitophagy Regulation: A Perspective on Materiobiology  
*abs# 49*

6:06 PM  **Katrina Browne**  
Translation from bench to bedside: testing a novel antimicrobial bone allograft in a standard rabbit distal femoral defect model  
*abs# 50*
ECIC Clinical Cases in Metabolic Bone Disease Seminar
7:30PM - 10:00PM
Rooms 7 & 8

7:30 PM  Mawson Wang
Skin and bones: systemic mastocytosis and osteoporosis abs# 51

7:50 PM  Emma Croker
The RANK-L’s with Polyostotic Fibrous Dysplasia Treatment in Adulthood abs# 52

8:10 PM  Lucy Collins
An unusual cause of hypercalcemia in two siblings abs# 53

8:30 PM  Louise S Goodall
Multiple vertebral fractures in a patient with severe COVID-19 treated with lung transplantation abs# 54

8:50 PM  Christopher Preston
Diagnostic dilemma: progressive femoral lesion in a young woman abs# 55

9:10 PM  Tomasz J Block
A RUNX1 germline mutation as a novel cause of previously unexplained severe osteoporosis in a young male abs# 56

MINIMUM PRODUCT INFORMATION CRYSVITA® (burosumab) solution for injection

**THERAPEUTIC INDICATION:** CRYSVITA® (burosumab) is indicated for the treatment of X-linked hypophosphataemia (XLH) in adults, adolescents and children 1 year of age or older.

**DOSE AND ADMINISTRATION:** The recommended starting dose regimen for paediatrics (children 1-11yrs and adolescents 12-17yrs) is 0.8 mg/kg of body weight, rounded to the nearest 10 mg, every 2 weeks, up to a maximum dose of 90 mg. The recommended dose regimen in adults (18yrs and older) is 1 mg/kg of body weight, rounded to the nearest 10 mg up to a maximum dose of 90 mg, administered every 4 weeks. Treatment should be initiated and monitored by specialist medical practitioners experienced in the management of patients with metabolic bone disease. Fasting serum phosphate concentration should be below the reference range for age prior to initiation of treatment. CRYSVITA® is administered by subcutaneous injection and should be administered by a healthcare provider. The maximum volume of CRYSVITA® per injection site is 1.5 mL. If multiple injections are required, administer at different injection sites.

**CONTRAINDICATIONS:** Hypersensitivity to CRYSVITA® or to any of the excipients. Concurrent administration with oral phosphate and / or active vitamin D analogues. Serum phosphate level within or above the normal range for age at initiation of treatment. Severe renal impairment or end stage renal disease.

**PRECAUTIONS:** Discontinue oral phosphate and active vitamin D analogues at least 1 week prior to initiating CRYSVITA® treatment. Monitor for signs and symptoms of nephrocalcinosis, hyperphosphatemia, ectopic mineralisation, and serious hypersensitivity reactions. Administration should be interrupted in any patient experiencing severe injection site reactions. Discontinue if serious hypersensitivity reaction occurs. Monitoring for signs and symptoms of nephrocalcinosis due to ectopic mineralisation, e.g. by renal ultrasonography, is recommended at the start of treatment and every 6 months for the first 12 months of treatment, and annually thereafter. Monitoring of urine calcium and phosphate is suggested every 3 months. Monitoring of plasma alkaline phosphatase, calcium, parathyroid hormone (PTH) and creatinine is recommended every 6 months (every 3 months for children 1 - 2 years) or as indicated. INTERACTIONS: Concurrent administration of CRYSVITA® with oral phosphate and active vitamin D analogues is contraindicated as it may cause an increased risk of hyperphosphataemia and hypercalcemia. Caution should be exercised when combining CRYSVITA® with calcinomimetic medicinal products. ADVERSE EFFECTS: Very common adverse reactions (>10%) reported in paediatric patients (≥1-17yrs) during clinical trials who had received at least 1 dose of CRYSVITA® were: injection site reactions, cough, headache, pyrexia, pain in extremity, vomiting, tooth abscess, vitamin D decreased, diarrhoea, rash, nausea, constipation, dental caries and myalgia. Common adverse reactions (≥1%) reported in paediatric patients ≥1 year of age during clinical trials who had received at least 1 dose of CRYSVITA® were: dizziness and blood phosphorus increased. Very common adverse reactions (>10%) reported in adult patients (≥18yrs) who had received at least 1 dose of CRYSVITA® during clinical trials were: back pain, headache, tooth infection, restless legs syndrome, muscle spasms, vitamin D decrease and dizziness. Common adverse reactions (≥1%) reported in adult patients who had received at least 1 dose of CRYSVITA® during clinical trials were: constipation and blood phosphorus increased. Content based on full CRYSVITA® Product Information. Date Approved: 10 Sept 2021.


**PBS INFORMATION:** This medicine is not available through the PBS
CRYSVITA® restores phosphate homeostasis

In Children

Compared to conventional therapy, CRYSVITA®:

- Significantly improved rickets healing and reduced severity
- Significantly improved growth and mobility outcomes
- Significantly improved biochemical markers of phosphate regulation and bone health

In Adults

Compared to baseline, CRYSVITA®:

- Improved fracture and pseudo-fracture healing
- Significantly improved physical function and mobility whilst reducing stiffness and pain at its worst
- Improved quality of life

Adverse events were generally mild or moderate in severity. No adverse drug reactions led to treatment discontinuation.

PBS INFORMATION: This medicine is not available through the PBS

Recommended for inclusion on the PBS at the May 2022 PBAC Intracyle Meeting. Visit us at ANZBMS booth 8/9 for further information.

Please review full Product Information before prescribing. Minimum Product Information is available from the adjacent page. CRYSVITA® (burosumab) is indicated for the treatment of X-linked hypophosphataemia (XLH) in adults, adolescents and children 1 year of age or older.

WEDNESDAY 3rd AUGUST 2022

Registration Opens
8:00AM - 7:00PM

ANZBMS Christopher and Margie Nordin Young Investigator Award Symposium
8:00AM - 9:00AM
Chairs: Marc Sim & Rachel Davey

8:00 AM  Delin Liu
Regulation of blood-brain barrier by a subset of astrocytes that express osteocyte marker DMP-1
abs# 244

8:06 AM  Ensieh Hajimotallebi
Identification of epigenetic factors deregulated in skeletal stem cells during high fat/glucose mediated inhibition of bone formation. abs# 245

8:12 AM  Yuqing Mu
The osteoinductive potential of the nutrient inorganic components from the bone microenvironment for in situ bone tissue engineering abs# 246

8:18 AM  Dinh-Tan Nguyen
Automated Grading System of Radiographic Knee Osteoarthritis Severity Using Deep Learning abs# 247

8:24 AM  Selwin Gabriel Samuel
Pathogen-associated molecular patterns produced by infectious microbes worsen Neurogenic Heterotopic Ossifications after spinal cord injury abs# 248

8:30 AM  Abadi Kahsu Gebre
Clinical cardiovascular disease and long-term falls risk: The Perth Longitudinal Study of Ageing in Women abs# 249

8:36 AM  Navira Samad
Poor alignment of a smaller femur with the upper body may contribute to increased fracture risk in women with POI abs# 250

8:42 AM  Jun Yuan
Elevated bone-derived sclerostin in plasma is associated with high brain amyloid-β load in cognitively normal older adults abs# 251

8:48 AM  Anuj Shah
Changes in body composition are associated with incident vertebral deformities over 10.7 years abs# 252

8:54 AM  Carrie-Anne Ng
Associations of Mechanical Loading from Physical Activity with Bone Mineral Density, Physical Function and Knee Impairment in Older Adults: the Tasmanian Older Adult Cohort (TASOAC) Study abs# 253
ANZORS PhD award talks
9:00AM - 10:00AM
Chairs: Amy Ribet & David Ackland

9:00 AM  Kieran J Bennett
Ex vivo assessment of surgically repaired tibial plateau fracture displacement under axial load using large-volume micro-CT abs# 57

9:12 AM  Beichen Shi
Development of predictive statistical shape models for paediatric lower limb bones abs# 58

9:24 AM  Lauren S Wearne
Anterior lift-off of implanted press-fit tibial tray during deep knee bend: a time-elapsed micro-CT and digital volume correlation analysis. abs# 59

9:36 AM  Samantha A Hefferan
Histological characterisation of different tendons of the human hand abs# 60

9:48 AM  Nicholas J Gunn
Examination of the interaction of autophagy and antibiotics in Staphylococcus aureus persistent infection of osteocytes abs# 61

Morning Tea + Odd Numbered Poster Session
10:00AM - 11:00AM
Foyer E & F

ANZBMS/ANZORS/MEPSA Plenary: Cancer and bone
11:00AM - 12:30PM
Rooms 5 & 6
Chairs: Melissa Cantley, Ross Crawford & Scott Byrne

11:00 AM  Michelle McDonald
Bone microenvironment regulation of tumour outgrowth abs# 62

11:30 AM  Claudia Di Bella
Bioengineering solutions for articular cartilage regeneration abs# 63

12:00 PM  Ronald Sluyter
The ATP-P2X7 signalling axis in graft-versus-host disease: Recent insights from humanised mouse studies abs# 64

ANZBMS Abstracts
12:30PM - 1:30PM
Rooms 5 & 6
Chairs: Melissa Cantley & Hong Zhou

12:30 PM  Emma J Buckels
Transient lipodystrophy protects against high-fat diet-induced bone volume loss in male mice abs# 65

12:42 PM  Thach Tran
Multimorbidity compounds excess mortality following proximal fractures: A nationwide cohort study abs# 66

12:54 PM  Ming-Hao Zheng
Osteocytes regulate organismal senescence of bone and bone marrow abs# 67
1:06 PM  Melissa D Cantley  
Spatially resolving the bone marrow microenvironment in MGUS and multiple myeloma  abs# 68

Lunch  
1:30PM - 2:30PM  
Foyer E & F

Kyowa Kirin Lunchtime Symposium: Introducing Crysvita - A new era in the management of XLH.  
1:40PM - 2:20PM  
Room 7  
Chair: Peter Ebeling

1:40 PM  Topic 1. Welcome from the Sponsor  
Dr Tiffany Bamford, Kyowa Kirin Australia Medical Affairs

1:43 PM  Introductions & learning objectives from the Chair  
Prof Peter Ebeling (Chair), Head Dept of Medicine, School of Clinical Sciences at Monash Health, Faculty of Medicine, Nursing and Health Sciences

Topic 2. X-Linked Hypophosphataemia

1:45 PM  XLH: Looking back, looking forward  
Prof Craig Munns, Head of Mayne Academy of Paediatrics and Director of Child health Research Centre, University of Queensland; Paediatric Endocrinologist, Queensland Children’s Hospital.

Topic 3: Introducing CRYSVITA® (burosumab) - a new treatment option for XLH

1:50 PM  The safety and efficacy of CRYSVITA® in paediatrics  
Prof Craig Munns, Head of Mayne Academy of Paediatrics and Director of Child health Research Centre, University of Queensland; Paediatric Endocrinologist, Queensland Children’s Hospital.

1:58 PM  The safety and efficacy of CRYSVITA® in adults  
Dr Syndia Lazarus, Endocrinologist, Queensland Health

Panel Discussion

2:06 PM  The practical use of CRYSVITA® in Australia  
Prof Peter Ebeling, Prof Craig Munns & Dr Syndia Lazarus

2:18pm  Close  
Prof Peter Ebeling (Chair)

Lunch boxes provided for attendees of this session outside of Room 7.

Session sponsored by

ANZORS AGM  
1:30PM - 2:30PM  
Room 4

Lunch boxes provided for attendees of this session outside of Room 4.
ANZBMS/ANZORS Symposium: Lifecourse management of MSK health: paediatrics to adulthood
2:30PM - 3:30PM  
Rooms 5 & 6
Chairs: Peter J Simm & Hanh Nguyen

2:30 PM  **Jenny Harrington**  
Transitioning adolescents with osteogenesis imperfecta to adult care: challenges and opportunities.  
abs# 69

3:00 PM  **Anne Trinh**  
Transition services for bone health in adolescents and young adults  
abs# 70

ANZBMS Abstracts
3:30PM - 4:30PM  
Rooms 5 & 6
Chairs: Peter J Simm & Hanh Nguyen

3:30 PM  **Dermot O'Rourke**  
Geometry and bone mineral density determinants of femoral neck strength changes following exercise  
abs# 71

3:42 PM  **Elaine M Dennison**  
What impact have therapeutic advances for musculoskeletal health had on mortality risk – do we see differential relationships for muscle and bone?  
abs# 72

3:54 PM  **Ngoc Huynh**  
Association Between Lifestyle Factor and Bone Loss in Elderly Women  
abs# 73

4:06 PM  **David Scott**  
A 6-month digital health osteoporosis self-management intervention delivered via Amazon Alexa improved osteoporosis knowledge and falls self-efficacy in postmenopausal women with osteoporosis  
abs# 74

4:18 PM  **Tuan V Nguyen**  
An individualized approach for assessing change in bone mineral density  
abs# 75

ANZORS Symposium: Biomechanics
2:30PM - 4:36PM  
Room 7
Chairs: Belinda Beck, David John Saxby & Geoffrey Handsfield

2:30 PM  **Thor Besier**  
All models are wrong, but some are useful: The challenge of model complexity for orthopaedic application  
abs# 76

3:00 PM  **Ryan Tiew**  
Finite element modelling to predict femoral fractures in transfemoral amputees with osseointegrated implants  
abs# 77

3:12 PM  **Sarah Woodford**  
Three-dimensional kinematics of the jaw following unilateral and bilateral prosthetic TMJ surgery  
abs# 78

3:24 PM  **Ziming Chen**  
Overload-induced extracellular mitochondria releasing from tendon organoid leads to inflammation  
abs# 79
3:36 PM  Dale L Robinson
Lumbar spinal canal occlusion due to bulging of intervertebral disc  abs# 80

3:54 PM  Yihang Yu
A pipeline to morph the finite element model of lumbar spine  abs# 81

4:06 PM  Hossein Mokhtarzadeh
A nonlinear controller algorithm to design a self-paced treadmill based on the real-time center of mass data  abs# 82

4:18 PM  Alexis Brierty
Surgical outcomes following tibialis anterior tendon transfer for recurrent congenital talipes equinovarus (CTEV).  abs# 83

MEPSA Symposium: Infection, Immunity and Inflammation II
2:30PM - 4:30PM
Room 4
Chairs: Anneliese Ashhurst & Angela Ferguson

2:30 PM  Anneliese Ashhurst
Mucosal protein-based vaccination with a TLR2-stimulating adjuvant induces potent local immunity against SARS-CoV-2 in mice  abs# 84

3:00 PM  Angela L Ferguson
High-dimensional spatial analysis of the tumour-microenvironment to determine metastatic disease progression and response and resistance to therapy.  abs# 85

3:30 PM  Jacqueline Marshall
Tuft cells regulate inflammation in the lung during influenzaA virus infection  abs# 86

4:00 PM  Rachael A Ireland
Local and systemic effects of narrowband UVB irradiation in mice  abs# 87

Afternoon Tea
4:30PM - 5:00PM
Foyer E & F

ANZBMS Abstracts
5:00PM - 6:00PM
Rooms 5 & 6
Chairs: David Findlay & Cassandra Smith

5:00 PM  Hanh H Nguyen
Artificial Intelligence Based Diagnostic Software for Atypical Femur Fractures  abs# 88

5:12 PM  Ali Ghasem-Zadeh
Variance in Estimated Strength Along the Femoral Neck and Radius is Accounted for Differences in Macro- and Micro-architecture, not Bone Mass  abs# 89

5:24 PM  Marc Sim
Association between automated abdominal aortic calcification 24 scoring obtained from lateral spine images with long-term fracture risk: the Perth Longitudinal Study of Ageing Women  abs# 90

5:36 PM  Jakub Mesinovic
Agreement and associations between bone variables assessed via standard and high-resolution peripheral quantitative computed tomography  abs# 91
Andrew J Burghardt  
Contribution of local density variation to micro-finite element analysis in pediatric HR-pQCT  

ANZBMS AGM  
600PM - 6:30PM  
Rooms 5 & 6  

ANZORS Symposium: Translational Orthopaedics  
5:00PM - 6:30PM  
Room 7  
Chairs: Peter Lee & Claudia Di Bella  

5:00 PM  
Ross Crawford  
Translational orthopaedics from an academic surgeons perspective  

5:30 PM  
Stuart Callary  
Development of a patient specific workflow for the corroboration of FE models with clinical migration data: A case study of the implanted acetabulum  

5:42 PM  
Sanaa Zaki  
Sex differences in a pre-clinical model of injury-induced osteoarthritis  

5:54 PM  
Chan Hee Cho  
Can RSA measurements predict long-term acetabular implant loosening earlier than the current two-year time point?  

6:06 PM  
Anja R Zelmer  
Evaluating the effectivity of treatment options for intracellular S. aureus infections in osteomyelitis  

6:18 PM  
Aaron Hammat  
The Increased Hospital Cost of Treating Septic Revision Total Hip Arthroplasty  

MEPSA Symposium: Models of Human Disease  
5:00PM - 7:00PM  
Room 4  
Chairs: James Wells & Jazmina-Libertad Gonzalez-Cruz  

5:00 PM  
Jazmina L Gonzalez-Cruz  
Making personalization of cancer treatment a reality with Spatial transcriptomics  

5:30 PM  
James W Wells  
Development of a novel compound for the treatment of SCC in organ transplant recipients  

6:00 PM  
Shoaib Anwaar  
Is there a role for regulatory T cells in the establishment of Cutaneous Squamous Cell Carcinoma?  

Conference Dinner  
7:30PM - 11:30PM  
Central Room A  
*Pre-dinner drinks served from 7:15pm
THURSDAY 4TH AUGUST 2022

Registration Opens
8:30AM - 4:00PM
Foyer G

ANZBMS-MEPSA-ANZORS Plenary: Vitamin D - the essential vitamin for bone health
9:00AM - 10:30AM
Rooms 5 & 6
Chair: Rebecca Mason

9:00 AM  Antony R Young
Physical determinants of vitamin D synthesis abs# 102

9:40 AM  Robert Scragg
Vitamin D and Health – where is the research heading? abs# 103

ANZBMS Abstracts
9:00AM - 10:30AM
Room 7
Chairs: Jason Talevski & Joshua Lewis

9:00 AM  Takayuki Nabeshima
Delayed cortical bone healing due to inactivated Nrf2 signaling pathway in COPD mice abs# 104

9:12 AM  Kara B Anderson
Can alternative bone measures improve prediction of fracture in individuals with osteopenia or normal BMD? abs# 105

9:24 AM  Vasilios Panagopoulos
Plant-derived soybean peroxidase stimulates osteoblast collagen biosynthesis, matrix mineralization, and accelerates bone regeneration in a sheep model abs# 106

9:36 AM  Weiwen Chen
Ankle fractures increase subsequent fracture risk and mortality: The 45 and Up study, a population-based cohort study of New South Wales, Australia abs# 107

9:48 AM  Brya Matthews
Identifying Adult Human Skeletal Stem/Progenitor Cells in the Periosteum abs# 108

10:00 AM  Jayde A Collier
Is chronic peripheral vestibular dysfunction associated with bone-related and fall-related indices of fracture risk in community-dwelling older women? abs# 109

10:12 AM  Yinghong Zhou
The Regulatory Effect of Macrophages on Osteocytes abs# 110
ANZORS Abstracts
9:00AM - 10:30AM
Chairs: Gerald Atkins & Nathalie Bock

9:00 AM  Stephanie Khuu
A multi-scale mechanobiological model of skeletal muscle regeneration in typical and pathological conditions abs# 111

9:12 AM  David Musson
The effect of saturated fatty acid exposure on tenocyte health abs# 112

9:24 AM  Boopalan Ramasamy
Comparative analysis of human migratory and fibronectin adhesion assay derived chondroprogenitors to assess superiority for cartilage repair abs# 113

9:36 AM  Scott M Bolam
A high-fat diet has negative effects on tendon resident cells in an in vivo rat model abs# 114

9:48 AM  Rachel W. R Li
A Novel Material Evidences a Great Potential in Future Orthopaedic Implant abs# 115

Morning Tea
10:30AM - 11:00AM

ANZBMS Abstracts
11:00AM - 12:00PM
Chairs: John Kemp & Julie Pasco

11:00 AM  Jiake Xu
ADR3, a next generation i-body to human RANKL, inhibits osteoclast formation and bone resorption abs# 116

11:12 AM  Jeff Hassall
Long-term Effect of Denosumab on Bone Microarchitecture as Assessed by Tissue Thickness–Adjusted Trabecular Bone Score (TBS) in Postmenopausal Women with Osteoporosis: Results from the FREEDOM and Open-Label Extension (OLE) abs# 117

11:24 AM  Natalie Wee
Osteoblast precursor or osteoblast? Tracking cell differentiation in vivo and in vitro abs# 118

11:36 AM  Ian Reid
Zoledronate Reduces Height Loss Independently of Vertebral Fracture Occurrence in a Randomized Trial in Osteopenic Older Women abs# 119

11:48 AM  Peter Dr Pivonka
Assessment of strategies for safe drug discontinuation and transition of denosumab treatment in PMO - insights from a mechanistic PK/PD model of bone turnover abs# 120
ANZORS Symposium: Imaging
11:00AM - 12:30PM
Room 7
Chairs: Thor Besier, Egon Perilli & Azadeh Nasseri

11:00 AM  **Kathryn Stok**
A in vivo microCT imaging protocol for reproducible quantitative morphometric analysis of joint structures abs# 121

11:30 AM  **Xiaolong Fan**
Time-elapsed micro-CT imaging of humeral implant failure in reverse shoulder replacement abs# 122

11:42 AM  **Geoffrey Handsfield**
Muscle and Fascia Structural Changes Following Ankle Sprain Injury and Immobilization abs# 123

11:54 AM  **Rachel Chalmers**
Current challenges of 3D-printing spinal orthoses abs# 124

12:06 PM  **Jingrui Hu**
Linking the Ultrastructure and Micromechanics of Articular Cartilage abs# 125

ANZBMS Therapeutics vs Exercise: the Great Debate
12:00PM - 1:00PM
Rooms 5 & 6
Chair: Craig Munns

Panel: **Team Therapeutics**: Peter Ebeling & Mark Cooper  **VS Team Exercise**: Belinda Beck & Robin Daly

MEPSA Symposium - Vitamin D in Human Disease
11:00AM - 1:00PM
Room 4
Chairs: Grant Parnell & Katie Dixon

11:00 AM  **Paul H Anderson**
Mammary-specific ablation of Cyp24a1 reduces mammary density and inhibits tumour development in MMTV-PyMT breast cancer mice abs# 126

11:30 AM  **Grant P Parnell**
Defining how vitamin D promotes tolerogenic dendritic cells to enable its use in combined therapy for multiple sclerosis and other autoimmune diseases. abs# 127

11:55 PM  **Katie M Dixon**
Photoprotection by vitamin D compounds: finding the missing pieces to the photocarcinogenesis puzzle. abs# 128

12:20 PM  **Furkan A. Ince**
Photoprotection by vitamin D compounds: uncovering markers that predict efficacy in reducing photocarcinogenesis. abs# 129

12:45 PM  **Kun (Kathy) Zhu**
Tracking of vitamin D status and its association with bone loss in middle-aged Australians: Busselton Healthy Ageing Study. Abs# 209
Lunch
1:00PM - 2:00PM

ANZBMS Abstracts
2:00PM - 3:24PM
Chairs: Richard Prince & Monika Frysz

2:00 PM  Yea Rin Olivia Lee
Mass spectrometry imaging spatially identifies complex-type N-glycans as putative cartilage
degradation markers in human knee osteoarthritis tissue abs# 130

2:12 PM  Itamar Levinger
A meta-analysis examining the impact of wait time for orthopaedic consultation on pain levels in
individuals with osteoarthritis abs# 131

2:24 PM  Dzenita Muratovic
Compromised Osteocyte Viability and Connectivity: a Key Contributor to the Pathogenesis of Human
Hip Osteoarthritis. abs# 132

2:36 PM  Zubeyir Salis
Loss of body mass index (BMI) reduces the need for knee replacement: a multi-cohort survival
analysis abs# 133

2:48 PM  Jiao Jiao Li
Unveiling the role of microRNA-1 in chondrocytes and osteoarthritis abs# 134

3:00 PM  Thach Tran
Fracture risk assessment: does competing risk adjustment make a difference? abs# 135

3:12 PM  Xiwei Fan
Advanced Mass Spectrometry imaging technique provides novel approaches to understanding the
lipid fingerprinting of osteoarthritis progression abs# 136

B.O.N.E Speaker Presentation
3:24PM - 3:54PM
Chairs: Richard Prince & Monika Frysz

3:24 PM  Monika Frysz
Observational and genetic relationships between hip shape and hip osteoarthritis: findings from UK
Biobank abs# 137
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<th>TITLE</th>
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<td>Parental fracture in early life predicts early life fracture risk in offspring</td>
<td>Kara Anderson</td>
<td>abs# 200</td>
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<td>The effect of astaxanthin on the structural alterations in muscles of elastase-induced emphysema mouse models</td>
<td>Yosuke Mano</td>
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<td>Associations of body mass index, body fat percentage and sarcopenia components with bone health estimated by second-generation high-resolution peripheral quantitative computed tomography in older adults with obesity</td>
<td>Anoohya Gandham</td>
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<td>Development of Optimised Sintered Bovine Bone Block for Oral Grafting: Physio-chemical, mechanical and biological characterisation</td>
<td>Asrar Elahi</td>
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<td>Gender-related differences in bone architecture in Vietnamese</td>
<td>Duy K. Hoang</td>
<td>abs# 204</td>
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<td>Bayesian Network Meta-Analysis of Cancer Events in Trials of Osteoporosis Therapies</td>
<td>Alexander H Seeto</td>
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<td>Discordance in paretic and non-paretic hips bone density in hemiplegic stroke patients – a cross-sectional multicenter retrospective study</td>
<td>Hoo Young Lee</td>
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<td>Coronary stenosis scores in a cohort of osteoporosis medication users undergoing cardiac computed tomography at a single tertiary centre</td>
<td>Alexander J. Rodriguez</td>
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<tr>
<td>Fracture does not exist in isolation: What do commodities contribute to subsequent fracture and mortality risk?</td>
<td>Dana D Bliuc</td>
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<tr>
<td>Tracking of vitamin D status and its association with bone loss in middle-aged Australians: Busselton Healthy Ageing Study</td>
<td>Kun (Kathy) Zhu</td>
<td>abs# 209</td>
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<td>Targeting cancer cells through arginine starvation</td>
<td>Hui Yi Chew</td>
<td>abs# 210</td>
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<tr>
<td>Association between genotypes of the fat mass and obesity-associated gene (FTO) and osteoporosis phenotypes</td>
<td>Krisel De Dios</td>
<td>abs# 211</td>
</tr>
</tbody>
</table>
Ngoc Huynh
Association Between Polymorphisms in the Collagen Type 1 Alpha 1 (COLIA1) Gene and Bone Phenotypes abs# 212

Itamar Levinger
Osteocalcin and glucose regulation, show me the evidence abs# 213

Rouha MS Granfar
The effects of GCSF in human and murine osteoclast differentiation and mature function models abs# 214

BIOMECHANICS

Richard Prince
Assessment of measures of bone distribution within DXA image cross sections improves prediction of femoral neck fracture independent of aBMD abs# 216

Mélody Labrune
Validation of a musculoskeletal human shoulder model using advanced computational modelling abs# 217

Geoffrey Handsfield
Statistical Shape and Vector Field Model for Gastrocnemius Muscle Architecture Characterisation abs# 218

CARCINOGENESIS

Michelle L Maugham-Macan
A retrospective analysis of obesity, fracture risk and overall survival in breast cancer bone metastasis abs# 219

CLINICAL

Khuong-Duy Hoang
Prevalence of and risk factors for sarcopenia community-dwelling: Vietnam Osteoporosis Study abs# 220

Alexander J. Rodriguez
Acute ECG changes in patients receiving intravenous bisphosphonates: A systematic review and meta-analysis abs# 221

Shane Patella
IPN60130 for the treatment of fibrodysplasia ossificans progressiva: Methodology of the randomized, double-blind, placebo-controlled phase II FALKON trial abs# 222

Shane Patella
Palovarotene for the treatment of Fibrodysplasia Ossificans Progressiva: Methodology of the phase III open-label PIVOINE rollover trial abs# 223

Shane Patella
Joint function and quality of life in Fibrodysplasia Ossificans Progressiva: Results from an international burden of illness survey of patients and family members abs# 224

Carlie Bauer
Increased circulating levels of lipocalin-2 are associated with increased risk of metabolic syndrome the Perth longitudinal study of aging women abs# 225
Albert S Kim
Assessing the effect of Asian ethnicity on bone microarchitecture in patients with Atypical Femoral Fractures using 3D Dual X-Ray Absorptiometry (DXA) *abs# 226*

Pamela Rufus-Membere
Healthy reference intervals for bone impact microindentation: a multi-centre international study. *abs# 227*

Paul Bao Duy La
Osteoporosis and fracture risk assessment in adults with ischaemic stroke *abs# 228*

Anne Trinh
Reduced body mass index and reduced total lean mass but not cirrhosis are independent predictors of reduced bone mineral density and osteoporosis in chronic liver disease *abs# 229*

Caitlin Corkhill
Atypical anecdotes: three cases of stress fracture associated with denosumab use for osteoporosis *abs# 230*

Cassandra Smith
Extent of abdominal aortic calcification is associated with increased risk of rapid weight loss and cachexia: the Perth Longitudinal Study of Ageing Women *abs# 231*

S. Jade Barclay
Factors affecting pain management in adults with hypermobility-related multimorbidity *abs# 232*

**CLINICAL CASES**

Jessica M Del Gigante
Teriparatide used for bisphosphonate-associated atypical femoral fracture in multiple myeloma *abs# 233*

Joanna Gong
Hypophosphatemic osteomalacia with suppressed bone turnover *abs# 234*

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Infection, Immunity and Inflammation

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Amgen is committed to unlocking the potential of biology for patients suffering from serious illnesses by discovering, developing, manufacturing and delivering innovative human therapeutics. This approach begins by using tools like advanced human genetics to unravel the complexities of disease and understand the fundamentals of human biology. Amgen focuses on areas of high unmet medical need and leverages its expertise to strive for solutions that improve health outcomes and dramatically improve people’s lives. A biotechnology pioneer since 1980, Amgen has grown to be one of the world’s leading independent biotechnology companies, has reached millions of patients around the world and is developing a pipeline of medicines with breakaway potential.
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Kyowa Kirin Co., Ltd. is a research-based life sciences company, with special strengths in biotechnologies. In the core therapeutic areas of oncology, nephrology and immunology/allergy, Kyowa Kirin leverages leading edge biotechnologies centred on antibody technologies, to continually discover innovative new drugs and to develop and market those drugs worldwide. In this way, the company is working to realize its vision of becoming a Japan-based global specialty pharmaceutical company that contributes to the health and wellbeing of people around the world.

DESTINATION SPONSOR
Tourism Queensland

Welcome to Queensland
"Wunya" and "sew ngapa" Wunya (welcome, greetings) is from the Yuggera language of Brisbane and the Gubbi Gubbi language of the Sunshine Coast. Sew ngapa (welcome) is from the Kala Lagaw Ya and Kala Kawaw Ya languages of the Western Torres Straits. Our garden’s a one-million-year-old rainforest. Out the back is a red desert of dinosaur bones. Our swimming pool? The world’s largest reef. Here, you’ll find experiences like nowhere else on the planet, but where the most simple moments are just as memorable. Where we can reconnect with nature, ourselves and our loved ones by finding joy in both the big and little things, together. Simply put - your Days Like This are waiting.

EXHIBITORS

Australia and New Zealand Bone and Mineral Society (ANZBMS)

ANZBMS is a professional medical / scientific society established in 1988 to bring together clinical and experimental scientists and physicians actively involved in the study of bone and mineral metabolism in Australia and New Zealand. The mission of the ANZBMS is to be the premier Australasian society in the field of bone and mineral metabolism through promoting excellence in bone and mineral research, fostering the integration of clinical and basic science, and facilitating the translation of our science to health care and clinical practice. Key objectives to achieve these goals include the nurturing and development of the future generations of basic and clinical scientists, and the dissemination of new knowledge in bone and mineral metabolism through our Annual Scientific Meeting. The ANZBMS will be proactive in shaping research and health policies based on scientific advances in our field.

Echolight (distributed by Cortex Health)

Echolight (distributed by Cortex Health) is new technology using Radiofrequency Echographic Multi Spectrometry (REMS) via ultrasound through scanning of central reference sites of lumbar vertebrae (L1-L4) and the femoral neck. This assessment determines a T-score, Z-score and BMD (g/cm2) values and gives a diagnosis of normal/osteopenia/osteoporosis. TGA approved medical device.

GE Healthcare

As a leading global medical technology, diagnostics and digital solutions innovator, GE Healthcare enables clinicians to make faster, more informed decisions through intelligent devices, data analytics, applications and services, supported by its Edison intelligence platform. With over 100 years of healthcare industry experience and around 50,000 employees globally, the company operates at the centre of an ecosystem working toward precision health, digitizing healthcare, helping drive productivity and improve outcomes for patients, providers, health systems and researchers around the world. We embrace a culture of respect, transparency, integrity and diversity.

Gedeon Richter

Headquartered in Hungary, Gedeon Richter Plc. is an innovation-driven specialty pharmaceutical company. The activities of the Hungarian-directed multinational company are vertically integrated and involve pharmaceutical manufacturing, research and development, sales and marketing. Gedeon Richter’s goal is to help patients with innovative products to improve the quality of human life.
Getz Healthcare
www.getzhealthcare.com
Getz Healthcare has represented the Lunar brand for over thirty years. Partnering with the manufacturer, GE Healthcare, Getz offers advanced DEXA solutions including Prodigy and iDXA for use in clinical and research applications. To support our customers we provide comprehensive sales, applications and technical support across Australia and New Zealand.

Hologic
www.hologic.com
Hologic’s purpose is to empower people to live healthier lives everywhere, every day. This is achieved by bringing The Science of Sure® to life. As a leading innovator and champion for women’s health, Hologic helps healthcare professionals around the world diagnose and treat their patients with precision, certainty, and confidence. With ground-breaking technology at the core, Hologic innovations across breast & skeletal health, diagnostic solutions and GYN surgical solutions are designed to achieve exceptional clinical results, making it possible to detect, diagnose and treat illnesses and other health conditions earlier and more effectively.

Jared Coolwell Art
www.facebook.com/jaredcoolwellaboriginalart
Jared Coolwell is displaying some of his artwork within the exhibition at the ANZBMS MEPSA – ANZORS Conference. Feel free to make contact with Jared if you are interested in purchasing some of his artwork.

Materialise
www.materialise.com/en/medical
Materialise Medical, which has pioneered many of the leading medical applications of 3D printing, enables researchers, engineers and clinicians to revolutionize innovative patient-specific treatment that helps improve and save lives. Materialise Medical’s open and flexible platform of software and services, Materialise Mimics, forms the foundation of certified Medical 3D printing, in clinical as well as research environments, offering virtual planning software tools, 3D-printed anatomical models, and patient-specific surgical guides and implants.

Theramex
www.theramex.com.au
Theramex Australia is a specialty pharmaceutical company solely committed to supporting the health needs of women. By working closely with our partners and healthcare professionals, Theramex Australia provides a diverse portfolio of treatments that help women through life’s stages. Our key therapy areas, Osteoporosis, Menopause, Contraception and Overactive Bladder.
<table>
<thead>
<tr>
<th>Attendees</th>
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| **David Ackland**  
University of Melbourne  
VIC | **Kieran Bennett**  
the University of Adelaide  
SA |
| **Ahmed Al Saedi**  
The University of Melbourne and Harvard Medical School  
VIC | **Michael Bennett**  
The Sutherland Hospital  
NSW |
| **Kylie Alexander**  
Mater Research  
QLD | **Samuel Berez**  
UQ  
QLD |
| **Kara Anderson**  
Deakin University  
VIC | **Thor Besier**  
University of Auckland  
New Zealand |
| **Paul Anderson**  
University of South Australia  
SA | **Sandy Bevc**  
XHL Australia  
VIC |
| **Niloufar Ansari**  
Monash Institute of Pharmaceutical Sciences  
VIC | **Carina Blaker**  
Kolling Institute of Medical Research  
NSW |
| **Shoaib Anwaar**  
The University of Queensland Diamantina Institute, Faculty of Medicine, The University of Queensland  
QLD | **Martha Blank**  
St. Vincent’s Institute  
VIC |
| **Agnieszka Arthur**  
University of Adelaide  
SA | **Robert Blank**  
Garvan Institute  
NSW |
| **Anneliese Ashhurst**  
University of Sydney  
NSW | **Dana Bluc**  
Garvan Institute of Medical Research  
NSW |
| **Sally Atichison**  
Amgen Australia  
NSW | **Tomasz Block**  
Monash Health  
VIC |
| **Gerald Atkins**  
University of Adelaide  
SA | **Nathalie Bock**  
Queensland University of Technology  
QLD |
| **Matthew Balcerek**  
Royal Brisbane and Women’s Hospital  
QLD | **Scott Bolam**  
University of Auckland  
New Zealand |
| **Tiffany Bamford**  
Kyowa Kirin  
NSW | **Marco Branni**  
QUT  
QLD |
| **Alexis Brierty**  
Children’s Health Queensland  
QLD | **Katrina Browne**  
ABSTE  
NSW |
| **Carlie Bauer**  
Victoria University  
VIC | **Emma Buckels**  
The University of Auckland  
New Zealand |
| **Belinda Beck**  
Griffith University  
QLD | **Andrew Burghardt**  
University of California San Francisco  
United States |
|  | **Christine Burns**  
WALT Institute  
VIC |
| **Natalie Butterfield**  
Imperial College  
United Kingdom |  |
| **Scott Byrne**  
University of Sydney  
NSW | **Stuart Callary**  
The University of Adelaide  
SA |
|  | **Hayley Cameron**  
Wellington Hospital  
New Zealand |
| **Melissa Cantley**  
The University of Adelaide  
SA |  |
| **Jackie Center**  
Garvan Institute of Medical Research and St Vincent’s Hospital  
NSW | **Rachel Chalmers**  
Queensland University of Technology  
QLD |
|  | **Fiona Chambers**  
ASN Events  
VIC |
|  | **Mardi Chapman**  
The Limbic  
QLD |
| **Pelin Chen**  
University of Western Australia  
WA | **Weiwen Chen**  
St Vincent’s Hospital  
NSW |
|  | **Ziming Chen**  
The University of Western Australia  
WA |
| **Hui Yi Chew**  
University of Queensland  
QLD | **Cherie Chiang**  
Melbourne Health  
VIC |
|  | **Jerry Chng**  
Kyowa Kirin Australia Pty Ltd  
NSW |
|  | **Chan Hee Cho**  
The University of Adelaide  
SA |
|  | **Kay Hau Choy**  
Barwon Health  
VIC |
|  | **Louise Clun**  
Gold Coast University Hospital  
QLD |
<table>
<thead>
<tr>
<th>Name</th>
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<tbody>
<tr>
<td>Jayde Collier</td>
<td>Griffith University, QLD</td>
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<tr>
<td>Lucy Collins</td>
<td>Western Hospital, VIC</td>
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<td>Jared Coolwell</td>
<td>Jared Coolwell Aboriginal Art, QLD</td>
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<td>Mark Cooper</td>
<td>University of Sydney, NSW</td>
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<td>Caitlin Corkhill</td>
<td>The Canberra Hospital, ACT</td>
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<td>Jillian Cornish</td>
<td>University of Auckland, New Zealand</td>
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<td>Ross Crawford</td>
<td>Queensland University of Technology, QLD</td>
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<td>Emma Croker</td>
<td>John Hunter Hospital, NSW</td>
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<td>Tania Crotti</td>
<td>University of Adelaide, SA</td>
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<td>Deakin University, VIC</td>
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<td>Timo Damm</td>
<td>University-Hospital Schleswig-Holstein, Germany</td>
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<td>Melita Daru</td>
<td>Healthy Bones Australia, NSW</td>
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<td>Rachel Davey</td>
<td>University of Melbourne, Austin Health, VIC</td>
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<td>Jessica Del Gigante</td>
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<td>Katie Dixon</td>
<td>The University of Sydney, NSW</td>
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<td>Melissa Douglas</td>
<td>Australian and New Zealand Bone and Mineral Society, NSW</td>
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<td>William du Moulin</td>
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<td>Gustavo Duque</td>
<td>Australian Institute for Musculoskeletal Science (AIMSS) - The University of Melbourne, VIC</td>
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<td>Jeongwan Kang</td>
<td>CHA UNIVERSITY ILSAN MEDICAL CENTER</td>
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<td>Ruveena Kaur</td>
<td>Middlemore hospital</td>
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<td>Sneha Krishna</td>
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<td>Theramex</td>
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<td>Paul Bao Duy La</td>
<td>Monash Health</td>
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<td>Méloidy Labrune</td>
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<td>Sydndia Lazarus</td>
<td>Royal Brisbane and Women’s Hospital</td>
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<td>Nicola Leaney</td>
<td>Theramex</td>
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<td>Hoo Young Lee</td>
<td>Seoul National University Hospital/National Traffic Injury Rehabilitation Hospital</td>
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<td>Peter Lee</td>
<td>The University of Melbourne</td>
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<td>Yea Rin Olivia Lee</td>
<td>The University of South Australia</td>
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<td>Jean-Pierre Levesque</td>
<td>Mater Research Institute - The University of Queensland</td>
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Itamar Levinger  
Victoria University  
VIC

Joshua Lewis  
Edith Cowan University  
WA

Jiao Jiao Li  
University of Technology Sydney  
NSW

Rachel W. Li  
Australian National University  
ACT

Peng Liao  
Shanghai Jiao Tong University Affiliated  
Shanghai Sixth People’s Hospital  
China

Ko-Chia Jasmine Lin  
QHealth  
QLD

Delin Liu  
The University of Western Australia  
WA

Matthew Luttrell  
Wollongong Hospital  
NSW

Joe Lynch  
Trauma and Orthopaedic Research Unit  
ACT

Greg Lyubomirsky  
Healthy Bones Australia  
NSW

Eugenie Macfarlane  
ANZAC Research Institute, University of Sydney  
NSW

Yosuke Mano  
University of occupational and environmental health, Japan  
Japan

Abdul Mardli  
Ampen Australia  
NSW

Jacqueline Marshall  
Centre for Inflammation, Centenary Institute, UTS  
NSW

T. Jack Martin  
St Vincent’s Institute of Medical Research  
VIC

Rebecca Mason  
University of Sydney  
NSW

Michael Matthew  
Materialise Australia Pty Ltd  
QLD

Brya Matthews  
University of Auckland  
New Zealand

Michelle Maugham-Macan  
University of the Sunshine Coast  
QLD

Henry Maung  
WSLHD  
NSW

Michelle McDonald  
Garvan Institute of Medical Research  
NSW

Jo McGovern  
Theramex Australia  
NSW

Jakub Mesinovic  
Deakin University  
VIC

Daniela Mini  
Flinders University  
SA

Hossein Mokhtarzadeh  
Motek Medical (DIN Brand)  
VIC

Marcela Montes de Oca  
UQD/ TRI  
QLD

Yuqing Mu  
Queensland University of Technology  
QLD

Bridie Mulholland  
University of Wollongong  
NSW

Craig Munns  
The University of Queensland  
QLD

Dzenita Muratovic  
The University of Adelaide  
SA

Takayuki Nabeshima  
School of Medicine, University of  
Occupational and Environmental Health  
Japan

Azadeh Nasseri  
Griffith University  
QLD

Carrie-Anne Ng  
School of Clinical Sciences at Monash Health, Monash University  
VIC

Christina Ng  
Gedeon Richter  
ACT

Elisabeth Ng  
Monash Health  
VIC

Carlene Ngoma  
Theramex  
ACT

Dinh-Tan Nguyen  
University of Technology Sydney, Australia  
NSW

Hanh Nguyen  
Monash Health, Western Health  
VIC

Huy Nguyen  
The University of Technology Sydney  
NSW

Tuan Nguyen  
University of Technology Sydney  
NSW

Thomas Nicholls  
Doctor  
VIC

Tian Nie  
University of Melbourne  
VIC

Dermot O’Rourke  
Queensland University of Technology  
QLD

Naomi O’Rourke  
Princess Alexandra Hospital  
QLD

Jim Panagiotidis  
Ampen Australia  
VIC

Bill Panagopoulos  
University of Adelaide  
SA

Suyoung Park  
Kyowa Kirin Asia Pacific Pte Ltd  
Singapore

Grant Parnell  
USYD  
NSW

Julie Pasco  
Deakin University  
VIC

Shane Patella  
Ipsen  
VIC

Nathan Pavlos  
University of Western Australia  
WA

Ben Peatt  
Ampen Australia  
NSW

Egon Perilli  
Flinders University  
SA

Allison Pettit  
Mater Research Institute - The University of Queensland  
QLD
Peter Pivonka
Queensland University of Technology
QLD

Nicholas Pocock
St Vincent’s Hospital
NSW

Chris Preston
St Vincent’s Hospital Melbourne
VIC

Richard Prince
University of Western Australia
WA

Elizabeth Pritchard
WALT Institute
VIC

Armi Rahimi
AmpGen
NSW

Boopalan Ramasamy
Royal Adelaide Hospital
SA

Jack Rawlings
University of Sydney
NSW

Karen Rees
AmpGen Australia
NSW

Ian Reid
University of Auckland
New Zealand

Amy Ribet
UWA
WA

Jason Rickets
Theramex
ACT

Ann Robinson
GOLD COAST UNIVERSITY HOSPITAL
QLD

Dale Robinson
University of Melbourne
VIC

Alexander Rodriguez
Monash University
VIC

Michael Rogers
Garvan Institute of Medical Research
NSW

Megan Roser
Biomechanics and Spine Research Group
QLD

Christine Rowland
Greenslopes Private Hospital
QLD

Pamela Rufus-Membere
Deakin University
VIC

Monica Russell
Materialise Australia Pty Ltd
QLD

Sarah Safavi
University of Melbourne
VIC

Amanda Sainsbury-Salis
The University of Western Australia
WA

Zubeyr Salis
The University of New South Wales (UNSW)
WA

Navira Samad
Monash University
VIC

Selwin Samuel
Mater Research Institute - UQ
QLD

Dhanya Sanjeev
Self employed
NSW

David John Saxby
Griffith Centre of Biomedical and Rehabilitation Engineering
QLD

David Scott
Deakin University
VIC

Robert Scrugg
School of Population Health, University of Auckland
New Zealand

Ego Seeman
Austin Health, Repatriation Campus
VIC

Alexander Seeto
Griffith University
QLD

Anuj Shah
University of Tasmania
TAS

Atit Shah
ASN Events
VIC

Kyle Shapland
Materialise Australia Pty Ltd
QLD

Beichen Shi
Griffith University
QLD

Aris Siafarikas
Princess Margaret Hospital
WA

Je-Wen Sim
Eastern Health, Monash Health
VIC

Marc Sim
Edith Cowan University
WA

Marija Simic
Garvan Institute of Medical Research
NSW

Peter J Simm
Royal Children’s Hospital Melbourne
VIC

Natalie Sims
St Vincent’s Institute
VIC

Anita Singh
Northern Health
VIC

Ronald Sluyter
Illawarra Health and Medical Research Institute
NSW

Cassandra Smith
Edith Cowan University
WA

Gary Smith
Medical Update
NSW

Kathryn Stok
University of Melbourne
VIC

Shoshana Sztal-Mazer
Alfred Hospital
VIC

Jason Talevski
Deakin University
VIC

Javad Tavakoli
University of Technology Sydney
NSW

Mark Taylor
Flinders University
SA

Ashvin Thambyah
University of Auckland
New Zealand

Michael Thompson
Menzies Research Institute Tasmania
TAS

Simon Thwaites
University of Adelaide
SA

E Hong Tiew
The University of Melbourne
VIC

David Tognarini
Echolight/Cortex Health
VIC
<table>
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<tr>
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<tr>
<td>Antony Young</td>
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<td>Sherif Youssef</td>
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<td>Cindy Yu</td>
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<td>Yihang Yu</td>
<td>University of Melbourne VIC</td>
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<tr>
<td>Jun Yuan</td>
<td>Centre for Orthopaedic and Translational Research, School of Biomedical Sciences, University of Western Australia WA</td>
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<tr>
<td>Sanaa Zaki</td>
<td>University of Sydney NSW</td>
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<td>Zhen Zeng</td>
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<td>Ming-Hao Zheng</td>
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<td>Yinghong Zhou</td>
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<tr>
<td>Jasmine Zhu</td>
<td>University of Melbourne VIC</td>
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<tr>
<td>Kun (Kathy) Zhu</td>
<td>Sir Charles Gairdner Hospital WA</td>
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