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On behalf of the Program Organising Committee and the council of the ANZBMS, we extend our warmest welcome to you for the 30th Annual Scientific Meeting of the society.

With the uncertainty and upheaval of this year, the pandemic has brought unexpected challenges. Despite these challenges the society saw an opportunity for innovation, aiming to bring us all together to share our research through the delivery of a comprehensive 2020 ASM. We are therefore proud to present the society’s inaugural virtual meeting, showcasing the latest clinical and basic research in the musculoskeletal field.

This year’s scientific program includes basic and clinical abstract presentations, awards for students and young investigators, 5 outstanding oral awards, a plenary poster session and e-poster viewing sessions. Our plenary speakers include Dr Harold Jueppner (USA), Dr Yuki Yoshimoto (Japan) and Prof Jennifer Byrne (Australia).

The Early Career Investigator Committee will deliver 2 excellent sessions to inspire younger members of the society, and those young at heart, including a Career Development Session on increasing funding success and a seminar on Clinical Cases in Metabolic Bone Diseases. All are welcome to attend these popular sessions!

There will be many opportunities for networking and interaction over the next 3 days, and we encourage you to fully immerse yourself in the virtual format. Whether you are a young investigator, clinician, basic scientist, or allied health professional, we hope this virtual meeting offers opportunities for you to reconnect with peers, drive collaboration and inspiration, and provide an exciting program of cutting-edge musculoskeletal science.

Please note all sessions will run in Australian Eastern Daylight Savings Time (AEDT).

We hope you enjoy this year’s first virtual meeting! Stay safe and well.

Michelle McDonald, Craig Munns and Christian Girgis, POC co-chairs
SOCIETY SECRETARIATS

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Westmead and Royal North Shore Hospital

Prof Mark Forwood – Meetings Chair
Griffith University

Dr Michelle McDonald – Program Co-Chair
Garvan Institute of Medical Research

Prof Natalie Sims – ANZBMS President
St Vincent’s Institute of Medical Research

Prof Craig Munns – Program Co-Chair
The Children’s Hospital at Westmead

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University of Sydney

Dr Julia Kuliwaba
The University of Adelaide

Dr Melissa Cantley
The University of Adelaide

Dr Brya Matthews
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University of Melbourne

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University of Melbourne

A/Prof David Scott
Deakin University

Prof David Findlay
The University of Adelaide

Dr Peter Simm
Royal Children’s Hospital Melbourne

Dr John Kemp
University of Queensland Diamantina Institute

Dr Ayse Zengin
Monash University

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Peter Croucher

Allison Pettit

30th ANZBMS Annual Scientific Meeting Delegate Booklet 2020

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ANZBMS AWARD SPONSOR

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).

1996  Vicky Kartsogiannis  2004  Susan Allison  2012  Farzin Takyar
1997  Linda Crofts  2005  Kirk Ho Man Yip  2013  Audrey Chan
1999  Liza-Jane Raggatt  2007  Yosuke Kawasaki  2014  Hua Ying
2000  Sandra Iuliano-Burns  2008  Stella Foley  2015  Irina Kulina
Nathan Pavlos  2009  Garry Williams  2015  Niloofar Ansari
2001  David Good  2010  Jonathan Gooi  2016  Christina Vrahnas
2002  Kun Zhu  2011  Nicola Lee  2017  Mahmoud Bakr
2003  Agatha Labrinidis  2012  Irene Zinonos  2018  Jun Li
Xiaofang Wang  2013  Chiaming Fan  2019  Amy Harding

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).

1997  Anne Nelson  2007  Taksum Cheng
Hidenori Murata  2008  Hasnawati Saleh
1998  Marianne Holzherr  2009  Ee-Cheng Khor
1999  Tanya Uebergang  2010  Kylie Alexander
2000  Josef Kaplan  2011  Shek Man Chim
2001  Rebecca Jackson  2012  Alvin Ng
2002  Nathan Pavlos  2013  Marie-Luise Wille
2003  Nicole Walsh  2014  Yu Wen Su
Rouha Granfar  2015  Masato Koike
2004  Laura Gregory  2015  Dzenita Muratovic – Clinical
Mark Bolland  Scott Youlten – Basic
2005  Mark Bolland  2016  Audrey Chan
Catherine Wang  2017  Scott Youlten
2006  Andrew Hattam  2018  Alexander Rodriguez
Estabelle Ang  2019  Amy Ribet
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.

2002 Catherine Middleton-Hardie
2003 Vicky Kartsiogiannis
2004 Kerrie Sanders
2005 Susan Allison
2006 Mark Forwood
2007 Brya Matthews
2008 Roger Zebaze
2009 Bich Tran
2010 Garry Williams
2011 Julie Quach
2012 Ashika Chhana
2013 Yohann Bala
2014 Michelle McDonald
2015 Christina Vrahnas
2016 Audrey Chan
2017 Alexander Rodriguez
2018 Thao Ho-Le
2019 Sabashini Ramchand

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 Roger Zebaze
2005 Markus Seibel, Julian Quinn
2006 Yosuke Kawasaki, Julie Kuliwaba, Stella Foley, Dana Bluic, 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 Kartsiogiannis, Nguyen Nguyen
2010 Markus Seibel, Emma Walker, Iris Wong, Sarah Brennan, Jasreen Kular, Markus Seibel
2011 Ian Reid, Asiri Wijenayaka
2012 Ego Seeman, Rachelle Johnson
2013 Peter Ebeling, Rossana Nogueira, Simon Junankar, Narelle McGregor, Jinwen Tu
2014 Allison Pettit, Paul Baldock, Jinwen Tu, Roger Zebaze, Kirtan Gandaz
2015 Michelle McDonald, Allison Pettit, Audrey Chan, Le Phong Thao Ho, Aya Nakayama
2016 Nicola Lee, Steven Watson, Emma Walker
2017 Victoria D Leitch, Emma M Wade, Michelle M McDonald, Ego Seeman
2018 Ian Reid, Nathan Pavlos
2019 Kai Chen, Robin Daly

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
2013 Syndia Lazarus
2014 Masakazu Kogawa
2015 Hanh Nguyen
2016 Thach Tran
2017 Weiwen Chen
2018 Jasna Aleksova
KAYE IBBERTSON AWARD ON METABOLIC BONE DISEASE

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.

2005 Roger Zebaze 2013 Tara Brennan-Speranza
2006 Julie Pasco 2014 Nicole Yu
2007 Tania Winzenberg 2015 Joshua Lewis
2008 Paul Baldock 2016 Rachelle Johnson
2009 Mark Bolland 2017 Michelle McDonald
2010 Kun Zhu 2018 Feitong Wu
2011 Susannah O’Sullivan 2018 Dawn Aitken
2012 Emma Duncan 2019 Fran Milat

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.

2006 Nathan Pavlos 2013 Farzin M Takyar
2007 Aaron McDonald 2014 Heath McGowan
2008 Haotian Feng 2015 Dana Bliuc
2009 Ming-Kang Chang 2016 Paul Lee
2010 Tak Sum Cheng 2017 Thao P. Ho-Le
2011 Kylie Alexander 2018 Nicola Lee
2012 Julie Quach 2019 Kai Chen

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.

2012 Gustavo Duque 2016 Jinwen Tu
2013 Emma Duncan 2017 Jansa Aleksova
2014 Kirtan Ganda 2018 Feitong Wu
2015 Sharon Brennan-Olsen 2019 Sabashini Ramchand

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.

2014 Tara Brennan-Speranza
  Ashika Channa
  Christina Vrahnas
2018 Babtunde Ayodele
  Dzenita Muratovic
2015 Campbell Macgregor
  Megan Thomas
  Scott Youlten
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

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 Bliuc  

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  
Dr Ailsa Goulding  
Associate Professor Michael Hooper  
Professor John Eisman  
Professor Ego Seeman

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

ANZBMS acknowledges the support of
**Professor Jennifer Byrne**
Jennifer Byrne has spent her scientific career analyzing childhood and adult cancers at a molecular level. Her PhD studies mapped loss of chromosome 11p15 loci in embryonal tumours, and she then identified a novel gene family during postdoctoral studies in France. Professor Byrne is Director Of Biobanking with NSW Health Pathology, and Professor of Molecular Oncology in the School of Medical Sciences in the Faculty of Medicine and Health. Jennifer Byrne was previously (Acting) Head of the Children's Cancer Research Unit at The Children's Hospital at Westmead from 2008-2019, and Deputy Director of the Kids Cancer Alliance from 2018-2019. She chaired the Biobanking Sub-committee of Australia and New Zealand Children’s Oncology Group from 2016-2020.

**Dr Harald Jueppner**
Harald Jueppner, MD, is the Chief of Pediatric Nephrology at the Massachusetts General Hospital and a Professor of Pediatrics at Harvard Medical School. He has had a long-standing interest in the regulation of calcium and phosphate homeostasis as well as the mechanisms contributing to bone growth and turnover. He and his colleagues were the first to isolate cDNAs encoding the PTH/PTHrP receptor (PTHR1), which allowed the search for human disorders caused by mutations in this gene. Initially it was thought that such mutations are the cause of pseudohypoparathyroidism types Ib (PHP1B); however, his group excluded such mutations, subsequently mapped the genetic locus for the autosomal dominant form of PHP1B (AD-PHP1B) to the GNAS complex locus on chromosome 20q13, and eventually showed that deletions in GNAS or STX16 are disease-causing. Instead, Dr. Jueppner’s group identified several different, activating mutations in Jansen’s metaphyseal chondrodysplasia (JMC), which is characterized by severe and crippling bone deformities, short-limbed dwarfism, and hypercalcemia. Expression of the PTHR1 mutant under the control of the type II collagen promoter (Col2-H223R-PTHR1) in mice resulted in a significant delay in chondrocyte differentiation, while expression of one of the mutant receptors under the control of the collagen type I promoter (Col1-H223R-PTHR1) resulted in massive new bone formation. Together with Dr. Gardella, Dr. Jueppner now explores in vitro and in vivo the role of inverse agonists at the PTHR1 for the treatment of growth plate and bone abnormalities observed in the currently available transgenic mouse JMC models.

*Participation made possible with the support of*

**Specially Appointed Research Associate Yuki Yoshimoto**
During a graduate student, I worked on research about tendon and ligament formation under Dr. Hiraki and Dr. Shukunami in Kyoto University. My thesis for degree presented that Scx+/ Sox9+ progenitors contribute to the formation of chondro-tendinous/ligamentous junction. I continued the research in the same field under Dr. Shukunami, and then investigated the role of Scx in the entheseal formation. From last year, I have moved to current institute and then started the research about relation between tendons and skeletal muscles under Dr. Uezumi.
INVITED NATIONAL SPEAKERS

Dr Khoon Lim
Dr Khoon Lim is a current Senior Research Fellow and Team Leader at the University of Otago Christchurch. His research technology platform involves photo-polymerizable hydrogel bioinks for 3D bioprinting of functional tissues and also delivery of bioactive molecules to promote tissue regeneration. He has generated multiple high impact journal publications and has been awarded a total of >NZD$ 3.5 Million research grant funding. Dr Lim is also currently an Associate Investigator on the Centre of Research Excellence in Medical Technologies (MedTech CoRE), Affiliate Investigator on the Maurice Wilkins Centre (MWC) for Molecular Diversity, and Executive Committee member of the Australasian Society of Biomaterials and Tissue Engineering (ASBTE). He also currently sits on the editorial board of IOP Biomedical Physics & Engineering Express and Frontiers in Bioengineering & Biotechnology.

Participation made possible with the support of

Hologic

Dr Sabashini Ramchand
Dr Ramchand is a clinical investigator and Endocrinologist whose research focuses on osteoporosis and metabolic bone disease. Her initial work in Melbourne, Australia, focused on evaluating the skeletal and metabolic effects of oestradiol depletion therapy in young women with breast cancer, and strategies to mitigate some of these adverse events. She is currently undertaking a research fellowship at the Massachusetts General Hospital, Harvard University, United States with Professor Leder’s group. Here, she is involved in clinical trials assessing the efficacy of combination therapy for osteoporosis, including a mechanistic study evaluating the effects of combining denosumab and teriparatide on iliac crest bone histomorphometry. Part of this work was funded by the Christine and T. Jack Martin Research Travel Grant (2020). Dr Ramchand is the immediate past Co-Chair of the ANZBMS Early Career Investigator Committee, and a member of the Therapeutics Committee and this year’s Program Organising Committee. She is also a member of the ASBMR Early Stage Investigator sub-committee and the IFMRS HubLE “My Mentor and I” sub-committee.

Professor Ego Seeman
Ego Seeman has worked in the field of bone biology for 38 years studying the epidemiology, pathogenesis and treatment of bone fragility. He emphasized the role of growth as a forerunner of bone fragility in old age, emphasized the role of cortical and trabecular microstructural deterioration as a most important cause of bone fragility, and signaled that fractures in both sexes is a public health problem. He has contributed to studies of many drugs used today. He has over 400 publications. He is past President of the ANZBMS, Editor of Progress in Osteoporosis, and Associate Editor of Osteoporosis International. He is in the top 10 most cited authors in the field of osteoporosis and bone biology.

https://journals.plos.org/plosbiology/article?id=10.1371%2Fjournal.pbio.3000384
The Australian and New Zealand Bone and Mineral Society are committed to providing conferences and events that are productive and enjoyable for everyone, regardless of gender, sexual orientation, disability, physical appearance, body size, race, nationality or religion. Each member of ANZBMS and those that attend meetings have a responsibility to act in a way that ensures a positive experience for all members and those that interact with members. All members and registrants are required to read, understand and follow this Code of Conduct. Conference attendees include anyone who registers for and attends the annual conference, irrespective of membership status or organisation.

• Members and those attending conferences will treat others with respect, dignity, consideration and courtesy. Members and those attending conferences will comply with the law, and in all their dealings with others behave honestly and ethically and respect individual privacy. This includes not photographing or recording any individual without consent.
• Members and those attending conferences will refrain from any form of behaviour that may be perceived as intimidation, harassment, a threat or otherwise cause a person to fear for their safety.
• Members and those attending conferences will not engage in acts of bullying, aggression or violence.
• Members and those attending conferences will respect the rights of others to attend the annual conference or other events associated with the conference free from discrimination and harassment, including sexual harassment. Harassment includes inappropriate physical contact, unwanted sexual attention or innuendo, deliberate intimidation or stalking. It also includes offensive comments related to gender, sexual orientation, disability, physical appearance, body size, race or religion. Sexist, racist, or exclusionary comments or jokes are not appropriate.
• Members or those attending conferences who witness violations of this code have a duty of care to report the behaviour to the Executive of their society (President, Secretary or Treasurer) other Council member or the Conference Secretariat as they see fit.
• Members or those attending conferences will not photograph data slides (during face to face or virtual presentations) or disseminate data slides for their own personal use.

We do not tolerate harassment in any form. Anyone who wishes to report a violation of this code is asked to contact, in confidence, the President, Secretary or Treasurer, another Council member or the Conference Secretariat.

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.
Welcome from ANZBMS President Natalie Sims

9:00AM - 9:05AM
Chair: Michelle McDonald

Plenary Presentation - Dr Harald Jueppner

9:05AM - 10:00AM
Chair: Natalie Sims

9:05 AM  Harald Jueppner
PTH resistance syndrome: genetics and epigenetics abs# 1

Outstanding Abstracts Session

10:00AM - 11:20AM
Chairs: Sabashini Ramchand & Peter Croucher

10:00 AM  Sandra Iuliano
Dairy supplementation reduces fractures and falls in institutionalised older adults: a cluster-randomised controlled trial abs# 2

10:16 AM  Audrey S Chan
Bone geometry is altered by follistatin-induced muscle growth in adult male mice abs# 3

10:32 AM  Tsuyoshi Isojima
Interaction between osteocyte SOCS3-dependent signaling and the bone marrow microenvironment maintains cortical bone integrity abs# 4

10:48 AM  Peter R Ebeling
Subject characteristics and changes in bone mineral density after transitioning from denosumab (DMab) to alendronate (ALN) in the Denosumab Adherence Preference Satisfaction (DAPS) Study abs# 5

11:04 AM  Victoria D Leitch
An essential physiological role for MCT8 in bone in male mice abs# 6

Break & E-Poster Viewing

11:20AM - 12:05PM
Roger Mellick Young Investigator Session

12:05PM - 1:45PM

Chairs: Rebecca Mason & Marc Sim

12:05 PM  Marija K Simic
Multi-targeting DKK1 and LRP6 prevents myeloma-induced bone disease abs# 7

12:17 PM  James T Smith
Single-cell mapping of bone identifies key intercellular interactions within the endosteal bone microenvironment abs# 8

12:29 PM  Lena Batoon
Osteal macrophage contributions to post-menopausal osteoporosis bone pathology abs# 9

12:41 PM  Bridie S Mulholland
MCP-1 inhibition prevents breast cancer-induced bone loss abs# 10

12:53 PM  Kara B Anderson
Hip structural analysis and incident fractures in a cohort of women abs# 11

1:05 PM  Dunia Alarkawi
The effect of denosumab on post-fracture mortality risk in the 45 and Up study abs# 12

1:17 PM  Ali Ghasem-Zadeh
Heterogeneity in Microstructural Deterioration Following Spinal Cord Injury Reflects Site-Specificity of Mechano-transduction abs# 13

1:29 PM  Angela Sheu
Fractures in T2DM independently predicted by insulin use and vascular complications (FIELD study) abs# 14

Plenary Poster Live Presentations

1:45PM - 2:10PM

Chair: Peter J Simm

1:45 PM  Kara L Holloway-Kew
Association between bone measures and use of angiotensin-converting enzyme inhibitors or angiotensin II receptor blockers abs# 15

1:47 PM  Albert S Kim
Bone Compartment Characteristics in Patients with Atypical Femoral Fractures on 3D Dual X-Ray Absorptiometry (DXA) abs# 16

1:49 PM  Jasna Aleksova
DXA-derived Trabecular Bone Score and Hip Structural Analysis Parameters in Patients with Type 1 Diabetes Mellitus undergoing Simultaneous Pancreas Kidney Transplantation abs# 17

1:51 PM  Yoon Ji Jina Rhou
The Use of Denosumab in Central Giant Cell Granuloma: 5-year Institutional Experience abs# 18
1:53 PM  Shane Patella  
A global natural history study of fibrodysplasia ossificans progressiva (FOP): 12-month outcomes  
*abs# 19*

1:55 PM  Lillias Nairn  
The first 4 years of an osteoporosis re-fracture prevention (ORP) service at Royal North Shore Hospital (RNSH): Treatment and re-fracture rates among ORP attendees and non-attendees:  
*abs# 20*

1:57 PM  Ya Xiao  
Can circulating Wnt antagonist DKK1 alter bone mass by endocrine signalling?  
*abs# 21*

1:59 PM  Aikta Sharma  
Molecular imaging at the multi-scale discloses novel regulators of matrix organisation during bone pathology  
*abs# 22*

2:01 PM  Lena Batoon  
Treatment with a chimeric long-acting CSF1 molecule enhances fracture healing of healthy and osteoporotic bones  
*abs# 23*

2:03 PM  Hsu-Wen HWT Tseng  
Neutrophils are dispensable for neurogenic heterotopic ossification development following spinal cord injury  
*abs# 24*

2:05 PM  Eugenie Macfarlane  
Chondrocyte glucocorticoid receptor deletion attenuates cartilage damage in murine osteoarthritis  
*abs# 25*

2:07 PM  Rogely Boyce  
Inhibition of Sclerostin by Sclerostin Antibody Does Not Affect Morphological or Transcriptional Endpoints Related to Atheroprogression, Plaque Calcification, or Inflammation in 2 Murine Models of Atherosclerosis  
*abs# 26*

**Plenary Poster Q&A - Within Poster Viewing**

2:10PM - 2:40PM
ECIC Career Development Session: Improving your chances of fellowship success

3:00PM - 4:30PM  
*Chairs: Melissa Cantley & Sarah Hosking*  
*Moderators: Melissa Cantley & Laura Laslett*  
*Panel Members: David Scott, Brya Matthews, John Kemp, Allison Pettit & Lana Williams*

3:00 PM  
**Melissa Cantley**  
ECIC overview, new member introductions and acknowledgement of outgoing members

3:05 PM  
**David Scott**  
Myth-busting the NHMRC Investigator Grant scheme *abs# 27*

3:20 PM  
**Sarah Hosking**  
Panel member introductions followed by fellowship advice – top tips and common mistakes to avoid

3:50 PM  
**Melissa Cantley & Laura Laslett**  
Panel discussion and Q&A

Break & E-Poster Viewing

4:30PM - 6:00PM

ECIC Clinical Cases in Metabolic Bone Diseases

6:00PM - 7:45PM  
*Chairs: Eleanor Thong & Alicia Jones*

6:05 PM  
**Jackie Center**  
Bone health in obesity and weight loss *abs# 29*  
*Expert Moderator - Debra Waters*

6:40 PM  
**Belinda Beck**  
Prescribing exercise for osteoporosis *abs# 28*  
*Expert Moderator - Robin Daley*

7:15 PM  
**Bronwyn Stuckey**  
Bone health in young women with primary or secondary hypogonadism *abs# 30*  
*Expert Moderator - Fran Milat*
Christopher and Margie Nordin Finalists

8:30AM - 9:20AM
Chairs: Allison Pettit & Alexander Rodriguez

8:30 AM  
Ruby Oberin  
Determining the role of maternal epigenetic inheritance in bone development and disease abs# 31

8:36 AM  
Courtney M Edwards  
Extra-nuclear PTHrP induces HIF and drives tumor cell exit from dormancy in bone abs# 32

8:42 AM  
Yaser Peymanfar  
Targeting Notch2 signalling to overcome methotrexate chemotherapy-induced bone loss and bone marrow adiposity in rats abs# 33

8:48 AM  
Ye Cao  
Characterisation of osteoprogenitors within the periosteum abs# 34

8:54 AM  
Lianzhi Chen  
Horizontal fissuring at the osteochondral interface: a novel and unique pathological feature in patients with obesity-related osteoarthritis abs# 35

9:00 AM  
Carrie-Anne Ng  
Feasibility, safety and effectiveness of a pilot 16-week home-based, high-impact exercise intervention in post-menopausal women with low bone mineral density abs# 36

9:06 AM  
Jason Talevski  
Multidisciplinary Care Pathways Associated with Recovery of Quality of Life in Individual Fracture Sites: Analyses of the International Costs and Utilities Related to Osteoporotic Fractures Study (ICUROS) abs# 37

9:12 AM  
Jasmine R Cleminson  
Antidepressant use, depressive symptoms and incident fracture: data from the PROFRAC study abs# 38

E- Poster Session with Q&A

9:20AM - 10:20AM

E-Poster Session sponsored by AMGEN®

Break & E-Poster Viewing continued

10:20AM - 10:35AM
National ANZBMS speaker - Khoon Lim

10:35AM - 11:05AM
*Chairs: Tara Brennan-Speranza & Michael Rogers*

10:35 AM  
**Khoon S Lim**  
Engineering the vasculature for bone engineering *abs# 39*

*Participation made possible with the support of*

**Hologic**

Basic Science and Clinical Orals

11:05AM - 11:30AM
*Chairs: Roderick Clifton-Bligh & Tara Brennan-Speranza*

11:05 AM  
**Jad Zamerli**  
Duration of OPG:Fc treatment determines the extent of rebound bone loss following its cessation – insight into rebound bone loss and fracture following Denosumab cessation *abs# 40*

11:17 AM  
**Arkadi Chines**  
Romosozumab (Romo) Improves Lumbar Spine Bone Mineral Density (BMD) and Bone Strength Greater Than Alendronate (ALN) as Assessed by Quantitative Computed Tomography (QCT) and Finite Element Analysis (FEA) in the ARCH Trial *abs# 41*

Break & E-Poster Viewing

11:30AM - 12:00PM

Kyowa Kirin Medical Education Symposium: XLH: Management from Paediatrics through Transition and into Adult Life

12:00PM - 1:00PM
*Chair: Craig Munns*

12:00 PM  
**Craig Munns**  
Welcome, Introductions & Learning Objectives

12:05 PM  
**Peter Simm**  
Paediatric XLH: Diagnosis, Management & Australian Guidelines

12:23 PM  
**Benjamin Wheeler**  
Australian & New Zealand Paediatric XLH Prevalence Surveys

12:28 PM  
**Craig Munns**  
Australian Paediatric Hypophosphatemic Rickets Registry

12:33 PM  
**Richard Prince**  
Optimising Transition from Paediatric to Adult XLH Management

12:49 PM  
**Panel Discussion**
Plenary Presentation - Prof Jennifer Byrne

1:00PM - 1:35PM  
_Chairs: Aaron Schindeler & Craig Munns_

1:00 PM  
Jennifer Byrne  
Tissue Biobanking in Research abs# 42

ANZBMS Awards followed by AGM

1:35PM - 2:30PM  
_ANZBMS President: Natalie Sims_

1:35 PM  
ANZBMS Outstanding Abstract Winners  
OA/AMGEN/ANZBMS Research Grant Winner  
ANZBMS Highest Rank Student Abstract  
Christopher & Margie Nordin Young Investigator Award Winner  
Roger Melick Young Investigator Award Winner  
Kaye Ibbertson Award Winner  
Sol Posen Award Winner

1:45 PM  
AGM
Stop, collaborate and listen: The ECIC networking breakfast

8:30AM - 9:30AM
Chairs: Natalie Hyde & Marc Sim
Please note this breakfast session is running on a different platform to the conference.

National ANZBMS speaker - Ego Seeman

9:30AM - 10:00AM
Chairs: Ayse Zengin & Itamar Levinger

9:30 AM
Ego Seeman
The pathogenesis and morphological basis of bone fragility abs# 43

National ANZBMS speaker - Sabashini Ramchand (Early Career Investigator)

10:00AM - 10:30AM
Chairs: Ayse Zengin & Itamar Levinger

10:00 AM
Sabashini Ramchand
Advances in combination therapy for postmenopausal osteoporosis abs# 44

Break & E-Poster Viewing
10:30AM - 10:45AM

Clinical Orals

10:45AM - 11:45AM
Chairs: Christian Girgis & Sue Lynn Lau

10:45 AM
Thao P. Ho-Le
Predicting Mortality and Re-fracture Following an Initial Fracture abs# 45

10:57 AM
Shyan Goh
Prevalence of vitamin D deficiency in patients with hip fracture over 20 years: time trends and impact on in-hospital mortality abs# 46

11:09 AM
Marc Sim
Higher dietary nitrate intake is associated with better muscle function in men and women independent of physical activity levels abs# 47

11:21 AM
Abadi Kahsu Gebre
Heel bone structure is associated with all cause and cardiovascular disease mortality independent of hip bone mineral density abs# 48

11:33 AM
Amy T Harding
Is high-intensity exercise associated with vertebral fracture in middle-aged and older men with osteopenia and osteoporosis? A secondary analysis of the LIFTMOR-M trial abs# 49

Break & E-Poster Viewing
11:45AM - 12:00PM
AMGEN Lunchtime Symposium: Non-invasive Imaging in Fracture Risk Assessment

12:00PM - 1:00PM
Chair: Prof. John A Eisman

Join us virtually to learn about the latest on non-invasive imaging assessments of bone strength and use of DXA-BMD as a surrogate for fracture endpoints in future clinical studies of osteoporosis therapies. Our invited speaker, Prof. Mary Bouxsein, is a world-leading expert on the biomechanics of skeletal fragility.

12:00 PM        John Eisman
                Welcome - Introduction

12:03 PM        Mary Bouxsein
                Non-invasive Imaging in Fracture Risk Assessment abs# 129

12:52 PM        Mary Bouxsein and John Eisman
                Q&A

This symposium is organised and sponsored by

B.O.N.E Plenary Presentation - Specially Appointed Research Associate Yuki Yoshimoto

1:00PM - 1:30PM
Chairs: Victoria Leitch & Scott Youlten

1:00 PM        Yuki Yoshimoto
                The functional role of Scleraxis in enthesis formation abs# 50

Basic Science Orals

1:30PM - 2:20PM
Chairs: Jillian Cornish & David Musson

1:30 PM        Renee T Ormsby
                Loss of Tsc2 in Cathepsin k expressing cells results in a high bone mass phenotype: not the usual suspects abs# 51

1:42 PM        Nathalie Bock
                Utilization of a microtissue-engineered 3D model of osteoblastic metastases to unravel the effects of anti-androgen therapies in the bone microenvironment of metastatic prostate cancer abs# 52

1:54 PM        Natalya Plakhova
                Age-related mesenchymal stromal cell senescence is associated with progression from MGUS to multiple myeloma abs# 53

2:06 PM        Lena Batoon
                Skeletal abnormalities in Csf1r knockout rats are rescued by transplant of total bone marrow abs# 54

Closing Ceremony

2:20PM - 2:40PM
ANZBMS President: Natalie Sims
PLENARY E-POSTERS

Kara L Holloway-Kew
Association between bone measures and use of angiotensin-converting enzyme inhibitors or angiotensin II receptor blockers
*abs# 15*

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*abs# 26*
CHRISTOPHER & MARGIE NORDIN E-POSTERS

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Jasmine R Cleminson
Antidepressant use, depressive symptoms and incident fracture: data from the PROFRAC study abs# 38

BASIC SCIENCE E-POSTERS

Nethmi Abeynayake
Role of Eph and ephrin interactions in mediating cross-communication in the neuro-osteogenic network during development abs# 55

Ahmed Al Saedi
Lipid Signaling Mediators Regulate Bone-Muscle Crosstalk During Ageing abs# 56

Agnieszka Arthur
The loss of ephrinB1 in osteoprogenitors delays endochondral ossification during the fracture repair process abs# 57

Behnaz Azimi Manavi
Antipsychotic medications use and bone mineral density in women from the Geelong osteoporosis study abs# 58

Emma J Buckels
Male preptin knockout mice have increased trabecular bone volume with advancing age abs# 59

Peilin Chen
Intramuscular injection of Botox induces tendon atrophy and senescence of tendon-derived stem cells abs# 60

Aiken Dao
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Endoplasmic reticulum stress induced inhibition of mitochondrial transfer and cathepsin K secretion in osteocyte network - a novel mechanism of glucocorticoid induced bone loss abs# 63

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Comparison between adjusting DXA-derived lean mass for body mass index (BMI) or height^2 Associations with physical performance and clinical outcomes abs# 64

Maaya Inoue
Histopathology/immunopathology in high-prevalence bisphosphonate-related osteonecrosis of the jaw around implants in rat maxillae abs# 65

Riho Kanai
Surface modification of dental implants improves bone quantity and quality in rabbit tibiae abs# 66

Shinichiro Kuroshima
Gene expression profiling and histopathology/immunopathology in high-prevalence bisphosphonate-related osteonecrosis of the jaw in mice abs# 67

Yea Rin Olivia Lee
Spatial mapping of N-glycans on human osteoarthritis cartilage-bone tissue using mass spectrometry imaging abs# 68

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Influence of stem cells in an in vitro model of an osteoarthritic joint abs# 69

Xuzhu Lin
Undercarboxylated osteocalcin and ibandronate improve hindlimb immobilisation-induced atrophy and muscle insulin resistance in a muscle-specific manner in mice abs# 70

Fatemeh Malekipour
Stress distribution in the third metacarpal condyle (MC3) of a racehorse with focal subchondral bone lysis abs# 71

Silvia Moreira
The (un)expected influence of pesticides exposure in bone cancer development and transgenerational epigenetic effects in bone metabolism abs# 72

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Elevated Levels of active TGFB1 in the Subchondral Bone Associate with the Severity of Human Osteoarthritis abs# 73

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Generating a pipeline for screening genetic variants associated with bone fragility disorders abs# 74

Tolu Omokehinde
LIF/OSM/CNTF Activate Distinct Pathways in Breast Cancer abs# 75

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Localised alterations in bone geometry and cortical porosity predispose fracture site in a mouse model of Paget’s disease of bone abs# 76

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The influence of undercarboxylated osteocalcin on endothelial function in normal and high glucose conditions abs# 77
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Effects of weight loss on bone health in mice abs# 78

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Loss of HIF signaling in breast tumors promotes outgrowth in the lung but not bone abs# 79

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Automated regional segmentation of the murine bone cortex exposes microstructural diversity in porosity abs# 80

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Intermittent administration of parathyroid hormone has different effects on peri-implant bone in a site-dependent manner. abs# 81

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Unexpected skeletal phenotype in a mesenchymal-targeted Calcitonin-like receptor (CLR) knockout model abs# 82

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Corylin inhibits RANKL-induced osteoclastogenesis: signaling mediated by NF-κB pathways abs# 83

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Mediterranean diet adherence and its associations with circulating cytokines, musculoskeletal health and incident falls in community-dwelling older men abs# 89

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Risk factors for atypical femoral fracture: a retrospective radiographic and demographic study abs# 92

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