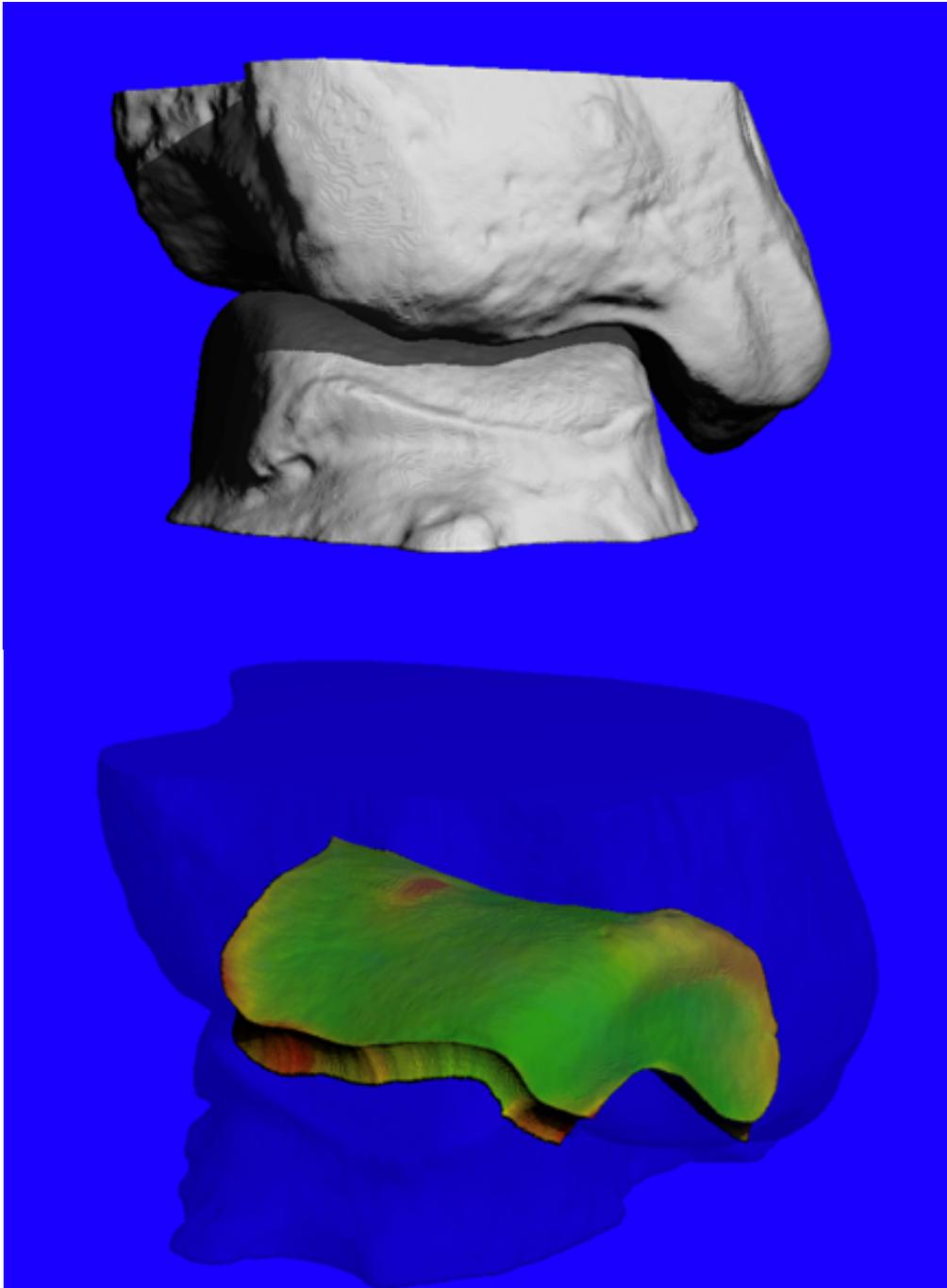


# ANZBMS Newsletter



**ANZBMS ASM highlights**

**ANZBMS ECI Report and Spotlight**

**ANZBMS Member Awards**

**Calendar of Events**



Cover Image by the Bone and Muscle Research Group, Monash University featuring a multi-stack High Resolution Peripheral Quantitative Tomography reconstruction of the distal tibia and talus (top) and tibiotalar joint space (bottom).



# Welcome to the ANZBMS Newsletter

## In this issue

- President's Comment (3-5)*
- Committee Updates (6, 7)*
- ECIC Report (8, 9)*
- ECI Spotlight (10-12)*
- ECI Funding Opportunities (13)*
- Lab spotlight (14-16)*
- Member Awards & Achievements (17-21)*
- ASM snapshots (22, 23)*
- HubLe update (24)*
- Member Publications (25, 26)*
- Calendar of Events (28, 29)*

Welcome to the final 2024 issue of the ANZBMS newsletter!

In this issue, we present a comment from ANZBMS president Professor Mark Cooper (pages 3-5) and updates from the Program Organising Committee (page 6) and Clinical Practice Committee (page 7). The ECIC co-chairs give an update on the Fellowship Database and welcome new members to the ECI committee (page 8, 9). Dr Ben Kirk is highlighted in this issue due to being the recipient of the B.O.N.E award 2024 - find more details about Ben and his research on pages 10-12.

The ASM was held in Adelaide in November and we want to congratulate all ANZBMS award recipients. Visit page 17-21 to find more information about our award winners and enjoy some snapshots from the conference on pages 22 and 23.

Don't miss the the latest HubLe news (page 24) and highlighted ANZBMS member publications (page 25, 26).

The ANZBMS Newsletter Editorial Board wishes you Merry Christmas and a Happy New Year.

## ANZBMS Newsletter Editorial Board



**Dr Martha Blank**



**Dr Pholpat Durongbhan**



**Dr Haniyeh Hemmatian**



**Dr Mícheál Ó Breasail**



**Jacob Harland**



**Dr Michelle Maugham-Macan**



**Dr Jakub Mesinovic**



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*Next Issue: March 2025*

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# President's Comments



## Professor Mark Cooper

BMBCh PhD FRCP (London) FRACP, GAICD

ANZBMS President  
Head of Clinical School, Concord Clinical School  
Faculty of Medicine and Health  
Patyegarang Precinct

As I come to the end of my first year as President, it is with great pleasure that I share a summary of the Society's key activities, milestones, and achievements over the last twelve months. ANZBMS has continued to strengthen its role as the leader in bone research, education, and clinical practice, reflecting our commitment to improving patient outcomes in osteoporosis and other bone and mineral disorders. We have endeavoured to support our early career investigators, our research community in general, and our clinical members. We have undertaken a comprehensive survey of our members and are acting on these results.

Many of us will have attended the recent Annual Scientific Meeting in association with ESA and SRB. I applaud the efforts of our POC leads, Agnes Arthur and Kirtan Ganda, the Meetings Committee Chair, Michelle McDonald, and the wider POC. They put together a well-balanced program with cutting-edge research presentations and interactive topics ranging from bone disease pathogenesis to innovative therapeutic approaches. I was impressed

by the researcher focussed sessions that appealed so well to members of all three societies. Our commitment to supporting the career development of our junior researchers was amply demonstrated and is hopefully an example to our ESA and SRB colleagues.

ANZBMS has also hosted a range of other meetings over the last year. These include the Advanced Clinical Postgraduate Course which is proving an excellent update for both trainees and seasoned practitioners. In addition, the CPC has organised a series of excellent webinars covering a diverse range of clinical areas. I thank Christian Girgis, the members of the CPC Committee and the faculty of these meetings for such a comprehensive and stimulating program. Our Clinical Imaging Committee has also held 2 bone densitometry courses. These continue to be the flagship densitometry courses nationally. Thanks Nick Pocock and the team for continuing to lead these courses.

ANZBMS continues to be committed to supporting the next generation of researchers in the field of bone and mineral



# President's Comments

metabolism. This is through a range of opportunities including presentations and awards at the ASM and mentorship and grant writing support. Traditionally, ANZBMS has not been in a position to directly fund research grants. However, in recent years we have had a fruitful collaboration with the Bone Health Foundation (BHF) to co-fund a range of grants. These include Health Innovation, Interdisciplinary Collaborative, and Grand-in-Aid grants. BHF also generously supported the Christine and T. Jack Martin Travel Award. We are continuing to look at ways we can fund research jointly, addressing aspects of the missions of both societies where they overlap. I personally thank the effort the BHF board has made to work between our societies despite some of the differences in the way we are set up. We were able to celebrate our collaborative outputs with BHF in a special session at the ASM packed with awardees and high-profile international speakers.

As I know the membership desires, ANZBMS remains an advocate for policies that prioritize bone health at both the state and national governmental levels. This year, we continued our advocacy efforts to increase funding for musculoskeletal research and improve access to new bone disease diagnostic tests and treatments. Much of this advocacy is done quietly but effectively through our Clinical Practice and Therapeutics Committees or in association with partners such as Healthy Bones

Australia. Two examples of significant successes in terms of advocacy include supporting the PBS listing of romosozumab as a first line agent in people with osteoporosis at high risk of fracture and petitioning MSAC to provide funding for FGF23 testing in people likely to have genetic causes of hypophosphataemia who might be eligible for burosumab. The development and validation of an online calculator to determine TmP/GFR which is now hosted on the ANZBMS website (under the resources tab) has been a wonderful addition. This is now being heavily used in the evaluation of people with possible phosphate wasting and again reduces barriers to the use of medications such as barosumab. Although the work of many, I'd like to single out Cherie Chiang and Richard Prince for their energy and expertise in getting this sorted out. On the same topic of hypophosphataemia, the Australian experience of these disorders is currently being written up in a series of articles to be published in JBMR+ thanks to a generous grant from Kyowa Kirin.

My predecessors have ensured that ANZBMS has robust processes and governance which makes the President role easier and more enjoyable. We have as a committee made some changes to some aspects of how we work and these can be discussed at the AGM as needed. We also have reports from a member survey that will be discussed in more depth. More importantly, I would like to thank all



# President's Comments

members of Council and the chairs and members of all of our committees. There is no way I can name you all personally but you collectively have demonstrated extremely high congeniality and professionalism. There are however 3 officers of the Society that have to be mentioned. ANZBMS should recognise the boundless energy of Michelle McDonald in her role as President-Elect. She also brings an international strategic perspective that will ensure ANZBMS maintains its role as a leader in the global bone field. I'd like to thank Mark Forwood as immediate Past-President. Not only did Mark manage the society for several weeks of my term while I dealt with some family emergencies but he has continued to be a sounding board and source of advice and wisdom for me and the Council. Last, but not least, Rachel Davey in her role of treasurer has overseen a program of financial management that has not only ensured our financial viability (despite declining funding from companies) but has established a

foundation for prudent investment in our members interests over the next few years.

On a final note it has become apparent that there is a personal cost, in terms of time and energy, for our members that take roles on Council or ANZBMS committees. At some times of the year this can be considerable. I am keen that we don't end up burning out, or otherwise disadvantaging, our members that volunteer for these critical positions. As such, I would ask you as members to also recognise these contributions where you can. The odd expression of thanks or constructive positive feedback for our Council or Committee members would be very much appreciated and would help our society run.

## **Mark S Cooper**

President

Australian and New Zealand Bone and Mineral Society



# ANZBMS Committee Updates

## Program Organising Committee

We are grateful to all POC members and in particular A/Prof Michelle McDonald and Dr Ayse Zengin for their support and guidance which enabled the success of the 2024 meeting in Adelaide.

We are looking forward to the November ANZBMS ASM to be held in Cairns from 9th to 12th November 2025. The POC hope to create a stimulating and engaging program with some potential themes we are considering listed below:

- Epigenetics
- Molecular regulation
- Nutrients and gut health and impact on bone
- Metabolic diseases and their effects on bone e.g. Duchenne's Muscular Dystrophy
- Osteokines
- Bone health in the setting of diabetes mellitus
- Bone health in the Australian indigenous population
- Menopausal Hormone Therapy

The POC will also review the feedback from this year's meeting to ensure the experience for delegates is the best possible and discuss speakers and themes in the coming weeks. Some speakers are likely to be drawn from the Herbert Fleisch Workshop (organised in collaboration with JSBMR/KSBMR and IFMRS for Early Career Investigators) to be held following the ANZBMS 12-14th November 2025.

We look forward to an exciting 2025 meeting in Tropical North Queensland.



# *ANZBMS Committee Updates*

## *Clinical Practice Committee*

### **Save the Date for the Post Graduate Clinical Meeting!**

The Clinical Postgraduate Meeting presents pragmatic and practice-informing concepts in bone and mineral medicine. This meeting is recognised by the RACP as a required CPD activity for Endocrine advanced physician trainees but also attracts a large number of early career physicians in endocrinology, aged care, rheumatology, nephrology and orthopedics. It will be held on March 15-16th virtually with registration opening soon.



# ANZBMS ECIC Report

## ECIC Co-Chairs Report

The ANZBMS ECIC hopes all members had a fantastic time at the recent ASM, as we finalise our plans leading into 2025.

Since our last update, most of our focus has been on arranging and undertaking our broad program of events at the ASM. We thank all our committee members who worked tirelessly in collaboration with teams from ESA and SRB, as well as the POC to ensure the meeting was a great success. Some key highlights for us were the social events including the Meeting of the Minds evening and the fantastic Career Development session sharing skills about communicating science to lay audiences. This was a fascinating session that was both entertaining and informative.

Recently, ANZBMS ECI Clinical Sub-Committee was responsible for the administration of the JBMRPlus special issue on hypophosphataemic bone disorders, generously funded by Kyowa Kirin Australia. We thank all authors who submitted an abstract and send our best wishes to the authors who are now awaiting decisions on manuscript acceptance from the JBMRPlus editorial board. We thank the ANZBMS Clinical Practice Committee and ANZBMS Council for prioritising this initiative which is undoubtedly of great benefit to our ECIs.

We now have access to the ESA-ANZBMS Fellowship Database which provides information on available clinical and non-clinical endocrine (including bone) fellowships throughout Australia. While the current iteration does not detail fellowships in New Zealand, we would love to receive submissions of available fellowships to be included. You can access the database or submit information through the links available at [ANZBMS - ESA ANZBMS Fellowship Database](#).

The ECIC is always considering ways to support and promote the work of our ECIs and encourage networking and collaboration in order to facilitate impactful research. With changing social media environments, we are now prioritising two new avenues.

The ANZBMS ECIs Facebook group will facilitate 6-weekly discussions on journal articles and topics of interest, as well as promote relevant initiatives and opportunities. The ANZBMS Early Career Investigators LinkedIn group provides a location to share your achievements and learn more about our upcoming initiatives. Links to both of these groups can be found [here](#). Come and join us!

The Career Development committee has also had a busy few months developing and co-ordinating events and



# ANZBMS ECIC Report

## ECIC Co-Chairs Report

opportunities for ECIs. The B.O.N.E program has been a resounding success in the past and in 2024, the European Calcified Tissue Society was keen to involve ANZBMS ECIs in the ECTS Academy Webinar series. We look forward to reporting the outcome in our next report.

We wish to congratulate all the fantastic ECR award winners who presented their work during the ASM. Congratulations!

The ECIC would like to thank our invited speakers who joined us from ECTS and ASBMR at the recent ASM. Katharina Jähn-Rickert from ECTS spoke on her research on the *"amazing osteocyte and its lacuno-canalicular network in relation to disease states"*; Andrea Cowan spoke on *"fracture prediction in patients receiving maintenance dialysis: a simple tool"*.

Finally, it is the time of year in which we welcome new members to the ECIC as we transition into our 2025 communities. We welcome our incoming members: Martha Blank, Gabi Stokes, Lucy Collins and Kai Chen. Thank you as well to our outgoing members: Jason Talevski, Amy Harding and Bridie Mulholland. We would also like to introduce Shejil Kumar as our incoming co-chair to join Madhuni Herath.

The ANZBMS ECIC is focussed on empowering you, the ECIs. We would love to share your news and successes through our various communication channels; please contact us at [ecic@anzbms.org.au](mailto:ecic@anzbms.org.au).

Best wishes,



Madhuni Herath and Kara Anderson  
ANZBMS ECIC Co-Chairs 2024



# ANZBMS ECI Spotlight



## Dr Ben Kirk

Senior Research Fellow, The University of Melbourne, Melbourne, Victoria

B.O.N.E Awardee

### Can you briefly describe what your research is about / what are your research interests?

I'm an epidemiologist and clinical trialist in the field of 'sarcopenia and gerontology':

<https://findanexpert.unimelb.edu.au/profile/847347-ben-kirk>

My research focuses on improving the identification, understanding and prevention/treatment of sarcopenia, an ICD-10 muscle wasting disease.

My program has three key themes surrounding sarcopenia. Examples of impact below.

#### Identification:

a. Global Leadership Initiative in Sarcopenia (GLIS): my program created the first global definition of sarcopenia for research and clinical practice via an International Delphi, involving 107 academic, industry and health professionals from 29 countries and 7 continents.

b. Australian Body Composition Study (ABC): my program developed age- and sex-specific normative values for muscle mass in 15,479 Australians using Hologic DXA scans, replacing the non-representative values from the USA.

#### Understanding:

a. Using data from 38,236 older adults, my program identified biological and clinical risk factors for sarcopenia, including telomere shortening, chronic inflammation, physical inactivity and malnutrition.

b. In four prospective studies with 2,701 older adults, my program revealed that low muscle mass/strength increases falls risk, fractures, and disability. We also found that low muscle mass interacts with low bone density to increase mortality risk.

#### Prevention/Treatment:

a. LHU-SAT Trial: My program demonstrated the safety and efficacy of multicomponent exercise and a higher protein diet for preventing sarcopenia in a phase 3 RCT.

b. EMPIRE Trial. I'm conducting a phase 3 RCT to determine the combined effects of protein+vitamin D on bone density, muscle mass and falls incidence in people with osteopenia and sarcopenia (osteosarcopenia).



# ANZBMS ECI Spotlight

## What motivates your research / what are your goals for the future?

Since finishing my PhD and becoming an ECI, my perspective has changed. Originally it was driven by my addiction for learning about muscle physiology. However, since working in a University-affiliated hospital and in outpatient clinics, I now see the detrimental effects of muscle loss and weakness (sarcopenia) on falls, disability and fragility fractures. I'm still addicted to learning, but I really want to help older people get better.

As for future goals, I want to find a safe and effective drug cure for sarcopenia and integrated it into clinical practice (exercise works, but unfortunately not all older people will exercise). In doing so, I will hopefully of left a legacy of good work and helped society in a meaningful way. Helping train the next generation of postgraduate researchers is also important to me.

## Do you have tips that would help ECIs in this stage of their career?

**Collaborate, collaborate, collaborate!** This is at the top of my list as an ECI. Working in silos prevents people and teams from performing at a level necessary to remain competitive for funding in the long term. Five people each contributing one-fifth of the effort you're putting into a project can sustain the intensity much longer than you can, and they have more time to dedicate to other projects that can help with career progression. As the saying goes, 'many hands make light work'. Collaborating with others enhances productivity and innovation, provides additional resources, facilitates interdisciplinary research, and opens more doors.

## Can you tell us a bit more about the B.O.N.E. program?

An excellent program for ECIs to showcase their work at the annual ASBMR meeting. Without the B.O.N.E. award I would not have been able to attend ASBMR and present novel findings. It provided me with the opportunity to share my research among my peers and receive feedback for improvement. It also provided the opportunity to develop new collaborations and strengthen existing collaborations. I'm very grateful to ANZBMS.

## Do you have tips that would help ECIs?

I'm only starting out but here are my two cents...1. Find a good mentor and listen. 2. Research a topic you love (this helps you stay hungry and humble). 3. Learn as many laboratory/clinical skills as possible. 3. Network, network, network. 4. Be sceptical yet open-minded of all research findings including your own!



# ANZBMS ECI Spotlight



Dr Ben Kirk was the recipient of the 2024 Bridging Overseas Networking and Exchange (B.O.N.E) Award. He was chosen from the Young Investigator Award Winners to represent ANZBMS at ASBMR. He had the opportunity to moderate the Late Breaking Clinical Oral presentation session along with a senior researcher.



# ECI Funding Opportunities

Grant/Fellowship Scheme*	Application Period
<a href="#"><u>Various MRFF grant opportunities</u></a>	Closing date varies
<a href="#"><u>The MJA Award for Excellence in Medical Research</u></a>	Deadline: 31 December 2024

*\*Clicking on the scheme name will redirect you to the grant/fellowship website.*



# ANZBMS Lab Spotlight

**It takes a team to make science happen. Here's a snapshot of members from a young lab, and what they're up to!**

## **Integrative Cartilage Reserach Group (ICRG), Department of Biomedical Engineering, The University of Melbourne**

*Featuring: Dr Kathryn Stok (Lab Head), Dr Pholpat Durongbhan, Han Liu, Jemima Schadow, and Tony Huang*

### **Dr Kathryn Stok, Lab Head, Professor of Biomedical Engineering**

**How long have you been in this lab/group?** I started the group at ETH Zürich in Switzerland in 2010, and then relocated it to Melbourne in September 2016.

**What topics are researched in your lab?** We develop and use novel 3D imaging, mechanics and computational modelling approaches to explore musculoskeletal remodelling. We are particularly interested in linking microstructural adaptation to homeostatic and pathological imbalance in osteochondral tissues and using this to inform tissue fabrication strategies.

**What was your career trajectory leading to this moment?** My undergraduate degree was in Mechanical/Biomedical Engineering at QUT in Brisbane. My final year project inspired me to a research Masters degree and then a relocation to Singapore for a PhD. However this was a not a match made in heaven, so I left after a year to a PhD and postdoc at ETH Zürich with Professor Ralph Müller, followed by a year in Industry with Scanco Medical in 2015. Over these years I combined my foundation in biomechanics with training in image acquisition and image analysis. I was recruited by UoM in 2016, where I founded the Mechanobiology Lab facility and built my wonderful team (currently 8 PhD students and 1 postdoc).

**What's your mentorship style?** Different team members respond differently, but my personal preference is a facilitative mentorship style; encouraging critical thinking, problem-solving and self-discovery. I also encourage a healthy work-life balance which I've found is core to personal development and generally better for the whole team.

**What's a fun fact about your lab?** We are a very interdisciplinary group so we have to work as a team to get anything done. We have degrees in Electrical Engineering, Health Science, Biomedical Engineering, Mechanical Engineering, Medicine, Biology, Biochemistry, Materials Science, Computer Science.



# ANZBMS Lab Spotlight



ICRG Lab: (left to right) Pholpat Durongbhan (Reserach Fellow), Jemima Schadow (PhD student), Han Liu (PhD student), Kathryn Stok (Lab head).

## Dr Pholpat Durongbhan, Research Fellow

**How long have you been in this lab/group?** I have been in the group for more than 5 years, first as a PhD student and now as a postdoctoral researcher.

**What topics are researched in your lab?** The lab works across a very diverse range of disciplines. My focus is on developing new tools for quantitative assessment of bone, cartilage, and joint health from high-resolution images acquired by team members.

**What was your career trajectory leading to this moment?** I had background in electrical and software engineering and was introduced to biomedical image processing as part of my master's thesis. I was blessed to be offered a position as a PhD student with Dr Stok and have been working with her on many exciting projects.

**What's a fun fact about your lab?** We are a very tightly knit group with very good vibes! We get together for a lab dinner every now and then, and if someone has something to celebrate (e.g., new publication, PhD milestone), they must bring a bottle of sparkling beverage to share the good news!

## Han Liu, PhD student

**How long have you been in this lab/group?:** Three years and ten months

**What inspired you to choose the lab?** During my master's degree, I worked on medical imaging but not at the microstructural level, which made me curious about



# ANZBMS Lab Spotlight

advanced techniques like microCT to explore intricate details. I also gained experience with small animal work and found it rewarding, even though I know it's not for everyone. These interests inspired me to join a lab specializing in high-resolution imaging and small animal studies.

**What are you excited to do?** I'm excited about planning, preparing, and executing small animal work while caring for the animals throughout the study. I'm also enthusiastic about exploring approaches in image processing, which offers freedom and opportunities to discover new solutions.

**What's a fun fact about your lab?** Our lab currently has a male/female split along two main projects: in vivo imaging (all female team) and in vitro tissue models (all male team).

## Jemima Schadow, PhD student

**How long have you been in this lab?** 5 years

**What inspired you to choose the lab?** I originally only joined for master's thesis, but I stayed to do a PhD because the musculoskeletal system is fascinating to me and the lab provided me with the opportunity to use cutting edge imaging techniques to investigate it.

**What are you excited to do?** I'm always excited to work with images, extracting information from them.

**What's a fun fact about your lab?** Kathryn is the only Australian in our group.

## Tony Huang, MD-PhD student

**How long have you been in this lab?** 4 months

**What inspired you to choose the lab?** As an aspiring orthopedic surgeon, I joined the Integrative Cartilage Research Group to delve into the cutting-edge field of cartilage biomechanics and advance my passion for tissue engineering.

**What are you excited to do?** Through my PhD, I aim to develop the scientific framework for a novel cell regeneration therapy for cartilage knee injuries. My ultimate goal is to translate this innovation into clinical practice, potentially reducing or eliminating the need for joint replacement surgeries.

**What's a fun fact about your lab?** Apparently, the A/C in our lab has better work-life balance than I do—it's off on weekends!



# ANZBMS Member Awards



**Haniyeh Hemmatian**  
**University of Melbourne**

Christine and T. Jack Martin Travel Grant



**Eugenie Macfarlane**  
**University of Sydney**

Philip Sambrook Young Investigator Travel Award  
Sol Posen Award



**Lucy Collins**  
**Monash University**

Roger Melick Young Investigator Award



**Micaela Quinn**  
**University of Adelaide**

Christopher and Margie Nordin Young Investigator Award



**Sarah Dixon**  
**Princess Alexandra Hospital, Brisbane**  
Clinical Cases in Metabolic Bone Disease Seminar



**Ben Kirk**  
**University of Melbourne**  
ASBMR 2024 Young Investigator Award  
ASBMR 2024 B.O.N.E Award



# ANZBMS Member Awards



**Mike Lin**

**Royal Prince Alfred Hospital**  
ANZBMS Outstanding Clinical Award



**Natalie Koh**

**University of Melbourne**  
ANZBMS Highest Rated Student Abstract



**Kaitlyn A Flynn**

**The University of Queensland**  
Basic Science Award



**Lena Batoon**

**The University of Queensland**  
Kaye Ibbertson Award



**Yinghong Zhou**

**The University of Queensland**  
Kaye Ibbertson Award



**Peter Ebeling**

**Monash University**  
2024 ASBMR Frederic C. Bartter Award



# ANZBMS Member Awards



**Christine Philippa Rodda**  
**Monash University**  
King's birthday Honours



**Thach Tran**  
**University of Technology, Sydney**  
Sol Posen Award



**Marc Sim**  
**Edith Cowan University**  
ANZBMS Bone Health Foundation  
Health Innovation grant



**Jack Dalla Via**  
**Edith Cowan University**  
2024 Best Clinical Article Award



# ANZBMS Member Awards





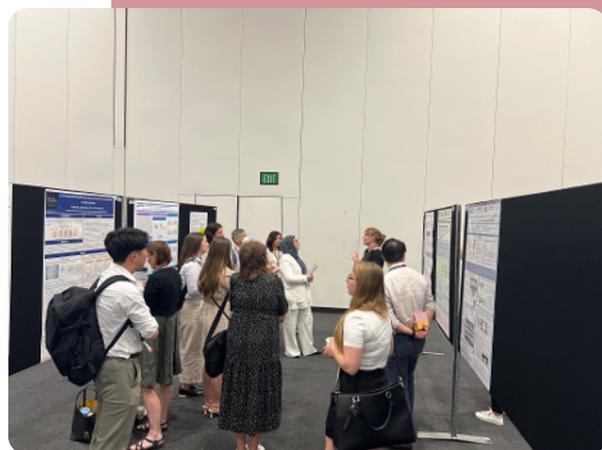
# ANZBMS Member Awards



**Congratulations to all awardees!**



# ASM snapshots



# ASM snapshots



## *HubLe (IFMRS Learning Environment)*

### **Reflecting on a Year of IFMRS HubLE**

As we are near the end of this incredible year, I am brimming with pride and optimism for our amazing early career musculoskeletal (MSK) research community. Since we first got started, the International Federation of Musculoskeletal Research Societies (IFMRS) HubLE has been totally dedicated to one main goal: making our platform the best it can be for Early Career Researchers (ECRs) in MSK research.

This year was a really special one for us because we got to engage with people all over the world in a really meaningful way. We were so proud to take part in some of the top conferences on four continents. It was a great way to show that IFMRS HubLE is a truly international platform for ECRs in MSK research. We are so proud of our ongoing dedication to enhancement! It has been the cornerstone of our approach, ensuring that we evolve alongside the needs of our dynamic research community.

We are so proud to say that our platform helped to make many new research connections between researchers from all sorts of different places and backgrounds. It has been a real highlight of our year to be able to interview with some of the most promising ECRs out there, and to give them a chance to share their amazing work. These interviews have been a great way to celebrate what these brilliant minds have achieved, and to show our wider community just how creative and innovative young researchers can be when they're tackling some of the most complex musculoskeletal challenges out there.

As part of the IFMRS, we are dedicated to creating a welcoming and encouraging atmosphere where everyone can thrive and explore their scientific curiosity. From day one, we have been working our socks off to create a platform that truly supports and empowers ECRs. We have been refining our approach to meet their evolving needs, and we are so proud of what we have achieved!

We are always excited to explore new ideas and opportunities for growth! Our wonderful community is all about innovation and collaboration! To all of you amazing emerging researchers and passionate scientists out there, we would absolutely love for you to reach out and be part of our journey! We are here for you, whether you have a groundbreaking idea, are seeking support, or want to contribute to our mission. Our doors are always open!

As we look ahead to the coming year, we are so excited about all the amazing things that lie ahead of us! We are so lucky to have such passionate, creative, and dedicated ECRs on our team. They give us so much hope for the future and remind us every day why we are so committed to supporting ECRs in MSK research.

Warmly,

Mustafa UNAL, PhD

Editor-in-Chief, HubLE



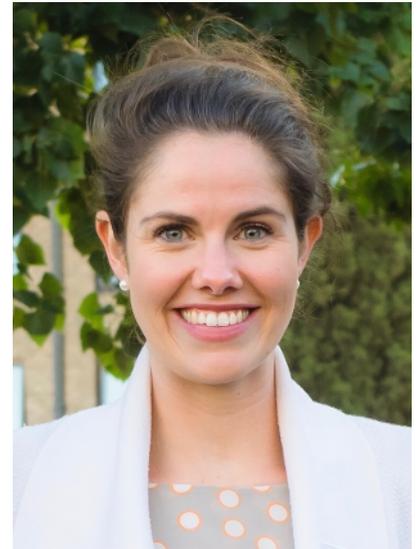
[Collins L.](#), [Ronan A.](#), [Hutcheon E.](#), [Ebeling PR.](#), [Grill V.](#), [Nguyen HH.](#) Atypical fractures at non-classical sites associated with anti-resorptive therapy: a systematic review. *J Bone Miner Res.* Dec 2024;39(12):1722-1734. doi: 10.1093/jbmr/zjae159.

## Featured author:

### Lucy Collins

PhD Candidate,  
Department of Medicine, School of Clinical Sciences,  
Monash University, Victoria, Australia  
Department of Endocrinology and Diabetes,  
Western Health, Victoria, Australia

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## What is the background of the study?

Rare complications of anti-resorptive therapy include medication-related osteonecrosis of the jaw and atypical femur fractures (AFF). ASBMR proposed a case definition for AFFs in 2010, which was updated in 2013. However, atypical fractures at non-classical sites have been increasingly described. We aimed to systemically identify atypical fracture cases, excluded from the ASBMR AFF case definition, in patients receiving anti-resorptive medication for > 3 years.

## What did you find?

Sixty-six articles were identified, describing 151 cases of atypical fractures in 114 individuals. The most frequent fracture site was the ulna, followed by the tibia. All patients were taking anti-resorptive treatment prior to or at the time of fracture, most frequently alendronate monotherapy (44%). Most commonly, fractures were transverse in nature (95%), following minimal or no trauma (96%), non-comminuted (98%) with cortical thickening of the surrounding bone (69%). Anti-resorptive treatment was ceased following atypical fracture in the majority (89%).

## What is the application of these findings?

Atypical fractures are rare and should not deter physicians from appropriate anti-resorptive therapy for osteoporosis. However, clinicians should be alert to their presence, at additional sites to the femur. An update of the current ASBMR AFF case definition to include other skeletal sites could be timely.



# ANZBMS Member Publications

[Anderson KB](#), [Mohebbi M](#), [Tembo MC](#), [Rufus-Membere P](#), [Hyde NK](#), [Pasco JA](#), [Kotowicz MA](#), [Holloway-Kew KL](#). Hip structure and incident fracture: a time-updating survival analysis over 20 years of data from the Geelong Osteoporosis Study. *Archives of Osteoporosis*. 2024;19:1-10.

## Featured author:

### Kara Anderson

Institute for Mental and Physical Health and Clinical Translation (IMPACT), Deakin University, Victoria, Australia

E: [k.anderson@deakin.edu.au](mailto:k.anderson@deakin.edu.au)



## What is the background of the study?

Fractures are both common and preventable, but deciding when to intervene is difficult. This work aims to target the gap between individuals identified as at-risk and those who will go on to fracture by using Hip Structural Analysis (HSA), a measure of bone geometric properties based on hip DXA scans.

## What did you find?

Our work from the Geelong Osteoporosis Study found that HSA parameters can predict incident fracture in women over a 20 years of follow up period. Our participants are randomly selected from the population and span the entire adult range, thus reflecting the general community. "Buckling ratio" a geospatial indicator of resistance to force, was identified as inversely associated with fracture risk; that is, low buckling ratios had an increased risk for fracture. This association at the "shaft" site was independent of total hip BMD.

## What is the application of these findings?

This work supports the application of HSA, which is calculable from existing hip DXA scans, towards fracture prediction. It may be possible to use this tool in conjunction with BMD to improve models of fracture prediction and better target interventions towards those most at need.

## ***ANZBMS Researchers: We want to share & celebrate your wins!***

We are on the lookout for members who have celebrated success (awards and publications) to be highlighted in the Spotlight or Publication sections for the upcoming editions of the newsletter. If you know of someone or want to self-nominate, please email us at [newsletter@anzbms.org.au](mailto:newsletter@anzbms.org.au)



**WE WANT  
YOU!**

***The ANZBMS Newsletter Editorial Board is  
searching for new members!***

Open to all ANZBMS members at any stage in their career. For more information and to apply, please e-mail [newsletter@anzbms.org.au](mailto:newsletter@anzbms.org.au) with up to 150 words explaining why you would be a good addition to the newsletter team.

# Calendar of Events



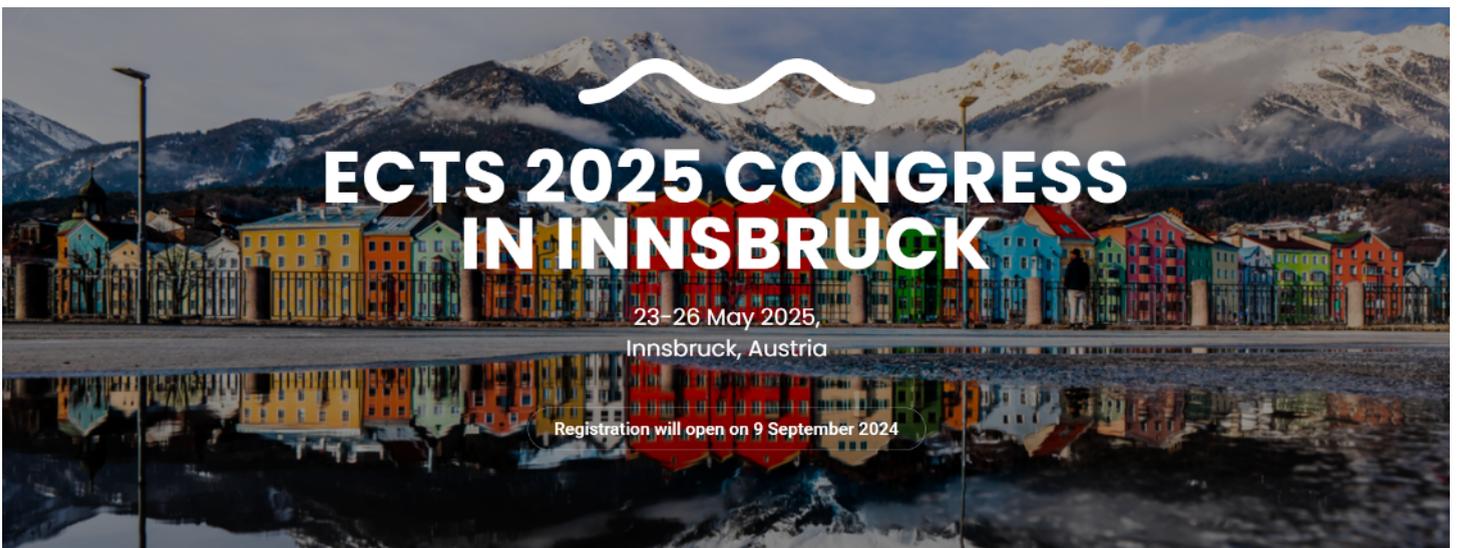
**ESA 2025**  
**SEMINAR**  
4-6 APRIL • RYDGES MELBOURNE VICTORIA

**esa**  
endocrine society of australia



2025 ROME

Roma Convention Center | April 10-13



**ECTS 2025 CONGRESS  
IN INNSBRUCK**

23-26 May 2025,  
Innsbruck, Austria

Registration will open on 9 September 2024



# Calendar of Events



## 2025 Annual Meeting

Save-the-Date! The ASBMR 2025 Annual Meeting is September 5-8, 2025 in Seattle, WA.

**ANZBMS**  
9-12 November,  
Cairns Australia **2025**

ANZBMS

**IFMRS**  
HERBERT FLEISCH  
WORKSHOP:  
ASIA PACIFIC

12-14 NOV  
**2025**

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