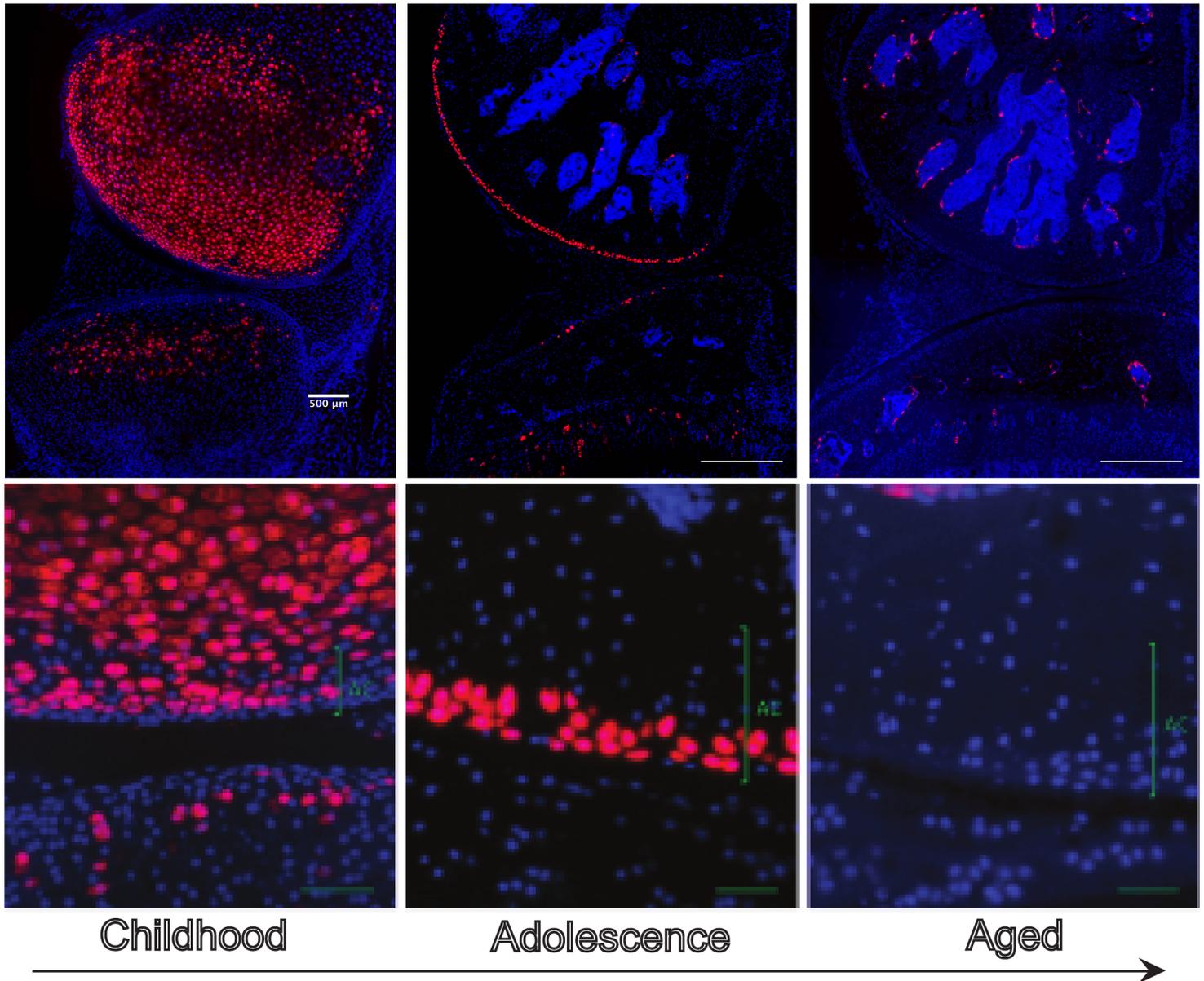


# ANZBMS Newsletter



**Clinical Updates**

**ANZBMS Committee Updates**

**ANZBMS ECI Spotlight**

**ASM Awards and Events**

**ANZBMS Member Publication Highlights**



**Cover Image** by Dr Jia Ng et al., The University of Adelaide. The images show the red population of Grem1 stem cells in the articular joint in early childhood, adolescence, and older age in unique animal tracing models. Images show how these cells diminish with age and provide a possible explanation for why osteoarthritis is common in aged joints compared to younger adults. In the paper, Dr Ng provides, for the first time a cell target for pharmacological intervention.

Read more here DOI <https://doi.org/10.1038/s41467-023-42199-1>



# Welcome to the ANZBMS Newsletter

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*Next Issue: March 2024*

*Please send us your scientific images and the best will feature on the front page of our next issue!*

 [newsletter@anzbms.org.au](mailto:newsletter@anzbms.org.au)

 @ANZBMSoc

Welcome to the December 2023 issue of the ANZBMS newsletter!

In this issue, we thank Prof Mark Forwood for his contribution to the ANZBMS society as president and welcome Prof Mark Cooper as the incoming president.

We are saying goodbye to Dr Lena Batoon and Dr Shanal Kumar who will be leaving the editorial board and welcome Dr Lucy Collins and Dr Shejil Kumar into the team.

After a successful ANZBMS society meeting in October, we congratulate all award recipients to their achievements (page 18 and 19). We would like to highlight two successful programs run by the ECIC; ECIC Fellowship Coaching Program (page 11) and ECIC Seminar Series: ECI Engage (page 16).

We are recruiting editorial board members! Email us with a short biography, at [newsletter@anzbms.org.au](mailto:newsletter@anzbms.org.au) if you'd like to join our fantastic team!

Merry Christmas and a Happy New Year from the ANZBMS Newsletter Editorial Board!

## ANZBMS Newsletter Editorial Board



**Dr Martha Blank**



**Dr Lena Batoon**



**Emma Cheney**



**Dr Shanal Kumar**



**Dr Michelle Maugham-Macan**



**Dr Jakub Mesinovic**



**Dr Lucy Collins**



**Dr Shejil Kumar**



# President's Comments



## Professor Mark Forwood

ANZBMS President  
Chair of Anatomy, School of Pharmacy and  
Medical Sciences  
Griffith University, Gold Coast

ANZBMS Colleagues, the time has indeed come for that biennial transfer of power from one President to the next. It has been an honour to lead the Society for the past two years and to work with a dedicated and collegiate Council, committees and administrative support committed to the ANZBMS mission. Of course, you don't dispense with me that easily, remaining Past-President for the next two years. I look forward to supporting Mark Cooper as the incoming President who will continue to promote ANZBMS as the peak Australasian society in the field of bone and mineral metabolism.

I thank outgoing Councillors Natalie Sims and Josh Lewis for contributions to ANZBMS Governance. I particularly thank Natalie for her leadership as President and continued counsel during the last term. I also congratulate Natalie on being awarded the ANZBMS Career Achievement Award, a well-deserved honour for a colleague who exemplifies outstanding and major scientific contributions and excellence in teaching and service to the bone and mineral field. Josh Lewis provided key input to Council as a mid-career researcher, providing excellent advice for initiatives that bridge early to

mid-career development.

I welcome the incoming President-Elect, Michelle McDonald and new Councillors, Belinda Beck, Itamar Levinger and Marc Sim. Michelle was a Co-Chair of the "virtual" POC and Councillor during the last two years bringing excellent experience, scientific expertise and enthusiasm for the role. Belinda, Marc and Itamar have been active members of the Society bringing a wealth of experience in different disciplines to Council. I thank Rachel Davey for her thoughtful and effective leadership as Treasurer. Rachel has ensured that the Society remains in a sound financial position and remains in this role for the next period.

During these past two years, Council has realised a considerable set of achievements, many of which are realised through our committees and described in their annual reports. These include renewal of committee structures and ToRs, improved governance policies for Conflicts of Interest, Code of Conduct, Equity, Diversity and Inclusion, and clinical and therapeutic advocacy. We are fortunate to have a vibrant and engaged ECI Committee who contribute to Society

*"The time has come," the Walrus said,  
"To talk of many things:  
Of shoes—and ships—and sealing-wax—  
Of cabbages—and kings—  
And why the sea is boiling hot—  
And whether pigs have wings."*

**Lewis Carrol**



# President's Comments

promotion, professional development and media. ANZBMS has strengthened its external engagement in the field with considerable contributions to IFMRS and ongoing affiliation with Healthy Bones Australia and the Clinical Imaging Committee delivered an international Densitometry Course to the Emirates Rheumatology Academy (ERA).

In 2023 we also established a partnership with Bone Health Foundation to support advocacy, education and funding, through which we continued to fund our ANZBMS-BHF grants-in-aid, established two new grants and supported ongoing funding of the Christine and T Jack Martin Award. We have maintained industry funding for our ASM and related awards through Amgen Australia, Kyowa Kirin Aus and our loyal trade exhibitors, thanks to the

support of our meeting managers ASN Events, led by Jim Fawcett. We were also successful in a Medical Education Grant with Kyowa Kirin Australia to publish an ANZBMS case-series on hypophosphataemic bone disorders in JBMR Plus. At the risk of missing anyone, I thank all of our Councillors, committee members and colleagues who have contributed to these outcomes, placing ANZBMS at the forefront of the field in Australia and New Zealand. Finally, I thank Ivone Johnson and Melissa Douglas for their executive support to Council, Committees and myself. Their collective experience and corporate memory have been highly valued over Ivone's 25!! and Melissa's 23-year service to the Society. I thank them for their support during my term as President and acknowledge their dedicated service to ANZBMS.



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<https://experts.griffith.edu.au/18894-mark-forwood>



# Incoming President's Comments



## Professor Mark Cooper

BMBSCh PhD FRCP (London) FRACP, GAICD

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

It is with great pleasure, and a degree of trepidation, that I move into the role of President of ANZBMS. Most importantly, I would like to thank Mark Forwood and the other Council members for their contributions over the last 2 years. My thanks go out to the members of the Council and committees that are stepping down and I welcome the new members taking on these roles.

Making my job easier is the healthy state that ANZBMS is currently in. The society is well governed with a robust constitution and clearly articulated policies and procedures. We hold a range of high quality meetings targeted at researchers and clinicians. We also have an expanded range of grant schemes, many of which have been developed with other organisations in the bone and mineral field. Our Early Career Investigators and Clinicians continue to be highly active and represented throughout our committees and meetings. Despite the turbulent times on the financial markets and the decline in sponsorship across the bone and mineral field our financial position remains robust.

But there is always more to do. During my tenure I'll be working with the new Council to continue and expand our activities in strategic areas. We hear from our membership that there is a desire for the society to be more active in

advocacy and we will be looking at ways to petition for, and secure, greater research funding for researchers in bone and musculoskeletal health in Australia and New Zealand. We already have strong partnerships with colleagues in musculoskeletal health research regionally and more widely. However, at a time when travel is difficult and expensive fostering links and joint initiatives with our regional partners becomes even more important. We look forward to leading new initiatives to bring us all closer together. Within the clinical realm there are challenges to getting access to the best treatment, in the best order, for patients with bone diseases. We will be working with other societies to try to overcome these barriers and increase access to these therapeutics.

Finally, I stress that we are here for our members. If you have suggestions for how we might better fulfill the various objectives of the Society please let me know and I look forward to meeting you all at our webinars and in person meetings.



# The ANZBMS Newsletter Editorial Board is changing!

**Welcome to our new members.....**



## **Dr Lucy Collins**

**Endocrinology Fellow, Royal Children's Hospital**

During my final year of adult Endocrinology training, I am completing a year of paediatric endocrinology at the Royal Children's Hospital. I am planning to commence a PhD next year, exploring gene variants associated with atypical femoral fractures.

It is with great pleasure that I join the editorial board! I look forward to communicating exciting developments to our members.

## **Dr Shejil Kumar**

**Endocrinology Fellow, Royal North Shore & Westmead  
PhD Candidate, University of Sydney**

I'm completing my final year of Endocrinology training and have taken the PhD plunge this year, in which I'll be investigating the interaction between drug treatment and skeletal loading in patients with osteoporosis. It's really exciting to join the editorial board which will help me stay up to speed with the latest advances in bone health research and I will take the opportunity to promote the latest and greatest work being done by our fantastic early career members!





# The ANZBMS Newsletter Editorial Board is changing!

.... and a big thank you to our outgoing members

## Dr Shanal Kumar

Endocrinologist, Prince Charles & Princess Alexandra Hospitals, Queensland,  
PhD Candidate, Monash University  
Senior Lecturer, University of Queensland

It has been wonderful working with the team to deliver on clinical content for the newsletter over the last two years. As I prepare to submit my PhD thesis, continue post-doctoral research and increase my clinical duties, and look after my two boisterous little girls - its time to hand the baton! And I'm looking forward to my new career development role in ANZBMS ECIC to add to the juggle...



## Dr Lena Batoon

Postdoctoral Research Fellow  
Mayo Clinic, Rochester, MN

Being part of the editorial board as a member and a copy editor allowed me to live one of my childhood dreams: to become a journalist. This experience was truly gratifying, and it was a perfect way for me to stay connected with the ANZBMS community as I'm currently situated in the US. One of the many highlights was learning and sharing the many successes of colleagues from Australia and New Zealand. I'm very grateful to have worked with a great team of ECIs who share the same level of enthusiasm in serving ANZBMS and I'm very excited to see how this platform evolves in the coming years.



# ***ANZBMS Committee Updates***

## ***Therapeutics Committee***

PBAC romosozumab re-submission to obtain 1st line PBS reimbursement following fracture (in selected patients) is on the agenda for the PBAC's March meeting. The consumer comments channel is currently open, and closes 31/1/24. The PBAC March 2024 meeting outcome will be published online 26/4/24.

## ***Clinical Practice Committee***

This year, the Clinical Practice Committee engaged with its clinical members in a variety of ways! The 3-part osteoporosis webinar series which ran from May to September was well received and recordings are available for all members on the ANZBMS website. We're preparing a list of infusion providers to improve access to zoledronic acid administration – this will soon appear on the ANZBMS website.

The committee hosted the Clinical Postgraduate Seminar on the weekend of the 9<sup>th</sup> and 10<sup>th</sup> December. This was delivered in an online virtual format, over two half-day sessions. The seminar covered broad themes with a focus on pragmatic case-based discussions, and clinical updates. Further information on this seminar and the program can be found here:

<https://www.anzbms.org.au/advanced-clinical-postgraduate-meeting.asp>

We're planning online events for 2024 in response to the continued demand for medical education in bone and mineral medicine. We're always happy to hear your suggestions on how we can better engage with clinicians. If you'd like to hear more or have ideas around clinician engagement/education, please feel free to email Christian on [christian.girgis@sydney.edu.au](mailto:christian.girgis@sydney.edu.au).

## TmP/GFR Calculator

- Kidney phosphate wasting can be due to genetic (e.g. X-Linked Hypophosphatemia) or acquired causes (Iron infusion, Fanconi syndrome, oncogenic osteomalacia).
- Hypophosphataemia leads to osteomalacia/rickets, myopathy, and skeletal fragility.
- Kidney phosphate wasting is diagnosed using the TmP/GFR, the ratio of the maximum rate of tubular phosphate reabsorption to the glomerular filtration rate.
- This requires a paired collection of blood and a second void fasting urine sample.
- The TmP/GFR Calculator - This is a collaborative project between ANZBMS and AACB [A/Prof Cherie Chiang (ANZBMS), Dr Kay Weng Choy (AACB), Dr Ee-Mun Lim (AACB TmP/GFR Harmonisation working group Chair)]
- It provides a harmonised diagnostic tool for patients with Kidney phosphate wasting due to genetic (e.g. X-Linked Hypophosphatemia) or acquired causes (Iron infusion, Fanconi syndrome, oncogenic osteomalacia).



## TmP/GFR Calculator

I am a:

Age In Years

Plasma Creatinine    $\mu\text{mol/L}$  OR  mg/dL

Plasma Phosphate   mmol/L OR  mg/dL

Urine Creatinine   mmol/L OR  mg/dL

Urine Phosphate   mmol/L OR  mg/dL



## ECIC Co-Chairs Report

This year has gone by way too quickly here at the ECIC, with the lots of new ECI initiatives delivered by our subcommittees. It was great to see all the ECI's and meet and welcome in the new ECIs and students into our society at the recent annual scientific meeting. From all reports, everyone had a great time in Newcastle, with all of our ECI events well attended and received, with bones and brews once again being a social highlight! At the annual meeting, we also welcomed 6 new ECIC members: Micheál Ó Breasail, Abadi Gebre, Eugenie Macfarlane, Shejil Kumar, Shanal Kumar and Angela Sheu. We would also like to take the opportunity to thank outgoing ECIC members who have made great contributions over the last 2 years John Kemp, Jack Dalla Via, Lena Batoon, Hahn Nguyen, and Pamela Rufus-Membere. Bridie Mulholland will be assuming the role as POC, as the outgoing Co-chair. Finally, we are excited to announce that we have recently appointed the new co-chair Madhuni Herath, a shared role with the chair Cassandra Smith, who are busy now planning on refining our ECI deliverables for 2024, watch this space!

This year, we launched 'ECI ENGAGE: The ANZBMS ECIC Seminar Series for Connecting and Advancing ECI Potential' which has been a big hit for our ECI community. Recently, we held our second webinar, which featured a panel discussion on **"Playing the Research Game"** with ANZBMS members Prof Rob Daly and Dr Sandra Luliano. Lots of great discussion between our members and some important take home messages on how to carve out your research niche, keeping true to your research story, tips for the prioritisation of grants and fellowships and taking time for self-reflection. The ANZBMS RACP Webinar Series has concluded for the year, with 6 webinars delivered by ANZBMS members. The ANZBMS ECIC as the lead society also recently co-hosted with KSBMR, an online webinar showcasing presentations from EMCRs from both societies, an initiative of the IFMRS Future Global Leaders. This was an excellent

opportunity for our ECIs to not only have an invited international webinar presentation, but also be recognised as a future global leader in bone and mineral research. We were really excited to see how engaged our audience was, with 161 registrants and representation across 8 countries! Hopefully, this is an initiative we can look to continuing in future years, again giving our ECI community these exciting international opportunities.

The ECIC is committed to promoting ANZBMS ECIs and their achievements – if you have recently published an article and would like us to promote it through our platforms, please send a link to the publication and a short blurb (no more than 50 words) to [ecic@anzbms.org.au](mailto:ecic@anzbms.org.au). Also keep an eye out on our X (formerly Twitter) account (@ANZBMS\_ECIC) for updates and our Member Monday highlight series!

Have a great Christmas break, and we look forward to seeing you all in 2024.



Bridie Mulholland and Cassandra Smith

ECIC Co-Chairs



# ECIC Fellowship Coaching Program

**Thank you to the coordinators and mentors, and congratulations to the mentorship recipients!**

The Fellowship Coaching Program is an initiative by the ANZBMS ECIC. It supports two early career investigators (ECIs) with their NHMRC Investigator Grant applications. The selected ECIs are coached by two mid-career investigators (MCIs) who provide feedback to strengthen the track record, research impact and leadership sections of their application.

## COORDINATORS



Dr Jack Dalla Via



Dr Hanh Nguyen



Dr Pamela Rufus-Membere

## MENTEES



Dr Cassandra Smith



Dr Marc Sims

## MENTORS



Dr David Musson



Dr John Kemp



A/Prof Joost Lesterhui



Dr Susan Millard

## SENIOR PANEL MEMBERS



Prof Allison Pettit



Prof Jillian Cornish



Prof Natalie Sims



Prof Peter Ebeling



# ANZBMS ECI Spotlight



## **Dr Shanal Kumar MBBS (Hons), FRACP BSC (Biomed)**

Endocrinologist, Prince Charles and Princess Alexander Hospital, Brisbane, Queensland

Senior Lecturer, University of Queensland

PhD Candidate, Monash Centre for Health Research & Implementation, Monash University, Victoria

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

My PhD explored endocrine and metabolic complications in adults with cystic fibrosis with focus on diabetes and bone health. Many adults with cystic fibrosis now have access to a disease-specific modulator therapy that has revolutionized their lung health and as a result, they are increasingly interested in optimizing their physical and skeletal health. My research so far has aimed to clarify the fracture prevalence in adults with cystic fibrosis including the impact of bisphosphonates. Moving forward, my projects will aim to characterize the effects of these disease-specific modulator therapies on bone health in this population. I also plan to evaluate novel imaging techniques in this group to evaluate and monitor skeletal effects of these treatments.

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

I am interested in complex chronic disease management and optimizing models of care that facilitate not just improved clinical outcomes but also service satisfaction. There is minimal evidence-base to guide my clinical management in adults with cystic fibrosis currently. With this in mind, I hope my research can fill important evidence-gaps, rapidly translate into clinical practice recommendations and facilitate a learning and shared-decision model of care.

### **Do you have tips that would help ECIs maximize their research potential?**

I try and frame any barriers I face as opportunities to reflect, evaluate, learn and improve. Being in such a highly-specialized field and early in my clinical-academic career, I often feel uncertain, particularly given the clinical landscape is changing so quickly. This can be terrifying and rewarding (all at once!).



# ANZBMS Lab Spotlight

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

Bone Densitometry Research Lab, Griffith University  
*Featuring: Prof Belinda Beck (Lab Head) and Dr Amy Harding*

## Professor Belinda Beck, Lab Head

### How long have you been in this lab/group?

24 years. I have taught musculoskeletal anatomy and bone physiology for over 20 years and lead a program of research in non-pharmacological interventions for bone health across the lifespan.

### What topics are researched in your lab?

We are primarily focused on mechanical loading interventions such as exercise and vibration for the prevention of osteoporotic fracture. Over the years we have conducted RCTs in kids, adolescents, young adults and older adults, including both males and females. I also work on the prevention of bone stress injuries in athletes and the military as a secondary but no less passionate interest.

### What was your career trajectory leading to this moment?

I completed a Bachelor of Human Movement Sciences (Education) at UQ, a Masters of Sports Medicine and PhD in Exercise Physiology at the University of Oregon, then a postdoc in the School of Medicine at Stanford. In 1999, I was offered a position at Griffith University and have been here ever since. Although Griffith was very low on bone collaborators and lab gear when I arrived, I have been lucky with infrastructure grants and we now have a world class lab with all the bells and whistles you need to run exercise trials for bone.

### What's your mentorship style?

Each student is different so needs a slightly different approach, but I try to lead by example and have painfully high standards. There is an element of tough love, but aiming high ensures students do the very best work they can. I have an open-door policy. We have formal fortnightly meetings, but most students stop in more regularly for problem solving, reassurance or just to have a chat. After we create a project plan, I try to dial down my inner control freak and step back. I want students to figure stuff out for themselves, including figuring out how to figure things out. When they get stuck, I have their back. It's a delicate balance of fostering independence along with a mentality of teamwork.

### What's a fun fact about your lab?

There is a gremlin in our lab. It makes our equipment do completely inexplicable things at the worst possible times.



# ANZBMS Lab Spotlight

## Dr Amy Harding, Project Coordinator of the STOP FRACTURE! study

### How long have you been in this lab?

10 years (approximately!)

### What inspired you to choose the lab?

I completed an undergraduate course in musculoskeletal anatomy which increased my interest in the skeleton and its physiology (bone is such a unique tissue!), and this introduced me to Prof Belinda Beck. I then completed some volunteer data collection for one of the Bone Densitometry Research Laboratory PhD research projects in 2014 and decided that I should head down the research path (I originally was set on doing Physiotherapy and working clinically)!

### What are you excited to do?

I'm excited about doing high quality research projects, mentoring/supervising student research projects...and just exercise and bone health in general. Also using medical imaging technologies to explore bone and muscle responses to exercise loading.

### What's a fun fact about your lab?

Almost every study conducted in the Bone Densitometry Research Laboratory since I started in 2014 has an acronym...can't complete a project without a snappy name to make it memorable (some of the studies have been CAPO Kids, LIFTMOR, LIFTMOR-M, Optima-Ex, HALTMOR, VIBMOR...).



**If you and your lab want to be featured in our next issue, please email us!**

**[newsletter@anzbms.org.au](mailto:newsletter@anzbms.org.au)**



# ANZBMS New Member Spotlight

## Dr Laura Sutton

Postdoctoral Research Fellow, Menzies Institute for Medical Research

**Research Category:** Clinical

**Research interests:** Improving the management of osteoarthritis, through health system change and implementation science.

**What I hope to gain from joining ANZBMS:** To have access to a network of people conducting bone and joint research and engage in opportunities for early career researchers.



## Jasmin Elliott

PhD Candidate at the University of the Sunshine Coast, Queensland

**Research category:** Clinical

**Research Interests:** Exploring the relationship between bone health and the development of psychological stress and mood disorder, particularly during the menopause transition.

**What I hope to gain from joining ANZMBS:** Joining ANZBMS will allow me to engage, network and collaborate with other like-minded researchers, and help keep me abreast of current and upcoming research.



# ECIC Seminar Series: ECI Engage

## This quarter, the ECIC has organised two virtual seminars!

"The ANZBMS ECIC introduced a new seminar series this year - ECI Engage - with a singular mission in mind: to empower ECIs and provide them with the tools they need to succeed. This series aims to target specific topics relevant to ECI career development, connecting them with seasoned experts to facilitate discussions and support the development of research skills.

Our first session (August 2023) provided invaluable insights for ECIs, highlighting the best practices and potential pitfalls in engaging consumers in research, offering ECIs practical advice on effective methodologies, ethical considerations, and strategies to foster meaningful collaborations. The transition from research-perspective to consumer-perspective was great and something we rarely see.

Our second session (November 2023) was a round-table discussion seminar where our expert guest speakers engaged in an open and collaborative discussion and answered questions from our attendees. The level of engagement from our ECIs was outstanding and there was a large exchange of insights shared among the group.

In previous years, our ANZBMS events have been targeted at ANZBMS members, however we are now extending the invite to ECI non-members to increase visibility of our society. The feedback from our seminar series has been overwhelmingly positive, and we have much more exciting seminar topics scheduled for 2024, so stay tuned!"



**Dr Jason Talevski**  
*ECIC Events lead*

Co-design and consumer engagement: the Do's and Don'ts | August 11

Number of attendees: 35



**Associate Professor Alison Beauchamp**



**Liz Flemming**



**Professor Robin Daly**



**Dr Sandra Iuliano**

Playing the research game: Celebrating the wins and how to overcome the losses | November 24

Number of attendees: 29



# ECI Funding Opportunities

Grant/Fellowship Scheme*	Application Period
<a href="#"><u>The MJA Award for Excellence in Medical Research</u></a>	Deadline: 31 December 2023
Amgen/ Healthy Bones Australia/ANZBMS Clinical Grants Program	Applications close: TBC 2023
Discovery Early Career Award (DECRA)	Applications close: 7 December 2023

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



# ANZBMS Member Awards & Achievements



**Kavindi Weerasinghe**  
**Deakin University**  
ANZBMS Highest Rated Student Abstract



**Christal Au-Yeung**  
**University of Sydney**  
Roger Melick Young Investigator Award



**Krisel De Dios**  
**University of Technology Sydney**  
Christopher and Margie Nordin Young Investigator Poster Award



**Amanda Ji**  
**Cairns Hospital**  
ANZBMS Clinical Case Award

## Amgen-ANZBMS Outstanding Abstract Awardees



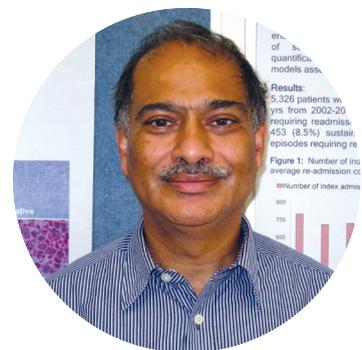
**Varun Venkatesh**  
**University of Melbourne**



**Benjamin Mullin**  
**University of Western Australia**



**Sandra Iuliano**  
**University of Melbourne**



**Charles Inderjeeth**  
**University of Western Australia**



# ANZBMS Member Awards & Achievements



**Jiao Jiao Li**

**University of Technology Sydney**

2023 Metcalf Prize - National Stem Cell Foundation of Australia



**Natalie Sims**

**St Vincent's Institute**

2023 ANZBMS Career Achievement Award



**Kai Chen**

**University of Western Australia**

2023 ANZBMS Kaye Ibbertson Award

2023 Professor Sambrook Young Investigator Travel Award



**Richard Prince**

**University of Western Australia**

ANZBMS Life Member



**Kathryn Stok**

**University of Melbourne**

2023 ANZBMS Bone Health Foundation Grant

**Submit your achievements at  
[newsletter@anzbms.org.au!](mailto:newsletter@anzbms.org.au)**



**Nguyen AL, Herath M, Burns M, Holt D, Ebeling PR, Milat F, Gibson PR, Moore GT. The value of whole-body dual-energy x-ray absorptiometry in assessing body composition in patients with inflammatory bowel disease: a prospective study. Eur J Gastroenterol Hepatol. 2023 Nov 7. DOI: [10.1097/MEG.0000000000002675](https://doi.org/10.1097/MEG.0000000000002675).**

## What is the background of the study?

Low skeletal muscle mass is a known poor prognostic factor for many important outcomes including quality of life, treatment response, and surgical outcomes in patients with inflammatory bowel disease (IBD). However, its relationship with intestinal inflammation is unclear, and well-characterised, accessible methods of accurately measuring skeletal muscle mass in this clinical context are lacking.

## What did you find?

We assessed 54 patients with IBD against 30 age- and sex-matched controls and re-assessed 17/54 patients >13 weeks post-induction of biologic therapy. Body mass index (BMI) and handgrip strength were assessed against body composition parameters by whole-body dual-energy x-ray absorptiometry (DXA), with skeletal muscle index (SMI) measuring skeletal muscle mass.

Handgrip strength and BMI did not adequately differentiate between patients with active and inactive IBD or between controls and IBD patients. Mean SMI was lower in patients with active disease (7.9 vs 7.0 kg/m<sup>2</sup>, P=0.029) although the prevalence of low SMI in these two groups were similar. Low SMI was, however, more prevalent in IBD patients than healthy controls (8/54, 15% vs 0/30, 0%, P=0.027). In the 9/17 patients who responded to therapy, SMI by DXA increased by 9.7% (95% CI 3.2-16.2%, P=0.0004) and BMI increased by 6.4% (1.3-11.5%, P=0.012). Handgrip strength was unable to differentiate between treatment responders and non-responders.

## What is the application of these findings?

While low SMI does not appear to be highly prevalent in patients with IBD, our study suggests that treatment of intestinal inflammation may contribute to improved SMI. This presents an exciting opportunity for intervention targeted at improving quality of life and operative outcomes for patients with IBD.

Unfortunately, currently available screening tools performed poorly at identifying individuals with low SMI and monitoring their response to therapy. Identification of IBD patients with low SMI via DXA may assist in tailoring and guiding therapy.



Rodriguez A, Hii R, Ebeling P, Nerlekar N. Coronary artery calcification is associated with smaller increases in femoral neck bone mineral density with anti-resorptive therapy. *European Heart Journal*, Volume 44, Issue Supplement\_2, November 2023, ehad655.1345, <https://doi.org/10.1093/eurheartj/ehad655.1345>

## What is the background of the study?

Vascular calcification is frequently seen in individuals with osteoporosis. As such, there has been a focus on understanding if treatments for osteoporosis can affect vascular calcification, most showing mixed results. However, there is very little attention paid to whether the presence of vascular calcification (and cardiovascular disease more broadly) affects bone mineral density (BMD) response to treatment.



## What did you find?

In an analysis of a single centre's cardiac CT registry, we identified 400 individuals who had coronary angiography (to detect coronary artery calcification, CAC) and took out at least one prescription for an anti-resorptive medication from the same centre. Most of these individuals were women and most were using bisphosphonates. Eighty-six of these individuals had follow-up BMD measurements. We found that those with evidence of CAC had, on average, a yearly change in BMD at the femoral neck that was 1.2% less (0.9% to 1.4%) than those without CAC after adjusting for age, sex, smoking status, height, weight, and years on treatment. A matched analysis on the full cohort is underway.

## What is the application of your findings?

Our results suggest that having structural cardiovascular disease may affect osteoporosis treatment response further underscoring the putative link between the skeleton and the vasculature. We hypothesise that; despite using medications that alter mineral metabolism (anti-resorptives), the presence of calcification may indicate that there is some fundamental alteration in mineral metabolism in these patients and that the use of anti-resorptives to restore BMD may be insufficient to overcome this change in biology.



# ANZBMS Member Publications

## ***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)



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## Spotlight item for December



## Early Investigator Spotlight

December 2023

### RESEARCH TITLE

*Protein O-GlcNAcylation modulates osteoclast formation*

### RESEARCH CATEGORY

*Basic*

### KEYWORDS

*Osteoclast, bone resorption, bone loss, Protein O-GlcNAcylation, nucleoporin 153.*



Yi-Nan Li,  
PhD Candidate.

University Hospital Düsseldorf, Germany.

Submission:

To submit your expression of interest for sharing your research or your opinion with HubLE, visit our website [www.huble.org](http://www.huble.org) or scan this QR code:





# Calendar of Events



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