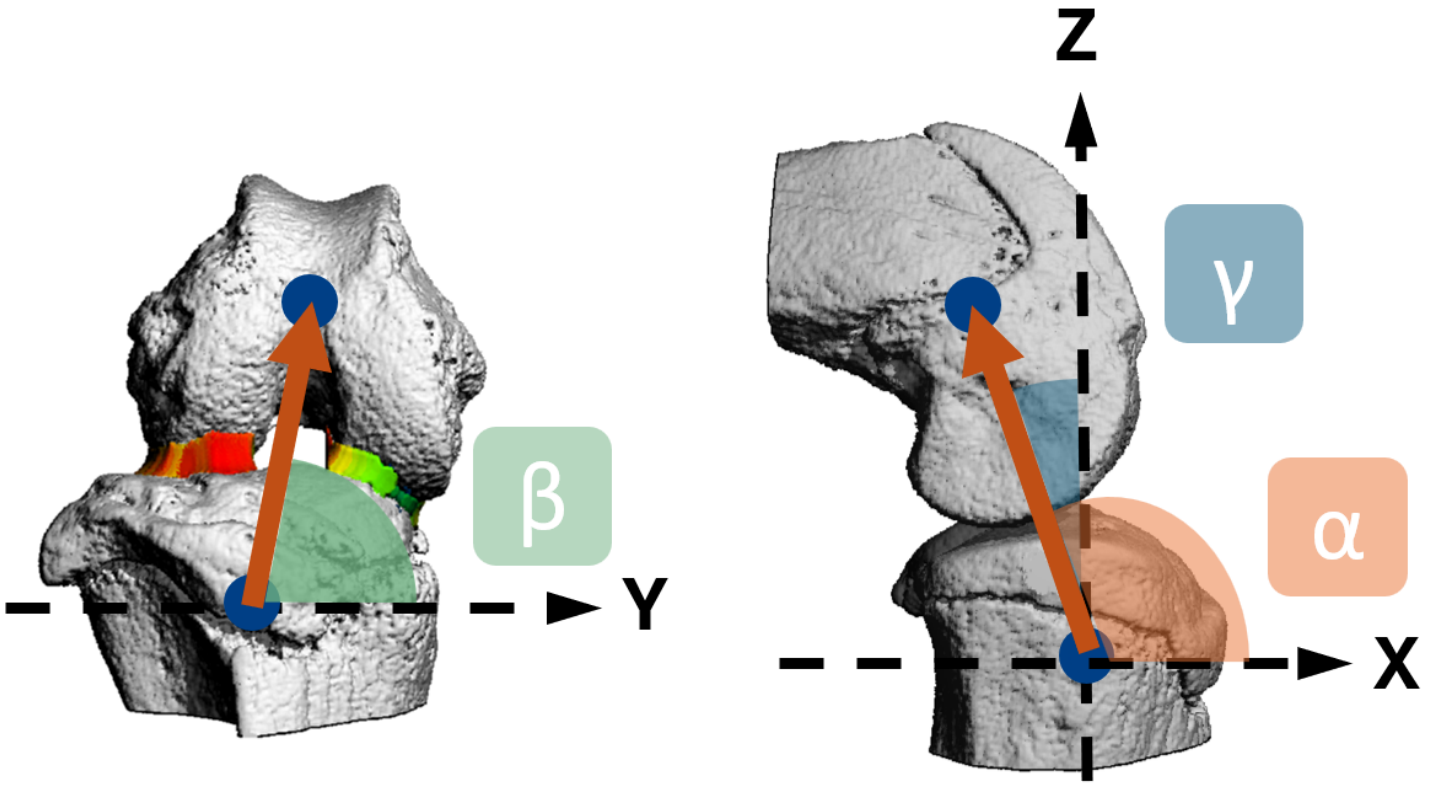
Issue 2, June 2026

ANZBMS Newsletter



Newsletter Editorial Board Updates

Committee Updates

ECIC Report

Member Awards and Spotlight

Member Publication Highlights

Calendar of Events

Cover image from work by **Dr Han Liu** and Professor Kathryn Stok et al. (doi.org/10.1093/jbmrpl/ziag087), showing measures of joint space thickness and altered joint alignment of the tibiofemoral joint in a 4-week osteoarthritis mouse model using microCT imaging.

Welcome to the ANZBMS Newsletter

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Welcome to the second ANZBMS Newsletter of 2026!

As we approach the 36th Annual Scientific Meeting in Auckland this September, excitement continues to build across the ANZBMS community. This issue highlights many of the initiatives shaping our Society, from international opportunities to expanded educational and career development programs for members at every stage of their careers.

Preparations for the Auckland meeting are well underway, with an outstanding scientific program featuring distinguished international speakers, new networking opportunities, and the introduction of the inaugural ANZBMS Mid-Career Plenary Award. We are also pleased to see continued investment in our early- and mid-career researchers through initiatives such as the ECIC Career Development Award, the Conference Mentorship Program, ECR Connect, and the ongoing B.O.N.E Exchange program.

Beyond the ASM, ANZBMS continues to strengthen member engagement through new committee appointments, the launch of the Engagement and Advocacy Committee, expanded clinical webinar offerings, and the continued success of the Consumer and Community Involvement program.

Whether you are preparing an abstract, exploring new professional development opportunities, or simply keeping up with the latest Society news, we hope you find something of interest in this issue.

Happy reading!

Next Issue: September 2026

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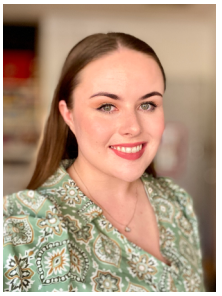
ANZBMS Newsletter Editorial Board

Dr Pholpat Durongbhan

Dr Haniyeh Hemmatian

Dr Mawson Wang

Dr Kaitlyn Flynn

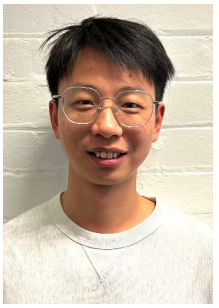


Mackenzie Skinner

Tony Huang

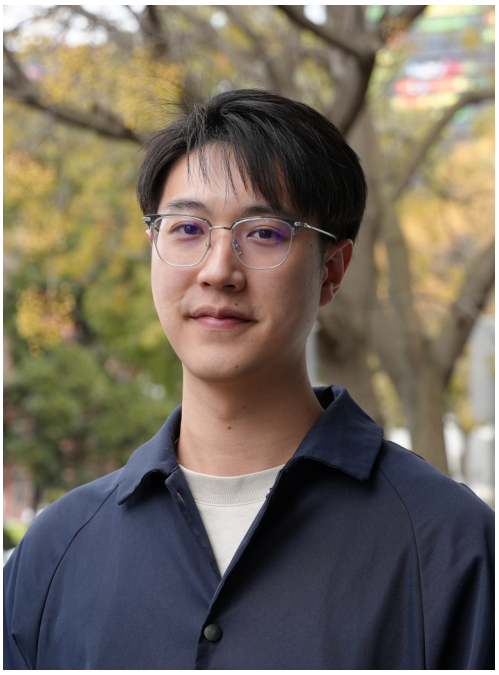
Cecily Chen

Jiaqi (Kino) Shen



Shihong (Shannon) Yang

Welcome to our new members...



Jiaqi (Kino) Shen

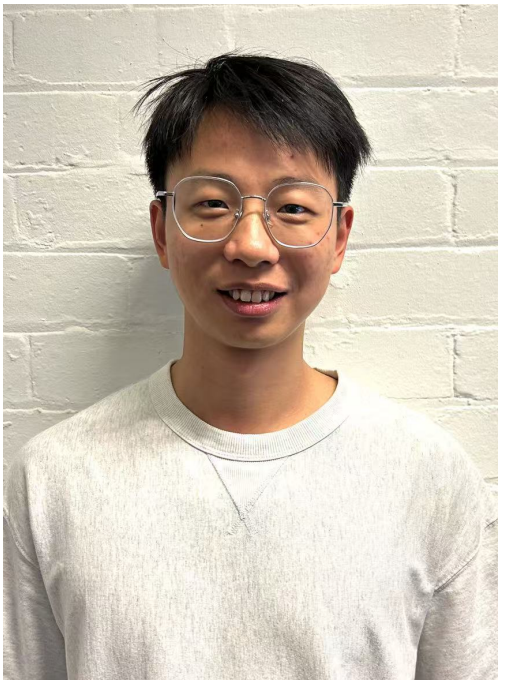
PhD Candidate, the University of Melbourne.
Department of Biomedical Engineering.

As a new member of the ANZBMS Newsletter Editorial Board, I look forward to spotlighting the latest innovations and breakthroughs emerging from our community. My PhD research explores cartilage mechanobiology and the engineering of custom bioreactor systems designed to provide tuneable conditions for optimising tissue development. Drawing on my prior background in medical device consultancy, I look closely at how standardisation bridges the gap between foundational research and clinical translation. My passion lies in navigating the product development lifecycle, driving early-stage benchtop concepts into realisable and user-centred solutions.

Shihong (Shannon) Yang

PhD Student, the University of Melbourne.
Department of Biomedical Engineering.

It is a pleasure to join the ANZBMS Newsletter Editorial Board, and I look forward to contributing to sharing emerging research within our community. My PhD focuses on AI-based cartilage morphology analysis, where I develop rapid and effective methods to extract structural features from low-clarity imaging data. I am particularly interested in how artificial intelligence can enhance biological insight and support more robust data-driven research.



From the President

Dear Members,

On behalf of the ANZBMS Council, I am pleased to share an update on key activities and opportunities across our Society. It has been an active and productive period, and I would like to highlight several important developments.

We are very much looking forward to welcoming you to Auckland this September for our Annual Scientific Meeting. A fantastic program has been developed by our Program Organising Committee, including our international invited speakers Professor Bente Langahl and Professor Chris Hernandez, led by Michael Bennett and Melissa Cantley, and we are grateful for their leadership and efforts. I was delighted to have my first ever visit to Auckland in April and tour the local venues. The city is beautiful, offers some amazing dining and venue experiences, and the newly opened Convention Centre will create the perfect atmosphere for our annual in person event.

We recognise the ongoing challenges associated with travel restrictions and costs in the current global climate. In response, we hope that the late-breaking abstract call has provided members with additional time and flexibility to contribute their work. We strongly encourage participation and look forward to what promises to be an engaging and high-quality meeting.

The Clinical Practice Committee is developing an exciting program of webinars for 2026, which will provide valuable, up-to-date insights for clinicians and researchers alike. The first of these is a joint webinar with Australian Rheumatology Association on 27th July. Further webinars and details will be shared soon, and we encourage members to look out for and take advantage of these learning opportunities.

We have welcomed several members into roles chairing our Communications Committee, Dr Dzenita Murotovic and Dr Kai Chen (Deputy) and our Research Committee, Dr John Kemp and Dr Natalie Hyde. We have also seen the formation of our new Engagement and Advocacy Committee, led by Co-chairs Associate Professor Joshua Lewis and Dr Cassandra Smith. We would like to thank Professor Rebecca Masson for her many years serving as Research Committee Co- chair and Dr Melissa Cantley as Communications Committee Chair.

We are pleased to report that our Consumer and Community Involvement (CCI) program has successfully completed Phase 1, including a series of CCI-led workshops, which were fully subscribed. These activities are helping to equip our members with the knowledge and skills needed to meet NHMRC CCI requirements, an increasingly important component of research funding and design. We look forward to building on this momentum in the next phase of the program, which will be driven by the CCI working group led by Cassandra Smith.

We are delighted to offer a new travel grant to support the attendance of 2 EMCR members at the ECTS Herbert Fleisch Meeting, to be held in Denmark in September 2026. This initiative reflects our commitment to supporting international engagement and the professional development of our members.

This year marks the introduction of our inaugural ANZBMS Mid-Career Plenary Award, a significant step in recognising and supporting excellence at this important career stage. This award offers an emerging leader in our community an opportunity to showcase their research during our ASM in Auckland. We look forward to celebrating outstanding contributions within our community.

We were extremely encouraged by the strong response to the Bone Health Foundation / ANZBMS Health Innovation and Inaugural EMCR Grants Expressions of Interest. The high level of engagement reflects both the strength of our research community and the importance of these funding initiatives in fostering innovation and early- to mid-career development.

I would like to thank all members for your continued engagement, dedication, and contribution to ANZBMS. Your work continues to drive advances in bone and mineral health across our region.

I look forward to reconnecting with many of you in person in Auckland.

Warm regards,

Associate Professor Michelle McDonald

ANZBMS President

Group Leader, Bone Microenvironment Group,
Research Education Academic Director
School of Medical Sciences
Faculty of Medicine and Health
The University of Sydney

Scientific Program Committee

We are looking forward to welcoming everyone to the ANZBMS ASM to be held at the New Zealand International Convention Centre in Auckland, NZ from the 6th to 9th of September 2026.

The Scientific Program Committee (SPC) have been hard at work creating an impactful and engaging program for all attendees. Abstract submissions have closed and both oral and poster presentations have been allocated. Presenters will be notified in the coming weeks.

International speakers have been confirmed, and we look forward to hearing the following presentations by our invited guests:

Prof Christopher Hernandez (USA)- Basic Science- "*Beyond the Skeleton: The Body-Wide Network Influencing Bone Health*".

Prof Bente Langdahl (Denmark)- Clinical- "*The New Anabolic Era: Optimising Sequencing, Cycling and Exit Strategies*"

Invited national speakers include Prof Itamar Levinger (Aus), A/Prof Frances Milat (Aus), A/Prof Edwin Hawkins (Aus), Dr Marion Mundt (Aus) and Dr Angela Sheu (Aus).

Our B.O.N.E Program awardees have been notified, and we are excited to welcome Qi He (ASBMR Awardee) and Nikola Stokovic (ECTS Awardee) to join the ASM program this year.

The debate topic will be: "*For fracture prevention in postmenopausal women, menopausal hormone therapy is preferred over antiresorptive therapy*". Speakers include:

Marc Bolland and Ian Reid (against)

Shoshana Sztal-Mazer and Kirtan Ganda (for).

There will be two sponsored lunchtime symposiums:

- "*Symposium on non-resectable tumour-induced osteomalacia (nrTIO)*"- **Kyowa Kirin**- Monday 7 September 1pm-2pm
- "*Theramex Bone Building Lunch Symposium*"- **Theramex**- Tuesday 8 September 1pm-2pm.

Key dates to keep in mind:

Early Bird Registration deadline: Friday 12 June 2026

Scientific Program Committee

We have lined up an engaging social program with the following highlights:

- Welcome Function- Sunday 6 September- 6:30pm-7:30pm
- Bones and Bites- Sunday 6 September- 7:30pm- 10:00pm
- Clinical Cases in Metabolic Bone Disease Seminar- Monday 7 September- 6:30pm
- Conference Dinner- Tuesday 8 September- 7:00pm (on-site)

The preliminary program is now available on the website for further information.

We are grateful to all SPC members for their support and guidance:

Michael Bennet and Melissa Cantley (Co-Chairs), Christian Girgis, Kaitlyn Flynn, Amy Harding, Dougall Norris, Paul Mitchell, Jack Dalla Via, Micaela Jocelyn Quinn, Matthew Ting, Marni Nenke, Agnes Arthur (Past Co-Chair) and Kirtan Ganda (Past Co-Chair).

Check the website to see SPC member bios.

We look forward to welcoming you to Auckland in September.

Michael Bennet and Melissa Cantley

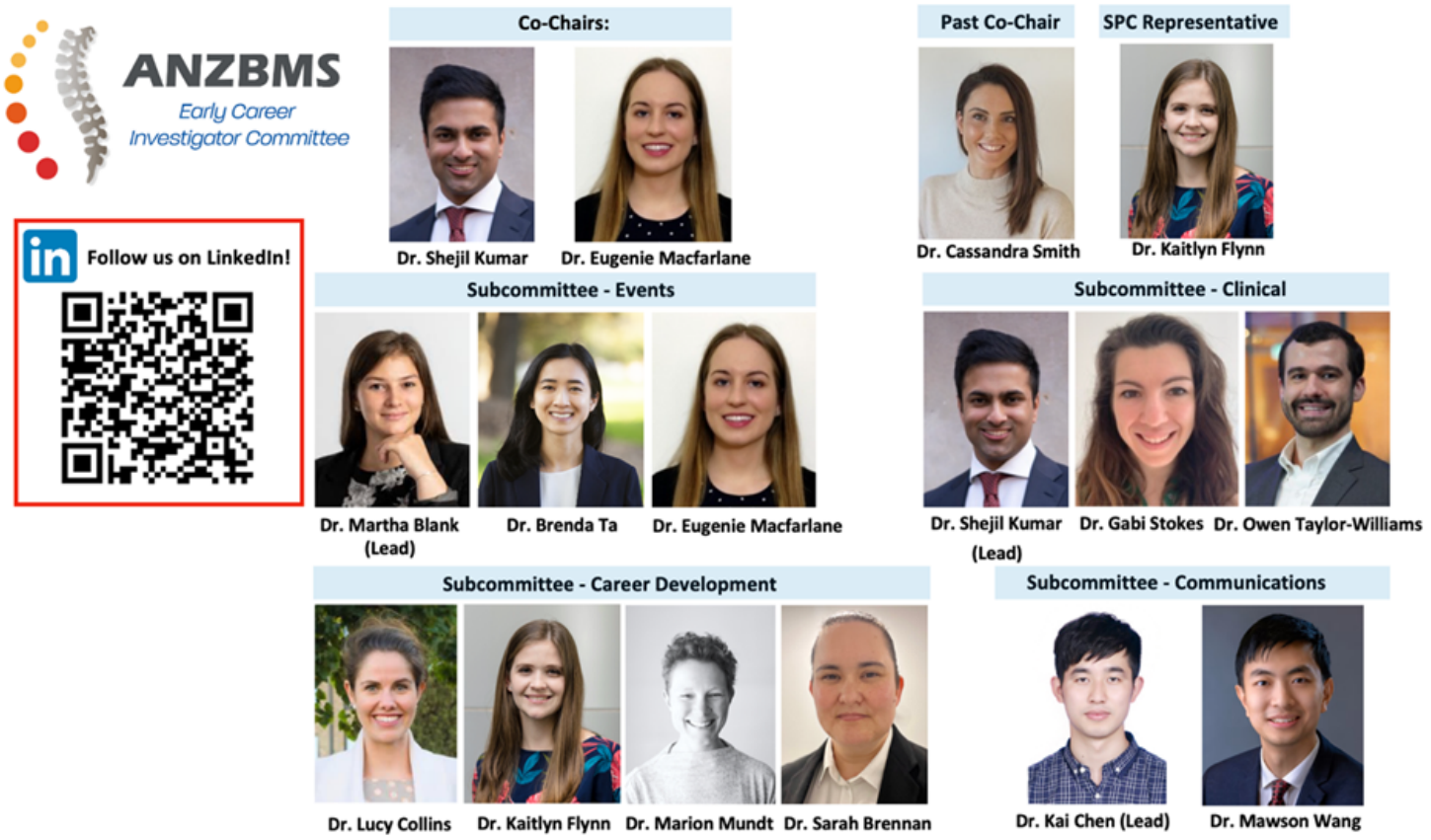
Scientific Program Committee (SPC) Co-Chairs

Clinical Committee

The Clinical Committee have two seminars coming up in the next half of the year.
Please see the advert for the first seminar below.
Keep an eye out for information relating to the second seminar later in the year.

Sincerely,
Jasna Aleksova

ECIC Co-Chairs Report



We're gearing up for an exciting year of new award, mentorship and educational opportunities for our thriving ECI community!

ECR Connect will be running again this year! This is an online interactive webinar-based educational event focusing on various topics for early career researchers. ECR Connect is led by the ANZBMS ECIC in collaboration with partnering societies ESA and ADS. ECR Connect will be held between **10AM-2PM AEST, Saturday 1st August**, and will include interactive sessions on how to use **artificial intelligence** to improve your workflow, how to optimise your **CVs** for **grants and job applications**, and a **career development Q&A session**. Register here!

Applications are open for the new **ECIC Career Development Award!** The CD award is targeted at ECIs who have not yet received major funding and may have faced career disruption. The successful ECI applicant will receive a $1,000 award, a 1-year free ANZBMS membership, a free registration to the 2026 ANZBMS ASM, and an invitation to co-chair a session. A mentorship component will also be embedded into this award program, enabling the awardee to connect with a mid-senior career mentor. **Applications will close on 17th July**, so don't miss out on this wonderful opportunity! Register here!

ECIC Co-Chairs Report

The ECIC are leading various sessions at the upcoming ASM:

A new **Conference Mentorship Program** is being launched this year at the ASM. This initiative aims to support early-career researchers, endocrine trainees and PhD candidates by connecting them with senior researchers, academics and clinicians for informal one-on-one mentoring during the conference. Mentors and mentees will be matched based on research interests and career stage, with contact details shared before the meeting to allow time to arrange a coffee, lunch or poster walk. We warmly encourage both mentees and mentors to register their interest by Friday 15 August through this link.

The **B.O.N.E Exchange** in 2026 is taking place between ANZBMS and partnering societies ASBMR and ECTS. B.O.N.E awardees are highly ranked ECRs not only invited to deliver a presentation at the host society's ASM, but also co-moderate an oral session, are hosted by the respective society's early career committee and receive an honorarium towards flights & accommodation. Kai Chen (ANZBMS) presented on "*Measuring Bone and Marrow Metabolism Across Time and Space*" at the ECTS conference in Girona, Spain in April. ASBMR will also select an Australian/New Zealand recipient of their Young Investigator Award for an oral presentation at the ASBMR conference in Boston, USA (October). Reciprocally, we will also welcome ECTS and ASBMR awardees to present at our conference in Auckland (September). We look forward to strengthening these inter-society collaborations and continuing to promote invited speaker opportunities for our ECIs.

The four successful trainees have been selected to present challenging bone/calcium cases at the **Clinical Cases Seminar** at ANZBMS ASM, with the winner receiving a publication fee waiver if their article is accepted in *JBMR Plus*. The seminar dinner will take place on Monday, 5th September, so make sure to register!

The **ANZBMS ECIC is run by ECIs, for ECIs!** We would love to hear from you if you have any suggestions for how we can better support you. We would also love to share your news and successes through our various communication channels on LinkedIn page, Facebook Group or contact us at ecic@anzbms.org.au.

Yours Sincerely,
Dr Shejil Kumar
ANZBMS ECIC Co-Chair 2026

Yours Sincerely,
Dr Eugenie Macfarlane
ANZBMS ECIC Co-Chairs 2026

ECIC Funding Opportunities

Grant/Fellowship Scheme*	Application Period
NHMRC Investigator Grants	Applications open 3 June 2026, closing 29 July 2026
Rebecca Cooper Fellowships	Applications open 3 August 2026, closing 31 August 2026
MRFF – Clinical Trials Activity Initiative	Applications open, minimum data due 19 August 2026, closing 16 September 2026
Christine and T.Jack Martin Research Travel Grant	TBC

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

(left to right) Yang Sun, Jian-ming Lin, Reece Joseph, Karen Callon, Ian Reid, Jill Cornish, Bo Hakert

Bone/Joint Research Group

Department of Medicine, University of Auckland, New Zealand

Prof Jillian Cornish, Group Leader

How long have you been in this lab/group?
After doing my PhD in immunopathology in Calgary, Canada, I returned to NZ and worked in the Endocrinology Department at Auckland Hospital. I then met Ian Reid (now Distinguished Prof Ian!) and he convinced me to shift to the Med School in the University of Auckland, to work on bone research in Department of Medicine, University of Auckland, so the lab started in the 1993.

What topics are researched in your lab?
Our lab was initially a cell, molecular and signalling biology bone/joint research group doing comprehensive assessments of novel bone-active factors using many in vitro and in vivo models. We have investigated the cell and molecular biology of normal and diseased bone, including osteoporosis, Paget's disease and various genetic bone disorders as well as associated skeletal effects with some novel therapeutics. This lead on to companies asking us to work with isolated factors or materials to investigate their actions in bone tissue. The dairy industry asked us to find novel bone-active factors in milk: fatty acids and phospholipids and our lab was the first to discover the potent bone-growth activity of lactoferrin, which we are now investigating as an antibiotic adjuvant with anti-biofilm properties in bone infections, such as osteomyelitis.

In addition, we collaborated with Mechanical and Biomaterial Engineers as well as orthopaedic surgeons to do research in skeletal regenerative medicine. This then lead on to working with cardiac surgeons to investigate tissue-engineered cardiac valves.

We have had many wonderful clinical and basic science students passing through our lab, who have completed PhD's, MSc's and Hons degrees. These have included orthopaedic surgeons, endocrinologists, cardiac students now consultants and registrars, as well as basic

researchers who are now international academics. We have also had amazing technicians and post docs that have kept the lab and pre-clinical animal surgeries running smoothly.

Research grant funding that has kept the lab going include Health Research Council, Heart Lung Foundation, Cure Kids, Wishbone Trust, Marsden, Auckland Medical Research Foundation, and US Army Dept of Defence.

Dr Yang Sun, PhD Candidate

How long have you been in this lab?
I have been in this lab since Oct 2024, when I completed a master's research project.

What inspired you to choose the lab?
I completed my bachelor's degree in clinical medicine in 2021 and then began my master's degree in orthopaedics. By October 2023, I had entered the final year of my master's study, but I was still uncertain about what I wanted to do in the future. Continuing my studies seemed like a good option, so I started applying for PhD positions.

At that time, my master's supervisor suggested that I stay and continue with a PhD under his supervision. However, after careful consideration, I decided to decline because I wanted to explore opportunities beyond my previous environment and experience something new. On 19th October, 2023, I emailed my current supervisor, Jillian Cornish, to inquire about a PhD opportunity in her lab. In November, I received her reply and an interview invitation. I was both excited and nervous because this opportunity was very important to me, and it was also my first time communicating academically in English with international researchers.

Fortunately, Jill and my co-supervisor, Simon, were incredibly kind, patient, and supportive. They introduced me to the research project and carefully explained the application process step by step. Their encouragement and enthusiasm deeply inspired me, and around Christmas that year, I submitted my PhD application through the University of Auckland website. After several months of waiting, I was very happy to receive both the PhD offer and a scholarship.

I arrived in New Zealand at the end of September 2024 and officially started my PhD in October. Time has passed very quickly, and I have now been here for one year and seven months. I feel very lucky because I truly enjoy both living here and being part of our research group. I am especially grateful to my colleagues, friends, and, most importantly, Prof. Jillian Cornish, who has given me tremendous support, encouragement, and confidence throughout this journey.

Bo Hakert, MBChB Student

How long have you been in this lab?
I became involved with the lab earlier this year.

What inspired you to choose the lab?
I was initially encouraged to get involved after speaking with an orthopaedic surgeon who spoke very highly of the lab's reputation and the quality of research being produced. I was particularly drawn to the lab's strong focus on translational musculoskeletal research and its collaborative work across orthopaedics, biomaterials, and infection research.

What are you excited to do?
I am excited to contribute to the lab's osteomyelitis projects and to gain experience in translational research that bridges basic science with clinical applications. I am especially interested in understanding bone infection biology and exploring research that may help improve future orthopaedic treatments and patient outcomes.

Eugenie Macfarlane*1*, Lauryn *Cavanagh1*, Caitlyn Massarotti, Colette Fong-Yee, Eleanor Imlay, Joseph Tannous, Jan Tuckermann, Markus J. Seibel, Hong Zhou. Deletion of the glucocorticoid receptor in osteoblasts and osteocytes drives trabecular bone loss in Col2.3-Cre and OG2-Cre knockout mice. Bone 207 (2026) 117866. https://doi.org/10.1016/j.bone.2026.117866.

This article is part of a Special issue entitled: 'Bone & AZNBMS special issue' published in Bone.

1 These authors contributed equally to this work.

Featured author:

Dr. Eugenie MacFarlane
The University of Sydney, Sydney, New South Wales, Australia
Email: eugenie.macfarlane@sydney.edu.au

What is the background of the study? Endogenous glucocorticoids are essential regulators of skeletal development and adult bone homeostasis. Studies using the 11β-HSD2 transgenic mouse model, which locally inactivates glucocorticoids in osteoblast lineage cells, have demonstrated that physiological glucocorticoid signaling in bone-forming cells is required for normal trabecular and cortical bone mass and structure. However, these models do not distinguish whether glucocorticoids act directly through the glucocorticoid receptor (GR) in mature osteoblasts and osteocytes. To address this gap, we conditionally deleted the glucocorticoid receptor in osteoblasts and osteocytes using two independent Cre drivers, Col2.3-Cre and OG2-Cre, to define the cell-autonomous role of GR signaling in maintaining the adult skeleton.

What did you find? We found that deletion of the glucocorticoid receptor using either knockout model profoundly reduced vertebral bone volume fraction across various ages from 7 to 26 weeks in male and female mice compared to wild-type animals. At the tibia we found sex-specific differences in trabecular bone volume fraction, which was reduced in male but not female Col2.3-Cre and OG2-Cre glucocorticoid receptor knockout mice. Compared to trabecular bone, changes in cortical bone mass and structure in glucocorticoid receptor knockout mice were age and model dependent. Young male and female Col2.3-Cre glucocorticoid receptor knockout mice exhibited a reduction in cortical area and thickness. However, in male but not female OG2-Cre glucocorticoid receptor knockout mice, cortical area fraction and cortical thickness were increased compared to control animals. By 26 weeks of age, cortical bone structure was comparable in Col2.3-Cre and OG2-Cre glucocorticoid receptor knockout mice compared to wild-type animals. Together, these findings demonstrate that GR signaling in mature osteoblasts and osteocytes is required for the maintenance of normal trabecular bone mass and contributes to cortical bone structure in an age- and sex-dependent manner.

What is the application of these findings? This study advances our understanding of glucocorticoid action in bone by identifying GR signaling in mature osteoblasts and osteocytes as a critical component of trabecular bone maintenance. The data indicate that physiological glucocorticoid signaling plays an active, supportive role in skeletal homeostasis, distinct from the well-recognized effects of glucocorticoid excess. More broadly, these findings refine current models of bone regulation by highlighting the importance of endogenous hormone signaling within specific skeletal cell populations.

ANZBMS Member Publications

Riho Kanai, Arvind Hariharan, Janaki Iyer, Younan Liu, Takashi I, Yoshinori Sumita & Simon D. Tran. Tracking of Transplanted Stem Cells in Mouse Models Using Practical Fluorescence-Based Protocols. Springer. 2026 May 08. DOI: 10.1007/7651_2026_704.

Featured author:

Dr. Riho Kanai
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Prof. Simon D. Tran
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What is the background of the study?

Accurate in vivo tracking of transplanted stem cells is essential for understanding cell engraftment, survival, migration, and therapeutic mechanisms in regenerative medicine research. However, because transplanted cells often constitute only a small fraction of the host tissue environment, highly reliable and reproducible tracking methods are required to distinguish donor cells from surrounding host cells over time.

What did you find?

In this paper, we introduce two complementary fluorescence-based approaches for tracking transplanted stem cells in mouse models: PKH26-mediated direct membrane labeling and GFP-based indirect genetic labeling. PKH26 enables rapid and robust membrane fluorescent labeling suitable for short-term cell tracking, whereas GFP supports long-term monitoring of viable transplanted cells through stable and heritable fluorescent expression. We further provide a detailed description of the experimental workflow established and optimized in our laboratory, including cell preparation, transplantation procedures, fluorescence imaging, troubleshooting strategies, and critical technical considerations for enhancing reproducibility and signal specificity.

What is the application of these findings?

These approaches enable reliable visualization of transplanted cells in mouse salivary gland tissues following both local and systemic administration. In addition, the protocols emphasize several important methodological considerations for improving experimental accuracy, including minimizing dye aggregation, preserving cell viability, reducing background fluorescence, and avoiding false-positive signal interpretation. By integrating practical experimental guidance with troubleshooting recommendations, these protocols are intended to support the adoption and reliable implementation of fluorescence-based cell-tracking techniques by researchers new to the field. Collectively, these protocols offer a practical and versatile platform for evaluating the distribution, persistence, and behavior of transplanted cells in preclinical models. Furthermore, their applications extend beyond salivary gland research to studies involving MSCs, immune cells, organoids, and other regenerative cell populations. We hope that these protocols will contribute to improving the reliability and reproducibility of stem cell tracking analyses in transplantation and regenerative medicine research, while also supporting the broader advancement of regenerative and cell-based therapeutic strategies.

ANZBMS Member Publications

Shirazi, S., Esawi, E., Nassar, Z. D., Gronthos, S., & Cakouros, D. Hyperglycemia leads to BMSC impaired osteogenesis, enhanced adipogenesis, and altered metabolism. Journal of Cellular Biochemistry, 127(4), e70090. https://doi.org/10.1002/jcb.70090

Featured authors:

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[1] Mesenchymal Stem Cell Laboratory, School of Pharmacy and Biomedical Sciences, College of Health, Adelaide University, South Australia, Australia
[2] Solid Tumour Program, Precision Medicine Theme, South Australian Health and Medical Research Institute, Adelaide, South Australia, Australia

What is the background of the study?

Diabetes-associated hyperglycaemia is increasingly recognised as a major contributor to compromised bone health, including increased fracture risk and osteoporosis. Bone marrow mesenchymal stromal/stem cells (BMSCs) are central to skeletal maintenance, as they give rise to both osteoblasts (bone-forming cells) and adipocytes (fat cells). However, the mechanisms by which elevated glucose levels influence BMSC function, lineage commitment, and metabolism remain poorly understood.

What did you find?

Using primary human BMSCs, we demonstrate that high glucose conditions profoundly disrupt their functional capacity. Hyperglycaemia markedly impaired osteogenic differentiation, evidenced by reduced alkaline phosphatase activity, diminished mineralisation, and downregulation of key osteogenic genes such as *RUNX2* and *ALPL*. In contrast, high glucose promoted adipogenesis, increasing lipid accumulation and upregulating adipogenic markers including *PPARγ2*, *CEBPα*, and *AdipoQ*.

Beyond lineage commitment, hyperglycaemia, particularly with continuous cell passaging, reduced BMSC proliferation and viability while increasing oxidative stress, DNA damage, apoptosis, and cellular senescence. Metabolomic profiling revealed significant alterations in cellular metabolism, identifying nicotinamide adenine dinucleotide (NAD^+) and glutamate as key metabolites altered during BMSC differentiation. This led us to investigate its downstream derivative, α ketoglutarate (α-KG), as a functional regulator of BMSC fate. Both NAD^+ and α-KG were reduced under high glucose conditions. Importantly, supplementation with NAD^+ or α-KG partially restored osteogenic capacity and suppressed adipogenic features.

What is the application of these findings?

Our findings provide mechanistic insight into how hyperglycaemia drives skeletal fragility by shifting BMSC fate from bone formation toward fat accumulation, while simultaneously accelerating cellular dysfunction and aging. Given that NAD^+ and α-KG act as cofactors for enzymes involved in epigenetic regulation, their identification highlights a critical link between cellular metabolism and the epigenetic control of stem cell fate.

These results suggest that targeting metabolic pathways—particularly NAD^+- and α-KG-dependent processes may represent a promising therapeutic strategy to restore bone-forming capacity and improve skeletal health in individuals with diabetes or hyperglycaemic conditions. More broadly, this work underscores the importance of metabolic regulation in stem cell biology and its potential for exploitation in regenerative and healthy aging interventions.

Dr Jasreen Kalar

Research Fellow in the Bone Biology and Disease Laboratory at The University of Western Australia.

Research Category: Basic Science Research

Research interests: My research focuses on uncovering the molecular mechanisms that regulate secretory lysosomes and their role in controlling osteoclastic bone resorption. By defining how these pathways influence skeletal turnover, my work aims to identify novel therapeutic targets for lysosomal storage disorders and debilitating musculoskeletal conditions, including osteoporosis, osteoarthritis, and Paget's disease.

What I hope to gain from ANZBMS: Through membership, I hope to connect with leading researchers in skeletal biology, stay current with emerging scientific advances, and build collaborations that strengthen the translational impact of my work. I am also looking forward to contributing to the Society's scientific community and participating in meetings that showcase innovative research in bone and mineral metabolism.

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**

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 with up to 150 words explaining why you would be a good addition to the newsletter team.


ANZBMS Annual
Scientific Meeting 2026
MENTORSHIP
PROGRAM
An Early Career Investigator Committee Initiative
The Conference Mentorship Program connects
early-career researchers with experienced researchers
for informal, one-on-one mentoring during the conference.
WHO?
Mentees: Early-career researchers, endocrine trainees and PhD candidates
Mentors: Senior researchers, academics and clinicians
HOW IT WORKS
✓ Mentor–mentee pairs matched by ECIC
✓ Matches based on interests and career stage
✓ Contact details shared before the conference
✓ Informal meetings during conference
— coffee, lunch, poster walk
Register your interest
via QR code by
Friday August 15th
https://forms.gle/u4EF4Rr9u1hYd3VZ7

ANZBMS

esa endocrine society of australia

ads Australian Diabetes Society

ECR CONNECT

How to elevate your career

A Joint ANZBMS-ESA-ADS Initiative for Early Career Researchers

Saturday 1st August 2026 | 10am – 2pm AEST | Online

Join us online in August for ECR Connect

ECR Connect is a dedicated online weekend workshop targeted at early career investigators to support career, research and professional development among peers. ECR Connect is a joint initiative led by Australian and New Zealand Bone Mineral Society Early Career Investigator Committee (ANZBMS ECIC) in collaboration with the Endocrine Society of Australia (ESA) and Australian Diabetes Society (ADS). Everyone is welcome to attend; no society membership is required.

Time (AEST)	*Session Topic*
10:00 AM - 10:05 AM	Welcome
10:05 AM - 10:50 AM	Session 1: Career Development: CV Building and Grant Preparation with Q&A
10:50 AM - 11:35 AM	Session 2: Artificial Intelligence: Literature Review and Synthesis
11:35 AM - 12:00 PM	Break
12:00 PM - 12:45 PM	Session 3: Artificial Intelligence: Data Management and Analysis
12:45 PM - 1:45 PM	Session 4: Career Development: Academic, Clinical, Industry Talks and Q&A
1:45 PM - 2:00 PM	Webinar Close

Register here for $15

https://events.humanitix.com/ecr-connect-2026

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Please note this webinar will not be recorded.


ISBM 2026
Queen Mary University of London
United Kingdom
July 4-7, 2026
Saravana Ramasamy, PhD
Local Organizing Chair
Aline Bozec, PhD
Program Organizing Chair
Stefaan Verbruggen, PhD
Fundraising Chair
Michelle McDonald, PhD
ISBM President

Calendar of Events