



ANZBMS

20TH ANNUAL SCIENTIFIC MEETING
ADELAIDE 2010

20TH ANNUAL SCIENTIFIC MEETING OF THE AUSTRALIAN & NEW ZEALAND BONE & MINERAL SOCIETY

5-8 SEPTEMBER 2010

HILTON ADELAIDE

PLATINUM SPONSORS



Supported by Amgen in collaboration with GSK

GOLD SPONSOR



SILVER SPONSORS



WWW.ANZBMS.ORG.AU/ASM2010



PROGRAM AT A GLANCE

TIME	SUNDAY 5 SEPT	MONDAY 6 SEPT	TUESDAY 7 SEPT	WEDNESDAY 8 SEPT
AM		07:00 Balcony Room 1 Meet the Professor 1 Vitamin D – how much is enough?, Paul Lips	07:00 Balcony Room 1 Meet the Professor 2 Of mice and men: animal models for human diseases, Ralph Müller 07:00 Balcony Room 2 Meet the Professor 3 HIV and bone, Juliet Compston	07:00 Rotunda at Elder Park, Adelaide Fun Run
AM	08:30 Balcony Rooms 1/2 ADVANCED QUANTITATIVE BONE IMAGING: BEYOND DXA	08:30 Ballroom B/C Session 1 Basic bone anabolism Chairs: Natalie Sims & Paul Baldock M Kneissel H Zhou G Duque G Thomas	08:30 Ballroom B/C Session 5 Novel therapeutic approaches for osteoporosis management Chairs: Emma Duncan & Peter Ebeling M Kneissel J Martin J Compston M Rybchyn	08:30 Ballroom B/C Session 9 The bone/joint interface Chairs: Malcolm Smith & Gethin Thomas J Kuliwaba N Walsh G Jones R Gu I Poulton
AM	10:20 – 10:50 AQBI WORKSHOP REFRESHMENTS Exhibition Foyer	10:10 – 10:40 REFRESHMENTS Exhibition Foyer	10:16 – 10:40 REFRESHMENTS Exhibition Foyer	10:10 – 10:30 REFRESHMENTS Exhibition Foyer
AM	10:50 Balcony Rooms 1/2 ADVANCED QUANTITATIVE BONE IMAGING: BEYOND DXA continues...	10:40 Ballroom B/C Session 2 Novel insights into osteoporosis pathophysiology Chairs: John Eisman & Rob Daly R Müller J Compston MA Brown IPL Wong	10:30 Ballroom B/C Session 6 Quantifying bone quality Session supported by Servier Laboratories (Aust) Pty Ltd Chairs: Mark Forwood & Roger Price R Müller R Zebaze C Langton E Perilli MY Chan	10:30 Ballroom B/C Session 10 Vitamin D Chairs: Rory Clifton-Bligh & Paul Anderson H Morris P Lips M Bolland K Sanders J Rampellini 12:45 Meeting Conclusion
LUNCH	12:20 – 13:00 AQBI WORKSHOP LUNCH Exhibition Foyer 12:00 – 16:30 Suite 4 ANZBMS Council Meeting	12:30 – 14:00 LUNCH & Trade Exhibition Exhibition Foyer Poster Session - odds 13:00 – 14:00 Ballroom B/C INDUSTRY SYMPOSIUM AMGEN/GSK SYMPOSIUM The impact of denosumab inhibition: from microarchitecture to outcomes Chair: Prof Philip Sambrook The prevention of structural decay using RANK Ligand inhibition Prof Ego Seeman Clinical aspects of denosumab Prof Juliet Compston	12:30 – 14:00 LUNCH & Trade Exhibition Exhibition Foyer Poster Session - evens 13:00 – 14:00 Ballroom B/C INDUSTRY SYMPOSIUM SERVIER LABORATORIES SYMPOSIUM Cortical bone and fracture risk Chair: Prof Philip Sambrook Strontium ranelate and bone: moving beyond the DXA mindset Prof Graeme Jones Title to be confirmed A/Prof Mark Kotowicz	12:45 – 14:00 LUNCH Brasserie Restaurant, Ground Floor
PM	13:50-14:30 Balcony Rooms 1/2 ADVANCED QUANTITATIVE BONE IMAGING: BEYOND DXA continues... 13:00 – 14:30 Royal Adelaide Hospital FROM BONES TO BENCH AND BACK AGAIN: THE SCIENCE UNDERLYING OUR CLINICAL REASONING AND THE CLINICAL RELEVANCE OF RESEARCH	14:00 Ballroom B/C Session 3 Osteoimmunology – classical and modern aspects Session supported by Amgen in collaboration with GSK Chairs: Matt Gillespie & Louise Purdon G Atkins K Alexander J-P Levesque J Xu	14:00 Ballroom B/C Session 7 Young Investigator Awards Chairs: Jill Cornish & Jackie Center	
PM	14:30 – 15:00 BONES TO BENCH WORKSHOP REFRESHMENTS Royal Adelaide Hospital	15:30 – 16:05 REFRESHMENTS Exhibition Foyer	15:40 – 16:00 REFRESHMENTS Exhibition Foyer	
PM	15:00 – 16:30 Royal Adelaide Hospital FROM BONES TO BENCH AND BACK AGAIN: THE SCIENCE UNDERLYING OUR CLINICAL REASONING AND THE CLINICAL RELEVANCE OF RESEARCH continues... 16:00 Registration Opens	16:05 PARALLEL ORAL SESSIONS Free Oral Communications Session 4A Clinical Ballroom B Including Outstanding Clinical Abstract Session 4B Basic Ballroom C Including Outstanding Basic Abstract 17:20 Sessions Close	16:00 Ballroom B/C Session 8 Greg Mundy Memorial Lecture Chair: Colin Dunstan Jack Martin 17:00 ANZBMS AGM	
EVENING	17:00 – 19:00 WELCOME RECEPTION Exhibition Foyer, Mezzanine Level, Hilton Adelaide	18:30 YOUNG SCIENTISTS AND STUDENTS' DINNER T Chow Restaurant, Gouger Street	18:30 – 19:00 ANZBMS WOMEN'S EVENT 19:00 for 19:30 – 23:30 CONFERENCE DINNER Hilton Adelaide Ballroom	



SUNDAY 5 SEPTEMBER 2010

08:30	WORKSHOP	Balcony Rooms 1 & 2, Hilton Adelaide
	ADVANCED QUANTITATIVE BONE IMAGING: BEYOND DXA	
08:30	Introduction – ANZBMS Clinical Bone Densitometry Committee	
08:35	Official opening & topic overview – where have we come from and where we are going? <i>Richard L Prince</i>	
08:50	Recent developments in micro-CT and their applications <i>Ralph Müller</i>	
09:35	Title to be confirmed <i>Roger Zebaze</i>	
10:20 – 10:50	Morning tea	
10:50	Laboratory-based micro-CT imaging studies: towards the clinic <i>Ian Parkinson</i>	
11:35	QUS assessment of bone: time for a new paradigm? <i>Christian M Langton</i>	
12:20 – 13:00	Lunch	
13:00	Navigating around animal ethics in research: a survivor's guide <i>Timothy Kuchel</i>	
13:45	Advanced imaging on the Imaging & Medical Beam Line at the Australian Synchrotron: to infinity and beyond <i>Damian E Myers</i>	
14:30	Meeting closure	
<hr/>		
13:00	WORKSHOP	Rooms 250 & 251 in the Eleanor Harrold Bldg Royal Adelaide Hospital
	FROM BONES TO BENCH AND BACK AGAIN: THE SCIENCE UNDERLYING OUR CLINICAL REASONING AND THE CLINICAL RELEVANCE OF RESEARCH	
	<i>Chair: Ian Reid</i>	
	a) Grand Rounds 1 – a common clinical scenario	
	b) Discussion groups:	
	a. Osteoblasts/anabolics	
	b. Osteoclasts/antiresorptives	
	c. Bone quality/bone turnover markers/bone density	
	d. Genetics and OP epidemiology	
	c) Grand Rounds 2 – a more unusual clinical scenario	
	d) Final questions and Discussion	
14:30 – 15:00	Refreshment Break	
15:00 – 16:30	Workshop continues (see above)	Royal Adelaide Hospital
16:00	Registration opens	Mezzanine Level, Hilton Adelaide
17:00 – 19:00	Welcome Cocktail Party, Exhibition and Poster Session (non attended)	Mezzanine/Ballroom A



MONDAY 6 SEPTEMBER 2010

ANZBMS
20TH ANNUAL SCIENTIFIC MEETING
SCIENTIFIC PROGRAM

07:00		BREAKFAST SESSION MEET THE PROFESSOR 1 <i>Chair: Richard Prince</i> <i>Vitamin D – How much is enough?</i> Paul Lips	Balcony Room 1
08:30		SESSION 1 <i>Basic bone anabolism</i> <i>Chair: Natalie Sims and Paul Baldock</i>	Ballroom B/C
08:30	IS1	Novel Insights on Wnt signalling in bone <u>Kneissel M</u> (Switzerland)	
09:10	IS2	Osteoblasts, Wnt signalling and the effects of glucocorticoids <u>Zhou H</u> and <u>Seibel M</u> (Australia)	
09:34	IS3	Osteoporosis in older persons: senescence vs. disease <u>Duque G</u> (Australia)	
09:58	OR1	SOST and DKK-1 are downregulated in the spines and joints of mice suffering ankylosing spondylitis creating a permissive environment for excessive bone formation Duan R, Glant TT, Brown MA and <u>Thomas GP</u>	
10:10 – 10:40		Refreshment Break	Mezzanine
		SESSION 2 <i>Novel insights into osteoporosis pathophysiology</i> <i>Chairs: John Eisman and Rob Daly</i>	Ballroom B/C
10:40	IS4	Osteocytes – the hunt for the mechanostat <u>Müller R</u> (Switzerland)	
11:10	IS5	Obesity and fractures <u>Compston J</u> (United Kingdom)	
11:40	IS6	Genetic studies in osteoporosis <u>Brown MA</u> (Australia)	
12:10	OR2	Modulation of PYY regulates bone formation a signal from gut to bone? <u>Wong IPL</u> , Shi YC, Enriquez RF, Sainsbury A, Herzog H, Eisman JA and Baldock PA	
12:30 – 14:00		Lunch and poster sessions Poster Numbers presenting: Odds	Mezzanine
13:00 – 14:00		AMGEN/GSK SYMPOSIUM Supported by Amgen in collaboration with GSK The impact of denosumab inhibition: from microarchitecture to outcomes <i>Chair: Prof Philip Sambrook</i> The prevention of structural decay using RANK Ligand inhibition Prof Ego Seeman Clinical aspects of denosumab Prof Juliet Compston	Ballroom B/C



MONDAY 6 SEPTEMBER 2010 CONT..

16:05	SESSION 4B	Ballroom C
	<i>Basic Presentations</i>	
	<i>Chairs: Rebecca Mason and David Findlay</i>	
16:05	OR9 Outstanding Abstract – Basic	
	Enhanced osteoclast formation in Oncostatin M receptor knockout (OSMR KO) mice in response to Parathyroid Hormone (PTH)	
	<u>Walker EC</u> , McGregor NE, Poulton IJ, Ho P, Allan EA, Martin TJ and Sims NA	
16:17	OR10 Trabecular bone volume is increased in a novel mouse model expressing an osteoblast-specific CYP27B1 transgene	
	<u>Turner AG</u> , Tyson JHT, Sawyer RK, O'Loughlin PD, Atkins GJ, Kogawa M, Findlay DM, Morris HA and Anderson PH	
16:29	OR11 Neuropeptide Y, Y6 receptor (Y6R) - a novel regulator of bone mass and energy homeostasis	
	<u>Driessler F</u> , Yulyaningsih E, Enriques RF, Sainsbury A, Herzog H, Eisman JA and Baldock PA	
16:41	OR12 Homozygous deletion of the Sost gene results in enhanced healing and increased callus formation in healing fractures	
	<u>McDonald MM</u> , Morse A, Peacock L, Mikulec K, Kramer I, Kneissel M and Little DG	
16:53	OR13 The antipsychotic clozapine, but not its derivative quetiapine, induces microarchitectural changes in bone	
	<u>Costa JL</u> , Smith GC, Cheng A, Watson M, Shepherd P, Callon KE, Grey A and Cornish J	
17:05	OR14 Skeletal cell apoptosis in methotrexate cancer chemotherapy-induced bone loss	
	Fan CM, Ng YS, Shandala T, Georgiou KR, King T, Scherer MA, Cool JC, Yip YC, Hopwood B, Foster BK and <u>Xian CJ</u>	
<hr/>		
17:20	Sessions Close	
18:30	Young Scientists and Students' Dinner	T-Chow Chinese Restaurant
19:00	President's Dinner	Bistro Dom



TUESDAY 7 SEPTEMBER 2010

07:00	BREAKFAST SESSION MEET THE PROFESSOR 2 <i>Chair: Liza Raggatt</i> <i>Of mice and men: animal models for human diseases</i> Ralph Müller	Balcony Room 1
	MEET THE PROFESSOR 3 <i>Chair: Bronwyn Crawford</i> <i>HIV and bone</i> Juliet Compston	Balcony Room 2
<hr/>		
08:30	SESSION 5 Novel therapeutic approaches for osteoporosis management <i>Chair: Emma Duncan and Peter Ebeling</i>	Ballroom B/C
08:30	IS11 Sclerostin: therapeutic potential of targeting SOST action in bone <u>Kneissel M</u> (Switzerland)	
09:00	IS12 Could ephrins be therapeutic targets in osteoporosis? <u>Martin J</u> (Australia)	
09:24	IS13 Osteoporosis: Increased resorption or failed anabolism: New approaches to therapeutic management <u>Compston J</u> (UK)	
10:04	OR15 Strontium ranelate-induced osteogenic effects in human osteoblasts via a sclerostin decrease and a canonical Wnt signaling increase <u>Rybchyn MS</u> , Conigrave AD and Mason RS	
10:16 – 10:40 Refreshment Break		Mezzanine
<hr/>		
10:40	SESSION 6 Quantifying bone quality <i>Session supported by Servier Laboratories (Aust) Pty Ltd</i> <i>Chair: Mark Forwood and Roger Price</i>	Ballroom B/C
10:40	IS14 Bone imaging - the future <u>Müller R</u> (Switzerland)	
11:20	IS15 Cortical bone decay: beyond density and thickness <u>Zebaze R</u> (Australia)	
11:44	IS16 Clinical bone imaging: beyond BMD... <u>Langton CM</u> (Australia)	
12:08	OR16 Bone mineral density assessed via DXA and microarchitecture assessed via micro-CT: predicting whole vertebral body strength <u>Perilli E</u> , Briggs AM, Codrington JD, Wark JD, Kantor S, Parkinson IH and Fazzalari NL	
12:20	OR17 Prognosis of fracture risk by quantitative-ultrasound measurement and bone mineral density <u>Chan MY</u> , Nguyen DN, Center JR, Eisman JA and Nguyen TV	



TUESDAY 7 SEPTEMBER 2010 CONT...

12:32 – 14:00	Lunch and poster sessions Poster Numbers presenting: Evens	Mezzanine
13:00 – 14:00	SERVIER SYMPOSIUM Cortical bone and fracture risk <i>Chair: Prof Philip Sambrook</i> Strontium ranelate and bone: moving beyond the DXA mindset Prof Graeme Jones Title to be confirmed A/Prof Mark Kotowicz	Ballroom B/C
14:00	SESSION 7 Young Investigator Awards <i>Chairs: Jill Cornish and Jackie Center</i>	Ballroom B/C
14:00	OR18 Atypical femoral fractures are associated with bisphosphonate use <u>Girgis CM</u> , Sher D and Seibel MJ	
14:12	OR19 Treatment with interleukin-6 receptor antibodies inhibits breast cancer growth in a murine model of bone metastasis <u>Börnert K</u> , Zheng Y, Zhou H, Mikuscheva A, Buttgerit F, Dunstan CR and Seibel MJ	
14:24	OR20 Micro-CT and biomechanical analysis of the leptin receptor-deficient db/db mouse tibia <u>Williams GA</u> , Callon KE, Watson M, Naot D, Costa JL, Dickinson M, Ding Y, Wang Y, Reid IR and Cornish J	
14:36	OR21 Calcium supplementation does not rescue the programmed adult bone deficits associated with perinatal growth restriction <u>Romano T</u> , Wark JD and Wlodek ME	
14:48	OR22 Comparison of the FRISK Score to the FRAX (UK) Algorithm and Garvan Nomogram: Geelong Osteoporosis Study <u>Zhang Y</u> , Pasco JA, Kotowicz MA, Sanders KM, Nicholson GC and Henry MJ	
15:00	OR23 Choline Kinase Beta is a critical regulator of bone homeostasis <u>Kular J</u> , Tickner J, Davey T, Lim B, Qian Y, Ang E, Zheng MH and Xu J	
15:12	OR24 The association between oral contraceptive use, bone mass and fractures in both young and older women <u>Wei S</u> , Venn A and Jones G	
15:24	OR25 Apomab, a fully human agonistic DR5 monoclonal antibody, inhibits tumour growth and osteolysis in murine models of breast cancer development and progression <u>Zinonos I</u> , Labrinidis A, Liapis V, Hay H, Lee M, Ponomarev V, Diamond P, Zannettino CWA, Findlay DM and Evdokiou A	
15:40 – 16:00	Refreshments	Mezzanine
16:00	SESSION 8 Greg Mundy Memorial Lecture <i>Chairs: Colin Dunstan</i> Jack Martin	Ballroom B/C
17:00	ANZBMS AGM Sessions Close	Ballroom B/C
18:30	'Women in Bone' Networking Event	Mezzanine
19:00 for 19:30 – 11:30	Conference Dinner	Ballroom B/C



WEDNESDAY 8 SEPTEMBER 2010

07:00 FUN RUN Rotunda in Elder Park, Adelaide

08:30 **SESSION 9** Ballroom B/C
The bone/joint interface
Chair: Malcolm Smith and Gethin Thomas

08:30 IS17 Basic aspects of OA
Kuliwaba JS and Fazzalari NL (Australia)

08:54 IS18 Bone remodelling in inflammatory arthritis
Walsh N (Australia)

09:18 IS19 Clinical aspects of OA
Jones G (Australia)

09:42 OR26 Macrophage migration inhibitory factor (MIF) promotes osteoclastogenesis and arthritic bone erosion
Gu R, Santos LL, Xu J, Quinn JMW, Gillespie MT and Morand EF

09:54 OR27 Leukemia Inhibitory Factor inhibits resorption of mineralised cartilage during growth and stimulates bone formation in remodelling
Poulton LJ, McGregor NE, Walker EC, Pompolo S, Martin TJ and Sims NA

10:10 – 10:30 Refreshment Break Mezzanine

10:30 **SESSION 10** Ballroom B/C
Vitamin D
Chair: Rory Clifton-Bligh and Paul Anderson

10:30 IS20 Basic aspects of vitamin D
Morris H (Australia)

10:55 IS21 Vitamin D: canonical and non-canonical
Lips P (The Netherlands)

11:35 IS22 Vitamin D supplements do not mitigate the effect of calcium supplements on cardiovascular events
Bolland M (New Zealand)

11:59 IS23 Changes in muscle strength three-months after annual 500,000IU dose of cholecalciferol: Further analysis from the Vital D Study
Sanders K (Australia)

12:23 OR28 The effects of a nine month RCT of vitamin D supplementation (150,000 IU every 3 months) on bone density and muscle strength in older postmenopausal women
Rampellini J, Trapanovski M, Lewis J, Gustafsson S, Novana F, D'Costa N, Marshall D, Pollock M, Prince RL and Zhu K

12:35 *It is anticipated that there will be extended discussion after this session led by chairs.*

12:45 Lunch and Conclusion Brasserie Restaurant, Ground Floor



POSTER PRESENTATIONS

Malignant bone disease

- P1 Vitamin D deficiency promotes human prostate cancer growth in a murine model of bone metastasis
Zheng Y, Zhou H, Ooi LL, Snir D, Dunstan CR and Seibel MJ
- P2 The role of tumour derived interleukin 6 in a murine model of breast cancer bone metastasis
Zheng Y, Mikuscheva A, Zhou H, Börner K, Buttgerit F, Dunstan CR and Seibel MJ
- P3 Anticancer efficacy of Apo2L/TRAIL is retained in the presence of high and biologically active concentrations of osteoprotegerin in vivo
Zinonos I, Labrinidis A, Lee M, Liapis V, Hay S, Ponomarev V, Diamond P, Findlay DM, Zannettino CWA and Evdokiou A

Orthopaedics

- P4 Muscle progenitors make a major contribution to open fracture repair
Schindeler A, Liu R, Peacock L, Mikulec K, Morse A and Little DG
- P5 A comparison of lumbar intervertebral disc height in mature and adolescent sheep following injection of a matrix degrading enzyme
Decelis M, Moore RJ and Vernon-Roberts B
- P6 Inhibition of osteoclastogenesis in patients with traumatic brain injury: a possible contributor towards increased callus size and enhanced fracture healing
Al-Mushaiqri MS and Filgueira L
- P7 Osteomacs are pivotal for optimal intramembranous bone formation during bone healing
Alexander KA, Chang MK, Maylin ER, Kohler T, Müller R, Sweet MJ, Raggatt LJ and Pettit AR
- P8 Local expression of sclerostin-protein is reduced adjacent to the stress fracture following ulnar loading
Wu AC, Kidd LJ, Cowling NR, Kelly WL and Forwood MR

Clinical metabolic bone diseases

- P9 Hypophosphataemic osteomalacia in two patients on adefovir dipivoxil
Girgis CM, Wong T, Ngu M, Emmett L, Archer K, Chen RC and Seibel MJ
- P10 Proteomic assessment of cell surface proteins of periodontal cell subsets
Xiong J, Gronthos S, Zilm P and Bartold M
- P11 The first case report of hypophosphataemic osteomalacia secondary to deferasirox therapy and clinical audit
Milat F, Johnstone L, Kerr PG, Doery JCG, Strauss BJ and Bowden DK
- P12 Can craniosynostosis give a leg up to fighting other bone diseases?
Hatfield J, Hinze SJ, Anderson P and Powell BC
- P13 Higher expression of ITAM-related osteoclastogenesis co-stimulatory factors in is associated with peri-implant osteolysis tissues
Alias E, Dharmapatni ASSK, Nealem SD, Crotti TN and Haynes DR
- P14 Bone cell abnormalities *in vitro* from a patient with a rare bone condition
Barron ML, Clifton-Bligh R, Clifton-Bligh P, Bonar F, Stalley PD and Mason RS

Clinical - other

- P15 Longitudinal studies of bone health during antiepileptic drug (AED) therapy
Shiek Ahmad B, Wark JD, Hill K, O'Brien TJ, Petty SJ and Kantor S
- P16 Dietary Emu Oil supplementation may suppress chemotherapy-induced formation of bone-resorptive cells osteoclasts and prevent bone loss
Raghu Nadhanan R, Scherer M, Shandala T, Su Y-W, Howarth GS, Masthoub S and Xian CJ
- P17 Errors in self reported myocardial infarction in calcium intervention studies
Lewis JR, Zhu K and Prince RL



POSTER PRESENTATIONS

Public health

- P18** Patient Recruitment Strategies for RCTs
Trapanovski M, Rampellini J, Lewis JB, Gustafsson S, Novana F, D Costa N, Marshall D, Pollock M, Zhu K and Prince RL
- P19** Persistence to oral osteoporosis therapy in Australia
Maclean A and Calcino G
- P20** Geographical variation in bone density in South Australia
Wormald JL and Schultz CG
- P21** Socioeconomic status and bone health in older men: The CHAMP study
Nabipour I, Cumming RG, Handelsman DJ, Naganathan V, Waite L, Janu M, Le Couteur D, Sambrook PN and Seibel MJ
- P22** A cultural models approach to osteoporosis prevention and treatment
Otmar R, Morrow M, Nicholson GC, Kotowicz MA and Pasco JA
- P23** The utility of bone health to predict mortality in older women
Gould H, Pasco JA, Brennan SL, Kotowicz MA, Nicholson GC and Henry MJ
- P24** Development of a Model of Care for osteoporosis in Western Australia utilising Health Networks
Briffa NK, Briggs AM and France L
- P25** Targeted exercise against osteoporosis: a systematic review and meta-analysis of exercise RCTs for optimising bone strength throughout life
Nikander B, Sievänen H, Heinonen A, Uusi-Rasi K, Kannus P and Daly RM
- P26** Inverse association between hip fracture and social disadvantage: Geelong Osteoporosis Study
Brennan SL, Henry MJ, Kotowicz MA, Nicholson GC, Zhang Y and Pasco JA

Epidemiology and genetics

- P27** Bone mineral density is positively associated with knee cartilage volume in healthy, asymptomatic adult females
Brennan SL, Pasco JA, Cicuttini FM, Henry MJ, Kotowicz MA, Nicholson GC and Wluka AE
- P28** Clinical utility of combined femoral neck and lumbar spine bone mineral density measurements in the individualized prognosis of fracture
Nguyen TV, Nguyen ND, Frost SA, Bliuc D, Center JR and Eisman JA
- P29** Relationship between low BMD and fracture in mortality risk: an 18-year prospective study from Dubbo Osteoporosis Epidemiology Study
Bliuc D, Nguyen ND, Nguyen TV, Eisman JA and Center JR
- P30** Osteoporosis medication and reduced mortality risk in elderly women and men: an 18-year prospective study from the Dubbo Osteoporosis Epidemiology Study
Center JR, Bliuc D, Nguyen ND, Nguyen TV and Eisman JA
- P31** Determinants of bone mass in smokers: A study in smoking-discordant twin pairs
Christie JJ, Osborne RH, Kantor S, Nowson CA, Seibel MJ, Sambrook PN and Wark JD
- P32** Table tennis activity is positively associated with bone mineral measures in older Asian Australian women and men
Li L, Apandi A and Wark JD
- P33** Pleiotropic genetic effects contribute to the correlation between bone mineral density and quantitative ultrasound measurements
Nguyen SC, Nguyen ND, Center JR, Eisman JA and Nguyen TV
- P34** BMD in a cohort of women a decade apart: Geelong Osteoporosis Study
Henry MJ, Kotowicz MA, Nicholson GC, Clark E and Pasco JA
- P35** The neglected fracture sites: non-hip and non-vertebral fractures
Henry MJ, Pasco JA, Sanders KM, Kotowicz MA and Nicholson GC



POSTER PRESENTATIONS

- P36** Association between beta-blocker use and bone loss: the Dubbo Osteoporosis Epidemiology Study
Yang S, Nguyen ND, Center JR, Eisman JA and Nguyen TV
- P37** Relationship between dietary selenium intake and bone mineral density across multiple anatomical sites in adult women
van der Pligt P, Pasco JA, Henry MJ, Kotowicz MA, Cleverdon M and Nicholson GC
- P38** Effects of vitamin D deficiency and high parathyroid hormone on mortality risk in elderly men
Nguyen ND, Bliuc D, Frost SA, Center JR, Eisman JA and Nguyen TV
- P39** Explaining the missing heritability of osteoporosis: contributions of ESR1 and LRP4 polymorphisms to fracture susceptibility in families
Tran BNH, Nguyen S, Nguyen ND, Center JR, Eisman JA and Nguyen TV
- P40** Contribution of Genetic Profiling to Individualized Prognosis of Fracture
Tran BNH, Nguyen ND, Vinh NX, Center JR, Eisman JA and Nguyen TV
- P41** Low-trauma fractures signal increased risk of hip fracture in frail older people
Sambrook PN, Chen JS, Cameron ID, Cumming RG, March LM and Seibel MJ

Clinical osteoporosis

- P42** Bisphosphonates and glucocorticoid osteoporosis in men: results of a randomized controlled trial comparing zoledronic acid with risedronate
Sambrook PN, Roux C, Devogelaer JP, Saag K, Lau CS, Reginster JY, Bucci-Rechtweg C, Su G and Reid DM
- P43** Intravenous zoledronate use in adult delayed non-union fracture healing
Gilchrist N, McKie J and Little D
- P44** Zoledronic acid improves Health-related quality of life in patients with hip fracture: Results of HORIZON-RFT
Adachi JD, Lyles KW, Colón-Emeric CS, Boonen S, Pieper CF, Mautalen C, Hyldstrup L, Recknor C, Nordsletten L, Bucci-Rechtweg C, Su G, Eriksen EF and Magaziner JS
- P45** Subtrochanteric fractures: results from the HORIZON-Recurrent Fracture Trial
Adachi JD, Lyles KW, Boonen S, Colón-Emeric C, Hyldstrup L, Nordsletten L, Pieper C, Recknor C, Su G, Bucci-Rechtweg C and Magaziner J
- P46** Measures of body fat are associated with prevalent vertebral deformities in older women but not men
Laslett LL, Just S, Quinn S, Winzenberg TM, and Jones G
- P47** Zoledronic acid (ZOL) prevents bone loss in postmenopausal women with low bone mineral density (BMD): The HORIZON prevention study
McClung MR, Miller P, Recknor C, Ruzicky M-E, Bucci-Rechtweg C, Yu S, Clunas N and Benhamou C-L
- P48** Effect of Denosumab on the incidence of hip, new vertebral, and nonvertebral fractures over 3 years among postmenopausal women with higher fracture risk: a subgroup analysis from the FREEDOM Study
Reid IR, Boonen S, McClung M, Minisola S, Lippuner K, Topping O, Rizzoli R, Man Z, Bone HG, Farrerons J, Adachi JD, Christinansen C, Eastell R, Siris E, Cummings S, Wang A, Franchimont N and San Martin J
- P49** Characterization of and risk factors for acute phase reactions following zoledronic acid infusion
Reid IR, Gamble GD, Mesenbrink P and Black DM
- P50** Dairy Phospholipid for Bone Health
Watson M, Guan J, Callon KE, MacGibbon AKH, Reid IR, McJarrow P and Cornish J
- P51** Low treatment rates of vertebral fractures in a large New Zealand District Health Board
Singh J and Bloomfield K
- P52** Audit of bone protection treatment in patients aged 65 yrs presenting to North Shore Hospital with fractures
Singh J
- P53** Paracetamol or ibuprofen alleviates post-dose symptoms related to intravenous infusion of zoledronic acid
Wark JD, Bensen W, Recknor C, Ryabitsseva O, Chiodo III J, Mesenbrink P and De Villiers TJ



POSTER PRESENTATIONS

- P54** The effects of a two year RCT of whey protein supplementation on bone density and urinary calcium excretion in older postmenopausal women
Zhu K, Meng X, Kerr DA, Devine A, Solah V, Binns CW and [Prince RL](#)
- P55** Identification of osteoporosis through a retrospective and prospective audit in patients following an acute fracture
[Heard A](#), Anderson L, Maguire P, Gilchrist N and McKie J
- P56** Zoledronic acid reduces the increased risk conferred by further fractures
[Seeman E](#), Black DM, Bucci-Rechtweg C, Eastell R, Boonen S and Mesenbrink P

Bone quality, bone structure and mechanical properties

- P57** Relationship between baseline remodelling intensity and changes in HR-pQCT parameters at the radius in postmenopausal women treated with denosumab or alendronate
[Seeman E](#), Cheung AM, Shane E, Thomas T, Boyd SK, Boutrou S, Hanley DA, Bogado C, Sellmeyer D, Majumdar S, Kearns A, Fan M, Zanchetta J and Libanati C
- P59** Reduced osteocyte density and morphological changes of canaliculi in trabecular bone of osteoporotic sheep
[Zarrinkalam MR](#), Mulaibrahimovic A, Nguyen AQ, Sarvestani GT, Vernon-Roberts and Moore RJ
- P60** Osteoporotic characteristics in vertebral trabecular bone of osteoporotic sheep remain after withdrawal of corticosteroid administration
[Zarrinkalam MR](#), Schultz C, Parkinson I and Moore RJ
- P61** In vivo imaging of subchondral bone using micro-CT in a rodent model of osteoarthritis
[Mohan G](#), Perilli E, Kuliwaba JS, Humphries JM, Parkinson IH and Fazzalari NL
- P62** Fatty acid composition of osteoarthritic, osteoporotic and control femoral heads
[Humphries JM](#), Gibson RJ and Fazzalari NL
- P63** Peri-osteocytic osteolysis with no decline in osteocyte-lacunae density occurs in association with bone volume loss due to estrogen depletion
[Anderson PH](#), Sawyer RK and Atkins GJ
- P65** Measurement of *ex vivo* subregional vertebral bone mineral density using lateral projection dual energy X-ray absorptiometry (DXA): validation with peripheral quantitative computed tomography (pQCT)
Briggs AM, Perilli E, [Parkinson IH](#), Wrigley T, Fazzalari NL, Kantor S and Wark JD
- P66** Regional analysis of trabecular bone microdamage in the human lumbar vertebra
[Tsangari H](#), Kuliwaba JS, Badiei A and Fazzalari NL
- P67** Increased density of hypermineralised osteocyte lacunae and microdamage accumulation in fragility hip fracture patients
[Kuliwaba JS](#), Carpentier V, Tsangari H, Shah S, Sutton-Smith P, Parkinson IH, Badiei A and Fazzalari NL
- P68** Combined high dietary calcium and vitamin D are necessary to improve cortical thickness to resist bone failure in senescent animals
[Lee AMC](#), Anderson PH, Sawyer RH, Moore AJ, Morris HA and O'Loughlin PD
- P69** BMD, trabecular architecture and bone turnover following estrogen deficiency in an ovine model of osteoporosis
[Brennan O](#), Kuliwaba JS, Kennedy OD, Lee TC, Parkinson IH, Fazzalari NL, McNamara LM and O'Brien FJ
- P70** Historically active postmenopausal women have greater trabecular bone volume and thickness than inactive women
[Gianoudis J](#), Bailey C, Ebeling PR, Krug R, Majumdar S and Daly RM
- P71** Quantifying intracortical porosity producing cortical remnants identifies individuals at risk for fracture beyond existing parameters
[Zebaze R](#), Ghasem-Zadeh A, Iuliano-Burns S, King K and Seeman E



POSTER PRESENTATIONS

- P72** Defining a region's surface/volume ratio identifies its susceptibility to being remodelled and decayed better than bone density measurements
Ghasem-Zadeh A, Zebaze R, Iuliano-Burns S, King K and Seeman E
- P73** Creation of a 3D finite element analysis model of the proximal femur incorporating cortical, trabecular and medullary compartments derived from a single 2D DXA scan image
Baker AM and Langton CM
- P74** A new approach to modelling bone remodelling: Smooth Particle Hydrodynamics
Thomas CDL, Fernandez JW, Das R, Cleary PW and Clement JG
- P75** Synchrotron-radiation micro-ct of cortical bone reveals new data on osteocyte lacunar volume and spacing
Thomas CDL, Hannah KM, Peele AG, DeCarlo F and Clement JG
- P76** Are changes in muscle size related to changes in bone material and structural properties at the axial and appendicular skeleton in older men? An 18-month study.
Bailey CA, Kukuljan S and Daly RM
- P77** Effect of fatigue-induced microdamage on the fracture resistance of human cortical bone
Codrington JD, Fazzalari NL and Kotousov AG
- P78** Metaphyseal trabecular architecture is established and decayed early in life
Wang Q, Iuliano-Burns S, Wang XF, Ghasm-Zadeh A and Seeman E

Cell biology

- P79** Functional involvement of the microtubule-binding dynein-dynactin complex in osteoclast formation and bone resorption
Ng PY, Cheng T, Feng HT, Ang E, Zheng MH, Xu J, Zhao H and Pavlos NJ
- P80** Ac45 mediates acidification and endocytosis during osteoclast bone resorption
Qin A, Cheng TS, Pavlos NJ, Xu J, Dai K and Zheng MH
- P81** The effects of arachidonic acid and docosahexaenoic acid on proliferation of and osteoclast formation from RAW 264.7 murine monocytes
Coetzee M, Boeyens JCA, Stander BA, Fray LM, Hiess JR, Chua W-H and Kruger MC
- P82** Grape seed proanthocyanidin extract inhibits osteoclast differentiation and resorption while having no effect on osteoblast proliferation in vivo
Chua WH, Plimmer GG, Hiess J, and Kruger MC
- P83** Culture of non-bone cells on bisphosphonate-coated bovine bone - an *in vitro* model of osteonecrosis of the jaw (ONJ)
Bava U, Cornish J and Reid IR
- P84** Osteoblast growth and differentiation in two- and three-dimensional cultures
Matthews BG, Callon KE, Locklin RM, Hulley PA, Naot D and Cornish J
- P85** Calcium promotes osteoblast differentiation resulting in an enhanced osteocyte-like phenotype in mineralised cultures of human primary osteoblasts
Welldon KJ, Findlay DM and Atkins GJ
- P86** EphB/ephrin-B interactions mediate MSC recruitment and differentiation: potential implications in bone remodelling
Arthur A, Borowicz R, Zannettino ACW, Sims NA, Matsuo K and Gronthos S
- P87** Both class I and class II histone deacetylases (HDACs) are important during osteoclast development
Cantley MD, Fairlie DP, Bartold PM, Lucke A and Haynes DR
- P88** Role of neuropeptide Y1 receptor signalling blockade on osteoblast activity
Sousa DM, Neto EC, Estêvão MI and Lamghari M
- P89** 17-allylamino geldanamycin (17AAG) increases osteoclast formation *in vitro* through the induction of a cell stress response
Quinn JMW, Chai R, Kouspou MM, Xu J, Gillespie MT and Price JT



POSTER PRESENTATIONS

- P90** Critical molecular regulators, histomorphometric indices and their correlations in the trabecular bone in primary hip osteoarthritis
Kumarasinghe DD, Perilli E, Tsangari H, Truong L, Kuliwaba JS, Hopwood B, Atkins GJ and Fazzalari NL
- P91** The TWIST family of basic-helix-loop-helix transcription factors, Twist-1 and-2, mediate mesenchymal stromal/stem cell proliferation and differentiation
Cooper L, Isenmann S, Arthur A, Zannettino A, Cakouros D, Glackin C and Gronthos S
- P92** Differential gene expression in osteochondrosis lesions
Mirams M, Pagel CN and Mackie EJ
- P93** JNK inhibitors promote osteogenic differentiation in NF1-deficient cells
Sullivan K, Schindeler A and Little DG
- P94** Localisation of RBP4 in human suture derived cells from craniosynostosis patients suggests a site specific function
Leitch VD, Hinze SJ, Anderson PJ and Powell BC
- P95** Microtubule motor protein Tctex-1 interacts with Rab3D and is required for osteoclastic bone resorption
Pavlos NJ, Cheng TS, Qin A, Feng HT, Ng PY, Ang ESM, Carrello A, Sung CH, Jahn R, Zheng MH and Xu J
- P96** Mechanisms of erosive gout: monosodium urate monohydrate crystals inhibit osteoblast viability and function
Chhana A, Callon KE, Pool B, Naot D, Watson M, Cornish J and Dalbeth N

Basic - other

- P97** Mangiferin attenuates osteoclastogenesis, bone resorption and RANKL-induced activation of NF- κ B and ERK
Ang E, Liu Q, Qi M, Liu HG, Zheng MH and Xu J
- P98** Homozygous deletion of Dickkopf-1 results in a high bone mass phenotype
McDonald MM, Morse A, Baldock PA, Peacock L, Khoo P-L, Tam PPL and Little DG
- P99** The impact of pregnancy and lactation on bone in rat mothers exposed to uteroplacental insufficiency
Romano T, Wark JD and Wlodek ME
- P100** The angiotensin converting enzyme inhibitor, captopril, reduces bone quality in ovary-intact rats but not in ovariectomized rats
Blazeska M, Chan V, Jois M, McDonald AC, Ward AR, Schuijers JA and Grills BL
- P101** Endothelin-1 receptor and myofibroblast-like cells in early soft callus: a potential role in fracture healing
McDonald SJ, Dooley PC, McDonald AC, Schuijers JA, Ward AR and Grills BL

Mineral regulating hormones (including vitamin D)

- P102** Increased bone VDR impairs osteoclast and osteoblast activities with low dietary calcium in a mouse model
Lam NN, O'Loughlin PD, Sawyer RK, Morris HA and Anderson PH
- P103** Glutathione analogs are potent suppressors of PTH secretion from human parathyroid cells
Mun H-C, Broadhead GK, Avlani VA, Jourdon O, Christopoulos A, Church WB, Delbridge L and Conigrave AD
- P104** Volume resuscitation confounds the interpretation of serum vitamin D concentrations in critically ill patients
Ochola J, Krishnan A, Kruger P, Mundy J, Jones M, Duncan EL and Venkatesh B
- P105** Vitamin D and bone mineral metabolism in obese patients prior to laparoscopic adjustable gastric banding
Yong TY and Li JYZ
- P106** Osteoclastic metabolism of 25(OH)-vitamin D₃: a potential mechanism for optimization of bone resorption
Kogawa M



POSTER PRESENTATIONS

- P107** The role of vitamin D in the proliferation and differentiation of osteoblasts
Yang D, Atkins GJ, Anderson PH, Weldon KJ and Morris HA
- P108** Vitamin D and bone health in Australian Aboriginals
Vanlint S, Morris H, Newbury J and Crockett A
- P109** The effect of receptor density on the function of the extracellular calcium-sensing receptor
Brennan SC, Christopoulos A and Conigrave AD
- P110** Intermittent high-dose vitamin D3 corrects vitamin D deficiency in adolescents: results from a randomised controlled trial
Carnes J, Quinn S, Nelson MR, Jones G and Winzenberg T
- P111** The skeletal response to vitamin D supplementation during sunlight deprivation: a randomised trial in Antarctic expeditioners
Iuliano-Burns S, King K, Ayton J, Hillam S, Jones G and Seeman E

Paediatrics

- P112** Reduced mechanical loading during growth results in deficits in cortical bone structure: a study of children with Legg-Calve Perthes Disease
Iuliano-Burns S, Macleod S, King K, Ghasem Zadeh A, Zebaze R, Torode I and Seeman E
- P113** Structural deficit in children with forearm fractures
Xu X-Y, Iuliano-Burns S, Ghasem-Zadeh A, Wang Q and Seeman E

Cytokine, growth factor and hormone mechanisms of action

- P114** Wnt7b plays a unique and essential role in osteoblast differentiation
Shao X, Fong-Yee C, Lyon K, Dunstan CR, Seibel MJ and Zhou H
- P115** Nilotinib inhibits osteoblast proliferation and differentiation, and inhibits osteoclastogenesis
O Sullivan S, Lim JM, Tong PC, Watson M, Callon K, Cornish J, Browett P and Grey A
- P116** Endogenous opioids regulate bone remodelling via actions on hypothalamic Neuropeptide Y
Driessler F, Wong I, Enriquez, RF, Kieffer B, Schwarzer C, Sainsbury A, Herzog H, Center J, Eisman JA and Baldock PA
- P117** Methionine199 in the TNF-like core domain of RANKL is crucial for RANKL function
Cheng TS, Qin A, Pavlos NJ, Chim SM, Tan WY, Dai K, Zheng MH and Xu J
- P118** Regulation of OPG expression in UMR-106 osteoblast cells by angiotensin II
MacRae KE, Thomas WG and Sernia C
- P119** Role of glypicans in regulation of bone morphogenetic protein signaling during skull bone growth
Dwivedi PP, Anderson PJ and Powell BC
- P120** Oncostatin M is a potent regulator of IL-6 and RANKL mRNA expression in synovial fibroblasts
Le Goff B, McGregor NM, Romas E, Sims NA and Walsh NC
- P121** Actions of novel adipokines on bone cells
Lin JM, Costa JL, Watson M, Callon KE, Tong PC, Williams GA, Grey A, Naot D, Reid IR and Cornish J