



ANZBMS 20<sup>th</sup> ANNUAL SCIENTIFIC MEETING – SCIENTIFIC PROGRAM

12:30 – 14:00		<b>Lunch and poster sessions</b> Poster Numbers presenting: Odds	Mezzanine
13:00 – 14:00		<b>AMGEN/GSK SYMPOSIUM</b> Supported by Amgen in collaboration with GSK <b>The impact of RANKL inhibition: from microarchitecture to outcomes</b> <i>Chair: Prof Philip Sambrook</i> The prevention of structural decay using RANK Ligand inhibition Prof Ego Seeman  Clinical aspects of RANK Ligand inhibition Prof Juliet Compston	Ballroom B/C
14:00		<b>SESSION 3</b> <b>Osteoimmunology – classical and modern aspects</b> <b>Session supported by Amgen in collaboration with GSK</b> <i>Chairs: Matt Gillespie and Louise Purdon</i>	Ballroom B/C
14:00	IS7	Inflammatory mediators: triggers of the bone anabolic-catabolic switch <u>Atkins, G.</u> (Australia)	
14:24	IS8	Osteomacs versus inflammatory macrophages in bone biology <u>Raggatt, L.</u> (Australia)	
14:48	IS9	Unraveling the endosteal hematopoietic stem cell niche - induction of mobilization <u>Levesque, J-P.</u> (Australia)	
15:18	IS10	RANKL and its signaling as therapeutic targets for osteolytic bone diseases <u>Xu, J.</u> (Australia)	
15:45 – 16:05		<b>Refreshments and poster session</b>	Mezzanine
16:05 – 17:20		<b>PARALLEL ORAL PRESENTATIONS</b>	
16:05		<b>SESSION 4A</b> <b>Clinical Presentations</b> <i>Chairs: Tania Winzenburg and John Wark</i>	Ballroom B
16:05	OR3	<b>Outstanding Abstract – Clinical</b> A dedicated intervention program reduces refracture rates in patients with incident non-vertebral osteoporotic fracture: Results of a 4-year prospective controlled study (OMEN) Lih, A., Nandapalan, H., Kim, M. and <u>Seibel, M.J.</u>	
16:17	OR4	Calcium supplementation and the risks of atherosclerotic vascular disease in postmenopausal women <u>Lewis, J.R.</u> , Calver, J., Zhu, K., Flicker, L. and Prince, R.L.	
16:29	OR5	Depletion of osteoclastic-like giant cells by denosumab alters the differentiation of stromal-like tumour cells in giant cell tumour of bone Pavlos, N.J., Utting, J.C., Smith, R.C., Robbins, P., Xu, J. and <u>Zheng, M.H.</u>	
16:41	OR6	Changing pattern of age- and sex-specific hip fracture incidence, 1990-3 to 2006-7: Geelong Osteoporosis Study. <u>Pasco, J.A.</u> , Brennan, S.L., Henry, M.J., Nicholson, G.C., Merriman, E.N., Zhang, Y. and Kotowicz, M.A.	
16:53	OR7	Evidence of Gene-Gene Interaction Determinants of Fracture Susceptibility <u>Tran, B.N.H.</u> , Nguyen, N.D., Center, J.R., Eisman, J.A. and Nguyen, T.V.	
17:05	OR8	Frequent walking is associated with an increased fracture risk in middle aged and older adults: A national, population-based prospective study (AusDiab) <u>Nikander, R.</u> , Gagnon, C., Dunstan, D.W., Ebeling, P.R., Magliano, D.J., Zimmet, P., Shaw, J. and Daly, R.M.	

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16:05		<b>SESSION 4B</b>	<b>Ballroom C</b>
		<i>Basic Presentations</i>	
		<i>Chairs: Rebecca Mason and David Findlay</i>	
16:05	OR9	<b>Outstanding Abstract – Basic</b> Enhanced osteoclast formation in Oncostatin M receptor knockout (OSMR KO) mice in response to Parathyroid Hormone (PTH) <u>Walker, E.C.</u> , McGregor, N.E., Poulton, I.J., Ho, P., Allan, E.A., Martin, T.J. and Sims, N.A.	
16:17	OR10	Trabecular bone volume is increased in a novel mouse model expressing an osteoblast-specific CYP27B1 transgene <u>Turner, A.G.</u> , Tyson, J.H.T., Sawyer, R.K., O’Loughlin, P.D., Atkins, G.J., Kogawa, M., Findlay, D.M., Morris, H.A. and Anderson, P.H.	
16:29	OR11	Calcium supplementation does not rescue the programmed adult bone deficits associated with perinatal growth restriction <u>Romano, T.</u> , Wark, J.D. and Wlodek, M.E.	
16:41	OR12	Homozygous deletion of the Sost gene results in enhanced healing and increased callus formation in healing fractures <u>McDonald, M.M.</u> , Morse, A., Peacock, L., Mikulec, K., Kramer, I., Kneissel, M. and Little, D.G.	
16:53	OR13	Micro-CT and biomechanical analysis of the leptin receptor-deficient db/db mouse tibia <u>Williams, G.A.</u> , Callon, K.E., Watson, M., Naot, D., Costa, J.L., Dickinson, M., Ding, Y., Wang, Y., Reid, I.R. and Cornish, J.	
17:05	OR14	Skeletal cell apoptosis in methotrexate cancer chemotherapy-induced bone loss Fan, C.M., Ng, Y.S., Shandala, T., Georgiou, K.R., King, T., Scherer, M.A., Cool, J.C., Yip Y.C., Hopwood, B., Foster, B.K. and <u>Xian, C.J.</u>	
17:20		<b>Sessions Close</b>	
18:30		<b>Young Scientists and Students’ Dinner</b>	<b>T-Chow Chinese Restaurant</b>
19:00		<b>President’s Dinner</b>	<b>Bistro Dom</b>

Tuesday 7 September 2010

07:00	<p><b>BREAKFAST SESSION</b>  <b>MEET THE PROFESSOR 2</b>  <i>Chair: Liza Raggatt</i>  <i>Of mice and men: animal models for human diseases</i>  <b>Ralph Müller</b>                      Cost: A\$35 includes breakfast and discussion</p>	Balcony Room 1
	<p><b>MEET THE PROFESSOR 3</b>  <i>Chair: TBC</i>  <i>HIV and bone</i>  <b>Juliet Compton</b>                      Cost: A\$35, includes breakfast and discussion</p>	Balcony Room 2
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08:30	<p><b>SESSION 5</b>  <b>Novel Therapeutic Approaches for Osteoporosis Management</b>  <i>Chair: Emma Duncan and Peter Ebeling</i></p>	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, M.S.</u> , Conigrave, A.D. and Mason, R.S.	
10:16 – 10:40	<b>Refreshment Break</b>	Mezzanine
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10:40	<p><b>SESSION 6</b>  <b>Quantifying bone quality</b>  <i>Session supported by Servier Laboratories (Aust) Pty Ltd</i>  <i>Chair: Mark Forwood and Roger Price</i></p>	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, C.</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, A.M., Codrington, J.D., Wark, J.D., Kantor, S., Parkinson, I.H. and Fazzalari, N.L.	
12:20 – 14:00	<b>Lunch and poster sessions</b> Poster Numbers presenting: Evens	Mezzanine

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13:00 – 14:00	<b>Servier Symposium</b>	<b>Ballroom B/C</b>
14:00	<b>SESSION 7</b> <b>Young Investigator Awards</b> <i>Chairs: Jill Cornish and Jackie Center</i>	<b>Ballroom B/C</b>
14:00	O17 Atypical femoral fractures are associated with bisphosphonate use <u>Girgis, C.M.</u> , Sher, D. and Seibel, M.J.	
14:12	O18 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., Buttgereit, F., Dunstan, C.R. and Seibel, M.J.	
14:24	O19 Metaphyseal trabecular architecture is established and decayed early in life <u>Wang, Q.</u> , Iuliano-Burns, S., Wang, X.F., Ghasm-Zadeh, A. and Seeman, E.	
14:36	O20 Neuropeptide Y, Y6 receptor (Y6R) - a novel regulator of bone mass and energy homeostasis <u>Driessler, F.</u> , Yulyaningsih, E., Enriques, R.F., Sainsbury, A., Herzog, H., Eisman, J.A. and Baldock, P.A.	
14:48	O21 Comparison of the FRISK Score to the FRAX (UK) Algorithm and Garvan Nomogram: Geelong Osteoporosis Study <u>Zhang, Y.</u> , Pasco, J.A., Kotowicz, M.A., Sanders, K.M., Nicholson, G.C. and Henry, M.J.	
15:00	O22 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, M.H. and Xu, J.	
15:12	O23 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	O24 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, C.W.A., Findlay, M.D. and Evdokiou, A.	
15:40 – 16:00	<b>Refreshments</b>	<b>Mezzanine</b>
16:00	<b>SESSION 8</b> <b>Greg Mundy Memorial Lecture</b> Jack Martin	<b>Ballroom B/C</b>
17:00	<b>ANZBMS AGM</b>  <b>Sessions Close</b>	<b>Ballroom B/C</b>
18:30	<b>ANZBMS Women's Function</b>	
19:00 for 19:30 – 11:30	<b>Conference Dinner</b>	<b>Ballroom B/C</b>

Wednesday 8 September 2010

07:00 FUN RUN

08:30 **SESSION 9** **Ballroom B/C**  
**The Bone/Joint Interface**  
*Chair: Gethin Thomas and Malcolm Smith*

08:30 IS17 Basic aspects of OA  
Kuliwaba, J. (Australia)

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

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

09:42 OS25 Macrophage migration inhibitory factor (MIF) promotes osteoclastogenesis and arthritic bone erosion  
 Gu, R., Santos, L.L., Xu, J., Quinn, J.M.W., Gillespie, M.T. and Morand, E.F.

09:54 OS26 Leukemia Inhibitory Factor inhibits resorption of mineralised cartilage during growth and stimulates bone formation in remodelling  
Poulton, I.J., McGregor, N.E., Walker, E.C., Pompolo, S., Martin, T.J. and Sims, N.A.

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 500,00IU dose of cholecalciferol: Further analysis from the Vital D Study  
Sanders, K. (Australia)

12:23 OS27 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, R.L. 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**

**Malignant bone disease**

- P1 Vitamin D deficiency promotes human prostate cancer growth in a murine model of bone metastasis  
Zheng, Y., Zhou, H., Ooi, L.L., Snir, D., Dunstan, C.R. and Seibel, M.J.
- P2 The role of tumour derived interleukin 6 in a murine model of breast cancer bone metastasis  
Zheng, Y., Mikuscheva, A., Zhou, H., Börmert, K., Buttgerit, F., Dunstan, C.R. and Seibel, M.J.
- 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, D.M., Zannettino, C.W.A. 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, D.G.
- P5 A comparison of lumbar intervertebral disc height in mature and adolescent sheep following injection of a matrix degrading enzyme  
Decelis, M., Moore, R.J. 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, M.S. and Filgueira, L.
- P7 Osteomacs are pivotal for optimal intramembranous bone formation during bone healing  
Alexander, K.A., Chang, M.K., Maylin, E.R., Kohler, T., Müller, R., Sweet, M.J., Raggatt, L.J. and Pettit, A.R.
- P8 Local expression of sclerostin-protein is reduced adjacent to the stress fracture following ulnar loading  
Wu, A.C., Kidd, L.J., Cowling, N.R., Kelly, W.L. and Forwood, M.R.

**Clinical metabolic bone diseases**

- P9 Hypophosphataemic osteomalacia in two patients on adefovir dipivoxil  
Girgis, C.M., Wong, T., Ngu, M., Emmett, L., Archer, K., Chen, R.C. and Seibel, M.J.
- 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, P.G., Doery, J.C.G., Strauss, B.J. and Bowden, D.K.
- 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, A.S.S.K., Nealem S.D., Crotti, T.N. and Haynes, D.R.
- 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, J.D., Hill, K., O'Brien, T.J., Petty, S.J. 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

**Public health**

- P18** Patient Recruitment Strategies for RCT s  
 Trapanovski M, Rampellini J, Lewis JR, 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, J.L. and Schultz, C.G.
- P21** Socioeconomic status and bone health in older men: The CHAMP study  
 Nabipour, I., Cumming, R.G., Handelsman, D.J., Naganathan, V., Waite, L., Janu, M., Le Couteur, D., Sambrook, P.N. and Seibel, M.J.
- P22** A cultural models approach to osteoporosis prevention and treatment  
Otmar, R., Morrow, M., Nicholson, G.C., Kotowicz, M.A. and Pasco, J.A.
- P23** The utility of bone health to predict mortality in older women  
Gould, H., Pasco, J.A., Brennan, S.L., Kotowicz, M.A., Nicholson, G.C. and Henry, M.J.
- P24** Development of a Model of Care for osteoporosis in Western Australia utilising Health Networks  
 Briffa, N.K., Briggs, A.M. and France, L.
- P25** Targeted exercise against osteoporosis: a systematic review and meta-analysis of exercise RCTs for optimising bone strength throughout life  
Nikander R, 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, S.L., Henry, M.J., Kotowicz, M.A., Nicholson, G.C., Zhang, Y. and Pasco, J.A.

**Epidemiology and genetics**

- P27** Bone mineral density is positively associated with knee cartilage volume in healthy, asymptomatic adult females  
Brennan, S.L., Pasco, J.A., Cicuttini, F.M., Henry, M.J., Kotowicz, M.A., Nicholson, G.C. and Wluka, A.E.
- P28** Clinical utility of combined femoral neck and lumbar spine bone mineral density measurements in the individualized prognosis of fracture  
Nguyen, T.V., Nguyen, N.D., Frost, S.A., Bliuc, D., Center, J.R. and Eisman, J.A.
- P29** Relationship between low BMD and fracture in mortality risk: an 18-year prospective study from Dubbo Osteoporosis Epidemiology Study  
Bliuc, D., Nguyen, N.D., Nguyen, T.V., Eisman, J.A. and Center, J.R.
- P30** Osteoporosis medication and reduced mortality risk in elderly women and men: an 18-year prospective study from the Dubbo Osteoporosis Epidemiology Study  
 Center, J.R., Bliuc, D., Nguyen, N.D., Nguyen, T.V. and Eisman, J.A.
- P31** Determinants of bone mass in smokers: A study in smoking-discordant twin pairs  
Christie, J.J., Osborne, R.H., Kantor, S., Nowson, C.A., Seibel, M.J., Sambrook, P.N. and Wark, J.D.
- P32** Table tennis activity is positively associated with bone mineral measures in older Asian Australian women and men  
Li, L., Apandi, A. and Wark, J.D.
- P33** Pleiotropic genetic effects contribute to the correlation between bone mineral density and quantitative ultrasound measurements  
Nguyen, S.C., Nguyen, N.D., Center, J.R., Eisman, J.A. and Nguyen, T.V. (255)
- P34** BMD in a cohort of women a decade apart: Geelong Osteoporosis Study  
Henry, M.J., Kotowicz, M.A., Nicholson, G.C., Clark, E. and Pasco, J.A.
- P35** The neglected fracture sites: non-hip and non-vertebral fractures  
Henry, M.J., Pasco, J.A., Sanders, K.M., Kotowicz, M.A. and Nicholson, G.C.

- P36** Association between beta-blocker use and bone loss: the Dubbo Osteoporosis Epidemiology Study  
Yang, S., Nguyen, N.D., Center, J.R., Eisman, J.A. and Nguyen, T.V.
- P37** Relationship between dietary selenium intake and bone mineral density across multiple anatomical sites in adult women  
van der Pligt, P., Pasco, J.A., Henry, M.J., Kotowicz, M.A., Cleverdon, M. and Nicholson, G.C.
- 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, B.N.H., Nguyen, S., Nguyen, N.D., Center, J.R., Eisman, J.A. and Nguyen, T.V.
- P40** Contribution of Genetic Profiling to Individualized Prognosis of Fracture  
Tran, B.N.H., Nguyen, N.D., Vinh, N.X., Center, J.R., Eisman, J.A. and Nguyen, T.V.
- P41** Low-trauma fractures signal increased risk of hip fracture in frail older people  
Sambrook, P.N., Chen, J.S., Cameron I.D., Cumming, R.G., March, L.M. and Seibel, M.J.

#### ***Clinical osteoporosis***

- P42** Bisphosphonates and glucocorticoid osteoporosis in men: results of a randomized controlled trial comparing zoledronic acid with risedronate  
Sambrook, P.N., Roux, C., Devogelaer, J.P., Saag, K., Lau, C.S., Reginster, J.Y., Bucci-Rechtweg, C., Su, G. and Reid, D.M.
- 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, J.D., Lyles, K.W., Colón-Emeric, C.S., Boonen, S., Pieper, C.F., Mautalen, C., Hyldstrup, L., Recknor, C., Nordsletten, L., Bucci-Rechtweg, C., Su, G., Eriksen, E.F. and Magaziner, J.S.
- P45** Subtrochanteric fractures: results from the HORIZON-Recurrent Fracture Trial  
Adachi, J.D., Lyles, K.W., 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, L.L., Just, S., Quinn, S., Winzenberg, T.M., and Jones, G.
- P47** Zoledronic acid (ZOL) prevents bone loss in postmenopausal women with low bone mineral density (BMD): The HORIZON prevention study  
McClung, M.R., Miller, P., Recknor, C., Ruzicky, M-E., Bucci-Rechtweg, C., Yu, S. 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, I.R., Boonen, S., McClung, M., Minisola, S., Lippuner, K., Torring, O., Rizzoli, R., Man, Z., Bone, H.G., Farrerons, J., Adachi, J.D., 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, J.D., Bensen, W., Recknor, C., Ryabitseva, O., Chiodo III, J., Mesenbrink, P. and De Villiers, T.J.

- 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, D.A., Devine, A., Solah, V., Binns, C.W. and Prince, R.L.
- 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, D.M., 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, A.M., Shane, E., Thomas, T., Boyd, S.K., Boutroy, S., Hanley, D.A., Bogado, C., Sellmeyer, D., Majumdar, S., Kearns, A., Fan, M., Zanchetta, J. and Libanati, C.
- P58** The antipsychotic clozapine, but not its derivative quetiapine, induces microarchitectural changes in bone  
Costa JL, Smith GC, Cheng A, Watson M, Shepherd P, Callon KE, Grey A and Cornish J
- 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
- P64** The relation between serum C-terminal telopeptide (CTX) and rate of change in bone mineral density (BMD) at different sites in postmenopausal women  
Nordin, B.E.C., O'Loughlin, P.D. and Coates, P.S.
- 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, A.M., Perilli, E., Parkinson, I.H., Wrigley, T., Fazzalari, N.L., Kantor, S. and Wark, J.D.
- P66** Regional analysis of trabecular bone microdamage in the human lumbar vertebra  
Tsangari, H., Kuliwaba, J.S., Badiei, A. and Fazzalari, N.L.
- P67** Increased density of hypermineralised osteocyte lacunae and microdamage accumulation in fragility hip fracture patients  
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- P68** Combined high dietary calcium and vitamin D are necessary to improve cortical thickness to resist bone failure in senescent animals  
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- P69** BMD, trabecular architecture and bone turnover following estrogen deficiency in an ovine model of osteoporosis  
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- P70** Historically active postmenopausal women have greater trabecular bone volume and thickness than inactive women  
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- P71** Quantifying Intracortical Porosity Producing Cortical Remnants Identifies Individuals at Risk for Fracture Beyond Existing Parameters  
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- P72** Defining a region's surface/volume ratio identifies its susceptibility to being remodelled and decayed better than bone density measurements  
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- 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  
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- P74** A new approach to modelling bone remodelling: Smooth Particle Hydrodynamics  
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- P75** Synchrotron-radiation micro-ct of cortical bone reveals new data on osteocyte lacunar volume and spacing  
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- 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.  
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- P77** Effect of fatigue-induced microdamage on the fracture resistance of human cortical bone  
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- P78** Prognosis of fracture risk by quantitative-ultrasound measurement and bone mineral density  
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#### **Cell biology**

- P79** Functional involvement of the microtubule-binding dynein-dynactin complex in osteoclast formation and bone resorption  
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- P80** Ac45 mediates acidification and endocytosis during osteoclast bone resorption  
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- P81** The effects of arachidonic acid and docosahexaenoic acid on proliferation of and osteoclast formation from RAW 264.7 murine monocytes  
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- P82** Grape seed proanthocyanidin extract inhibits osteoclast differentiation and resorption while having no effect on osteoblast proliferation in vivo  
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- P83** Culture of non-bone cells on bisphosphonate-coated bovine bone - an in vitro model of osteonecrosis of the jaw (ONJ)  
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- P84** Osteoblast growth and differentiation in two- and three-dimensional cultures  
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- P85** Calcium promotes Osteoblast differentiation resulting in an enhanced Osteocyte-like phenotype in mineralised cultures of human primary Osteoblasts  
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- P86** EphB/ephrin-B interactions mediate MSC recruitment and differentiation: potential implications in bone remodelling  
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- P87** Both class I and class II histone deacetylases (HDACs) are important during osteoclast development  
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- P88** Role of neuropeptide Y1 receptor signalling blockade on osteoblast activity  
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- P89** 17-allylamino geldanamycin (17AAG) increases osteoclast formation in vitro through the induction of a cell stress response  
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- P90** Critical molecular regulators, histomorphometric indices and their correlations in the trabecular bone in primary hip osteoarthritis  
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- P91** The TWIST Family of Basic-Helix-Loop-Helix Transcription Factors, Twist-1 and-2, Mediate Mesenchymal Stromal/Stem Cell Proliferation and Differentiation  
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- P92** Differential gene expression in osteochondrosis lesions  
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- P93** JNK inhibitors promote osteogenic differentiation in NF1-deficient cells  
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- P94** Localisation of RBP4 in human suture derived cells from craniosynostosis patients suggests a site specific function  
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- P95** Microtubule motor protein Tctex-1 interacts with Rab3D and is required for osteoclastic bone resorption  
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- P96** Mechanisms of erosive gout: monosodium urate monohydrate crystals inhibit osteoblast viability and function  
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#### **Basic - other**

- P97** Mangiferin attenuates osteoclastogenesis, bone resorption and RANKL-induced activation of NF-κB and ERK  
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- P98** Homozygous deletion of Dickkopf-1 results in a high bone mass phenotype  
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- P99** The impact of pregnancy and lactation on bone in rat mothers exposed to uteroplacental insufficiency  
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- P100** The angiotensin converting enzyme inhibitor, captopril, reduces bone quality in ovary-intact rats but not in ovariectomized rats  
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- P101** Endothelin-1 receptor and myofibroblast-like cells in early soft callus: a potential role in fracture healing  
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#### **Mineral regulating hormones (including vitamin D)**

- P102** Increased bone VDR impairs osteoclast and osteoblast activities with low dietary calcium in a mouse model  
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- P103** Glutathione analogs are potent suppressors of PTH secretion from human parathyroid cells  
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- P104** Volume resuscitation confounds the interpretation of serum vitamin D concentrations in critically ill patients  
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- P105** Vitamin D and bone mineral metabolism in obese patients prior to laparoscopic adjustable gastric banding  
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- P106** Osteoclastic metabolism of 25(OH)-vitamin D<sub>3</sub>: a potential mechanism for optimization of bone resorption  
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- P107** The role of vitamin D in the proliferation and differentiation of osteoblasts  
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- P108** Vitamin D and bone health in Australian Aboriginals  
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- P109** The effect of receptor density on the function of the extracellular calcium-sensing receptor  
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- P110** Intermittent high-dose vitamin D3 corrects vitamin D deficiency in adolescents: results from a randomised controlled trial  
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- P111** The Skeletal Response To Vitamin D Supplementation During Sunlight Deprivation: A Randomised Trial In Antarctic Expeditioners  
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- P112** Reduced Mechanical Loading During Growth Results In Deficits In Cortical Bone Structure: A Study of Children With Legg-Calve Perthes Disease  
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- P113** Structural Deficit in Children with Forearm Fractures  
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#### ***Cytokine, growth factor and hormone mechanisms of action***

- P114** Wnt7b plays a unique and essential role in osteoblast differentiation  
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- P115** Nilotinib inhibits osteoblast proliferation and differentiation, and inhibits osteoclastogenesis  
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- P116** Endogenous opioids regulate bone remodelling via actions on hypothalamic Neuropeptide Y  
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- P117** Methionine199 in the TNF-like core domain of RANKL is crucial for RANKL function  
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- P118** Regulation of OPG expression in UMR-106 osteoblast cells by angiotensin II  
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- P119** Role of glypicans in regulation of bone morphogenetic protein signaling during skull bone growth  
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- P120** Oncostatin M is a potent regulator of IL-6 and RANKL mRNA expression in synovial fibroblasts  
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- P121** Actions of novel adipokines on bone cells  
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