Issue 1 • July 2004

Australian & New Zealand Bone & Mineral Society

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#### OFFICE BEARERS: Prof. Ego Seeman PRESIDENT

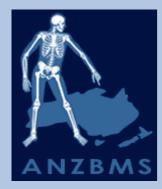
A/Prof. Jillian Cornish PRESIDENT ELECT

Dr Mark R. Forwood TREASURER

A/Prof David Findlay HONORARY SECRETARY

# COUNCIL MEMBERS: A/Prof Rebecca S. Mason

A/Prof Roger Price Prof Geoff Nicholson Prof Philip Sambrook



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Design Mark Stevens

## PRESIDENT'S REPORT JUNE 2004

The most important function of our Society is to provide educational resources for its members.

We achieve this mainly through Annual Scientific Meeting (ASM) and I hope that you will attend and participate actively and energetically by submitting work and going to the microphone to contribute scientific the debate when you see fit to do so. We already have over 160 registrants, and over 159 abstracts. We have many guest speakers this year and the program is a very busy one so I'm sure you will find the meeting stimulating and educational.

The weekend before the ASM will highlight several special meetings including a paediatric day, the confocal workshop (architecture), the ISCD training course and a practitioner's day. All of these meetings will be held at the Stamford hotel at Sydney airport and the programs are included in the newsletter.

There are several new initiatives that will emerge in the next 12-24 months

A 3 year Ph D scholarship is being advertised and the closing date is 16th July 2004. The winner of the scholarship will be announced at the Annual General Meeting

We plan on offering an ANZBMS symposium at special societies. This is a simplest way of updating specialists (orthopaedics, respiratory medicine, general

medicine, rheumatology and other groups). In the longer term we will aim at having combined, or back-to-back meetings, so that members from our society can benefit from the specialist meeting and visa versa.

In 2005 the scientific meeting will be held in Perth overlapping the Endocrine society meeting by a day and overlapping the Diabetes meeting completely. The plan is to have symposia and topics that will be of interest to members of both societies.

In 2006 we will organise the Asia-pacific Regional IOF meeting. This has been endorsed by council the board Osteoporosis Australia. This meeting will occur in around October in Cairns at the convention centre. We will have the ANZBMS Annual Scientific Meeting at the same time so that this will bе international meeting.

I recommend we consider Kakadu National Park for the 2007 ASM and welcome your comments.

The ISCD densitometry course will run this year but independent of the ANZBMS. There are two important reasons for this, one being the high cost of this course, the most important is for ANZBMS to develop and run its own densitometry training course in Australia.

Osteoporosis Australia has made important contribution to improving awareness of osteoporosis and this organisation, headed by Judith Stenmark

as CEO and John Hewson as Director are he thanked and congratulated their efforts. The organisation also has provided scholarships for osteoporosis and metabolic bone disease increasing co-operation between our societies will help both grow and provide services to patients as well as investigators and health professionals.

The AHMRC is holding its annual meeting in November 21-26<sup>th</sup> 2004 in Sydney.

Ethical guidelines require that conflicts of interest or potential conflicts of interest he declared whenever scientific work is presented. We will require this from all members. The format will bе a straightforward declaration of affiliations at the bottom of abstract submissions.

Industry symposia – we have two approaches to this, one is to have sponsored or named lectures (as we have this year and the year before) and actually allotted symposia. Council is of the view that speakers at these symposia should receive no honoraria but rather the corporate donations to the society include this in the overall grant. Your comments are welcome.

Please attend the Annual General meeting which will be held at Cypress Lakes Resort on 17<sup>th</sup> August at 6.00pm as this will give you a chance to tell us what you think and want. If you don't tell us we are forced to make decisions on your behalf.

#### Ego Seeman

# TRANSFERS TO CYPRESS LAKES

Just a quick note to all delegates getting the return transfer from Cypress Lakes Resort to Sydney on Friday, 20 August 2004. This transfer will depart the Hunter Valley at 2pm and the trip will take approximately 2 1/2 hours. There will be one stop in the CBD area (near Wynyard) and the coach will then carry on to the airport. If you are an interstate delegate and will be getting a flight that evening,

If you have any queries regarding the transfers, please contact the Meeting Secretariat Emma Waygood - on (02) 9437 9333 or email

please do not book your

flight any earlier than

5.45pm.

emma@conferenceaction.com.au.

# ANZBMS 2004 ANNUAL SCIENTIFIC MEETING

Congratulations! As a group you submitted 159 Abstracts for the 2004 Annual Scientific Meeting, a remarkable outcome.

Your enthusiastic participation in the upcoming conference guarantees its success. This year's ASM at the Cypress Lakes Resort amongst the vineyards of the Hunter Valley will be an excellent opportunity for rubbing elbows with fellow scientists. The scientific and social programs will provide a number of opportunities for meaningful interactions. Any serious antipodean bone investigator would be unwise to miss it!

We have planned a stimulating scientific with five excellent program, international speakers Gerard Karsenty, Sundeep Khosla, Erik Eriksen, Frank Rauch and Serge Ferrari - whose presentations will span the clinical and basic science interests of our registrants. Our list of local invited speakers is now complete, with a number of topics sure to satisfy every scientific appetite. The provisional scientific program on the web site has up-to-the-minute information.

To synergise with the ESA Clinical Weekend, which will follow our meeting at the same venue, we have scheduled a series of medically focussed talks on Friday morning. These special presentations are sure to inform everyone involved in basic and clinical aspects of bone disease. We are offering a special registration package for this series that will include coach transfer to the Hunter on Thursday afternoon, a ticket to the Gala Dinner and registration for the Friday morning sessions. Please bring this package to the attention of colleagues outside our society who would find this intensive exposure to bone useful.

We have also developed a variety of satellite events to add value to your ASM experience. The Paediatric Bone Symposium, ANZBMS/Osteoporosis Australia Clinical Update, Bone Imaging Workshop and Clinical Densitometry

Course will be excellent educational opportunities. Your participation in one of these extra events will multiply the benefit of your trip to NSW and give you a head start on the week of bone science. Additional information about these events is provided elsewhere in this newsletter and updated program details are available on the web site.

A primary purpose of the ASM is education, and attendance by scientists in training is particularly important. Supervisors and mentors of PhD scholars and postdoctoral scientists are strongly encouraged to support attendance by their junior colleagues, to give them the valuable experience of oral and poster presentations. A considerable number of travel grants and merit awards funded by our sponsors will be available to support the participation of trainee members of the society.

This meeting would not be possible without the generosity of our sponsors and exhibitors. In particular, we greatly appreciate the exceptional support of our platinum sponsors Merck Sharp & Dohme and Eli Lilly, our gold sponsor Aventis Pharma, and our silver sponsor Novartis Oncology.

Their contributions have allowed us to pursue our educational mission with confidence.

Dr Edith Gardiner

### ANNUAL GENERAL MEETING Thursday 19th August 2004 at 6.00pm

The Annual Genereal Meeting of ANZBMS will be held at Cypress Lakes Resort, Hunter Valley. All members are encouraged to attend the meeting at which the Roger Melick Young Investigator Award, Christopher & Margie Nordin Young Investigator Poster Award, ANZBMS Outstanding Abstract Award, Christine & T. Jack Martin Research Travel Grant and the ANZBMS PhD Scholarship award will be presented.

# TREASURER'S REPORT

During the past term, Michael Hooper in which it deferred due to marketing and I started the process of negotiating sponsorship agreements with our Major Corporate Sponsors to define more specifically the responsibilities and benefits to each party. In addition, it was hoped to provide some continuation of the agreements beyond the annual request for funding. Merck Sharp and Dohme Australia are the first of the companies to sign-off on a sponsorship agreement with ANZBMS and we thank Maree Rutherford and her team for seeing this through to completion. This agreement is based on incorporation into the one package of the annual sponsorship of the Society and its operation, and the sponsorship and exhibition fees associated with the ASM. In addition, Roche products has reinstated its Corporate Sponsorship after a period Dr Mark Forwwod

considerations, and Novartis has reinforced its support of the Society. We are currently waiting to complete sponsorship agreements with Eli Lilly Australia, and Aventis.

After some considerable homework and bureaucratic inertia on the part of ANZ and the Commonwealth, we now have in place provision for secure online payment of fees through our regular bank, The Commonwealth. This should assist many members to get their fees in on time during this subscription period. I would like to thank Roger Price, Ann Kovach (RACP IT Dept) and Ivone Johnson for their hard work and patience in getting this system operational.

# ONLINE SUBSCRIPTION RENEWALS NOW AVAILABLE

You may find it more convenient to use our new online Annual Subscriptions Renewal Form and secure credit card payment gateway.



Go to: www.anzbms.org.au/subscriptions Please take note of your arrears and add them to your payment.

## ANZBMS WELCOMES **NEW MEMBERS:**

Dr Kerry McMahon Mr Andrew Turner Mr Jeremy Bracegirdle Ms Inge Stewart Ms Vanessa Wells Dr Vivienne Milch Ms Lisa Kidd Mr Tuan (Tony) Phan Dr Craig Godfrey Dr David Little Dr Aaron Schindeler Zafrir Bechor Miss Karissa Fitzgerald Ms Colette Fong Dr Andrew Lowy Mrs Wendy Kelly Dr Luis Esteban Dr Prisca Eser Ms Yanchuan Shi Miss Nicola Zimmerman Ms Lan Li Miss Leah Worton Mrs Joanna Makovey Miss Renee Greaves Ms Amy Zhu Mrs Yasser Ahmed Mrs Liliana Tatarczuch Dr Cynthia Rouh-Yu Ong Miss Laura Wilkinson Dr Mark Bolland Dr Ramin Rohanizadeh Mr Kirk Yip Mr Jeff Gibson Ms Roya Lari Mr Andrew Biggs Ms Naomi Lee Dr Jerzy Konstantynowicz Miss Michelle Chacksfield Dr Sandi Warr Ms Susan Allison Ms Felice Jacka Ms Meaghan Read Mrs Diana Wattie Mr Jian-Ming Lin Mr P C Tong Ms Tara Brennan Miss Shaimaa Atcoa Dr Daniel Ching Mr Elias Ploydorou Dr Mark Rosman Mr Steven Danks Dr Mahesan Anpalahan Dr John Walsh Mrs Divya Diwan Dr Hong Zhou

Prof. Er-Yuan Liao

## ANZBMS

# 15<sup>TH</sup> ANNUAL SCIENTIFIC MEETING PERTH, WA 7<sup>TH</sup>- 9TH SEPTEMBER 2005

# PROGRAMME ORGANISING COMMITTEE

Edith Gardiner, Chair Michael Hooper Rebecca Mason Rory Clifton-Bligh Arthur Conigrave

# LOCAL ORGANISING COMMITTEE

Kathy Briffa, Chair Ben Khoo Roger Price Rob Will Jiake Xu Ming Hao Zheng

#### **Associated Events**

A number of satellite events are being planned to follow the ASM. Topics and organising committees are currently being developed. Further details will be provided as arrangements are confirmed.

# Endocrine Society of Australia ASM and Clinical Weekend

The ANZBMS ASM will follow the The Endocrine Society of Australia ASM and Clinical Weekend that will also be held in Perth in 2005. Scientific sessions shared between the ESA and ANZBMS meetings are planned.

Further details on the ESA meetings will be available from the ESA homepage: www.racp.edu.au/esa.

# **22ND MATHISON LECTURE**

Bone fragility - how to be a lever and a spring for soap suds in a wheel world

### by Professor Ego Seeman

The purpose of bone, like all organs, is host survival. The heart must contend with matters of love, the brain with understanding, and the soul with immortality. Bone is both humble lever and spring, serving movement and speed so the host can catch dinner or avoid becoming it.

It has strength for weight-bearing yet lightness for speed, stiffness to resist deformation yet flexibility for energy absorption. These contradictions are made possible by an evolutionary selection of crystal impregnation of the triple helices of collagen fashioned into levers stronger and lighter than granite, cast iron and concrete.

Bone is now defended by warriors capable of detecting and removing damage, and restoring its pristine landscape to sustain the Olympian spirit of youth or to forestall frailty for a while.

Date: 10 August 2004

Time: 6.00-7.00pm

Venue: Sunderland Lecture
Theatre, Ground floor,
Medical Building,
cnr Grattan St and Royal Parade,
University of Melbourne,
Parkville

(Melways Ref: Map 2B C8)

RSVP: (03) 8344 9800 or email gael@unimelb.edu.au

Admission is free

## RECOMMENDED READINGS

Recent reviews, commentaries and editorials that may be of interest

The expanding role of PI3-kinase in bone Golden LH, Insogna KL Bone 2004;34:3-12

Dietary protein and bone health Rizzoli R, Bonjour J-P J Bone Miner Res 2004;19:527

Phosphorus nutrition and the treatment of osteoporosis Heaney RP Mayo Clin Proc 2004;79:91-7

Molecular and genetic mechanisms of osteoporosis:implication for treatment Shen H, Recker RR, Deng HW Curr Mol Med 2003;3:737-57

Genetic determinants of susceptibility to osteoporosis
Ralston SH

Curr Opin Pharmacol 2003;3:286-90

PTH/PTHrP activity and the programming of skeletal development in utero Tobias JH, Cooper C J Bone Miner Res 2004;19:177–182

Preventing osteoporotic fractures with antiresorptive therapy: implications of microarchitectural changes Boonen S, Haentjens P, Vandenput L, Vanderschueren D J Intern Med 2004;255:1-12

HMG-CoA reductase inhibitors in osteoporosis: do they reduce the risk of fracture? Schlienger RG, Meier CR Drugs Aging 2003;20:321-36

Teriparatide (rhPTH 1-34) for the treatment of osteoporosis Ebeling PR, Russell RG Int J Clin Pract 2003;57:710-8

The cellular and clinical parameters of anabolic therapy for osteoporosis Rosen CJ Crit Rev Eukaryot Gene Expr

2003;13:25-38

Calcitonin for osteoporosis and bone pain Mehta NM, Malootian A, Gilligan JP Curr Pharm Des 2003;9:2659-76

Biochemical markers of bone metabolism in the assessment of osteoporosis: useful or not?

Seibel MJ

J Endocrinol Invest 2003;26:464-71

Clinical utility of bone markers in the evaluation and follow-up of osteoporotic patients: why are the markers poorly accepted by clinicians?

Stepan JJ

J Endocrinol Invest 2003;26:458-63

Osteogenesis imperfecta. Rauch F, Glorieux FH. Lancet. 2004;363:1377-85.

Assessment of dietary vitamin D requirements during pregnancy and lactation.

Hollis BW, Wagner CL. Am J Clin Nutr. 2004;79:717-26.

Does bone resorption inhibition affect the anabolic response to parathyroid hormone?

Trends Endocrinol Metab. 2004;15:49-50.

Are all estrogens the same? Coelingh Bennink HJ.
Maturitas. 2004;47:269-75

#### Roodman GD.

Mechanisms of bone metastasis. N Engl J Med. 2004;350:1655-64.

The patient with a fragility fracture: an evolving role for the orthopaedic surgeon.

QJM 2004; 97:101-4

Yamauchi H. Suzuki H. Orimo H. Calcitonin for the treatment of osteoporosis: dosage and dosing interval in Japan. Journal of Bone & Mineral Metabolism. 2003; 21:198-204

Osteoporosis: underrated, underdiagnosed and undertreated.
Nguyen TV. Center JR. Eisman

JA.Medical Journal of Australia 2004; 180 Suppl:S18-22

Diet, nutrition and the prevention of osteoporosis.

Prentice A.

Public Health Nutrition. 2004; 7:227-43

Acute and long-term management of patients with vertebral fractures.
Francis RM. Baillie SP. Chuck AJ. Crook PR. Dunn N. Fordham JN. Kelly C. Rodgers A.
QJM. 2004; 97:63-74

Clues for new therapeutics in osteoporosis.

Serhan CN.

New England Journal of Medicine. 2004; 350:1902-3

Fat's loss is bone's gain Pei L. Tontonoz P. Journal of Clinical Investigation. 2004; 113:805-6 Mechanisms of action of antiresorptive therapies of postmenopausal osteoporosis.

Stepan JJ. Alenfeld F. Boivin G. Feyen JH. Lakatos P.
Endocrine Regulations. 2003; 37:225-38

Strontium ranelate—a novel therapy for osteoporosis or a permutation of the same?

El-Hajj Fuleihan G. New England Journal of

New England Journal of Medicine. 2004; 350:504-6

A review of anabolic therapies for osteoporosis.

Lane NE. Kelman A.

Arthritis Research & Therapy
2003;5:214-22

Homocysteine and osteoporotic fractures—culprit or bystander? Raisz LG.

New England Journal of Medicine. 2004; 350:2089-90

Treatment of osteoporosis: why, whom, when and how to treat. The single most important consideration is the individual's absolute risk of fracture.

Seeman E. Eisman JA.

Medical Journal of Australia. 2004; 180:298-303

New ways with old bones. Osteoporosis researchers look for drugs to replace hormone replacement therapy.

Bonn D.

Lancet 2004; 363:786-7

Skeletal effects of statins.

Yaturu S.

Endocrine Practice 2003; 9:315-20

A review of the effects of tibolone on the skeleton.

Devogelaer JP.

Expert Opinion on Pharmacotherapy 2004; 5:941-9

Clinical considerations in premenopausal osteoporosis.

Gourlay ML. Brown SA.

Archives of Internal Medicine 2004; 164:603-14

List provided by E Seeman

## **CONVENORS**

Melbourne:
Dr Damian Myers
Department of
Physiology
The University of
Melbourne
damianem@unimelb.edu.au

Sydney:
Dr Colin Dunstan
ANZAC Research
Institute
Concord Hospital,
Sydney
cdunstan@anzac.edu.au

Adelaide: A/Prof Nick Fazzalari Institute of Medical and Veterinary Research, Adelaide nick.fazzalari@imvs.sa.gov.au

# CURRENT SPONSORS

Olympus Coherent Scientific-Nikon Zeiss Perkin-Elmer Berthold Australia Leica-Microsystems

# OTHER SPEAKERS

A/Prof Guy Cox Dr. Allan Jones Dr. Ellie Kable Dr. Natalie Sims Dr. Alan Hibbs Dr. Ian Harper Stephen Cody

# CONFOCAL MICROSCOPY AND IMAGING OF BONE

### Workshop 2004 Mon 16<sup>th</sup> and Tues 17<sup>th</sup> August 2004

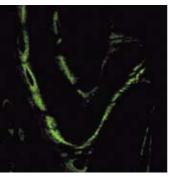
Venue: The Key Centre for Microscopy and Microanalysis, University of Sydney In association with the ANZBMS Accommodation is available through the ANZBMS organizers at the Stanford Sydney Airport Hotel

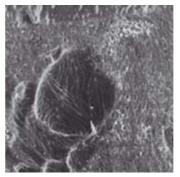
Accommodation closer to the University of Sydney can be sought by the registrants at any of the many hotels/motels within the city precinct

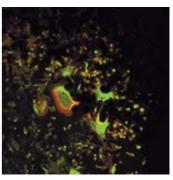
"Confocal microscopy and imaging of bone" A workshop for cell biologist studying metabolic bone disease Imaging techniques covered include: Fluorescence microscopy, Deconvolution, Confocal microscopy, Multiphoton microscopy, Histomorphometry, Scanning electron microscopy, X-ray tomography, Phasecontrast X-ray Imaging

Topics include instruction on microscopy, the proper use of fluorescent probes to investigate cell structure and function, software training and an overview of the various confocal systems available

Register by e-mail by contacting one of the convenors listed on the left:







#### Lectures - Monday 16th August

Time	Speaker	Topic
08:30 - 09:00	Registration	Coffee
09:00 - 09:10	A/Prof Simon Ringer	Welcome/Intro
09:10 - 09:40	A/Prof Guy Cox	Microscopy of Bone: An overview
09:40 - 10:10	Stephen Cody	Basic microscopy and selection of lens
10:10 - 10:40	Dr. Ian Harper	Specialised techniques for confocal microscopy
	Morning tea break	
11:00 - 11:30	Dr. Alan Hibbs	Overview of confocal systems
11:30 - 12:00	Dr. Damian Myers	Confocal microscopy and imaging of bone
12:00 - 12:30	Dr. Ellie Kable	Introduction to workstations

## Lectures - Monday 17th August

Time	Speaker	Topic
08:30 - 09:00		Coffee
09:00 - 09:30	A/Prof Guy Cox	Harmonic imaging of collagen
09:30 - 10:00	Dr. Natalie Sims	Histomorphometry
10:00 - 10:30	Dr. Allan Jones	X-ray Microtomography
10:30 - 11:00	A/Prof Nick Fazzalari	MicroCT analysis of trabecular bone
	Morning tea break	
11:30 - 12:00	Dr. Damian Myers	Phase-contrast X-ray imaging of bone
12:00 - 12:30	Group discussion	Update and discussion about workstations

## Description of workstations 1 pm - 4:30 pm each day

(Registrants will be allocated after delivery of preferences)

Workstations	Instrument	Description
A	Leica	Multiphoton Microscope
В	BioRad	Radiance CLSM
С	SkyScan	X-ray Microtomography
D	Philips	XL-30 Scanning Electron Microscope
E	Zeiss	Apotome Microscope with Deconvolution
F	Nikon	C1 Digital EclipseModular Confocal Microscope
G		Workstation for Histomorphometry
Н	Olympus	FV1000 Confocal Microscope
I	PE System	UltraVIEW

## AACB ROMAN LECTURE 2004

Vitamin D: A hormone Perth, Western Australia Brisbane, Queensland for all Seasons -How much is enough?

Professor Howard Morris Director, Hanson Institute, Perth Adelaide.

#### Presentation dates:

Adelaide, South Australia 6.15 pm Tuesday 22 June, 2004 Robson Lecture Theatre Eleanor Harald Building on the RAH campus Frome Road at North Terrace, Adelaide

6pm Tuesday

6 July, 2004 Sheraton Hotel 207 Adelaide Terrace

Melbourne, Victoria

6.30pm Thursday 8 July, Turner Lecture Theatre, Botany Building, University of Melbourne

Sydney, New South Wales

Grattan St Parkville

6.30 pm Tuesday 13 July, 2004 Mercure Hotel Lawson 383 -389 Bulwara Rd. Ultimo

6pm Thursday 15 July, 2004 The United Services Club 183 Wickham Terrace, Brisbane

Auckland, New Zealand

12.00 Noon Tuesday 27 July, 2004 Big Rangitoto Room, Labplus, Auckland Hospital

Hobart, Tasmania

6:00 pm on 28th July, 2004 Royal Hobart Hospital, Pathology Video Conference Suite

For further details: http://aacb.asn.au/meet/Roman%20Lecture/index.htm

# THE 2<sup>ND</sup> AUSTRALIAN HEALTH AND MEDICAL RESEARCH COUNCIL MEETING

Darling Harbour Exhibition Centre, Sydney 22-26th November 2004 This exciting meeting will bring together 26 Australian scientific societies in an unparalleled opportunity for crossfertilization of ideas. ANZBMS is participating, and we have organized a bone day" that will occur on Tuesday 23rd November. This will include sessions discussing the integration of bone biology with other systems; a robust examination into the relative contributions of genetic, in utero and post-natal influences on skeletal development; and finishing with a look to future treatments of bone and joint diseases.

E Gardiner

J Bateman

J Folkman

M Brown

G Jones

I Martin

D Little

TBA

E Seeman

### Session: Integrated systems in bone biology

8.30- Neurobiology and bone 9.00 The immune system and bone 9.30 Cartilage and bone

10.00 Mineral Homeostasis and bone

Plenary:

1100 Angiogenesis and cancer

Session: Determinants of skeletal fragility

1330 Genetic determinants of skeletal fragility 1400 Early life influences on development of peak bone mass

1430 Material and structural determinants of skeletal fragility

Session: Therapeutic frontiers in bone diseases

1530 Best Young Investigator(s) ANZBMS

1600 Anabolic therapies for osteoporosis

1630 Medical therapies in orthopaedic surgery

1700 Biomaterials and skeletal disease: bridging the gap

The full program can be found at http://www.ahmrcongress.org.au/program.htm.

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Harvard

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Hobart Melbourne

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M Gillespie Melbourne

D Goltzman Montreal



Professor Jack Martin and Vicky Kartsogiannis

I was so very thrilled last year to be awarded the Christine and T. Jack Martin Travel Grant at the 13th Annual Scientific Meeting of the Australian and New Zealand Bone and Mineral Society that was held in Coolum, particularly since that meeting was to honor the achievements of Jack Martin's career.

# CHRISTINE AND T. JACK MARTIN TRAVEL GRANT

By Vicky Kartsogiannis St Vincent's Institute, Fitzroy, Melbourne

I am deeply honored to have received this award which is very special to me Firstly, it is for several reasons. awarded in memory of Christine Martin who I had the pleasure of meeting on a number of occasions during the early years of my PhD and I will always remember her. Secondly, the award honors the outstanding and major scientific contributions of one of my mentors Professor Jack Martin to bone and mineral research, but more so his distinguished contributions and interactions to associates and trainees in teaching and research. Thirdly, this award enabled me to visit several prestigious international laboratories to present and discuss various aspects of my post-doctoral studies as well as develop and initiate new experiments and at the same time learn new methods. The award further enabled me to attend for my first time, one of the best International bone cancer meetings, the Frontiers of Skeletal Biology (10th workshop on Cell Biology of Bone and Cartilage in Health and Disease, Davos, Switzerland). At this meeting I presented my most recent research on the OCIL family of Osteoclast Inhibitors and received a Young Investigator's Award.

Frontiers of Skeletal Biology (10<sup>th</sup> workshop on Cell Biology of Bone and Cartilage in Health and Disease), Davos, Switzerland, March 24-26, 2004

The workshop was divided into an instructional part, oral presentations chosen from the abstracts, and poster sessions. The instructional part was devoted to "hot" topics presented in State of the Art Lectures and Invited Presentations. The poster sessions remained indeed the fundamental pillar of the meeting and covered all the fields of skeletal biology. Some of the posters were selected for 10 minutes presentations. The additional workshop "NEW AND EMERGING TREATMENTS FOR SKELETAL DISEASES" had been incorporated into the Workshop "FRONTIERS OF SKELETAL BIOLOGY".

My personal highlight of this meeting is the fact that it is a small meeting sufficiently intimate to enable extensive interactions with delegates; something that is not achieved by the larger meetings such as ASBMR and IBMS. I can honestly say that I met more scientists in this meeting than I have in all the

meetings that I have attended in the past 5 years. The focus of this meeting was to highlight and discuss latest "hot" topics that cover the rapidly advancing field of skeletal biology, both in health and disease.

I was invited to give an oral presentation describing the latest insights on OCILs – a family of new osteoclast inhibitors, for which I was awarded a Young Investigator award.

Highlights of the "Frontiers of Skeletal Biology" workshop were:

Elegant presentations (Keynote address) on:

- "VEGF in cartilage and bone" by B. Olsen
- "Current knowledge of osteoblast differentiation" by Gerard Karsenty
- "Regulators of TGF-b/BMP signaling" by S. Piccolo
- "The role of NFATc1 as a Fos target gene during osteoclast formation" by K. Matsuo
- "How basic studies in chronic inflammation are useful in targeting tissue destruction" by J.M. Dayer
- "Back to the beginning: Pyrophosphate revisited" by Graham Russell
- "Strategies for the discovery of new bone anabolics" by Roland Baron
- "Development of RANKL-directed therapeutics: General strategies, challenges, surprises, and successes" by David Lacey
- "SERM's; where can they go?" by H.U. Bryant

Some equally stimulating presentations (Hot topics) on:

- "Aggregan knock-in mice resistant to MMP and ADAMTS mediated aggregan catabolism. Effects on growth and development" by Amanda Fosang
- "Phosphaturic factors and disorders of phosphate metabolism" by S. Fukumoto
- "Should thyrotropin (TSH) be named as a bone hormone?" by M. Zaidi
- "Anabolic agents and the BMP2 pathway" by Ross Garrett
- "Novel genes regulated by parathyroid hormone and their possible roles in its anabolic effects" by Nicola Partridge

- "ClC-7 as target for drug discovery - Inhibition of bone resorption without inhibition of bone formation?" By Mortan Karsdahl
- "Inhibitors of alpha v beta 3 integrin - The in vitro and in vivo evaluation of a potent alpha v beta 3 antagonist for the prevention of osteoporosis" by L.T. Duong

#### Laboratory visits Principal Laboratories

Bone Biology Group, Division of Clinical Sciences (South), G Floor, University of Sheffield, Medical School, Beech Hill Road, Sheffield, II K

The Head of the Bone Biology Group, Professor Peter Croucher, has a long standing interest in Multiple Myeloma having established (with collaborators from Belgium) a useful experimental mouse model of the disease that closely resembles the human disease. The principal interests of the group are in three main areas. These include studies of the regulation of osteoclast formation and survival, and bone resorption. There is a particular emphasis on the role of members of the tumour necrosis factor family Peter (Peter Croucher & Grabowski). Secondly, there is a major focus into understanding the cellular and molecular mechanisms of tumour-induced bone disease. Thirdly, there is strong interest in osteoblast biology and bone formation with a particular interest in the role of peroxisomeproliferator activated receptor (PPAR) family (Karen Still). In addition to specific research projects, the bone biology group have also established a bone analysis laboratory. This laboratory has been created to provide members of the Musculoskeletal Theme and academics throughout School with access the contemporary approaches analysing bone. These include access to experienced histologists, bone histomorphometry expertise, x-ray equipment, and access to bone densitometry. The laboratory is currently looking into providing 'state of the art' imaging facilities including micro CT analysis. The activities of this laboratory are managed on a day to day basis by Orla Gallagher.

The primary reason for my visit to Professor Croucher's group in Sheffield was to give me the opportunity to initiate ongoing collaborative studies between the two groups that will ultimately determine the role of Osteoclast Inhibitory Lectin (OCIL) family members in multiple myeloma. As the current interest of my postdoctoral studies in the St Vincent's Institute group (Melbourne, Australia) focuses upon determining the role of OCIL in normal bone remodeling, arthritis and cancer-induced otseolysis, another appropriate disease in which OCIL may have actions is in the progression of multiple myeloma. Professor Croucher's laboratory was ideally suited in developing my research interests with OCIL and osteolytic bone diseases.

Like other diseases of bone, the development of osteolytic bone disease is one of the major clinical features in multiple myeloma. The increase in bone destruction is attributed uncontrolled to osteoclastic bone resorption, and although recent studies have implicated a number of factors such as RANKL and macrophage protein-1 alpha, the major culprits responsible for mediating the increase in osteoclast formation in mveloma. remain unclear. Croucher and colleagues (Shipman et al., 2003) have recently demonstrated the ability of recombinant osteoprotegerin (Fc-OPG), a soluble decoy receptor for RANKL, as well as ibandronate and zoledronate, to inhibit the development of myeloma bone disease in the 5T2MM murine model of multiple myeloma (Croucher et al., 2003). They showed that Fc-OPG prevented the development of osteolytic bone can also block TNFa-induced and TGFb-primed osteoclast formation. Thus the 5T2MM experimental model of multiple myeloma is an appropriate model to evaluate the efficacy of OCIL to limit the progression of this disease. More recently, Professor Croucher has focused on the role of bone marrow endothelial cells in the development of MM bone disease as well as the formation of new vessels as an important feature in the development of myeloma. models MMare established in any other laboratory Australia, within and experience with this model would

be invaluable for its transfer to Australian laboratories.

Presenting my current research to the Bone Biology group as well as invited members from other Research groups (Urology and Molecular Medicine) was very effective in setting up an active interaction within the Bone Biology Group.

There were four main research groups that I interacted with: 1) the histology laboratory run by Orla who helped Gallagher tremendously in my efforts to establish the in situ hybridization immunohistochemistry techniques in Professor Croucher's laboratory. I was very pleased in successfully for looking at the expression of OCIL; OPG; RANKL and PTHrP mRNA and protein in paraffin sections from the 5T2MM mouse model (with myeloma disease) and 5T33 model (no myeloma disease); 2) the Molecular Biology Laboratory where I interacted with Dr Clive Buckle, Evy De Leenheer and Jennifer Phillips in undertaking RT-PCR analysis and sequencing, as well as setting up REAL-TIME PCR (SYBRgreen) for examining the expression of OCIL family members in human and mouse MM cell lines; 3) the tissue culture and osteoclast assay laboratory for tissue culture work using non-adherent cell lines (5T33; OPM-2; JJN-3; NCIH929; RPMI-8226; XG1) and the adherent STR10, cell lines STR12 (endothelial cell lines); 4) Dr Angela Rogers (Professor Croucher's group) and Sue Clarke (Cancer Studies) who were instrumental in FACS experiments using OCIL antibodies on 5T33, STR10, and STR12 cell lines.

Nuffield Department of Orthopaedic Surgery, University of Oxford, Oxford, U.K. The Botnar Research Centre, University of Oxford, Institute of Musculoskeletal Sciences

The Botnar Research Centre is a purpose built research facility housing the research arm of the Nuffield Department of Orthopaedic Surgery. The research endeavors cover a wide range of musculoskeletal disorders ranging from joint problems such as osteoarthritis and rheumatoid arthritis, to bone diseases such as osteoporosis, as well as assessment

## MEMBERS PUBLICATIONS

for ANZBMS Website: http://anzbms.org.au/ memberpub/index.htm

This new section on the ANZBMS website is designed to give members an overview of the clinical and basic research that we are collectively involved in.

Members are encouraged to contribute to this section by sending in details of recent publications to Ivone Johnson at

anzbms@racp.edu.au

and design of joint replacements. The research centre can accommodate 120 scientists. Major interests of the centre's researchers include genetics of osteoarthritis, osteoporosis and inflammatory arthritis, osteoclast and osteoblast biology, and biomedical engineering.

Professor Graham Russell has played a central role in studying the biological effects of bisphosphonates, and in their evaluation for the treatment of bone disorders. Bisphosphonates are now the most widely-used drugs for the treatment of bone diseases throughout the world. His other research interests include bone cell biology - work which is directly concerned with the improvement of treatment of osteoporosis, Paget's disease and malignant disease of bone. His research team is now based in the new institute, where they play a key role in the investigation of the cell biology and biochemistry of common bone diseases, especially osteoporosis and malignant disease of bone, including trials of new treatment.

I was invited to give a seminar on my recent work to several research groups at the Botnar Research Centre which generated a number of questions and significant interest for future experiments. I spent three days meeting members of the Botnar Institute, including: Professor Nick Athanasou who studies pathogenetic mechanisms in bone and joint disease (possibilities of examining OCIL/OPG/ RANKL/PTHrP expression by in situ hybridization and immunohistochemistry in human patient samples of multiple myeloma, rheumatoid arthritis, Giant Cell Tumour and Paiet's disease of bone were discussed); Dr Claire Shipman who studies bone disease associated with cancer and myeloma (Claire provided some helpful insights into future experiments involving OCIL and was directly involved in determining OCIL expression by FACS analysis); Dr Afsie Sabokbar who studies osteoclast biology (Afsie provided stimulating discussions on possibilities of using OCIL in osteoclast-type assays); Dr Philippa Hulley who studies bone cell biology and intracellular signaling (a number of interesting topics were discussed); James Edwards who's a PhD student (James was very helpful in organizing for me to do a trial run of in situ hybridization and immunohistochemistry on a selection of various human samples of multiple myeloma; rheumatoid arthritis; Giant Cell Tumour; and Pajet's disease of bone); Isabelle Gennero who is finishing her postdoctoral studies at the Botnar Centre (it was great to have a chat about something outside OCIL!!).

#### **Overall Outcomes**

Overall, I was very pleased to achieve the aims that were outlined in the travel grant. Whilst being provided with the opportunity to attend and present my work at the Frontiers of Skeletal Biology (10th workshop on Cell Biology of Bone and Cartilage in Health and Disease, Davos, Switzerland) and The Botnar Research Centre [University of Oxford, Institute of Musculoskeletal Sciences, Oxford, U.K.], my predominant time overseas was spent working in the laboratory of Professor Croucher [Bone Biology Group, Division of Clinical Sciences (South), University of Sheffield, Medical School, Sheffield, U.K]. weeks were used The ten laboratory-based research whereby I established the in situ hybridization and immunohistochemistry techniques quite successfully in Professor Croucher's laboratory and gained a lot of experience and insights into the models and cell lines of multiple myeloma disease which are applicable to my research interests. I determined the expression of OCIL in various models of multiple myeloma disease using a number of different techniques such as RT-PCR and REAL-TIME PCR; FACS; immunohistochemistry and in situ hybridization. My time there has consolidated a collaborative project which will be further developed based on exciting new discoveries from the expression/localisation data achieved. Professor Croucher provided constant guidance and stimulating discussions towards future investigations of OCIL and multiple myeloma. One avenue that we wish to actively pursue in the near future is the lentivirus approach of recombinant protein production which will be established in Professor Croucher's laboratory or alternatively, we might consider using murine Fc-OCIL protein constructs for long term treatment (12 weeks) in the MM mouse models. Another avenue to follow up on will be the potential use of an effective neutralizing OCIL antibody for use in in vitro osteoclast assays. This will form the basis of an active ongoing collaboration and one that will hopefully yield a few insights into the potential actions of OCIL in MM disease.

I would finally like to thank the Australian and New Zealand Bone and Mineral Society and the sponsors Merck, Sharpe and Dohme for providing me with the funds which enabled me to attend the "Frontiers of Skeletal Biology" meeting in Davos, Switzerland, and work with Professor Croucher's group in Sheffield. I would also like to extend a special THANK YOU to Professor Peter Croucher and his group for having me. It was an absolute pleasure to work with them and I feel that I have gained so much from this experience. I feel very privileged to have received this award.

Thank you, Vicky Kartsogiannis, PhD

# ANZBMS POSTGRADUATE RESEARCH SCHOLARSHIP

Applications are invited from medical, science or health-sciences graduates of Australian or New Zealand Universities wishing to complete a full-time PhD in the field of calcium and bone research within an Australian or New Zealand University.

The stipend for the three year scholarship will be \$27,489/yr (medical graduates) or \$18, 484/yr (science graduates) plus \$4,500/vr for research expenses, \$1000/yr for research travel and \$900 for thesis preparation. Information and application form available www.anzbms.org.au. For further enquiries please contact Prof Geoff Nicholson on (03) 52 267792 or gcn@unimelb.edu.au.

#### **Title**

"ANZBMS Postgraduate Research Scholarship"

#### **Purpose**

- To promote careers in calcium and bone research among promising early-career Australian and New Zealand investigators.
- Maintain high academic component of ANZBMS membership.
- To facilitate clinicians to undertake calcium and bone research.

#### **Eligibility**

- Medical, science or healthsciences graduates of Australian/NZ Universities wishing to complete a fulltime PhD within an Australian/NZ University.
- Scholarships will only be give to those doing a PhD in an Australian and New Zealand University
- Not to be held concurrently with NHMRC Scholarship, cannot be held if the c a n d i d a t e is offered another scholarship.

- An overseas component of the research project is acceptable if ratified by selection and supervision panel.
- Applicants will be expected to have applied for a NHMRC, University, ARC or APA postgraduate scholarship.
- Supervisor must be a financial member of ANZBMS
- Applicant must be a financial member of ANZBMS
- Application must be supported by the Head of the sponsoring university department.

#### **Duration**

Maximum duration 3 years.

#### Number of scholarships

One only scholarship active at any time. A new scholarship will be awarded every three years, unless current holder withdraws.

#### **Selection**

- Competitive selection: Based on applicant track record (relative to opportunity), scientific merit of the project (must be calcium/bone related), future plans and supervisors' track record.
- Selection Panel appointed by ANZBMS Council, comprising four ANZBMS members (two Scientists and two Clinicians, with gender balance). Members should have PhD, MD or equivalent. The selection panel will ensure adequate supervision of the scholarship.
- Applications invited in August, close in September, short list in October, announcement in November.
- Selection Panel to bring short-list of 3 (in priority order) to ANZBMS Council for final decision.

#### **Conditions**

The awardee will:

- provide annual progress report to the selection & supervision panel. Unsatisfactory progress (as judged by panel or the university) will be grounds for termination.
- present in Years 2 and 3 at ANZBMS ASM and be encouraged to present at international meetings such as ASBMR and IOF.
- acknowledge ANZBMS in all presentations and publications.

The university supervisor will provide an annual confidential progress report.

**Stipend** (tax free, linked to NHMRC rates)

#### 2004

- Medical graduates: \$27,489/yr
- Science graduates: \$18,484/yr

### Other support

Maintenance funding to sponsoring department: \$4,500/yr

Conference or collaboration travel (actual expenses incurred) \$1000/yr

Thesis production costs: up to \$900 3 yearly (actual expenses incurred) \$900/yr

#### Review

By ANZBMS Council prior to advertising each scholarship.

#### **Budget**

Up to \$33,000/year

## **APPLICATIONS**

#### should include:

- Cover page including: Applicant's brief details; Project title; Project Synopsis (<100 word); Names of Institution, Department and Supervisor(s).
- Applicant's CV.
- Research proposal maximum four (4) A4 pages, 12 font, 2 cm margins.
- Supporting letters from University Supervisor and Head of Department.
- Applications in 4 copies should be sent to:
- ANZBMS
- Honorary Secretary
- 145 Macquarie Street
- Sydney. NSW. 2000

Deadline: Thursday 5<sup>th</sup> August 2004

# For further information, please contact:

Prof Geoff Nicholson, Chair ANZBMS Medical Affairs Committee on (03) 5226 7972 or gcn@unimelb.edu.au

Prof David Findlay, Chair ANZBMS Research Committee on (08) 8222 5621 or david.findlay@adelaide.edu.au

## DIARY DATES

#### 2004

August 21-22, 2004

Endocrine Society of Australia Clinical Weekend Cyrpess Lakes Resort Contact: Mike Pickford mp@asnevents.net.au

August 18-20, 2004

ANZBMS 14th Annual Scientific Meeting, Hunter Valley, Cypress Lakes Resort Contact: Conference Action Email: emma@conferenceaction.com.au

#### ANZBMS ASM-Satellite Events August 14-15, 2004

International Society for Clinical Densitometry CourseHunter Valley, Cypress Lakes Resort

Contact: Conference Action Email:

emma@conferenceaction.com.au

#### August 16, 2004

ANZBMS/Osteoporosis Australia Clinical Update on Osteoporosis Stamford Sydney Airport Contact: Conference Action Email: emma@conferenceaction.com.au August 16-17, 2004

Paediatric Bone Symposium Stamford Sydney Airport Contact: Conference Action Email:

emma@conferenceaction.com.au

August 16-17, 2004

Bone Imaging Workshop The Australian Key Centre for Microscopy & Microanalysis, Sydney Contact: Dr Damien Myers: damianem@unimelb.edu.au

August 21-25, 2004 Endocrine Society of Australia Sydney Contact Mike Pickford ASN

Mike Picktord ASN Email: mp@asnevents.net.au

October 1-5, 2004

American Society for Bone and Mineral Research (ASBMR) 26th Annual Meeting Washington State Convention and Trade Center Seattle, Washington, USA For more information, call (202) 367-1161, email asbmr@dc.sba.com, or check our web site www.asbmr.org

November 10-13, 2004

5th Interdisciplinary World Congress on Low Back and Pelvic Pain, Melbourne AACB Roman Lecture 2004

Vitamin D: A hormone for all Seasons - How much is enough? Professor Howard Morris Director, Hanson Institute AdelaideFurther information and Presentation dates: www.aacb.asn.au/meet/ Roman%20Lecture/index.htm.

#### 2005

June 25-29, 2005

Second Joint Meeting of the European Calcified Tissue Society and the International Bone and Mineral Society, Geneva, Switzerland Contact Website: http://www.ectsoc.org

September 4-7, 2005

ESA/SRB Annual Scientific Meeting Perth Convention Centre Contact Mike Pickford ASN Email: mp@asnevents.net.au

September 7-9, 2005 ANZBMS

Annual Scientific Meeting Perth, W.A. Contact: Ivone Johnson Email: anzbms@racp.edu.au

September 23-27, 2005

Annual Meeting, American Society for Bone and Mineral Research Gaylord Opryland Hotel Nashville, Tennessee, USA Phone: (202) 367-1161 Fax: (202) 367-2161 E-mail: asbmr@smithbucklin.com October 18-22, 2005—11th World Congress on the Menopause, Buenos Aires, Argentina Contact website: www.anajuan.com/ menopause

#### 2006

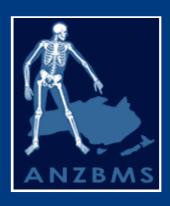
September 15-19, 2006

Annual Meeting, American Society for Bone and Mineral Research Philadelphia Convention Center Philadelphia, Pennsylvania, USA Phone: (202) 367-1161 Fax: (202) 367-2161 E-mail: asbmr@smithbucklin.com

October 2006

ANZBMS/Asia-Pacific Regional IOF meeting Cairns Convention Centre Contact: Ivone Johnson Email: anzbms@racp.edu.au

## COMMITTEES OF THE SOCIETY



### EXECUTIVE

PRESIDENT ELECT: A/Prof. Jillian Cornish

PRESIDENT: Prof. Ego Seeman

**SECRETARY:** Prof. David Findlay

TREASURER:
Dr Mark Forward

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## PAEDIATRIC Bone disease

Chris Cowell

RESEARCH
David Findlay

# FUTURE DIRECTIONS

Ego Seeman Jillian Cornish Philip Sambrook

ANZBMS is a professional medical / scientific society established in 1989 to bring together clinical and experimenta scientists and physicians actively involved in the study of bone and mineral metabolism in Australia and New Zealand.

# LOCAL ORGANISING COMMITTEE 2004

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Edith Gardiner Elisabeth Smith Bronwyn Crawford Martin Epstein

## ANZBMS MANUAL

Jillian Cornish Ivone Johnson

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Michael Hooper Rebecca Mason Rory Clifton-Bligh Arthur Conigrave Chris White

## ADVANCED Trainee Representative

Rory Clifton-Bligh

### LIAISON:

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IOF - Ego Seeman
APOF - Phil Sambrook
B & J Decade - Phil Sambrook
IBMS - Ego Seeman