

# Healthy Development Adelaide

*A Research & Innovation Cluster in South Australia*

*cordially invites you to attend the*

## *Bone Health Symposium*

*Spectrum of research on bone development and bone health in Adelaide covering the areas from bone development, nutritional regulation, bone health, genetic and metabolic disorders, fractures and to repair.*



Bone grows rapidly in the first year of life and during pubertal growth spurt. Bone mass peaks in late adolescence and then decreases with age in adult life. Apart from genetic factors, bone development/growth and bone mass are influenced by lifestyle and environmental factors such as nutrition, physical activity, injuries, chronic illnesses, and medical treatments.

The bone supports, carries, and protects the body, and stores and regulates body's minerals. It manufactures blood and immune cells and houses stem cells critical for tissue renewal/regeneration. Optimal bone health is imperative for long-term quality of life; and peak bone mass achieved in childhood is an important contributor to bone health during adult life.

The event is FREE and open to researchers, clinicians, students, health care and government personnel with an interest in bone health and development.

**Tuesday 4 August 2009**

**10.00am - 3.30pm**

**State Library of South Australia  
Institute Building Lecture Theatre  
(Corner Kintore Avenue and North Terrace)**

**RSVP essential by 28 July as seating will be strictly limited.**

✉ [anne.jurisevic@adelaide.edu.au](mailto:anne.jurisevic@adelaide.edu.au) (email preferable) ☎ (08) 8303 8222 for enquiries

*Event Sponsor*



**BONE GROWTH  
FOUNDATION INC**

*This event also supported by*



**Women's & Children's  
Health Research Institute Inc.**  
*Research for the future health of our children*



**Government of South Australia**  
Department of Education and  
Children's Services

# PROGRAM

## 10.00 Registration

- 10.30 Welcome by Chair  
**A/Professor Cory Xian**  
Group Leader, Bone Growth and Repair Research Group  
University of South Australia
- 10.40 **Professor David Findlay**  
Discipline of Orthopaedics and Trauma, University of Adelaide  
**Basic bone cell function and bone remodelling**
- 11.00 **Dr Tetyana Shandala**  
Bone Growth and Repair Research Group, University of South Australia  
**Bone health and nutraceuticals**
- 11.20 **Professor Howard Morris**  
Director, Hanson Institute  
**Vitamin D in bone development, bone health and cancer prevention**
- 11.40 **Dr David Haynes**  
Discipline of Pathology, University of Adelaide  
**Regulation of bone loss in inflammatory diseases**
- 12.00 **Session 1: Panel Discussion**

## 12.30 Lunch

- 1.30 **Dr Sharon Byers**  
Head, Matrix Biology Unit, Genetics and Molecular Pathology  
SA Pathology (Women's and Children's Hospital)  
**Bone disease in MPS children - current and potential therapy options**
- 1.50 **A/Professor Barry Powell**  
Head, Craniofacial Research Group, Women's and Children's Health Research  
Institute  
**A new face for the future**
- 2.10 **A/Professor Bruce Foster**  
Department of Orthopaedic Surgery, Women's and Children's Hospital  
**Physeal surgery**
- 2.30 **A/Professor Andrew Zannettino**  
Head, Myeloma Research Laboratory, Haematology, IMVS  
**The therapeutic application of mesenchymal precursor cells in bone repair**
- 2.50 **Session 2: Panel Discussion**

## 3.30 Close

## SPEAKERS



**Professor David Findlay** is Professor of Orthopaedic Research in the Discipline of Orthopaedics and Trauma at The University of Adelaide and Head of the Bone and Joint Centre in the Hanson Institute, Adelaide. His undergraduate and postgraduate studies were at The University of Melbourne, followed by postdoctoral work at the National Institutes of Health, Maryland, USA. He has worked in bone and joint research in Melbourne and, since 1996 in Adelaide, for 30 years. His research interests are the cell and molecular biology of bone and bone cancers, and translation of basic research into clinical outcomes, particularly in orthopaedics.



**Dr Tetyana Shandala** obtained her PhD at The Ukrainian Academy of Sciences (Kiev, Ukraine) and subsequently joined the department of Genetics at the University of Adelaide in 1995, where she was involved in studies of the molecular mechanisms of development using the classical genetic model, *Drosophila melanogaster*. She later joined the Centre for the Molecular Genetics of Development, where she investigated developmental aspects of cytokinesis. In 2005 she moved to the Institute of Medical and Veterinary Sciences, where she established a project analysing the role of secretion in innate immunity. Her current research in the Bone Research Unit at the University of South Australia aims to establish nature-derived remedies to prevent cancer chemotherapy or age-related bone loss, the problems that are clinically relevant and awaiting to be addressed.



**Professor Howard Morris** is Director of the Hanson Institute, Adelaide South Australia. He leads a research group investigating the pathophysiology of metabolic bone disease with a focus on the hormonal control of bone metabolism including estrogen and vitamin D. This body of work has identified key areas of calcium and bone metabolism that are modulated through the menopause and with ageing. Over 200 publications have been produced with the support of some \$6 million of competitive grant funding. He has served the Australian and New Zealand Bone and Mineral Society as a Federal Council member and Chair, Scientific Program Committee.



**Dr David Haynes** has developed an international reputation over the past two decades in the fields of bone pathologies, biomaterials and inflammation. He has over 70 publications and been a chief investigator on more than 17 successful NH&MRC and ARC grants in these areas. Presently he is the President (past secretary) of the Australian and New Zealand Society of Orthopaedic Research ([www.ANZORS.org.au](http://www.ANZORS.org.au)) and the Australian representative at the Combined Orthopaedic Research Societies (CORS) meetings in Hawaii, 2007 and 2010 in Japan. In his role as senior lecturer in the Discipline of Pathology at the University of Adelaide makes a significant contribution to the training of medical, dental, nursing and health science students by coordinating undergraduate and postgraduate courses and lecturing.



**Dr Sharon Byers** received her PhD from Monash University, Melbourne in 1984 on chondrocyte cell biology. She spent time in the USA, initially as a post-doctoral fellow at Rush Presbyterian St. Lukes Medical Center, Chicago working on proteoglycan metabolism and then as an A/Professor at the West Virginia Medical Center working on small proteoglycan turnover. Sharon returned to Adelaide in 1988 as a Research Officer within the Department of Orthopaedic Surgery at the Women's and Children's Hospital working on mechanisms of growth plate damage and repair in children. In 1992, Sharon became Senior Research Officer within the Lysosomal Disease Research Unit at WCH working on enzyme replacement therapy for bone pathology in Mucopolysaccharidoses (MPS) disorders. Since 1999, Sharon has headed the Matrix Biology Unit, SA Pathology (WCH site). The Unit's focus is to develop and test treatment strategies for MPS children that address all sites of pathology. The unit is funded by the NHMRC, the WCH Research Foundation and The National MPS Society and in is comprised of 3 post-doctoral fellows, 3 technical officers and 1 PhD student.



**A/Professor Barry Powell** received his PhD from the University of Adelaide in 1980. He undertook his early career research at the University of Adelaide in the field of skin and hair biology studying the genes involved in the growth of the wool fibre. This led to a Cooperative Research Centre funded by the federal government to commercialise this research. He joined the Children's Health Research Institute in 1998 as a group leader in the CRC for Tissue Growth and Repair and now heads the Craniofacial Research Group in the Women's and Children's Health Research Institute.



**A/Professor Bruce Foster** is a Clinical Associate Professor in the Departments of Paediatrics and Orthopaedics at the University of Adelaide. His clinical position is as Deputy Head of Paediatric Orthopaedics at the Women's and Children's Hospital where he has been a Paediatric Orthopaedic Surgeon since 1982. His clinical research interests relate to bone growth and the correction of deficiencies clinically and experimentally. The growth plate surgery was the topic of his MD Thesis at the University of Adelaide accepted in 1989. In 1991 the Bone Growth Foundation was established to provide infrastructure to support research into the process of growth plate structure and function. Currently at the University of South Australia the Bone Growth Foundation Charity supports a research team of 14 under the guidance of A/Professor Cory Xian. Mr Foster is married with two children Anna, Elizabeth and wife Penny works as a pain specialist and currently Dean of the Pain Faculty of Australasia.



**A/Professor Andrew Zannettino** is a Chief Medical Scientist in the Division of Haematology, IMVS; a member of the Centre for Cancer Biology, SA Pathology; and member of the Centre for Stem Cell Research, University of Adelaide. He graduated with his PhD in 1997 and has co-authored upwards of 90 publications, book chapters, review articles and patents. In recent years, A/Prof Zannettino's interests have focused on haematological malignancy, multiple myeloma, which mediates a profound destruction of skeletal tissues. Studies emanating from his lab have added to a growing appreciation of the mechanisms that lead to bone disease. In collaboration with A/Prof Stan Gronthos, he has developed numerous patents describing the isolation and composition of matter of mesenchymal precursor cells (MPC). The family of patents surrounding this technology were assigned to Angioblast Systems Inc., NY, USA in 2004 and formed the basis for the establishment of Mesoblast Ltd, Melbourne, Australia. In his capacity as scientific consultant to Mesoblast Ltd, Melbourne /Angioblast Systems Inc. NY, he is now examining the therapeutic potential of MPC for cardiac and orthopaedic applications.