



**Abstracts from the  
50<sup>th</sup> Anniversary Meeting  
of the  
Bone and Tooth Society**

*10-12 July 2000*

**Churchill College,  
Cambridge, UK**

**Local Organiser**

**Dr Juliet Compston  
Cambridge University School of Medicine**

# **Bone and Tooth Society**

The Society is the oldest and largest scientific society in Europe that is dedicated to further research into clinical and basic science problems related to mineralised tissues. The meeting attracts a wide audience from throughout the UK and, increasingly, from continental Europe and further afield. The presentations are traditionally a balance between clinical and laboratory-based studies. The participation of young scientists and clinicians is actively encouraged.

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## **Web Site**

[www.batsoc.org.uk](http://www.batsoc.org.uk)

## **Annual Meeting 2000**

### **Venue**

The meeting will take place at Churchill College, Storey's Road, Cambridge.

The Society gratefully acknowledges the support of the following:

### **Major Sponsors**

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### **CME**

The meeting is approved for 18.5 CME credits for full attendance.

### **Meeting Organiser**

For further information please contact our Meeting Organiser:  
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### **Future Bone and Tooth Society Meetings**

3-5 July 2001, York, UK  
Local Organiser: Professor Tim Skerry

# PROGRAMME

## Bone and Tooth Society Meeting 10<sup>th</sup> - 12<sup>th</sup> July 2000 Churchill College, Cambridge

***Monday, 10<sup>th</sup> July, 2000***

**10.30 Registration & Coffee**

**11.30 Oral Session 1: Osteoclasts**

Chair: Adrienne Flanagan

11.30 001, Nucleotide effects on human osteoclast formation and transcription factor activation

Buckley KA, Hipskind RA, Gaw A, Gallagher JA, Bowler WB

11.42 002, On the mechanism of osteoclastic bone resorption

Stenbeck G, Horton M

11.54 003, Increased osteoclast sensitivity associated with osteoporosis

Jevon M, Hirayama T, Wass J, Brown M, Sabokbar A, Athanasou NA

12.06 004, PTH-inhibition of rank ligand-induced osteoclast formation from human peripheral blood

Buckley KA, Gaw A, Gallagher JA, Bowler WB

12.18 005, Transforming growth factor- $\beta$  promotes osteoclast induction by tumour necrosis factor- $\alpha$

Fox SW, Fuller K, Bayley KE, Chambers TJ

**12.30 Clinical Case Presentations**

Chair: Michael Parfitt and Trevor Stamp

CC1, A case of mastocytosis?

Peel N, Hughes D, Bainbridge P, Clowes J, Eastell R

CC2, A spontaneous case of osteoporosis

O'Gradaigh D, Compston J

CC3, Metabolic bone disease in a patient with ankylosing spondylitis

Haq I, Sturge RAS, Pringle J, Keen RW

CC4, A case of cherubism

Flanagan AM, Mangion J, Townend JV, Stratton MR

**13.30 Lunch**

**14.30 Jack Martin (Melbourne)**

Osteoclast formation in bone diseases of cancer and inflammation

Chair: Iain MacIntyre

**15.30 Poster viewing and Tea (Posters P21 - P40)**

**16.30 Workshop: Mini-symposium: Bone as an Organ**

Jack Martin, Alan Boyde, Erik Eriksen, John Currey

### **17.30 Oral Session 2: Clinical**

Chair: Peter Selby

- 17.30 O06, Coxarthrosis: Protection against hip fracture is associated with decreased lacunar density and increased cancellous bone mass  
Jordan GR, Loveridge N, Rushton N, Bell KL, Power J, Reeve J
- 17.42 O07, Time course for the attainment of peak bone mineral density (PBMD)  
Henry YM, Fatayerji D, Eastell R
- 17.54 O08, Reduction in bone mineral density following burn injury is due to a fall in bone mineral content  
Klein GL, Nusynowitz ML, Herndon DN
- 18.06 O09, Increased paternal age and occurrence of sporadic osteogenesis imperfecta  
Blumsohn A, McAllion SJ, Paterson CR
- 18.18 O10, Osteoclast differentiation in Paget's disease is hypersensitive to RANKL  
Neale SD, Pocock A, Smith R, Wass JAH, Athanasou NA

### **19.00 Reception**

### **19.30 Gala Dinner**

### **21.00 Disco**

## ***Tuesday, 11<sup>th</sup> July, 2000***

### **08.00 Oral Session 3: Bisphosphonates, Oestrogen**

Chair: Stuart Ralston

- 08.00 O11, Bisphosphonates inhibit glucocorticoid but not oxidant-induced apoptosis in osteocytes  
Stevens HY, Rogers MJ, Wheeler-Jones CP, Lanyon LE, Noble BS
- 08.12 O12, Farnesyl diphosphate synthase is the target of nitrogen-containing bisphosphonates: Evidence from structure-activity relationships  
Dunford JE, Coxon FP, Thompson K, Hahn FM, Poulter CD, Rogers MJ
- 08.24 O13, Myeloma cells isolated from patients with multiple myeloma express osteoprotegerin ligand  
Shipman CM, Holen I, Lippitt JM, Edwards T, Croucher PI
- 08.36 O14, PTH Blocks oestrogen's inhibitory action of periosteal bone formation  
Samuels A, Perry MJ, Gibson RL, Tobias JH
- 08.48 O15, Oestrogen receptor beta *in vivo* in osteoclasts and other bone cells of adult men and women  
Hailey L, Batra G, Selby PL, Saunders P, Hoyland JA, Braidman IP

### **09.00 Michael Parfitt (Little Rock)**

Pathogenesis of parathyroid adenoma: The set point hypothesis revisited

Chair: Jeffrey O'Riordan

### **10.00 Poster viewing and Coffee (Posters P41 - P60)**

**11.00Workshop: Osteoclasts**

Greg Mundy, Adrienne Flanagan, Nick Athanasou, Tim Chambers

## **12.00 Clinical governance**

Guidelines for the management of:  
Primary Hyperparathyroidism  
Osteoporosis  
Management of Paget's Disease  
Hypercalcaemia of Malignancy

## **13.00 Lunch and afternoon social event (Newmarket races/punting/free time)**

## **18.30 Buffet supper**

## **20.00 Poster Discussion**

Chair: Agi Grigoriadis and Richard Eastell

- 20.00 P01, 200IU salmon calcitonin nasal spray prevents vertebral fractures and is well tolerated in women with established post-menopausal osteoporosis: Final 5-year results of the PROOF study  
Moniz C, Doyle D, Chestnut C
- 20.06 P02, Characterisation of early and late osteoblast gene expression during *in vivo* bone formation  
Plant A, Perry MJ, Tobias JH
- 20.12 P03, Extracellular ADP is a powerful activator of rat osteoclasts  
Hoebertz A, Burnstock G, Arnett TR
- 20.18 P04, Localization of PTHrP in regenerating deer antlers  
Nicholls BM, Faucheux C, Danks J, Price JS
- 20.24 P05, Human myeloma cells shed Syndecan-1 *in vitro*: Evidence for mediation by a non-matrix metalloproteinase  
Holen I, Dury NL, Hargreaves PG, Croucher PI
- 20.30 P06, Gonadal steroid receptor expression in human fracture callus  
Batra G, Hainey L, Andrew G, Saunders P, Hoyland JA, Braidman IP
- 20.36 P07, Modulation of cell cycle protein expression by c-Fos during differentiation of chondrocytes  
Gentry A, Thomas DP, Sunters A, Grigoriadis AE
- 20.42 P08, Lack of effect of intravenous pamidronate on bone mineral density and fracture incidence after liver transplantation  
Ninkovic M, Love S, Tom B, Bearcroft P, Compston JE, Alexander GJM
- 20.48 P09, The effect of corticosteroids on human osteoclast formation and activity  
Hirayama T, Athanasou NA, Sabokbar A
- 20.54 P10, Effect of phosphodiesterase inhibitors on fibroblastic colony formation *in vitro*  
Scutt A, Still K, Reading L, Fittschen C



**Wednesday, 12<sup>th</sup> July, 2000**

**08.00 Oral Session 4: Osteoblasts, Chondrocytes**

Chair: Colin Farquharson

- 08.00 O16, FGF2 induces rat osteoblast attachment, proliferation and cranial suture fusion  
Moursi AM, Winnard PL, Rubenstrunk J
- 08.12 O17, An intracellular form of osteopontin associated with CD44 and involved in cell migration  
Sodek J, Suzuki K, Zhu J, Suzuki N, Zohar R, McCulloch CAG
- 08.24 O18, The role of fibroblast growth factor (FGF) signalling in c-Fos-induced inhibition of chondrocyte differentiation  
Thomas DP, Sunters A, Grigoriadis AE
- 08.36 O19, Local metabolism of glucocorticoids promotes selective regulation of osteoblast proliferation and differentiation  
Rabbitt EH, Eyre LJ, Hughes SV, Cooper MS, Stewart PM, Hewison M
- 08.48 O20, The effects of overexpressing the osteoblast-stimulating factor Osf-1  
Roach HI, Tare RS, Hashimoto-Gotoh T, Oreffo ROC, Clarke NMP

**09.00 Greg Mundy (San Antonio)**

In search of an anabolic agent

Chair: Juliet Compston

**10.00 Poster viewing and Coffee (Posters P61 - P80)**

**11.00 Poster Discussion**

Chair: Jon Tobias and David Hosking

- 11.00 P11, Inhibition of osteoclast differentiation in rheumatoid arthritis by IL-1 $\beta$  and TNF $\alpha$   
Danks L, Gundle R, Athanasou NA
- 11.06 P12, Pro-inflammatory cytokines stimulate glucocorticoid production in human osteoblasts  
Cooper MS, Poyser L, Sheppard MC, Stewart PM, Hewison M
- 11.12 P13, Evidence for a novel signalling interaction between the G-protein coupled P2Y and PTH receptors in UMR-106 cells  
Buckley KA, McKay G, Wagstaff SC, Gaw A, Gallagher JA, Bowler WB
- 11.18 P14, Vascular invasion into non-calcified, non-hypertrophic epiphyseal cartilage  
Roach HI, Oreffo ROC, Clarke NMP
- 11.24 P15, Oestrogen-induced osteogenesis *in vivo* is associated with an increase in BMP-6 expression  
Plant A, Tobias JH
- 11.30 P16, Clodronate is metabolised by osteoclasts and macrophages *in vivo*  
Frith JC, Monkkonen J, Auriola S, Monkkonen H, Ralston SH, Rogers MJ
- 11.36 P17, Localised impairment of bone formation in osteoporotic hip fracture  
Bell KL, Loveridge N, Power J, Reeve J
- 11.42 P18, Differential regulation of 25-hydroxyvitamin D<sub>3</sub>-1 $\alpha$ -hydroxylase activity in human proximal tubule and cortical collecting duct cell lines  
Bland R, Zehnder D, Hughes SV, Ronco PM, Stewart PM, Hewison M

11.48 P19, Differential expression of glucocorticoid receptor isoforms in human bone

Beavan S, Bord S, Horner A, Compston J

11.54 P20, Oestrogen receptors (ER) $\alpha$  and  $\beta$  demonstrate differential expression in growing human bone

Bord S, Horner A, Compston JE

### **12.00 Barbara Mawer (Manchester)**

50 years of vitamin D - from rickets to the gene

Chair: Graham Russell

### **13.00 Lunch**

### **14.00 Oral Session 5: Miscellaneous**

Chair: Tim Skerry

14.00 O21, Three-dimensional imaging of bone-resorbing osteoclasts: Spatial analysis of matrix collagens, cathepsin K, MMP-9 and TRAP by confocal microscopy

Nesbitt SA, Charras GT, Lehenkari PP, Horton MA

14.12 O22, Increased bone mass in mice lacking the receptor for thrombopoietin

Perry MJ, Samuels A, Evans C, Tobias JH

14.24 O23, Undermineralisation and reduced bone strength in growth hormone (GH) deficient transgenic (Tgr) rats

Warner JT, Wells T, Elford C, Evans BAJ, Evans SL, Gregory JW

14.36 O24, Osteocyte density is higher in osteonal bone surrounding remodelling vs quiescent canals in the human femoral neck

Power J, Loveridge N, Rushton N, Reeve J

14.48 O25, Effects of motion and the COX-2 inhibitor (Meloxicam) on fracture healing process

Connolly CK, Dickson GR, Li G, Marsh DR

### **15.00 Bone and Tooth Society AGM**

### **15.45 Tea**

### **16.00 Prize giving**

Young Investigator Awards

Registrar Prize

Best Oral Presentation

Best Poster Presentation

### **16.15 Close of meeting**