Bone and Tooth Society Meeting
22nd – 24th June 1999
University of Bristol

**Tuesday, 22nd June 1999**

11.00  Registration  Atrium

12.30  Lunch  Common Room and Atrium

13.30  Plenary Lecture  Room 1.11
*Sponsored by The Sackler Institute for MusculoSkeletal Research, University College London*
Chair:  Jon Beresford
**IS1**, Cellular and molecular pathology of fibrous dysplasia of bone (McCune-Albright syndrome)
*Paolo Bianco* (University of L’Aquila, Rome)

14.15  Oral Presentations 1  Room 1.11
Chair:  Jim Gallagher
14.15  **O01**, Immunohistochemical detection of PTHrP in cells of the osteoblast lineage in McCune-Albright syndrome
McCreavy DT, Fraser WD, Walsh CA, Gallagher JA
14.27  **O02**, Noggin, a BMP antagonist, increases proliferation, differentiation and mineralisation in human marrow mesenchymal stem cells
Church VL, Kennedy S, Patel U, Ashton BA
14.39  **O03**, Unraveling the secretory pathways in osteoblasts
Prele C, Horton MA, Stenbeck G
Still K, Reading I, Scutt A
15.03  **O05**, Ectopic C-FOS expression inhibits chondrocyte differentiation in vitro
Thomas DP, Gentry A, Sunters A, Grigoriadis AE

15.15  Tea and Poster Viewing  Common Room & Atrium
(odd numbers)

16.45  Grant giving bodies  Room 1.11
Chair:  Stuart Ralston
Presentations from ARC, BBSRC, MRC, Wellcome Trust

19.30  Sherry Reception  Reception Room, Wills Building
*Sponsored by Eli Lilly*

**Wednesday, 23rd June 1999**

08.15  Plenary Lecture  Room 1.11
*Sponsored by the International Bone and Mineral Society*
Chair:  Brian Ashton
**IS2**, The marrow stromal-haematopoietic interface
09.00  Oral Presentations 2  Room 1.11
Chair: Juliet Compston
09.00  O06, CBFA1 expression is induced in the metaphysis of female mice by high-dose oestrogen
Samuels A, Perry MJ, Gibson RG, Tobias JH
09.12  O07, Megakaryocyte population in human bone marrow increases with oestrogen treatment: a role in bone remodelling?
Bord S, Vedi S, Beavan SR, Horner A, Compston JE
09.24  O08, ROS cells proliferate in response to estrogen through IGF-I and mechanical strain through IGF-II
Cheng MZ, Zaman G, Rawlinson SCF, Mohan S, Baylink DJ, Lanyon LE
09.36  O09, Mechanical strain acts through the estrogen receptor in ROS cells
09.48  O10, Nitric oxide mediates IL-1-induced osteoclast formation by sustaining NFkB activation in mouse co-cultures
Van ’t Hof RJ, Smith LM, Ralston SH

12.00  Oral Presentations 3  Room 1.11
Chair: Adrienne Flanagan
12.00  O11, Human osteoclasts generated with soluble TRANCE – differences from stromal-cell based culture systems
Lader CS, Scopes J, Horton MA, Flanagan AM
12.12  O12, Functional GLAST; an essential molecular link in glutamatergic signalling during osteoblast differentiation
Spencer GJ, Bhangu PS, Genever PG, Grewal TS, Skerry TM
12.24  O13, Nitrogen-containing bisphosphonates induce apoptosis in human myeloma cells in vitro by inhibiting protein prenylation
12.36  O14, Small pH changes alter osteoclast membrane conductance
Dunina-Barkovskaya A, Arnett TR
12.48  O15, Loss of functional activity in blood-derived macrophages is associated with mutations in the 1α-hydroxylase (P450c1α) gene in four families with pseudovitamin D-deficiency rickets (PDDR)
Berry JL, Rucka AK, Smith SJ, Davies M, Mylchreest S, Paterson CR, Heath DA, Tassabehji M, Read AP, Mee AP, Mawer EB

13.00  Lunch and Poster Viewing  Common Room & Atrium
14.30  **Plenary lecture**  
*The Ann Stansfield Lecture, sponsored by the National Association for the Relief of Paget’s Disease*  
Chair: Peter Selby  
**IS3**, Why one skeleton is enough: Review of recent insights into fibrodysplasia ossificans progressiva  
Fred Kaplan (University of Pennsylvania, Philadelphia)

15.15  **Oral Presentations 4**  
*Sponsored by the International Bone and Mineral Society*  
Chair: Stuart Ralston  
15.15  **O16**, Does c-fos have a role in the pathophysiology of Paget’s Disease?  
Beedles KE, Sharpe PT, Wagner EF Grigoriadis AE  
15.27  **O17**, Osteoclast differentiation from circulating mononuclear precursors in Paget’s disease  
Neale SD, Smith R, Wass J, Athanasou NA  
15.39  **O18**, Polymorphism in the promoter region of the Bcl-2 gene: a possible explanation for enhanced Bcl-2 expression in Paget’s disease  
Brandwood CP, Hoyland JA, Selby P, Davies M, Hillarby MC, Mee AP  
15.51  **O19**, Extracellular ATP potentiates growth factor signaling to the c-fos proto-oncogene in MCF-7 breast cancer cells – implications for metastasis  
Bowler WB, Wagstaff SC, Gallagher JA, Hippskind RA  
16.03  **O20**, Infero-anterior remodelling clusters: a cause of focal weakness in hip fracture  
Jordan G, Loveridge N, Power J, Bell K, Reeve J

16.15  **Tea**  
Common Room and Atrium

16.45  **Oral Presentations 5**  
*Sponsored by Strakan*  
Chair: Richard Eastell  
16.45  **O21**, Long-term effects of lactation on bone mineral  
Laskey MA, Prentice A  
16.57  **O22**, Subchondral bone mineral density falls in knees at risk of progressive osteoarthritis (OA)  
Clarke S, Duddy J, Shepstone L, Ellingham KEM, Watt I, Elson CJ, Dieppe PA, Kirwan JR  
17.09  **O23**, High prevalence of osteoporosis in patients with chronic liver disease prior to transplantation  
Ninkovic M, Love S, Alexander GJM, Compston JE  
17.21  **O24**, Neonatal predictors of bone mass in children who were born preterm  
Smith CM, Coombs RC, Gibson AT, Eastell R  
17.33  **O25**, ColIA1 SP1 polymorphism predicts fracture independent of bone mass: a population based study in men and women  
McGuigan FEA, Reid DM, Ralston SH  
17.45  **O26**, Can the dedicated forearm densitometer predict T-scores in femoral neck (FN) and lumbar spine (LS) in patients with clinical risk factors?  
Pattison D, Wood S, Young A  
17.57  **O27**, Progesterone delays oestrogen–induced uncoupling in postmenopausal women  
Clarke S, Amer H, Robins SP, Fraser WD, Tobias JH
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Thursday, 24th June 1999

08.15  Plenary Lecture  Room 1.11

*Sponsored by Eli Lilly*

Chair: Richard Eastell

**IS4**, Recent advances in our understanding of the pathogenesis of male and postmenopausal osteoporosis

*Sundeep Khosla* (Mayo Clinic, Rochester, Minnesota)

09.00-13.00  CONCURRENT SESSIONS:

**Clinical Session 1**

*Sponsored by Procter and Gamble Pharmaceuticals*

Chair: Jon Tobias

09.00  Clinical Workshop 1  Room 1.11

**C01**, Oncogenic osteomalacia with sarcomatous transformation over an 11 year period
MacGowan J, Pringle J, Stamp TCB

09.10  **C02**, Severe polyostotic fibrous dysplasia complicated by hypophosphataemic rickets: apparent failure of pamidronate therapy prior to calcitriol treatment
MacGowan JR, Ell PJ, Stamp TCB

09.20  **C03**, Acquired fanconi syndrome presenting as multiple spontaneous fractures
Price EJ, Woods D, Collins DA

09.30  Discussion led by Jeffrey O’Riordan

09.50  Clinical Workshop 2  Room 1.11

**C04**, Latent coeliac disease masquerading as osteoporosis of pregnancy
Clowes JA, Fordham JN

10.00  **C05**, A case of severe osteoporosis of pregnancy
Marshall AT, Compston JE

10.10  Discussion led by Sundeep Khosla

10.20  Coffee  Common Room and Atrium
Clinical Session 2

Sponsored by Procter and Gamble Pharmaceuticals

Chair: Cyrus Cooper

10.50 Clinical Governance Room 1.11
Dr Juliet Compston

11.20 Clinical Workshop 3 Room 1.11

11.20 C06, Transmission of Paget’s disease to unaffected bone following femoral fracture and operative fixation
George GHM, Churchill M, Duke O, Patel S

11.30 C07, Osteomalacic vertebral collapse associated with three to four years continuous etidronate therapy for Paget’s disease
Stamp TCB, Morris V, Horwood N, Pringle J

11.40 C08, Englemann’s disease – an immunological disorder?
Boehmer G, Ralston SH

11.50 Discussion led by Fred Kaplan

12.10 Clinical Workshop 4 Room 1.11

12.10 C09, Adult Still’s disease with severe bilateral hip joint destruction
Quilty BM, Hollingworth P

12.20 C10, Joint contracture, ligamentous laxity and constitutional short stature in a case of hypophosphatasia
Daniels ED, Miles HL

12.30 Discussion led by Roger Smith

RUNNING CONCURRENTLY

09.00 Workshop 2 Reception Room, Wills Building

W02, Marrow Stromal Cells - Concepts and Controversies
Chair: Richard Oreffo
Panellists: Paolo Bianco (Rome), Paul Simmons (Adelaide) Pamela Gehron-Robey (Bethesda)

10.15 Coffee Reception Room, Wills Building
10.30  Workshop 3  Reception Room, Wills Building

W03, Analysis of Differential Gene Expression
Chair: Judith Hoyland
Panellists: Ged Brady (Manchester), Raj Grewal (York), Teresa Garcia (Paris)

11.45  Break

12.00  Workshop 4  Reception Room, Wills Building

W04, Probing Gene Function In Vivo
Chair: Agi E Grigoriadis
Panellists: Mikka Vikkula (Brussels), Attila Aszodi (Lund)

13.00  Lunch  Common Room and Atrium

14.00  Annual General Meeting  Room 1.11

14.30  Poster Discussion  Room 1.11
Chairs: Colin Farquharson, Trevor Stamp
P01-P15 5 minutes each - see list below

15.45  Awards  Room 1.11
Presented by: Stuart Ralston
Best Oral Presentation
Best Poster Presentation
Registrar Prize for Best Case Presentation

16.00  Tea and close of meeting  Common Room and Atrium

POSTER PRESENTATIONS  Common Room and Atrium
Sponsored by Merck Sharp and Dohme

P01, Regulation of osteoblast and osteoclast differentiation by pasteurella multocida toxin (PMT)
Harmey D Lax AJ Grigoriadis AE

P02, Assessment of the role of macrophage colony stimulating factor on human osteoclast development in vitro
Fujikawa Y, Itonaga I, Sabokbar NS, Torisu T, Athanasou N

P03, Overexpression of c-fos in osteoblasts results in aberrant cell cycle regulation
Sunters A, Thomas DP, Grigoriadis AE

P04, Osteoprotegerin causes osteoclasts to detach from the surface of mouse parietal bones and adhere to the adjacent periosteum
O’Brien EA, Williams JHH, Marshall MJ
P05, Comparison of hand bone density and finger ultrasound after distal forearm fracture
Ingle BM, Eastell R
P06, Alteration in maternal protein intake and skeletal development in the offspring
Roach HI, Langley-Evans SC, Aihie Sayer A, Cooper C, Clarke NMP
P07, Preferential role of endothelial nitric oxide synthase in oestrogen-induced osteogenesis in mice
Perry MJ, Tinston HC, Samuels A, Tobias JH
P08, Is increased cortical resorption depth the primary cause of hip fractures?
Bell KL, Loveridge N, Power J, Reeve J
P09, Identification of vertebral deformities by wedge angle, height ratios and radiology
Ferrar L, Barrington A, Eastell R
P10, The localisation of thyroid hormone receptor mRNAs in human bone
Abu EO, Horner A, Chatterjee VKK, Compston JE
P11, Physiological doses of oestrogen stimulate bone formation in female mice
Samuels A, Perry MJ, Tobias JH
P12, Intracapsular hip fractures and osteocyte lacunar occupancy
Power JD, Loveridge N, Bell KL, Noble BS, Reeve J
P13, Cells from the perichondrium of regenerating deer antlers have an extended lifespan in culture
Price JS, Conway E, Bream M, Faucheux C
P14, c-fos dependent and independent AP-1 translocation induced by NMDA, AMPA and kainate glutamate receptors in bone
Taylor AF, Birch MA, Skerry TM
P15, Assessment of the utility of SB-10 and HOP-26 as stage-specific markers for human cells of the osteoblast lineage
Walsh SK, Jefferiss CM, Joyner C, Triffitt JT, Beresford JN
P16, Effect of lysophospholipid growth factors on bone cells
Withers SJ, Horton MA, Stenbeck G
P17, Glucocorticoid-mediated protection of human osteoblast-like cells from drug cytotoxicity
Davies JH, Evans BAJ, Jenney MEM, Gregory JW
P18, Characterisation of sGLAST; a gene involved in osteogenesis in bone
Huggett J, Mason D
P19, Measurement of pelvic periprosthetic BMD following total hip arthroplasty: analysis protocols and repeatability
Wilkinson JM, Peel NFA, Stockley I, Eastell R
P20, Short term variability of biochemical markers of bone turnover in clinical practice
P21, Alteration of 14-3-3 levels in fetal bone in skeletal dysplasia and intra-uterine growth retardation
Byers RJ, Le Maitre C, Moore L, Hoyland JA
P22, Duration of bone loss from the spine and hip after cardiac transplantation
Johnson A, Locke TJ, Peel NFA, Eastell R
P23, Upregulation of mevalonate genes in Paget’s disease
Dixon JA, Mee AP, Selby PL, Mawer EB, Hoyland JA
P24, The effect of 17β oestradiol in vitro on cytokines measured in peripheral whole blood cultures
Rogers A, Eastell R
P25, Rapid measurement of relative alkaline phosphatase activity in 96 well plates without solubilisation of the enzyme
Harbour ME, Davies JH, Gregory JW, Evans BAJ
P26, Differential gene expression in early stages of osteoarthritis in vivo
Gilbert SJ, Duance VC, Mason DJ

**P27.** Identification and functional analysis of genes involved in the osteogenic differentiation of pericytes

Canfield AE, Wood AC, Doherty MJ, Grant ME, Boot-Handford RP

**P28.** Modifications of algorithms for quantitative identification of vertebral deformities

Jiang G, Barrington NA, Eastell R

**P29.** Predictors of bone mass in 11-12 year old girls

Lambert H, Barker ME, Eastell R

**P30.** The expression of the growth-arrest-specific gene GAS7 is down-regulated during chondrocyte hypertrophy

Houston B, Lester D, Seawright E, Jefferies D, Farquharson C

**P31.** Characterisation of conditionally immortalised cell lines derived from adult human bone marrow

Walsh S, Stewart K, Jefferiss C, Kuznetsov S, Robey P, Gehron, Beresford JN

**P32.** ORX in adult rats increased CFU-F number and induced B lymphopoiesis

Dobson KR, Scutt AM

**P33.** Effects of smoking on fracture repair: a study of the possible direct effects on bone cell activity

Walker LM, Thomas PBM, Magnay JL, El Haj AJ

**P34.** Peripheral densitometry: comparison of Lunar PIXI and Lunar Achilles+

Stewart A, Calder LD, Reid DM

**P35.** The localisation of peroxisome proliferator-activated receptor gamma in human bone

Abu EO, Horner A, Triffitt JT, Compston JE, Fraser WD

**P36.** Human articular chondrocytes are stromal positive in vitro and in situ

Gargiulo B, Turner SL, Harrison PE, Ashton BA

**P37.** Bone mineral density and depression

Dennison E, Rodin I, Wheeler T, Thompson C, Cooper C

**P38.** Measurement of type I collagen and TGFβ1 in human bone before and after liver transplantation

Beeton C, Horner A, Bord S, Beavan S, Compston J

**P39.** Coexpression of sonic and indian hedgehog in growth plate chondrocytes

Jefferies D, Houston B, Seawright E, Farquharson C

**P40.** Expression of voltage operation calcium channels in the mouse osteocyte cell line MLO-Y4

Gu Y, Preston MR, Publicover SJ, El Haj AJ

**P41.** Short-term precision of the UBIS 5000 quantitative ultrasound calcaneal imaging device

Crabtree N, Boivin CM

**P42.** Changes in gene expression in mouse long bones following oestrogen administration

Plant A, Tobias JH

**P43.** Effect of age on bone mineral density (BMD) in men and women

Henry Y, Fatayerji D, Eastell R

**P44.** Cloning of the cell surface glycoproteins HT7 and B-cadherin from growth plate chondrocytes by agarose gel differential display

Jefferies D, Houston B, Seawright E, Farquharson C

**P45.** The osmotic role of betaine and potassium during cell expansion in growth cartilage

Lee RB, Urban JPG

**P46.** Acid activation of osteoclasts derived from human osteoclastoma

Hoebertz A, Nesbitt SA, Horton MA, Arnett TR

**P47.** Changes in bone mass and turnover in peri and recent post-menopausal women: early findings

Macdonald HM, New SA, Robins SP, Golden MHN, Grubb D, Reid DM
P48, Regulation of macrophage colony-stimulating factor (M-CSF) by oestrogen (17β-E2) – A direct or indirect mechanism?
Lee JJ, Ebrahim H, Sarma U, Berg LP, Flanagan AM

P49, The use of “feeder suspensions” in the analysis and enrichment of fibroblastic-colony forming units
Sherwood K, Scutt A

P50, Interaction between substrates and mechanical loading of human bone cells, responses, in vitro
Peake MA, Cooling LM, Magnay JL, El Haj AJ

P51, Characterisation of genes down-regulated during the deposition of a mineralised matrix by pericytes in vitro
Harvey B, Wood AC, Boot-Handford RP, Canfield A

P52, Response of bone turnover markers to bisphosphonate treatment in Paget’s disease
Gill KA, Naylor KE, Ellison JV, Bainbridge PR, Eastell R

P53, Thyroxine stimulated long bone growth in vitro
Bowden WG, Urban JP

P54, Does the FAS (APO-1) system mediate the death of osteocytes?
Noble BS, Lignell T, Stevens HY, Reeve J

P55, Cytokine profiling in the rat streptococcal cell wall-induced arthritis model
Wicks S, Barham S, Bottoms S, Hardman T, Maitland P, Redford J, Foster M

P56, Regulation of activin subunit expression during murine osteoblastogenesis
Coker JK, Gaddy-Kurten D

P57, Isolation of a gene that is expressed in bone marrow and not in fetal liver hematopoietic precursors
Bashein A, Brady G

P58, Ultrasound measurements at the radius predict wrist fractures in postmenopausal women
Knapp KM, Blake GM, Fogelman I, Spector TD

P59, Mouse models for skeletal defects
Boyd Y, Reed V

P60, Postmenopausal bone loss has only a modest genetic influence: a longitudinal study of female twins
Keen RW, Baker JR, Baan K, Spector TD

P61, Evidence of association and linkage disequilibrium between a novel TGF-β1 gene polymorphism and hip BMD in female twins
Keen RW, Snieder H, Davies H, Chiano M, MacGregor AJ, Spector TD