P1  X-linked Hypophosphataemia: burden of disease using United Kingdom primary care data
Muhammad Javaid1, Antonella Delmestri1, Nick Shaw2, Daniel Prieto-Alhambra2, Cyrus Cooper1, Rafael Pinedo-Villanueva1
1NDORMS, University of Oxford, Oxford, UK; 2Paediatrics, Birmingham Women’s Children’s NHS Foundation Trust, Birmingham, UK

P2  Localisation and partial deletion of the HGD gene in a new targeted model of Alkaptonuria
Juliette Hughes1, Peter Wilson1, Ke Liu1, Andrew Hughes1, Lakshminarayan Ranganath1, James Gallagher1, George Bou-Gharios1
1Institute of Ageing and Chronic Disease, University of Liverpool, Liverpool, UK; 2Department of Clinical Chemistry, Royal Liverpool and Broadgreen University Hospital Trust, Liverpool, UK

P3  A review of clinical, radiological and treatment features from 18 patients with SAPHO (synovitis, acne, pustulosis, hyperostosis and osteitis) syndrome and CRMO (chronic recurrent multifocal osteomyelitis) at Addenbrooke’s hospital
Jagtar Singh Nijjar1, Jessica Padley2, Ken Poole1
1Department of Medicine, University of Cambridge, Cambridge, UK; 2School of Clinical Medicine, University of Cambridge, Cambridge, UK

P4  Self-perception of fracture risk is associated with radial bone microarchitecture in the GLOW Study
Leo Westbury, Anna Litwic, Kate Ward, Cyrus Cooper, Elaine Dennison
MRC Lifecourse Epidemiology Unit, University of Southampton, Southampton, UK

P5  Cluster analysis of high resolution peripheral quantitative computed tomography parameters including finite element analysis identifies bone phenotypes associated with higher rates of prevalent fracture
Mark Edwards, Leo Westbury, Cyrus Cooper, Elaine Dennison, Kate Ward
MRC Lifecourse Epidemiology Unit, University of Southampton, Southampton, UK

P6  Severe lumbar spinal stenosis on MRI scans is related with heavy manual work: The Wakayama Spine Study
Yuyu Ishimoto1, Cyrus Cooper1,2, Georgia Ntani1,2, Hiroshi Yamada3, Hiroshi Hashizume3, Shigeyuki Muraki4, Sakae Tanaka5, Munehito Yoshida3, Noriko Yoshimura6, Karen Walker-Bone1,2
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P7  Spontaneous atypical tibial and femoral fractures associated with alendronate then denosumab therapy in an adult patient with juvenile idiopathic arthritis: a case report
Juan Tan1, Kenneth Poole2
1Foundation School, NHS Lothian, Edinburgh, UK; 2Metabolic Bone Disease Unit, University of Cambridge, Cambridge, UK

P8  Osteoclasts are multinucleated cells that degrade cartilage, as well as bone
Quitterie Larrouture, Helen Knowles, Sarah Snelling, Nick Athanasou
Nuffield Department of Orthopaedics, Rheumatology and Musculoskeletal Sciences, University of Oxford, Oxford, UK

P9  Impact of mild and moderate/severe vertebral fractures on physical activity: A five-year prospective study based on a cohort of older women in the UK
Usama A Al-sari, Jon H Tobias, Emma M Clark
Bristol Medical School, University of Bristol, Bristol, UK

P10  Limb bones scale similarly despite forelimb-hindlimb load asymmetry in bipedal hopping
Michael Doube1,2, Alessandro A Felder2, Melissa Y Chua1, Kalyani Lodhia1, Michał M Kłosowski1, John R Hutchinson3, Sandra J Shefelbine1,4
1Department of Bioengineering, Imperial College London, London, UK; 2Skeletal Biology Group, Comparative Biomedical Sciences, The Royal Veterinary College, London, UK; 3Structure and Motion Laboratory, Comparative Biomedical Sciences, The Royal Veterinary College, London, UK; 4Department of Mechanical & Industrial Engineering, Northeastern University, Boston, USA
POSTERS

P11 A tale of two phosphatases: dissecting the roles of PHOSPHO1 and TNAP during skeletal biomineralisation
Scott Dillon¹, Fabio Nudelman², Colin Farquharson¹
¹The Roslin Institute, University of Edinburgh, Edinburgh, UK; ²School of Chemistry, University of Edinburgh, Edinburgh, UK

P12 Human decellularised blood vessel matrices promote bone repair in an ex vivo bone defect model
Janos Kanczler¹, Stefanie Inglis¹, Karl Schneider², Heinz Redl³, Richard Oreffo¹
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P13 Slc38a10 is a novel genetic determinant of osteoblast proliferation and bone mineral density
Andrea S Pollard¹, Apostolos Gogakos¹, John G Logan¹, Davide Komba Ebri¹, Penny C Sparkes¹, Natalie C Butterfield¹, Victoria D Leitch¹, JH Duncan Bassett¹, Graham R Williams¹
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P14 In vivo skeletal regeneration using a nanocomposite silicate-based bioink
Gianluca Cidonio¹,², Tilman Ahfeldt³, Michael Glinka¹, Yi-Ghee Kim¹, Stuart Lanham¹, Janos Kanczler¹, Shoufeng Yang², Jonathan Dawson¹, Michael Gelinsky², Richard Oreffo¹
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P15 Bone induction in a murine subcutaneous model using nanoclay gel and bone morphogenetic protein: an optimisation study
Josephine McEwan, Janos Kanczler, Stuart Lanham, Julia Wells, Jonathan Dawson, Richard Oreffo
Bone and Joint Research Group, Centre for Human Development, University of Southampton, Southampton, UK

P16 Osteoporosis as a risk factor for the occurrence of frailty: a four-year follow-up of the ROAD study
Noriko Yoshimura¹, Shigeyuki Muraki¹, Hiroyuki Oka², Toshiko Iidaka¹, Rie Kodama³, Chiaki Horii³, Hiroshi Kawaguchi⁴, Kozo Nakamura⁵, Toru Akune³, Sakae Tanaka³
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P17 TGFβ inhibition in combination with chemotherapy repairs existing lytic bone lesions in a novel plateau phase model of multiple myeloma
Alanna Green¹, Katie Hudson¹, Jenny Down¹, Darren Lath¹, Holly Evans¹, Julia Paton-Hough¹, Simon Tazzyman¹, Matt Fisher¹, John Snowden¹, Andrew Chantry¹, Michelle Lawson¹
¹Oncology and Metabolism, The University of Sheffield, Sheffield, UK; ²Haematology, Sheffield Teaching Hospitals NHS Foundation Trust, Royal Hallamshire Hospital, Sheffield, UK

P18 Photoperiod-induced central actions of thyroid hormone are essential for medullary bone formation in Japanese quail
Natalie Butterfield¹, Justyna Miszkiewicz¹, Anne-Tonsia Adoum¹, John Logan¹, Victoria Leitch¹, Takashi Yoshimura¹, Duncan Bassett¹, Graham Williams¹
¹Molecular Endocrinology Laboratory, Imperial College, London, UK; ²Laboratory of Animal Physiology, Graduate School of Bioagricultural Sciences, Nagoya University, Nagoya, Japan
P19  **Gpc6: a novel determinant of bone mineral density in osteoporosis**

Naila S Mannan, Victoria D Leitch, John G Logan, Anne-Tounisia Adoum, Hannah F Dewhurst, Andrea S Pollard, Penny C Sparkes, Elena J Ghirardello, Rebecca Allen, Natalie C Butterfield, Sangar Mouse Pipelines, David Komla-Ebri, Katharine F Curry, Peter I Croucher, Graham R Williams, JH Duncan Bassett

1Molecular Endocrinology Laboratory, Imperial College London, London, UK; 2Sanger Institute, Wellcome Trust, Cambridge, UK; 3Bone Biology Division, Garvan Institute of Medical Research, Sydney, Australia

P20  **Age related changes in native human bone marrow mesenchymal stem cells**

Payal Ganguly, Jehan J El-Jawhari, Agata N Burska, Frederique Ponchel, Peter V Giannoudis, Elena A Jones

Leeds Institute of Rheumatic and Musculoskeletal Medicine, St James’s University Hospital, University of Leeds, Leeds, UK

P21  **Fam73b is essential for skeletal growth and the maintenance of bone mass and strength**

Davide Komla-Ebri, Apostolos Gogakos, Penny Sparkes, John G Logan, Sanger Institute Mouse Pipelines, Peter I Croucher, JH Duncan Bassett, Graham R Williams

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P22  **Independent skeletal phenotyping of Creb3l1 knockout mice confirms validity of signature in human GWAS**

Elena J Ghirardello, John G Logan, Penny C Sparkes, Katherine F Curry, Justyna J Miszkiewicz, Victoria D Leitch, Natalie C Butterfield, Peter I Croucher, Graham R Williams, JH Duncan Bassett, Sanger Mouse Pipelines

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P23  **Osteocalcin regulates arterial calcification via altered Wnt signalling and glucose metabolism**

Nabil Rashdan, Alisia Sim, Peter Hohenstein, John Hung, Jakub Kaczynski, David Newby, Andrew Baker, Gerard Karsenty, Vicky MacRae

1The Roslin Institute and Royal (Dick) School of Veterinary Studies, University of Edinburgh, Edinburgh, UK; 2School of Chemistry, University of Edinburgh, Edinburgh, UK; 3Centre for Cardiovascular Science, University of Edinburgh, Edinburgh, UK; 4Department of Genetics and Development, Columbia University, New York, USA

P24  **The regulation of bone mineralisation *in vitro* and *in vivo* models of chronic kidney disease**

Shun-Neng Hsu, Vicky MacRae, Amanda Novak, Katherine Staines, Colin Farquharson

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P25  **All that fractures is not bone: microscopic anatomy of vertebral bodies**

Alan Boyd, David Mills

Biophysics OGD, Queen Mary University of London, London, UK

P26  **Inhibition of the Protein Kinase R signaling pathway *in vivo* reduces bone remodeling in post-traumatic osteoarthritis**

Sophie Gilbert, Cleo Bonnet, Menna Ihenacho, Rose-Marie Cronin, Emma Blain, Debbie Mason

School of Biosciences, Cardiff University, Cardiff, UK

P27  **Bone geometry is correlated with oscillometric arterial stiffness in overweight older adults with low vitamin D**

Alexander Rodriguez, Cecilia Xu, Lachlan McMillan, Velandai Srikanth, David Scott, Peter Ebeling

1Bone and Muscle Health Research Group, School of Clinical Sciences, Monash University, Melbourne, Australia; 2Stroke and Aging Research Group, Frankston Hospital, Monash University, Melbourne, Australia
P28 VEGF exerts sexually dimorphic effects on bone mass and architecture
Alice Goring1, Behzad Javaheri2, Napoleone Ferrara3, Bjorn Olsen4, Philipp Schneider5, Richard Oreffo6, Andrew Pitsillides2, Claire Clarkin1
1Biological Sciences, University of Southampton, Southampton, UK; 2Comparative Biomedical Sciences, Royal Veterinary College, London, UK; 3Genetech, San Francisco, USA; 4Department of Cell Biology, Harvard School of Dental Medicine, Boston, USA; 5Faculty of Engineering and the Environment, University of Southampton, Southampton, UK; 6Faculty of Medicine, University of Southampton, Southampton, UK

P29 Demonstrating Fracture Liaison Service effectiveness – use of fracture incidence and prescribing data to demonstrate clinical and cost effectiveness in a small population
Tim Jones
Service Development, National Osteoporosis Society, Bath, UK

P30 Falls risk is increased and bone mineral density reduced in individuals with rheumatoid arthritis: findings from UK biobank
Michael Clynes1, Karen Jameson1, Daniel Prieto-Alhambra2, Nicolas Harvey1, Cyrus Cooper1, Elaine Dennison1
1MRC Lifecourse Epidemiology Unit, University of Southampton, Southampton, UK; 2Centre for Statistics in Medicine, University of Oxford, Oxford, UK; 3NIHR Musculoskeletal Biomedical Research Unit, University of Oxford, Oxford, UK

P31 Identification of vertebral fractures in Fracture Liaison Services (FLS) in the UK
Sonya Stephenson
National Osteoporosis Society, Bath, UK

P32 IRF5 is required for macrophage-driven bone formation
Adel Ersek, Carlotta Cosulich, Irina Udalova, Nicole Horwood
Kennedy Institute of Rheumatology, University of Oxford, Oxford, UK

P33 Abstract withdrawn

P34 Relationships between muscle size, strength and function and the risk of falls and fractures
Nicholas Fuggle1, Karen Jameson1, Mark Edwards1,2, Elaine Dennison1, Cyrus Cooper1,3
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P35 Does modeling-based bone formation continue on trabecular surfaces throughout life? A histological analysis of forming minimodeling structures in the human femoral head
Hiroshige Sano1,2, Naoki Kondo1, Taketoshi Shimakura1, Junichi Fujisawa1, Yasufumi Kijima1, Linda Skingle1, Kenneth Poole1, Noriaki Yamamoto2, Hideaki Takahashi2,4, Naoto Endo1
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P36 An investigation of polymethylmethacrylate bone cement loaded with amoxicillin encapsulated in liposomes
Rebecca Beamish1,2, Wayne Ayre3, Sam Evans2
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P37 Abstract withdrawn

P38 Azathioprine protects against poor bone health in mice with DSS induced inflammatory bowel disease
Stephanie Morgan1, Kirsty Hooper1, Katherine Halewood1, Elspeth Milne2, Colin Farquharson2, Craig Stevens1, Katherine Staines1
1School of Applied Sciences, Edinburgh Napier University, Edinburgh, UK; 2Roslin Institute and R(D)SVS, University of Edinburgh, Edinburgh, UK

P39 Quality of bone formed by osteogenic stem/progenitor cell cultures
Gurjit S Mandair1, Pieter Steenhuis1, Michael A Igelnzli, Jr2, Michael D Morris1
1School of Dentistry, University of Michigan, Ann Arbor, USA; 2Department of Chemistry, University of Michigan, Ann Arbor, USA
P40 **Effects of in vitro glycation on bone collagen structure and order**
Gurjit S Mandair1, Matthew Karabetos1, Gloria G Vanreunterghem1, Ramamoorthy Ayyalusamy2, Michael D Morris2, David H Kohn1
1School of Dentistry, University of Michigan, Ann Arbor, USA; 2Department of Chemistry, University of Michigan, Ann Arbor, USA

P41 **A study of the relationships between fracture risk and ethnicity**
Premila Kadamban1, James Galloway2
1Rheumatology, Basildon University Hospital, Basildon, UK; 2Rheumatology, King’s College, London, UK

P42 **Using ante-mortem consented bone samples as age matched controls in hip fracture research**
Linda Skingle1, Timothy Vaughan-Lane2, Maria Wright3, Cecilia Brassett2, Kenneth Poole1
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P43 **Reliable change index in the evaluation of joint space loss: a novel method for assessing osteoarthritis progression**
Camille Parsons1, Andrew Judge2, Kirsten Leyland2, Hazel Inskip1, Cyrus Cooper1,3,4
1MRC Lifecourse Epidemiology Unit, University of Southampton, Southampton General Hospital, Southampton, UK; 2Musculoskeletal Research Unit, University of Bristol, Bristol, UK; 3NIHR Southampton Nutrition Biomedical Research Centre, University of Southampton and University Hospital Southampton NHS Foundation Trust, Southampton, UK; 4NIHR Oxford Biomedical Research Centre, University of Oxford, Oxford, UK

P44 **Bone formation and vascular calcification are differentially affected by N-acetylcysteine**
Lucie E Bourne1, Jessal J Patel1,2, Ellen Neven3, Patrick D’Haese4, Caroline Wheeler-Jones1, Isabel R Orriss1
1Department of Comparative Biomedical Sciences, Royal Veterinary College, London, UK; 2School of Life and Medical Sciences, University of Hertfordshire, Hatfield, UK; 3Laboratory of Pathophysiology, Department of Biomedical Sciences, University of Antwerp, Antwerp, Belgium

P45 **Age at initiation of Antiretroviral Therapy predicts low bone density in Zimbabwean children with vertically-acquired HIV infection**
April Hartley1,2, Ruramayi Rukuni3,4, Nicola Crabtree5, Cynthia Mukwasi6, Edith Majonga3,4, Grace McHugh5, Hilda Mujuru7, Rashida Ferrand3,4, Celia L Gregson1
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P46 **Inspecting multiscale damage in human bone using an X-ray image algorithm**
Jiye Chen1, Jin Luo2
1Faculty of Technology, University of Portsmouth, Portsmouth, UK; 2School of Applied Sciences, London South Bank University, London, UK

P47 **Harnessing clay nanoparticles to stabilise and enhance bioactive extracellular matrix for bone regeneration application**
Vikash H Dodhia1, Gianluca Cidonio1, Yang-Hee Kim1, Richard OC Oreffo, Jonathan I Dawson1, Bone and Joint Research Group, Centre for Human Development, Stem cell and Regeneration, Faculty of Medicine, University of Southampton, Southampton, UK

P48 **Stimulation of bone cell function using osteogenic factor-loaded poly-lactic-co-glycolic (PLGA) nanoparticles in light-curable scaffolds**
Michael Glinka1, Gianluca Cidonio1, Jin Geng2, Ewa Czekańska1, Yang-Hee Kim1, Jonathan I Dawson1, Shoufeng Yang1, Khoon Lim1, Tim Woodfield1, Mark Bradley2, Richard Oreffo1
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P49 **Methods for determination of carbonate position in hydroxyapatite lattice**
Emily Arnold, Charlene Greenwood, Keith Rogers
Craniﬁeld Forensic Institute, Craniﬁeld University, Shrivenham, UK
P50 **Getting to the bare bones of the age-related changes to the mechanical and structural properties of the clavicle**

Hannah McGivern, Charlene Greenwood, Nicholas Marquez-Grant, Peter Zioupos
Cranfield Forensic Institute, Cranfield University, Shrivenham, UK

P51 **NaQuinate treatment increases bone strength in ovariectomized rats**

Stephanie Gohin, Robin Soper, Behzad Javaher, Lars Marius Ytrebo, Mark Hopkinson, Richard Meeson, David Howat, Andrew Pittillides, Stephen Hodges
1 Department of Comparative Biomedical Sciences, Royal Veterinary College, London, UK; 2 Haoma Medica, Haoma Medica, London, UK; 3 Anaesthesiology and Intensive Care Medicine, Tromsø University Hospital, Tromsø, Norway; 4 Institute of Orthopaedics and Musculoskeletal Science, University College London, Stanmore, UK

P52 **Harnessing high-resolution virtual histology in three dimensions for understanding bone development in birds**

Katherine A Williams, Neil J Gostling, Gareth Dyke, Richard OC Oreffo, Philipp Schneider
1 Mechanical Engineering, Faculty of Engineering and the Environment, University of Southampton, Southampton, UK; 2 Biological Sciences, Faculty of Natural and Environmental Sciences, University of Southampton, Southampton, UK; 3 Department of Evolutionary Zoology and Human Biology, University of Debrecen, Debrecen, Hungary; 4 Bone and Joint Research Group, Faculty of Medicine, University of Southampton, Southampton, UK

P53 **'Stories from Bones' – the potential of 3D scanning and biomechanical modelling in the archaeological study of human skeletons**

Stephanie Evelyn-Wright, Martin Browne, Christopher Woods, Mark Mavrogordato, Kathryn Rankin, Oliver Stocks, Alex Dickinson, Sonia Zakrzewski
1 Archaeology Department, University of Southampton, Southampton, UK; 2 Bioengineering Science Research Group, University of Southampton, Southampton, UK; 3 μ-VIS X-Ray Imaging Centre, University of Southampton, Southampton, UK

P54 **The feasibility of a unilateral high impact exercise intervention to increase bone mineral density in post-menopausal women**

Chris Hartley, Jonathan Folland, Robert Kerslake, Katherine Brooke-Wavell
1 NCSEM, School of Sport, Exercise and Health Science, Loughborough University, Loughborough, UK; 2 Queen’s Medical Centre, Nottingham University Hospitals, Nottingham, UK

P55 **Enhancement of a sustained release of bone morphogenetic protein-2 from hyaluronan-bisphosphonate hydrogel by addition of laponite clay nanoparticles**

Yang-Hee Kim, Dmitri Ossipov, Richard OC Oreffo, Jonathan I Dawson
1 Bone and Joint Research Group, Institute of Developmental Sciences, University of Southampton, Southampton, UK; 2 Science for Life Laboratory, Division of Polymer Chemistry, Uppsala University, Uppsala, Sweden

P56 **Osseointegrated implants for lower limb amputees: evaluation of bone mineral density**

Seamus Thomson, William Lu, Munjed Al Muderis
Clinical Research, The Osseointegration Group of Australia, Sydney, Australia

P57 **Osseointegrated implants for trans femoral amputees: radiographic evaluation of bone remodeling**

Seamus Thomson, William Lu, Munjed Al Muderis
Clinical Research, The Osseointegration Group of Australia, Sydney, Australia

P58 **Serum adiponectin concentrations are inversely associated with bone mineral density in a community-based cohort of middle-aged women**

Nigel Arden, James R Edwards, Stefan Kluzek, Aneka Sowman, Maria T. Sanchez-Santos, Deborah Hart, Tim D. Spector
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P59 **Urocortin: A novel inhibitor of the differentiation of human osteoclasts**

Omar Ismail, Joshua Coxon, Paul Townsend, Rebecca Jones, Kevin Lawrence
Division of Cancer Sciences, University of Manchester, Manchester, UK

P60 **In vivo correlation of single-slice peripheral Quantitative Computed Tomography (pQCT) and high resolution pQCT measures at the tibia**

Micheal Ó Breasail, Ann Prentice, Kate Ward
1 Elsie Widdowson Laboratory, MRC, Cambridge, UK; 2 Lifecourse Epidemiology Unit, MRC, Southampton, UK
P61 Developing and testing novel delivery systems for glutamate receptor antagonists for the treatment of joint pain and disease
Ben Egan1,2, James Birchall2, Charles Heard2, Deborah Mason1
1School of Bioscience, Cardiff University, Cardiff, UK; 2School of Pharmacy and Pharmaceutical Sciences, Cardiff University, Cardiff, UK

P62 Bone Research Society Barbara Mawer Travelling Fellowship update: Investigating extracellular ATP in the tumour microenvironment of osteosarcoma using the plasma membrane-targeted luciferase (pmeLUC) probe
Luke Tattersall1, Elena De Marchi2, Francesco Di Virgilio2, Michelle Lawson1, Elena Adinolfi2, Alison Garland1
1The Mellanby Centre for Bone Research, The University of Sheffield, Sheffield, UK; 2Department of Morphology, Surgery and Experimental Medicine, University of Ferrara, Ferrara, Italy

LATE BREAKING POSTERS

LBP1 Temporal investigation of tissue-engineered cartilage from human fetal skeletal progenitor cells using multimodal label-free imaging
Catarina Costa Moura1,2, Rahul S Tare2,3, Richard Oreffo2, Sumeet Mahajan1
1Institute for Life Sciences and Department of Chemistry, University of Southampton, Southampton, UK; 2Centre for Human Development, Stem Cells and Regeneration, Institute of Developmental Science, University of Southampton, Southampton, UK; 3Mechanical Engineering Department, Faculty of Engineering and the Environment, University of Southampton, Southampton, UK

LBP2 Abstract withdrawn

LBP3 Enrichment of bone progenitor populations from human bone marrow using label-free microfluidic techniques
Miguel Xavier1, Stefan Holm2, Jason Beech2, Daniel Spencer1, Jonas Tegenfeldt2, Richard OC Oreffo2, Hywel Morgan1
1Institute for Life Sciences, University of Southampton, Southampton, UK; 2Solid State Physics, Lund University, Lund, Sweden; 3Centre for Human Development, Stem Cells and Regeneration, University of Southampton, Southampton, UK

LBP4 Does a hysterectomy predispose women to developing osteoarthritis?
Jenny Martin, Caitlin Murphy, Jenny Gregory, Richard Aspden, Anna Riemen, Fiona Saunders
Arthritis and Musculoskeletal Research, University of Aberdeen, Aberdeen, UK

LBP5 Surgical menopause, hip shape and OA: Are they related?
Caitlin Murphy, Jenny Martin, Jenny Gregory, Richard Aspden, Anna Riemen, Fiona Saunders
Arthritis and Musculoskeletal Research, University of Aberdeen, Aberdeen, UK

LBP6 A novel MRI method for non-destructive vertebral strength quantification
Amanda Davies1, Faizan Ahmad2, Peter Theobald2, Richard Hugtenburg3, Richard Johnston4
1Osteotronix Ltd, Osteotronix Ltd, Swansea, UK; 2School of Engineering, Cardiff University, Cardiff, UK; 3College of Medicine, Swansea University, Swansea, UK; 4College of Engineering, Swansea University, Swansea, UK

LBP7 The ΔE50-MD dog model of Duchenne muscular dystrophy has a skeletal phenotype
Emma Wintsch, Richard Piercy, Michael Doube
1Skeletal Biology Group, Royal Veterinary College, London, UK; 2Comparative Neuromuscular Diseases Laboratory, Royal Veterinary College, London, UK

LBP8 Undercarboxylated osteocalcin, but not the carboxylated form, may increase human aortic smooth muscle cell calcification
Sophie Millar, Susan Anderson, Saoirse O’Sullivan
Graduate Entry Medicine and Medical Sciences, University of Nottingham, Derby, UK

LBP9 Correlation between serum 25 hydroxyvitamin D, parathyroid hormone (PTH) and high resolution peripheral quantitative computed tomography (HR-pQCT) parameters of the distal tibia
Hassan A Alshamrani1,2, Margaret A Paggiosi1, Nick Bishop1,2, Amaka C Offiah1,2
1Mellanby Centre for Bone Research, Department of Oncology and Metabolism, The University of Sheffield, Sheffield, UK; 2Sheffield Children’s NHS Foundation Trust, Sheffield, UK
LBP10 Effect of vitamin D and whole body vibration on high resolution peripheral quantitative computed tomography (HR-pQCT) parameters of the distal tibia (VibeD study)
Hassan A Alshamrani1,2, Margaret A Paggiosi1, Nick Bishop1,2, Amaka C Offiah1,2
1Mellanby Centre for Bone Research, Department of Oncology and Metabolism, The University of Sheffield, Sheffield, UK; 2Sheffield Children’s NHS Foundation Trust, Western Bank, Sheffield, UK

LBP11 Probing the skeletal stem cell niche through functional investigation of Prx1 expressing cells
Sarah Pretorius1, Scott Roberts2, Malcolm Logan1
1Randall Division of Cell and Molecular Biophysics, King’s College London, London, UK; 2UCB Pharma, Slough, UK

LBP12 Computed tomography-based texture analysis improves the prediction of incident vertebral fracture
Fjola Johannesdottir1,2, Brett Allaire1, Dennis E Anderson1,2, Elizabeth J Samelson1,4,5, Douglas P Kiel1,4,5, Mary L Bouxsein1,2
1Center for Advanced Orthopaedic Studies, Beth Israel Deaconess Medical Center, Boston, USA; 2Orthopedic Surgery, Harvard Medical School, Boston, USA; 3Institute for Aging Research, Hebrew Senior Life, Roslindale, USA; 4Medicine, Beth Israel Deaconess Medical Center, Boston, USA; 5Medicine, Harvard Medical School, Boston, USA

LBP13 A rare case of neck of femur fracture in a female adolescent associated with minor trauma and impaired bone metabolism
Olamide Olatokun, Thomas Nash, Hani B Abdul-Jabar
Trauma & Orthopaedics, Northwick Park Hospital, London, UK

LBP14 The role of canonical and non-canonical autophagy in bone resorption by osteoclasts
Anh Tran1, Sandra Segeletz2, Emma McDermott1, Justin Rochford2, Tom Wileman4, Miep Helfrich1
1Institute of Medical Sciences, University of Aberdeen, Aberdeen, UK; 2Max Planck Institute of Molecular Cell Biology and Genetics, MPI, Dresden, Germany; 3Rowett Institute, University of Aberdeen, Aberdeen, UK; 4Biomedical Research Centre, University of East Anglia, Norwich, UK

LBP15 Pleckstrin homology domain containing protein family member 1 (PLEKHM1) regulates bone resorption through sealing zone dynamics and lysosomal targeting in osteoclasts
Anh Tran1, Emma McDermott1, Justin Rochford2, Miep Helfrich1
1Institute of Medical Sciences, University of Aberdeen, Aberdeen, UK; 2Rowett Institute, University of Aberdeen, Aberdeen, UK

LBP16 Abstract withdrawn

LBP17 Specific analysis of osteoclast-mediated bone resorption by differentiation of primary human osteoclasts in 3D
Helen Knowles
NDORMS, University of Oxford, Oxford, UK

LBP18 Altered expression of A3 and P2X6 receptors in osteocytes and chondrocytes following mechanical loading – novel mechanically regulated pathways
Amelia Redman1, Sophie Gilbert2,4, Carole Elford1,2,4, Ayesha Al-Sabah3, Emma Blain2,4, Bronwen Evans1,4
1School of Medicine, Cardiff University, Cardiff, UK; 2School of Biosciences, Cardiff University, Cardiff, UK; 3Medical School, Swansea University, Swansea, UK; 4Arthritis Research UK Biomechanics and Bioengineering Centre, Cardiff University, Cardiff, UK