

**5<sup>th</sup> Joint Conference of the  
Bone Research Society (BRS) and British Orthopaedic Research Society (BORS)  
School of Biosciences, Cardiff University, Cardiff CF10 3AX  
4-6 September 2019**

| Wednesday 4 September 2019 |   |   |
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| <b>1200</b>                | <i>Entrance Foyer, Ground Floor</i><br>Registration desk opens  |   |
| <b>1300-1500</b>           | <i>Shared Lecture Theatre, 1<sup>st</sup> Floor</i><br><b>BRS/BORS Mid-Career Development Workshop powered by the ORS Ambassadors Program</b><br>Chairs: <b>Sophie Williams</b> (Leeds, UK) and <b>Kassim Javaid</b> (Oxford, UK) |   |
| <b>1300-1310</b>           | Introduction - <b>Sophie Williams</b> (Leeds, UK) and <b>Kassim Javaid</b> (Oxford, UK)   |   |
| <b>1310-1320</b>           | BRS strategy document – <b>Kassim Javaid</b> (Oxford, UK)   |   |
| <b>1320-1350</b>           | Life as a mid-career researcher: what happened, what I wish I had known and what I would have changed - <b>Amy Naylor</b> (Birmingham, UK)  |   |
| <b>1350-1410</b>           | My reflections on what makes a good mid-career researcher- <b>Tim Arnett</b> (London, UK)   |   |
| <b>1410-1430</b>           | Results of BRS / BORS mid-career survey – <b>Sophie Williams</b> (Leeds, UK) and <b>Kassim Javaid</b> (Oxford, UK)  |   |
| <b>1430-1450</b>           | What is the gap - a discussion  |   |
| <b>1450-1500</b>           | Next Steps  |   |
| <b>1500-1530</b>           | <i>Seminar Room E1.22, 1<sup>st</sup> Floor</i><br>Refreshment break  |   |
| <b>1530-1645</b>           | <i>Shared Lecture Theatre, 1<sup>st</sup> Floor</i><br><b>Muscle, Tendon and Bone Workshop</b><br>Chairs: <b>Alex Ireland</b> (Manchester, UK) and <b>Jolet Mimpfen</b> (Oxford, UK)  |   |
| <b>1530-1555</b>           | Tendon Structure, Function and Adaptation in Humans - <b>Neil Reeves</b> (Manchester, UK)   |   |
| <b>1555-1620</b>           | Making Connections: engineering hard-soft tissue interfaces – <b>Jennifer Paxton</b> (Edinburgh, UK)  |   |
| <b>1620-1630</b>           | <b>OC1</b> , High tibial osteotomy (HTO) and wide stance (WS) gait reduces knee joint loading in individuals with varus knee deformity – <b>Jake Bowd</b> (Cardiff, UK)   |   |
| <b>1630-1640</b>           | <b>OC2</b> , Which muscle parameters are longitudinally associated with knee osteoarthritis outcomes? Findings from the Hertfordshire Cohort Study – <b>Nicholas Fuggle</b> (Southampton, UK)                                     |   |
| <b>1640 - 1645</b>         | General discussion  |   |
| <b>1700-1830</b>           | <i>The Lodge, Cardiff University Students' Union, Park Place</i>  | <i>Large Chemistry Lecture Theatre, Cardiff University Main Building, Park Place</i><br><b>1730-1820 - Public Lecture</b> |

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|  | <p><b>New Investigator Evening</b> – Round table<br/>‘Meet the Expert’ Discussions:<br/>Organisers: <b>Elizabeth Curtis</b> (Southampton, UK), <b>Hazel Fermor</b> (Leeds, UK), <b>Richard van Arkel</b> (London, UK) and <b>Dimitris Vlachopoulos</b> (Exeter, UK)<br/>Small project grants<br/>Working in industry<br/>Clinical academic career<br/>Meet the editor / Getting published<br/>Bridging the gap<br/>Moving abroad for research<br/>Improving your online profile<br/>Translation pathways (quality management, identifying project partners)<br/>Basic science academic career</p> | <p>Chairs: <b>Elaine Dennison</b> (Southampton, UK) and <b>Mark Wilkinson</b> (Sheffield, UK)<br/>More than skin deep: how sunlight shapes our bodies and minds - <b>Linda Geddes</b><br/>In conjunction with the BRS Neil MacKenzie Public Engagement award</p> |
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| <b>Wednesday 4 September 2019 Continued/...</b> |   |                    |  |
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| <b>1900-2200</b>                                | <p><i>Temple of Peace, Cardiff CF10 3AP</i><br/><b>Rare Bone Diseases Workshop and Supper supported by Alexion, Kyowa Kirin and Mereo BioPharma<br/>Chairs: <b>Kassim Javaid</b> (Oxford, UK) and <b>Ines Reichert</b> (London, UK)</b></p> | <b>1900-2100</b>   | <p><i>Physiology A Lecture Theatre, Ground Floor</i><br/><b>Biomechanics and Bioengineering Research Centre Versus Arthritis Workshop</b></p>    |
| <b>1900-1910</b>                                | Registration and networking   |                    | <p><b>‘Interdisciplinary research in Osteoarthritis’</b><br/>Chairs: <b>Ben Egan</b> (Cardiff, UK) and <b>Ilse Jonkers</b> (Leuven, Belgium)</p> |
| <b>1910-1915</b>                                | Introduction and setting the scene for rare bone diseases research in the UK – <b>Kassim Javaid</b> (Oxford, UK)  | <b>1900 – 1915</b> | An engineer’s perspective – <b>Gemma Whatling</b> (Cardiff, UK)  |
| <b>1915-2000</b>                                | Rare disease mechanistic insights to therapy - <b>Brendan Lee</b> (Houston, USA)  | <b>1915 – 1930</b> | A bio-engineer’s perspective – <b>Wayne Ayre</b> (Cardiff, UK)   |
| <b>2000-2005</b>                                | <b>OC3</b> , Ochronotic pigment distribution in alkaptonuric mice reveals that homogentisic acid deposition in tissues reflects the intensity of mechanical loading – <b>Juliette Hughes</b> (Liverpool, UK)                                | <b>1930 – 1945</b> | A biologist’s perspective - <b>Sophie Gilbert</b> (Cardiff, UK)  |
| <b>2005-2010</b>                                | <b>OC4</b> , Characterization of Pain in Fibrous Dysplasia – <b>Tihana Spencer</b> (Bethesda, USA)  | <b>1945 - 2000</b> | An orthopaedic registrar’s perspective - <b>Alison Kinghorn</b> (Cardiff, UK)  |
| <b>2010-2015</b>                                | <b>OC5</b> , Novel use of Burosumab in refractory iron-induced FGF23 mediated hypophosphataemic osteomalacia – <b>Raj Amarnani</b> (Oxford, UK)   | <b>2000 – 2100</b> | <i>Light buffet supper and networking (BIOSI Foyer)</i>  |
| <b>2020-2030</b>                                | Short break   |                    |  |

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| <b>2030-2100</b> | Unanswered orthopaedic issues when treating broken brittle bones - <b>Fergal Monsell</b>   |  |  |
| <b>2100-2130</b> | Rare OI phenotypes: why detailed phenotyping matters - <b>Meena Balasubramanian</b>  |  |  |
| <b>2130-2200</b> | The genetic epidemiology of acquired heterotopic ossification: Prospects for novel treatment strategies? - <b>Mark Wilkinson</b> (Sheffield, UK) |  |  |
| <b>2200-2205</b> | <b>LB1</b> , Imaging Fibrous Dysplasia of bone – <b>Alan Boyde</b> (London, UK)  |  |  |

| <b>Thursday 5 September 2019</b> |   |
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| <b>0830</b>                      | <i>Entrance Foyer, Ground Floor</i><br>Registration   |
| <b>0900-0920</b>                 | <i>Shared Lecture Theatre, 1<sup>st</sup> Floor</i><br>Welcome and opening remarks<br><b>Bronwen Evans</b> (Cardiff, UK) and <b>Richie Gill</b> (Bath, UK), Chairs of Organising Committee  |
| <b>0920-1020</b>                 | <i>Shared Lecture Theatre, 1<sup>st</sup> Floor</i><br><b>Symposium 1: – Osteoarthritis</b><br>Chairs: <b>Bronwen Evans</b> (Cardiff, UK) and <b>Richie Gill</b> (Bath, UK)   |
| <b>0920-0950</b>                 | <b>IS1</b> , Comorbidities and Osteoarthritis - <b>Fiona Watt</b> (Oxford, UK)  |
| <b>0950-1020</b>                 | <b>IS2</b> , Novel strategies in regenerative medicine for musculoskeletal disease - <b>Andrew McCaskie</b> (Cambridge, UK)   |
| <b>1020-1100</b>                 | <i>Shared Lecture Theatre, 1<sup>st</sup> Floor</i><br><b>Oral communications – OA theme</b><br>Chairs: <b>Clare Brockett</b> (Leeds, UK) and <b>Dimitris Vlachopoulos</b> (Exeter, UK)   |
| <b>1020-1030</b>                 | <b>OP6</b> , Mutations in osteoarthritis susceptibility genes cause functional changes in zebrafish joints that lead to altered load and disease pathology – <b>Chrissy Hammond</b> (Bristol, UK)                                 |
| <b>1030-1040</b>                 | <b>OP7</b> , Preclinical diabetes accelerates onset of Osteoarthritis - lessons from model system - <b>Samuel Joshua Pragasam</b> (Hyderabad, India)  |
| <b>1040-1050</b>                 | <b>OP8</b> , Bi-Unicondylar Arthroplasty preserves the Anterior Cruciate Ligament, retaining near-normal anteroposterior stability in the treatment of medial and lateral tibiofemoral arthrosis – <b>Amy Garner</b> (London, UK) |
| <b>1050-1100</b>                 | <b>OP9</b> , Individuals with high bone mass have increased clinical and radiographic progression of knee osteoarthritis independent of fat mass <b>April Hartley</b> , (Bristol, UK)   |
| <b>1100-1200</b>                 | <i>Entrance Foyer area and CO.13, Ground Floor</i><br><i>and</i><br><i>Seminar room E1.22, 1<sup>st</sup> Floor</i><br>Refreshments, Exhibition and Poster viewing (odd numbered posters)   |

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| <b>1200-1230</b> | <p><i>Shared Lecture Theatre, 1<sup>st</sup> Floor</i></p> <p><b>Plenary lecture</b></p> <p>Chairs: <b>Jim Gallagher</b> (Liverpool, UK) and <b>Ines Reichert</b> (London, UK)</p> <p><b>IS3</b> - New therapeutic approaches to OA, <b>Brendan Lee</b> (Houston, USA)</p> |
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| <b>Thursday 5 September 2019 Continued/...</b>       |  |   |   |  |
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| <b>1230-1250</b>                                     | <p><i>Shared Lecture Theatre, 1<sup>st</sup> Floor</i></p> <p><b>Poster Pitching</b></p> <p>Chairs: <b>Jim Gallagher</b> (Liverpool, UK) and <b>Ines Reichert</b> (London, UK)</p> <p><b>PP1</b>, High tibial osteotomy (HTO) and wide stance (WS) gait reduces knee joint loading in individuals with varus knee deformity - <b>Jake Bowd</b> (Cardiff, UK)</p> <p><b>PP2</b>, Which muscle parameters are longitudinally associated with knee osteoarthritis outcomes? Findings from the Hertfordshire Cohort Study - <b>Nicholas Fuggle</b> (Southampton, UK)</p> <p><b>PP3</b>, Ochronotic pigment distribution in alkaptonuric mice reveals that homogentisic acid deposition in tissues reflects the intensity of mechanical loading - <b>Juliette Hughes</b> (Liverpool, UK)</p> <p><b>PP4</b>, Osteoblast-specific Enpp1 deficiency promotes bone mass whilst worsening the metabolic phenotype - <b>Fiona Roberts</b> (Oxford, UK)</p> <p><b>PP5</b>, Associations between chondrocyte transiency and osteoarthritis pathology - <b>Hasmik Jasmine Samvelyan</b> (Edinburgh, UK)</p> <p><b>PP6</b>, Barbara Mawer Travelling fellowship: Associations between endocrine metabolites and bone mineral density in children aged 6-8 years: the PANIC study - <b>Dimitris Vlachopoulos</b> (Exeter, UK)</p> <p><b>PP7</b>, Determinants of bone mineral content and density in children aged 6-8 years: the PANIC study - <b>Annie Constable</b> (Exeter, UK)</p> <p><b>PP8</b>, Does screening for high hip fracture risk reduce fractures by modifying falls risk? A post hoc analysis from the SCOOP study - <b>Eugene McCloskey</b> (Sheffield, UK)</p> <p><b>PP9</b>, The Effect of Bone Quality on the Time Dependant Response of Human Trabecular Bone at Physiological Levels of Strain - <b>Robert Wallace</b> (Edinburgh, UK)</p> <p><b>PP10</b>, New therapeutic avenues in bone repair: harnessing a novel endogenous molecule to boost bone and prevent bone loss in inflammatory disease - <b>Jonathan Lewis</b> (Birmingham, UK)</p> <p><b>PP11</b>, Do sex hormones determine sexual dimorphism of the bone vasculature? <b>Alice Goring</b> (Southampton, UK)</p> |   |   |  |
| <b>1250-1350</b>                                     | <p><i>Entrance Foyer area, Ground Floor</i></p> <p><i>and</i></p> <p><i>Seminar room E1.22, 1<sup>st</sup> Floor</i></p> <p>Lunch and Exhibition</p>   |   |   |  |
|  | <table border="1" style="width: 100%;"> <tr> <td style="width: 50%;"><i>Shared Lecture Theatre, 1<sup>st</sup> Floor</i></td> <td style="width: 50%;"><i>Physiology B Lecture Theatre, Basement</i></td> </tr> <tr> <td><b>BRS Annual General Meeting (time to be added)</b></td> <td><b>BORS Annual General Meeting (time to be added)</b></td> </tr> </table>  | <i>Shared Lecture Theatre, 1<sup>st</sup> Floor</i> | <i>Physiology B Lecture Theatre, Basement</i> | <b>BRS Annual General Meeting (time to be added)</b> |
| <i>Shared Lecture Theatre, 1<sup>st</sup> Floor</i>  | <i>Physiology B Lecture Theatre, Basement</i>  |   |   |  |
| <b>BRS Annual General Meeting (time to be added)</b> | <b>BORS Annual General Meeting (time to be added)</b>  |   |   |  |

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| <b>1350-1445</b>   | <i>Shared Lecture Theatre, 1<sup>st</sup> Floor</i><br><b>Sponsored Symposium – UCB</b><br>Chair: <b>Mike Stone</b> (Cardiff, UK) |
| <b>1350-1400</b>   | Clinical tools to assist goal-directed therapy for fragility and fracture patients – <b>Mike Stone</b> (Cardiff, UK)              |
| <b>14.00-14.20</b> | Mass vs strength: Which measurement can help guide my patients' therapy – <b>Beth Curtis</b> (Southampton, UK)                    |
| <b>14.20-14.40</b> | How do bone cells translate drug effects into bone strength? – <b>Jon Tobias</b> (Bristol, UK)                                    |
| <b>14.40-14.45</b> | Looking to the future – <b>Mike Stone, Beth Curtis and Jon Tobias</b>   |

| <b>Thursday 5 September 2019 Continued/...</b> |  |   |
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| <b>1445-1545</b>                               | <i>Shared Lecture Theatre, 1<sup>st</sup> Floor</i><br><b>OATech+ Symposium</b><br>supported by OATech+<br>Chairs: <b>Sophie Gilbert</b> (Cardiff, UK) and <b>Sabina Gheduzzi</b> (Bath, UK) | <i>Physiology B Lecture Theatre, Basement</i><br><b>Oral communications - Basic</b><br>Chairs: <b>Andrew Chantry</b> (Sheffield, UK) and <b>Isabel Orriss</b> (London, UK)                                      |
| <b>1445-1515</b>                               | <b>IS5, OA – where movement modelling meets biology - Ilse Jonkers</b> (Leuven, Belgium)   | <b>1445-1455 OC10, Systemic Teriparatide with Locally Injected Mesenchymal Stem Cells Synergistically Enhances Fracture Healing – Liza Osagie</b> (London, UK)  |
| <b>1515-1525</b>                               | <b>IS4, OATech+ EPSRC Network plus funding update - Cathy Holt</b> (Cardiff, UK)   | <b>1455-1505 OP11, Predicting cortical bone adaptation in the mouse tibia: a longitudinal study – Vee San Cheong</b> (Sheffield, UK)  |
| <b>1525-1545</b>                               | <b>IS6, Imaging OA – technology challenges and opportunities - David Williams</b> (Cardiff, UK)  | <b>1505-1515 OC12, The secretome of mesenchymal stromal cells drives functional heterogeneity – Andrew Stone</b> (York, UK)   |
|  |  | <b>1515-1525 OC13, Analysis of osteoclastic resorption in vitro reveals new pathways of bone collagen breakdown and novel markers of bone resorption in vitro and in vivo – Brendan Norman</b> (Liverpool, UK)  |
|  |  | <b>1525-1535 OC14, Understanding the role of L-cysteine and hydrogen sulphide in the beneficial effects of N-acetylcysteine on bone formation and arterial medial calcification – Lucie Bourne</b> (London, UK) |
|  |  | <b>1535-1545 OC15, TightRight : augmenting screwdrivers to reduce bone stripping rates and optimise tightness when inserting non-</b>   |

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|                  |  | locking screws – <b>James Fletcher</b><br>(Bath, UK) |
| <b>1545–1605</b> | <i>Entrance Foyer area, Ground Floor</i><br><i>and</i><br><i>Seminar room E1.22, 1<sup>st</sup> Floor</i><br>Refreshments, Exhibition and Poster viewing |  |

| <b>Thursday 5 September 2019 Continued/...</b> |  |  |
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| <b>1605-1705</b>                               | <i>John Pryde Lecture Theatre, Basement</i><br><b>Symposium 2: - Epigenetics</b><br>Chairs: <b>Elizabeth Curtis</b> (Southampton, UK)<br>and <b>Debbie Mason</b> (Cardiff, UK)   | <i>Physiology B Lecture Theatre, Basement</i><br><b>Symposium 3: - Epidemiology and Health Services Research supported by National Joint Registry for England and Wales</b><br>Chairs: <b>Kassim Javaid</b> (Oxford, UK) and<br><b>Andrew McCaskie</b> (Cambridge, UK) |
| <b>1605-1635</b>                               | <b>IS7</b> , What has DNA methylation analysis told us about OA? <b>Louise Reynard</b> (Newcastle, UK)   | <b>IS9</b> , Patient reported outcome measures in musculoskeletal disease - How can they inform decision-making? <b>Ola Rolfson</b> (Gothenburg, Sweden)   |
| <b>1635-1705</b>                               | <b>IS8</b> , microRNA biomarkers: new diagnostic and prognostic tools for bone diseases - <b>Matthias Hackl</b> (Vienna, Austria)  | <b>IS10</b> , A global perspective on adolescent growth and healthy musculoskeletal ageing - <b>Kate Ward</b> (Southampton, UK)  |
| <b>1705-1715</b>                               | Break  |  |
| <b>1715-1745</b>                               | <i>Shared Lecture Theatre, 1<sup>st</sup> Floor</i><br><b>Sponsored Symposium – Gedeon Richter</b><br>Chairs: <b>Elaine Dennison</b> (Southampton, UK) and <b>Bridget Scammell</b> (Nottingham, UK)<br>- <b>Mike Stone</b> (Cardiff, UK)   |  |
| <b>1745-1830</b>                               | <i>Shared Lecture Theatre, 1<sup>st</sup> Floor</i><br><b>Debate supported by MiLabs</b><br>Chairs: <b>Bronwen Evans</b> (Cardiff, UK) and <b>Mark Wilkinson</b> (Sheffield, UK)<br>This house believes that if it doesn't hurt it isn't a disease:<br><b>IS13</b> , For the motion; <b>Chris Little</b> (Sydney, Australia)<br><b>IS14</b> , Against the motion; <b>Alison Gartland</b> (Sheffield, UK) |  |
| <b>1915-2300</b>                               | Conference Dinner – National Museum Cardiff  |  |

| Friday 6 September 2019 |  |
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| 0800                    | Entrance Foyer, Ground Floor<br>Registration   |
| 0830–0930               | Shared Lecture Theatre, 1 <sup>st</sup> Floor<br><b>Symposium 4: Cancer and Bone</b><br>Chairs: <b>Michelle Lawson</b> (Sheffield, UK) and <b>Debbie Mason</b> (Cardiff, UK)   |
| 0830–0900               | <b>IS15</b> , Endogenous production of IL-1B by breast cancer cells drives metastasis and colonisation of the bone microenvironment - <b>Penny Ottewell</b> (Sheffield, UK)  |
| 0900-0930               | <b>IS16</b> , Bones, Groans and Lumps: Improving Outcomes in Orthopaedic Oncology <b>Mike Parry</b> (Birmingham, UK)   |
| 0930–1000               | Shared Lecture Theatre, 1 <sup>st</sup> Floor<br><b>Poster pitching</b><br>Chairs: <b>Michelle Lawson</b> (Sheffield, UK) and <b>Debbie Mason</b> (Cardiff, UK)<br><b>PP12</b> , Evaluating strength of 3D printed screw threads for patient-specific osteosynthesis plates - <b>Alisdair MacLeod</b> (Bath, UK)<br><b>PP13</b> , What is the optimum tightness for non-locking cortical screws, and how can this be predicted prior to insertion? - <b>James Fletcher</b> (Bath, UK)<br><b>PP14</b> , Genome-wide Expression Analysis of Human Osteoclasts Following Clinically Relevant Cobalt and Chromium Exposure - <b>Karen Shah</b> (Sheffield, UK)<br><b>PP15</b> , How does body weight influence the risk of vertebral fracture?- <b>Jin Luo</b> (London, UK)<br><b>PP16</b> , Accelerated osteogenesis in vivo and in vitro achieved through metabolic and secretomic modification in mesenchymal stromal cells - <b>Alasdair Kay</b> (York, UK)<br><b>PP17</b> , Higher birthweight is associated with greater limb muscle mass and grip strength in middle age: findings from the UK Biobank Imaging Enhancement - <b>Elizabeth Curtis</b> (Southampton, UK)<br><b>PP18</b> , Measuring prosthesis migration using a novel ultra-low dose CT-based method - <b>Kartik Logishetty</b> (London, UK)<br><b>PP19</b> , Pharmacokinetics of parathyroid hormone peptide PTH 1-34 via nasal spray for the treatment of osteoporosis - <b>Richard Pearson</b> (Nottingham, UK)<br><b>PP20</b> , The influence of the RNA binding protein HuR on skeletal development is not mediated through the control of mesenchymal cell differentiation - <b>Simon Tew</b> (Liverpool, UK)<br><b>PP21</b> , Investigating the regulation of bone mineralisation through in vitro and in vivo models of chronic kidney disease - <b>Shun-Neng Hsu</b> (Edinburgh, UK)<br><b>PP22</b> , Changes in gait, knee loading and patient reported outcomes following High Tibial Osteotomy - <b>Gemma Whatling</b> (Cardiff, UK)<br><b>PP23</b> , An in vitro assessment of knee kinematics following radial tears of the medial meniscus - <b>Fahd Mahmood</b> (Glasgow, UK)<br><b>PP24</b> , Correlations between Radiographic Classification Systems and Confirmed Cartilage Loss in Severe Knee Osteoarthritis - <b>Oisin Keenan</b> (Edinburgh, UK)<br><b>PP25</b> , Impact of renal function on response to oral and i.v. bisphosphonate treatment: Real world observational data using linkage to national registers - <b>Bo Abrahamsen</b> (Odense, Denmark)<br><b>PP26</b> , A tale of two phosphatases: how do matrix vesicles generate phosphate for bone mineralization? - <b>Scott Dillon</b> (Edinburgh, UK)<br><b>LBPP1</b> , Fleas and bites in bones – <b>Alan Boyde</b> (London, UK) |

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| <b>1000–1100</b> | <i>Entrance Foyer area and C0.13, Ground Floor</i><br><i>and</i><br><i>Seminar room E1.22, 1<sup>st</sup> Floor</i><br>Refreshments, Exhibition and Poster viewing (even numbered posters) |
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| <b>Friday 6 September 2019 Continued/...</b> |   |   |
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| <b>1100–1200</b>                             | <i>John Pryde Lecture Theatre, Basement</i><br><b>Oral communications - Clinical</b><br>Chairs: <b>Rosemary Hollick</b> (Aberdeen, UK)<br>and <b>Chris Wilson</b> (Cardiff, UK)                           | <i>Physiology B Lecture Theatre, Basement</i><br><b>Oral communications - Basic/Translational</b><br>Chairs: <b>Claire Clarkin</b> (Southampton, UK)<br>and <b>Andrew Phillips</b> (London, UK) |
| <b>1100-1110</b>                             | <b>OC16</b> , Targeting Rehabilitation to Improve Outcomes following total knee arthroplasty (TRIO): a randomised controlled trial of physiotherapy interventions – <b>David Hamilton</b> (Edinburgh, UK) | <b>OC22</b> , Transforming growth factor (TGF) $\beta$ inhibition with chemotherapy heals murine myeloma bone disease and improves fracture resistance – <b>Alanna Green</b> (Sheffield, UK)    |
| <b>1110–1120</b>                             | <b>OC17</b> , Over-Impaction of Acetabular Cups Can Reduce Fixation Strength: Surgical Technique Is Critical – <b>Ruben Doyle</b> (London, UK)  | <b>OC23</b> , Breast cancer metastasis to bone; the effect of LOX and P2X7R inhibition, - <b>Karan Shah</b> (Sheffield, UK)   |
| <b>1120–1130</b>                             | <b>OC18</b> , Bi-Unicondylar Arthroplasty preserves healthy gait characteristics and near-normal extensor mechanism efficiency compared to Total Knee Arthroplasty – <b>Amy Garner</b> (London, UK)       | <b>OC24</b> , Sexual dimorphism in both bone geometry and bone strength for a mouse model of Paget’s disease of bone (PDB) – <b>Alisha Sharma</b> (Southampton, UK)                             |
| <b>1130–1140</b>                             | <b>OC19</b> , Preoperative Gait Biomechanics and its Relationship to Functional Outcome Following Total Hip Arthroplast – <b>Paul Biggs</b> (Cardiff, UK) Cathy Holt (presenting)                         | <b>OC25</b> , Is the mechanical function of the meniscus altered in osteoarthritic knees? <b>Fahd Mahmood</b> (Glasgow, UK)   |
| <b>1140-1150</b>                             | <b>OC20</b> , Platelet-rich plasma (PRP) for patellar tendinopathy: a randomized controlled trial of leukocyte-rich PRP or leukocyte-poor PRP vs. saline – <b>Alex Scott</b> (Vancouver, Canada)          | <b>OC26</b> , Repurposing glutamate receptor antagonists to prevent the onset of post-traumatic osteoarthritis – <b>Cleo Bonnet</b> (Cardiff, UK)   |
| <b>1150-1200</b>                             | <b>OC21</b> , Charting longitudinal patient function following TKA and evaluating the influence of implant design: 8-year follow-up of a prospective RCT – <b>David Hamilton</b> (Edinburgh, UK)          | <b>LB3</b> , Osteoblast interaction with an endothelial cell-specific extracellular matrix protein controls trabecular bone formation rate and patterning – <b>Amy Naylor</b> (Birmingham, UK)  |
| <b>1200-1230</b>                             | <i>John Pryde Lecture Theatre, Basement</i><br><b>BORS Presidential Lecture</b><br><b>Andrew Amis</b> (London, UK)<br>Chair: <b>Richie Gill</b> (Bath, UK)  | <i>Physiology B Lecture Theatre, Basement</i><br><b>BRS Dent Lecture</b><br><b>Tim Arnett</b> (London, UK)<br>Chair: <b>Jim Gallagher</b> (Liverpool, UK)                                       |
| <b>1230-1330</b>                             | <i>Entrance Foyer area and C0.13, Ground Floor</i><br><i>and</i><br><i>Seminar room E1.22, 1<sup>st</sup> Floor</i>   |   |

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|  | Lunch, Exhibition and Poster viewing |
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| Friday 6 September 2019 Continued/... |   |   |
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| <b>1330-1430</b>                      | <i>John Pryde Lecture Theatre, Basement</i><br><b>Symposium 5: Imaging supported by ImagingBioPro Network and Scanco</b><br>Chairs: <b>Robert Wallace</b> (Edinburgh, UK) and <b>Wayne Ayre</b> (Cardiff, UK)   | <i>Physiology B Lecture Theatre, Basement</i><br><b>Symposium 6: Clinical cases</b><br>Chairs: <b>Amy Garner</b> (London, UK) and <b>Mike Stone</b> (Cardiff, UK) |
| <b>1330 – 1400</b>                    | <b>IS17</b> , Synchrotron imaging for bone research - <b>Ralph Muller</b> (Zurich, Switzerland)   | 1.  |
| <b>1400 – 1430</b>                    | <b>IS18</b> , Making Rainbows: Clinical Applications for Synchrotron Imaging - <b>Richie Abel</b> (London, UK)  | 2.<br>3.<br>4.  |
| <b>1430 - 1440</b>                    | Break   |   |
| <b>1440 – 1510</b>                    | <i>Shared Lecture Theatre, 1<sup>st</sup> Floor</i><br><b>Plenary Lecture</b><br>Chairs: <b>Bronwen Evans</b> (Cardiff, UK) and <b>Richie Gill</b> (Bath, UK)<br><b>IS19</b> , Mechanistic insights from Combination therapies- opportunities for osteoporosis and fracture healing - <b>Bente Langdahl</b> (Aarhus, Denmark) |   |
| <b>1510 – 1610</b>                    | <i>Shared Lecture Theatre, 1<sup>st</sup> Floor</i><br><b>Oral communications</b><br>Chairs: <b>Bronwen Evans</b> (Cardiff, UK) and <b>Richie Gill</b> (Bath, UK)   |   |
| <b>1510 – 1520</b>                    | <b>OC28</b> , Molecular imaging modalities reveal pathological matrix disorganisation in whole bone sections and isolated osteoblasts – <b>Aikta Sharma</b> (Southampton, UK)   |   |
| <b>1520 – 1530</b>                    | <b>OC29</b> , Can we predict medial knee load during gait for varus osteoarthritic knees using radiographic alignment measures? - <b>Gemma Whatling</b> (Cardiff, UK)   |   |
| <b>1530 – 1540</b>                    | <b>OC30</b> , Comprehensive evaluation of the morphology and mechanics of the human femoral head – <b>Enrico Dall'Ara</b> (Sheffield, UK)   |   |
| <b>1540 – 1550</b>                    | <b>OC31</b> , Visualisation and quantification of in situ porcine acetabular soft tissue behaviour: A study of labrum circumferential behaviour – <b>Jiacheng Yao</b> (Leeds, UK)   |   |
| <b>1550 - 1600</b>                    | <b>OC32</b> , AMPA/kainate glutamate receptors regulate inflammatory and degradative markers in 3D loading models of cartilage and bone – <b>Sophie Gilbert</b> (Cardiff, UK)   |   |
| <b>1600 - 1610</b>                    | <b>LB4</b> , Repairing myeloma-induced bone disease using combination bone anabolic and antiresorptive therapy - <b>Rebecca Andrews</b> (Sheffield, UK)   |   |
| <b>1610 - 1625</b>                    | <i>Shared Lecture Theatre, 1<sup>st</sup> Floor</i><br><b>Awards and closing remarks</b>  |   |