5th International Workshop on Advances in the Molecular Pharmacology and Therapeutics of Bone Disease
27-30 June 2012

St Catherine’s College
Oxford, UK

Final Programme
5th International Workshop on Advances in the Molecular Pharmacology and Therapeutics of Bone Disease
27-30 June 2012

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Bookmark and check mobile website for any programme changes during the meeting:

http://m.oxfordbonepharm.org/
Advances in the Molecular Pharmacology and Therapeutics of Bone Disease

Scientific Committee
Chairman:
Graham Russell (Oxford, UK)
Co-Chairs:
Cyrus Cooper (Oxford and Southampton, UK)
Peter Croucher (Sydney, Australia)
Jack Martin (Melbourne, Australia)

In association with:
The Botnar Research Centre, University of Oxford
The Mellanby Institute for Bone Research, University of Sheffield

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Wednesday 27 June

10:00-18:00  Registration (Porters’ Lodge)

12:45  Lunch

13:50  WELCOME AND INTRODUCTION
       Graham Russell (Oxford and Sheffield, UK)

14:00-15:30  Advances in bone biology and genetics

       Chairs: Francis Glorieux (Montreal, Canada)/Bente Langdahl (Aarhus, Denmark)

       14:00  WHAT'S NEW IN BONE BIOLOGY AND THE IMPACT OF GENETICS
              Stuart Ralston (Edinburgh, UK)

       14:30  STEM CELLS AND REGENERATIVE MEDICINE: DREAM OR REALITY?
              Paolo Bianco (Rome, Italy)

       15:00  THE INTERRELATIONSHIP BETWEEN FAT AND BONE
              Clifford Rosen (Maine, USA)

       15:30  Tea

16:00-17:40  Advances in skeletal biology and disease

       Chairs: Andrew Carr (Oxford, UK)/Peter Croucher (Sydney, Australia)

       16:00  REGULATORY PATHWAYS IN OSTEOCYTES
              Joanna Price (Bristol, UK)

       16:30  SCLEROSTIN BIOLOGY AND ANABOLIC STRATEGIES
              Michaela Kneissel (Basle, Switzerland)

       17:00  TENDON AS A THERAPEUTIC TARGET
              Philippa Hulley (Oxford, UK)

       17:20  NOVEL TARGETS AND MYELOMA BONE DISEASE
              Claire Edwards (Oxford, UK)

       17:40  Close

19:00-20:15  Dinner (St Catherine’s College)
Thursday 28 June

08:00-17:00  Registration (Bernard Sunley Building)

08:45-10:15  Regulatory pathways in bone formation and resorption

Chairs: Tim Arnett (London, UK)/Jonathan Reeve (Cambridge, UK)

08:45  NEW MEDIATORS OF PTH ANABOLIC EFFECTS
Serge Ferrari (Geneva, Switzerland)

09:15  EPHRIN SIGNALLING WITHIN THE OSTEOBLAST LINEAGE AND PTH ACTION
Natalie Sims (Melbourne, Australia)

09:45  REGULATION OF HOMEOSTASIS BY RAMPS AND THEIR POTENTIAL AS DRUG TARGETS
Tim Skerry (Sheffield, UK)

10:15  Coffee and Posters

11:15-12:45  Therapeutics based on receptor biology

Chairs: Serge Ferrari (Geneva, Switzerland)/Tim Skerry (Sheffield, UK)

11:15  (MIS)ADVENTURES IN DRUG DISCOVERY
Lorraine Fitzpatrick (GSK)

11:45  SELECTIVE RECEPTOR MODULATION: VITAMIN D AND GLUCOCORTICOIDS
Henry Bryant (Eli Lilly)

12:15  SELECTIVE RECEPTOR MODULATION: RETINOIC ACID AND ANDROGENS
Gary Krishnan (Eli Lilly)

12:45  Lunch

14:00-15:00  ECTS/Amgen Fellows Presentations

Chairs: Miep Helfrich (Aberdeen, UK)/Bente Langdahl (Aarhus, Denmark)

14:00  A COMBINED FC-OPG/PTH(1-34) THERAPY TO RESTORE IMPAIRED SKELETAL GROWTH AND BONE LOSS IN A MOUSE MODEL OF IL-6 DEPENDENT JUVENILE INFLAMMATORY DISEASES
Andrea Del Fattore (L'Aquila, Italy)

14:15  IKK INHIBITORS: RATIONALE, MECHANISMS OF ACTION, AND IMPLICATIONS FOR THE TREATMENT OF BONE DISEASE
Aymen Idris (Edinburgh, UK)

14:30  SELECTIVE GLUCOCORTICOID RECEPTOR MODULATION MAINTAINS BONE MINERAL DENSITY IN MICE
Martina Rauner (Dresden, Germany)

14:45  PERIOSTIN DEFICIENCY INCREASES CORTICAL MICROCRACKS AND REDUCES WOVEN BONE FORMATION IN MICE SUBJECTED TO FATIGUE LOADING
Nicolas Bonnet (Geneva, Switzerland)

14:50  EFFECTS OF POLYMORPHISMS ON TNFRSF11B GENE FUNCTION: IMPLICATIONS FOR BONE DISEASES
Anna Daroszewska (Edinburgh, UK)
14:55 PREVALENCE AND CLINICAL SIGNIFICANCE OF OSTEOPROTEGERIN AUTO-ANTIBODIES
Philip Riches (Edinburgh, UK)

15:00-15:20 Science, medicine and society 1
Chairs: Jack Martin (Melbourne, Australia)/Graham Russell (Oxford and Sheffield, UK)
15:00 THE CHARITIES SECTOR AND THE ROLE OF ARTHRITIS RESEARCH UK (ARUK)
Alan Silman (Medical Director, ARUK)

15:20-16:00 Tea and Attended Posters

16:00-16:30 Pathogenic pathways and other therapeutic opportunities
Chairs: Roger Smith (Oxford, UK)/Michael Whyte (St Louis, USA)
16:00 LESSONS FROM OCHRONOSIS
Jim Gallagher (Liverpool, UK)/Alan Boyde (London)

16:30-17:30 Science, medicine and society 2
Chairs: Jack Martin (Melbourne, Australia)/Graham Russell (Oxford and Sheffield, UK)
16:30 REDUCING THE IMPACT OF HIP FRACTURES IN REAL LIFE
Keith Willett (National Clinical Director for Trauma Care, UK)
16:50 MANAGING SCIENCE AND INNOVATING IN CHALLENGING TIMES; A VIEW FROM NIH
Joan McGowan (Director of the Division of Musculoskeletal Diseases at the National Institute of Arthritis and Musculoskeletal and Skin Diseases, Bethesda, USA)
17:10 A VIEW FROM THE LEGAL WORLD
Ranjit Dhindsa (Attorney, Washington, USA)

17:30-18:15 Keynote Lecture
Chairs: Hal Ebetino (Cincinnati, USA)/Graham Russell (Oxford and Sheffield, UK)
THE SHOCKING HISTORY OF PHOSPHORUS
John Emsley (Chemist, Author and Broadcaster)

18:15 Close

19:00-20:15 Dinner (St Catherine’s College)

20:30 Historic Oxford – Walking Tour (meet at Porters’ Lodge)
Friday 29 June

08:00-17:00  Registration (Bernard Sunley Building)

08:30-08:45  Musculoskeletal research in Oxford: Past, Present and Future
Chairs: Afsie Sabokbar (Oxford, UK)/James Triffitt (Oxford, UK)

08:30  MUSCULOSKELETAL RESEARCH IN OXFORD
Andrew Carr (Oxford, UK)

08:45-10:20  The impact of structural biology on drug discovery: Science and the Structural Genomics Consortium
Chairs: Afsie Sabokbar (Oxford, UK)/James Triffitt (Oxford, UK)

08:45  INTRODUCTION TO THE STRUCTURAL GENOMICS CONSORTIUM: PAST, PRESENT AND FUTURE
Chas Bountra (Oxford, UK)

09:05  UNRAVELLING THE HUMAN KINOME: USING CHEMICAL PROBES FOR IDENTIFYING NEW DRUG TARGETS
Stefan Knapp (Oxford, UK)

09:30  THE ROLE OF THE BMP/TGFBIETA FAMILY IN FIBRODYSPLASIA OSSIFICANS PROGRESSIVA
Alex Bullock (Oxford, UK)

09:55  EPIDEMIOLOGICAL APPROACHES TO BONE AND MUSCULOSKELETAL PHYSIOLOGY AND DISEASE
Udo Oppermann (Oxford, UK)

10:20  Coffee

10:50-11:20  Update on Paget's Disease
Chairs: Kenneth Lyles (Durham, USA)/ Ian Reid (Auckland, New Zealand)

10:50  UPDATE ON PAGET'S DISEASE
David Roodman (Pittsburgh, USA)

11:20-12:40  New approaches to treating bone diseases
Chairs: Tim Arnett (London, UK)/Caje Moniz (London, UK)

11:20  BONE ANABOLICS IN MYELOMA BONE DISEASE
Andy Chantry (Sheffield, UK)

11:40  PURINERGIC SIGNALLING IN BONE
Alison Gartland (Sheffield, UK)

12:00  EVALUATION OF THE THERAPEUTIC POTENTIAL OF A NOVEL CNP ANALOGUE FOR ACROMEGALIA
Florence Lorget (BioMarin, Novato, USA)

12:20  NEW DIRECTIONS IN THE BIO-ORGANIC CHEMISTRY OF BPs
Marie Migaud (Belfast, UK)

12:40  Lunch
14:00-15:30 Emerging treatments for bone diseases

Chairs: Richard Eastell (Sheffield, UK)/Uri Liberman (Tel Aviv, Israel)

14:00 ENZYME REPLACEMENT IN BONE DISEASE BECOMES A REALITY/THERAPEUTIC ADVANCES IN THE TREATMENT OF INHERITED DISORDERS OF BONE
Michael Whyte (St Louis, USA)

14:30 CATHEPSIN K INHIBITION AS A THERAPEUTIC STRATEGY
Le Thi Duong (Merck)

15:00 NITRIC OXIDE AND BONE
Sophie Jamal (Toronto, Canada)

15:30 Tea

16:00-18:00 Arthritis, calcification disorders and cancer

Chairs: Sophie Jamal (Toronto, Canada)/Kassim Javaid (Oxford, UK)

16:00 ADVANCES IN THERAPIES FOR INFLAMMATORY ARTHRITIS
Peter Taylor (Oxford, UK)

16:30 ADVANCES IN THERAPIES FOR OSTEOARTHRITIS AND THE ROLE OF STRONTIUM RANELATE
Cyrus Cooper (Oxford and Southampton, UK)

Chairs: Cyrus Cooper (Oxford, UK)/Peter Croucher (Sydney, Australia)

17:00 REGULATORY PATHWAYS IN VASCULAR CALCIFICATION AND POSSIBLE INTERVENTION STRATEGIES
Lorenz Hofbauer (Dresden, Germany)

17:30 THERAPEUTICS IN BONE ONCOLOGY: CURRENT STATUS AND FUTURE DIRECTIONS
Robert Coleman (Sheffield, UK)

18:00 Close

19:30-22:30 Reception and Workshop Dinner (St Catherine's College)
Saturday 30 June

08:30-17:00   Registration (Bernard Sunley Building)

08:35-16:45   Bisphosphonates: Update and future prospects

08:35   INTRODUCTION
Hal Ebetino (Cincinnati, USA)/Graham Russell (Oxford and Sheffield, UK)

Chairs: Hal Ebetino (Cincinnati, USA)/Graham Russell (Oxford and Sheffield, UK)

08:45   CLINICAL INTRODUCTION AND PERSPECTIVES
Paul Miller (Colorado, USA)

09:05   UPDATE ON ZOLEDRONATE, AND ITS EXTENDED ACTIONS
Ian Reid (Auckland, New Zealand)

09:25   BPs AND LIFE SPAN
Kenneth Lyles (Durham, USA)

09:50   CELLULAR AGEING: AUTOPHAGY AND OTHER AGEING MECHANISMS
Katja Simon (Oxford)

10:20   Coffee
Chairs: Nick Athanasou (Oxford, UK)/Rajesh Thakker (Oxford, UK)

10:45   ANTI-APOPTOTIC EFFECTS OF BPs; CONNEXINS, ERK, AND OSTEOCYTES
Lilian Plotkin (Indianapolis, USA)

11:15   OSTEOCYTES IN HIPS
Jonathan Reeve (Cambridge, UK)

11:35   LINKING AGEING MECHANISMS AND BONE LOSS
James Edwards (Oxford, UK)

11:55   CELLULAR UPTAKE AND DISTRIBUTION WITHIN BONE
Fraser Coxon (Aberdeen, UK)

12:15   NEW CHEMICAL PROBES FOR BISPHOSPHONATE INTERACTIONS WITH BONE
Charles McKenna (Los Angeles, USA)

12:35   Lunch
Chairs: Claus Glüer (Kiel, Germany)/Nuria Guanabens (Barcelona, Spain)

14:00   CLINICAL STUDIES OF DISTRIBUTION AND REGIONAL EFFECTS OF BPS IN MAN
Ignac Fogelman (London, UK)

14:20   MEASURING CLINICAL RESPONSES USING BIOMARKERS
Richard Eastell (Sheffield, UK)

14:40   EFFECTS OF BPs ON OSTEOCLAST DIFFERENTIATION
Guillaume Mabillet (Angers, France)
14:55  THE IMPORTANCE OF GAMMA-DELTA T CELLS  
Keith Thompson (Aberdeen, UK) 

15:10  Tea  
Chairs: Uri Liberman (Tel Aviv, Israel)/David Roodman (Pittsburgh, USA) 

15:30  ASSESSING MINERAL AFFINITY OF BPs  
Xuchen (Aimee) Duan (Oxford, UK) 

15:45  STUDIES ON FPPS AND GGPPS AND MUTANTS  
James Dunford (Oxford, UK) 

16:00  BONE LOSS AND EFFECTS OF BPs AFTER BURNS  
Gordon Klein (Galveston, USA) 

16:15  NEW DIRECTIONS WITH BPs AND GASTROINTESTINAL ACTIONS  
Michael Pazianas (Oxford, UK) 

16:35  Closing remarks 

16:45  Close and end of Workshop 

19:30-22:00  Reception and Dinner: St Peter’s College
POSTERS (PhD Students)

P01
THE ROLE OF CONNEXIN 43-MEDIATED GAP JUNCTIONAL INTERCELLULAR COMMUNICATION IN THE SKELETAL RESPONSE TO MECHANICAL UNLOADING
Shane Lloyd (Pennsylvania, USA)

P02
N-CADHERIN MODULATION OF BONE ANABOLIC RESPONSES VIA WNT AND PARATHYROID HORMONE SIGNALING
Leila Revollo (St Louis, USA)

P03
THE ROLE OF E PROTEINS IN OSTEOCLAST DIFFERENTIATION AND SURVIVAL
Courtney Long (Oklahoma, USA)

P04
THROMBOSPONDIN-1 REGULATES BONE DENSITY BY REGULATING OSTEOCLAST-OSTEOBLAST COUPLING
Sarah Amend (St Louis, USA)

P05
IDENTIFICATION, CHARACTERIZATION AND ISOLATION OF A COMMON MONOCYTE PROGENITOR FOR OSTEOCLASTS, MACROPHAGES AND DENDRITIC CELLS FROM MURINE BONE MARROW AND PERIPHERAL TISSUES
Christian Jacome-Galarza (Connecticut, USA)

P06
EFFECTS OF SLOW ACTION DRUGS ON THE CARTILAGE AND SUBCHONDRAL BONE IN A RABBIT MODEL OF OSTEOARTHRITIS
Maria Permuy (Santiago de Compostela, Spain)

P07
OSTEOGENESIS IMPERFECTA - GENOTYPE, PHENOTYPE AND MEDICAL TREATMENT
Jannie Dahl Hald (Aarhus, Denmark)

P08
THE ROLE OF AUTOPHAGY IN THE PATHOGENESIS OF PAGETS DISEASE OF BONE
Eman Azzam (Aberdeen, UK)

P09
THE EFFECT OF ACTIVATING FGFR3 MUTATIONS ON OSTEOGENIC DIFFERENTIATION AND ECTOPIC BONE FORMATION BY HUMAN PERIOSTEAL DERIVED CELLS
Johanna Bolander (Leuven, Belgium)

P10
AGE-RELATED CHANGES IN GENE EXPRESSION PATTERNS IN BONE FOLLOWING MECHANICAL LOADING
Tobias Thiele (Berlin, Germany)

P11
THE DIMINISHED RESPONSE TO AXIAL LOADING IN AGED FEMALE MICE IS NOT INFLUENCED BY CONCURRENT EXERCISE
Lee Meakin (Bristol, UK)

P12
EFFECTS OF ARTIFICIAL MATRICES ON OSTEOCLASTOGENESIS
Juliane Salbach (Dresden, Germany)
PATHOPHYSIOLOGY OF MALE OSTEOPOROSIS: ROLE OF ANDROGENS AND DISUSE
Michaël Laurent (Leuven, Belgium)

ROLE OF TRAF6 ACTIVITY ON THE DEVELOPMENT AND PROGRESSION OF METASTATIC BONE DISEASE
Pushpabhaní Prábha Peramuhendígé (Edinburgh, UK)

ROLE OF THYROID HORMONE RECEPTOR ALPHA IN OSTEOARTHRITIS SUSCEPTIBILITY AND PREVENTION
Julian Waung (London, UK)

THE EFFECT OF OBESITY ON BONE STRUCTURE
Amy Evans (Sheffield, UK)

STUDY OF RANKL-MEDIATED PATHOGENIC MECHANISMS IN MOUSE MODELS AND DEVELOPMENT OF NEW THERAPEUTIC APPROACHES
Vagelis Rinotás (Vari, Greece)

PERIOSTIN DEFICIENCY INCREASES CORTICAL MICROCRACKS AND REDUCES WOVEN BONE FORMATION IN MICE SUBJECTED TO FATIGUE LOADING
Nicolas Bonnet (Geneva, Switzerland)

EFFECTS OF POLYMORPHISMS ON TNFRSF11B GENE FUNCTION: IMPLICATIONS FOR BONE DISEASES
Anna Daroszewska (Edinburgh, UK)

PREVALENCE AND CLINICAL SIGNIFICANCE OF OSTEOPROTEGERIN AUTO-ANTIBODIES
Philip Riches (Edinburgh, UK)

AN AUDIT EXPLORING THE RELATIONSHIP BETWEEN BISPHOSPHONATE THERAPY IN POST-MENOPAUSAL WOMEN WITH OSTEOPOROSIS AND SUB-TROCHANTERIC INSUFFICIENCY FRACTURES
Stephanie Avery (Cardiff, UK)

CIRCULATING MICROPARTICLES IN PAGET'S DISEASE, OSTEOPOROSIS AND BONE TUMORS
Judit Donáth (Budapest, Hungary)
General Information

Accommodation
If you are staying at the University please collect your room key from the Porters’ Lodge on your arrival, otherwise please go straight to the registration desk.

Vacating rooms
For those staying on campus, please note that rooms must be vacated after breakfast on the day of your departure.

Luggage storage
Luggage can be stored in the Porters’ Lodge.

Contact information – during the conference
In case of emergencies, messages can be left for delegates at the Porters’ Lodge on +44 (0)1865 271700. The Porters’ Lodge is manned 24 hours a day.

Registration
The registration desk is in the Porters’ Lodge on Wednesday and from then on in the Bernard Sunley Building, and is open as follows:

Registration desk: opening times
Wednesday 27 June 10:00-18:00
Thursday 28 June 08:00-17:00
Friday 29 June 08:00-17:00
Saturday 30 June 08:30-16:30

Conference Office
Please visit the Conference Office in Room B, upstairs in the Bernard Sunley Building, if you have any queries during the meeting.

Meals on campus
Dining times at the College are as follows:

Breakfast: 07:45-08:30
Lunch: 12:45
Dinner (Weds/Thurs): 19:00
Dinner (Fri): 19:30 for 20:00

The College bar will be open each evening.

Walking Tour
Thursday 28 June, 20:30
Post-dinner walking tour featuring some of Oxford’s most historic Colleges and pubs.
Please meet at the Porters’ Lodge

Post-Conference Dinner
Saturday 30 June, 19:30
For those able to stay on, there is a Post-Conference Dinner at St Peter’s College on the Saturday evening.
Lectures take place in the Bernard Sunley Lecture Theatre and posters, exhibition and tea/coffee breaks will be in the same building.

**Car parking**
St Catherine’s College is one of the few Oxford Colleges to have a car park but please note that it can get extremely busy so spaces cannot be guaranteed. There is no charge for parking but please leave a note on your dashboard to indicate which conference you are attending (Molecular Pharmacology 27-30 June).

**Taxis**
Telephone numbers for taxis:
ABCTaxis: +44 (0)1865 770077  
Radio Taxis: +44 (0)1865 242424  
Courtesy Cars: +44 (0)1865 343575  

For Heathrow transfers  
Courtesy Cars: +44 (0)1865 343575  
Hugh Damien: +44 (0)20 8897 0555

**Internet access**
Internet access is available at the meeting. WiFi is available in most areas of the College, and leads are available from the Porters in case you need one to connect your laptop. You will need a password, which will be available from the registration desk staff.

There is also a computer room for delegates’ use (shown on the plan below). You will need to pick up a password from the registration desk in order to use this.

**Websites**
www.oxfordbonepharm.org  
For mobile phones - http://m.oxfordbonepharm.org/