Faculty Profiles

Graham Russell

Graham Russell (R G G Russell) is Emeritus Professor of Musculoskeletal Pharmacology at Oxford and Sheffield Universities. After graduating in Biochemistry from Cambridge University in 1962 he spent his formative years in Leeds, Davos, Bern, and then in Oxford, where he completed medical studies. In the 1970s, he worked at the Massachusetts General Hospital in Boston with John Potts and Stephen Krane, before joining Jack Martin at Sheffield University, where he became Professor of Human Metabolism from 1977-2001. In 2001 he moved back to Oxford University as the first Norman Collisson Professor of Musculoskeletal Sciences, and first Director of the Botnar Research Centre.

His research interests are in skeletal biology and disease. His early work with Herbert Fleisch led to the discovery of the biological effects of bisphosphonates, and to their eventual successful clinical use in the treatment of bone disorders, including Paget's disease, cancer metastases in bone, and osteoporosis (see Russell RG. Bisphosphonates: The first 40 years. Bone. 2011l; 49: 2-19).

Bisphosphonates continue to be the major drugs used worldwide to treat these disorders. With Michael Rogers, his group elucidated how bisphosphonates act within cells, especially as inhibitors of the mevalonate pathway of cholesterol biosynthesis, resulting in inhibition of protein prenylation. These properties have extended the potential medical uses of these compounds, which celebrate their 50th anniversary in 2019 (https://bisphosphonates2019.org).

Among many national and international appointments in scientific and charitable activities, he is a past President of IBMS, and currently Honorary President of the Paget's Association (UK). His several awards include the W F Neuman and the Gideon A. Rodan Excellence in Mentorship awards from the American Society of Bone and Mineral Metabolism.

Further information at:
https://royalsociety.org/people/robert-grahamrussell12214/
http://www.ndorms.ox.ac.uk/team/graham-russell
http://mellanbycentre.org/graham-russell/

Claire Edwards

Claire obtained a first class honours degree and Ph.D. from the University of Sheffield, where she began her career in bone oncology. She undertook postdoctoral studies at the University of Sheffield and the University of Oxford. Claire then relocated to the University of Texas Health Science Center at San Antonio, and subsequently Vanderbilt University to work with the late Prof. Gregory Mundy as an Assistant Professor. In 2010, she was recruited to the University of Oxford, where she is currently an Associate Professor with a joint appointment between the Nuffield Dept. of Surgical Sciences (NDS) and the Nuffield Dept. of Orthopaedics, Rheumatology and Musculoskeletal Sciences (NDORMS). She is also a Fellow of St. Edmund Hall. Dr. Edwards is the recipient of multiple awards and fellowships, including the Iain T. Boyle Award from the European Calcified Tissue Society. Dr. Edwards runs the Bone Oncology Group at the Botnar Research Centre, University of Oxford. Specific interests include the contributions of the host bone marrow microenvironment and the role of obesity, adipocytes and adipokines to the pathogenesis of MGUS, multiple myeloma and prostate cancer bone metastases.

Faculty Profiles

Roland Baron

Dr. Roland Baron is Professor at the Harvard Medical School, Endocrine Unit, Massachusetts General Hospital, and Professor Chair of Oral Medicine, Infection and Immunity at the Harvard School of Dental Medicine, since January 2008. From 1977 to 2007 Dr Roland Baron was a Professor in the departments of Medicine, Orthopedics and Cell Biology at Yale University School of Medicine. He received his DDS and PhD degrees from the University of Paris Medical School, France. He is the founder of the and was Editor-in-Chief of BONE until 2013. Between 1994 and 2002, he also held the position of Vice President and Head of the Bone Diseases Group at Hoechst Marion Roussel and then Aventis. In 2002 he founded ProSkelia, a small pharmaceutical company devoted to the discovery and development of new drugs for bone and hormonal dependent diseases. He has held the positions of President and Chief Scientific Officer, Head of Research and Development of ProSkelia and then ProStrakan, until April 2006.

Dr Baron has been the President of the European Calcified Tissue Society (ECTS) and of the American Society for Bone and Mineral Research (ASBMR). He currently is the co-Chair of the International Federation of Musculoskeletal Research Societies (IFMRS).

Dr Baron has published over 350 scientific papers in the field of bone biology and bone diseases.

Chas Bountra

Chas is Professor of Translational Medicine in the Nuffield Department of Clinical Medicine and Associate Member of the Department of Pharmacology at the University of Oxford. He is also a Visiting Professor in Neuroscience and Mental Health at Imperial College, London. Chas is an invited expert on several government and charitable research funding bodies, and an advisor for many academic, biotech and pharma drug discovery programmes.

His current interests are i) using X ray structures of novel human proteins to generate small molecule inhibitors, screening in human cells to identify novel targets for drug discovery, and then developing clinical candidates for evaluation in patients, pre-competitively; ii) focussing on epigenetic and genetically identified proteins, because these are likely to represent better targets for drug discovery, for many cancer, inflammatory, metabolic and neuro-psychiatric diseases; iii) working with colleagues in Oxford to build major programmes in rare diseases and Alzheimer's Disease, and creating a "BioEscalator" for the rapid translation of SGC science; iv) building stronger links with local hospitals, patient groups, regulatory agencies, private investors, CROs, biotechs and large pharma companies, to create a new, more efficient ecosystem for pioneer drug discovery.

Øyvind Bruland

Since 2008, Øyvind S Bruland has held the tenure position as Professor of Clinical Oncology, University of Oslo, Norway. He is affiliated with the Department of Oncology at the Norwegian Radium Hospital, Oslo University Hospital as a senior consultant oncologist treating sarcoma patients, and serves as director of sarcoma research. He has been the main supervisor or co-supervisor for 22 candidates having completed their theses and is the supervisor for 4 ongoing PhD projects at the University of Oslo, Norway. He is a member of The Norwegian Academy of Science and Letters. He has several patents related to targeted radionuclide therapies, and is co-founder of Algeta ASA, Nordic Nanovector AS and Oncoinvent AS. He has had 233 peer-reviewed papers published during his career. For a complete list; including some additional review papers and book chapters see www.bruland.info.

H-Index: 37. Citations: 4207 (without self- citations). Source: ISI Web of Science, February 2018.

Thomas Carpenter

Thomas O Carpenter, MD, is Professor of Pediatrics and Professor of Orthopedics and Rehabilitation at the Yale School of Medicine. After undergraduate studies at the University of Virginia (BA, 1973), he received his medical degree (1977) and general pediatric training at the University of Alabama. His fellowship training in endocrinology at Boston Children's Hospital began his career-long involvement in clinical research focused on metabolic bone diseases in children. He has been at Yale for over 30 years and has been very active in the Yale Bone Program throughout this time, including direction of Yale's Pediatric Metabolic Bone Disease clinic, director of the Physiology Core of the Yale Core Center for Musculoskeletal Diseases, and Director of the Yale Center for X-Linked Hypophosphatemia (XLH). He has a vast clinical experience in the management of children with XLH. Dr Carpenter

has served on various editorial boards of Pediatric, Endocrinology and Bone journals, and is currently Associate Editor of the Journal of Bone and Mineral Research. He has authored over 150 articles, reviews, and book chapters related to metabolic bone disease in children.

Andrew Chantry

Dr Andy Chantry is: Senior Clinical Lecturer in the Department of Oncology, University of Sheffield and leads the Sheffield Myeloma Research Team (SMaRT); an Honorary Consultant Haematologist in the Department of Haematology, Sheffield Teaching Hospitals NHS Foundation Trust; nationally, an executive member of the United Kingdom Myeloma Research Alliance (UKMRA), through which all significant UK Myeloma Clinical Trials are administered; an executive member of the United Kingdom Myeloma Forum (UKMF), the national body for Haematologists leading clinical and research led developments in the UK; a member of the UKMF National Guidelines Group with a special interest in Myeloma Bone Disease; locally, an executive member of the local Cancer Clinical Trial Executive Committee; member of the Sheffield Experimental Cancer Medicine Centre; and executive member of the Mellanby Centre for Bone Research and Insigneo, the Centre for in Silico Medical Research.

Since appointment in 2012, he has been awarded over £2 million in research grants notably from Bloodwise (formerly Leukaemia and Lymphoma Research). His principal research interests are anabolic strategies in the treatment of myeloma bone disease and novel strategies to target myeloma tumour. He has diverse and holistic research interests including life with cancer – holistic care and quality of life studies, computational modeling of cancer using deep learning, artificial intelligence, military precision and game technology.

He has received substantial industry sponsorship and access to novel compounds from Amgen, Celgene, Acceleron and Novartis.

Cyrus Cooper

Cyrus Cooper is Professor of Rheumatology and Director of the MRC Lifecourse Epidemiology Unit; Vice-Dean of the Faculty of Medicine at the University of Southampton; and Professor of Epidemiology at the Nuffield Department of Orthopaedics, Rheumatology and Musculoskeletal Sciences, University of Oxford.

He leads an internationally competitive programme of research into the epidemiology of musculoskeletal disorders, most notably osteoporosis. His key research contributions have been: i) discovery of the developmental influences which contribute to the risk of osteoporosis and hip fracture in late adulthood; ii) demonstration that maternal vitamin D insufficiency is associated with sub-optimal bone mineral accrual in childhood; iii) characterisation of the definition and incidence rates of vertebral fractures; iv) leadership of large pragmatic randomised controlled trials of calcium and vitamin D supplementation in the elderly as immediate preventative strategies against hip fracture.

He is President of the International Osteoporosis Foundation; Chair of the BHF Project Grants Committee; an emeritus NIHR Senior Investigator; and Associate Editor of Osteoporosis International. He has previously served as Chairman of the Scientific Advisors Committee, International Osteoporosis Foundation; Chairman, MRC Population Health Sciences Research Network; Chairman of the National Osteoporosis Society of Great Britain; past-President of the Bone Research Society of Great Britain; and has worked on numerous Department of Health, European Community and World Health Organisation committees and working groups. He has published extensively (over 900 research papers; hi=119) on osteoporosis and rheumatic disorders and pioneered clinical studies on the developmental origins of peak bone mass. In 2015, he was awarded an OBE for services to medical research.

Luis Corral-Gudino

Luis Corral-Gudino graduated from the University of Salamanca, Spain. He completed his specialist registrar training in internal medicine at the University Hospital of Salamanca in 2003. Since 2010, he has been a consultant in internal medicine in el Bierzo Hospital, León, Spain. In 2004, he attained his PhD investigating the genetics of Paget's disease of bone in the patients from the high prevalence focus of Vitigudino, Salamanca, Spain. In 2012, he received a Carlos III grant to spend one year in the Western General Hospital, Edinburgh, Scotland with Professor Ralston. He´s a member of a research group that studies the genetics of Paget`s disease of bone and its epidemiology. He has special interest in systematic reviews of the literature. Since 2013, he's been a member of the Cochrane collaboration. He has led two systematic reviews into Paget's disease of bone.

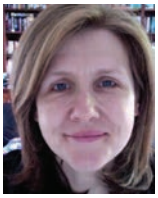
Faculty Profiles

Lynne Cox

I am an Associate Professor of Biochemistry at the Department of Biochemistry, University of Oxford. I carried out my PhD in Cambridge under the supervision of Prof Ron Laskey, studying the regulation DNA replication, then moved to Dundee to work on p53 with Prof Sir David Lane. This sparked an career-long interest in control of cell proliferation through p53, its target p21 and the premature ageing syndrome protein WRN, and how these factors contribute to DNA damage responses, cell cycle arrest and cellular senescence. Senescence is thought to underly many morbidities associated with ageing, including sarcopenia and bone loss. My lab continues to study premature ageing Werner syndrome (WS) in human cells, and we have also established, in collaboration with Robert Saunders at the Open University and Alison Woollard at Oxford, model systems of WS in both *Drosophila* and *C. elegans*, allowing whole lifecourse analysis of the impact of WRN mutation and re-expression, as well as other factors that regulate longevity and health span. We are also very interested in determining the molecular basis of senescence, using a range of tools including proteomics to analyse biochemical pathways leading to senescence, and to highlight potential drug targets. We are using both target-based screening and phenotypic screening to identify novel senescence-modifying agents.

Steve Cummings

Dr Steve Cummings is a general internist and epidemiologist who has designed and led several large multicenter studies, such as the Study of Osteoporotic Fractures, and pivotal trials, including the FIT trial of alendronate and the FREEDOM trial of denosumab. He has made pivotal contributions to understanding risk factors for hip fractures and proving the efficacy and safety of most of the treatments for osteoporosis used in clinical practice. He has received ASBMR's Bartter Award for Excellence in Clinical Research in Osteoporosis and has been elected to the U.S. National Academy of Medicine of the National Academies of Science. His current work focuses on the prevention of fractures in patients with medical conditions, such as Parkinson's Disease, and the biology of aging bone and muscle.



Sarah Danson

Sarah Danson is a Professor of Medical Oncology at the University of Sheffield and Honorary Consultant in Medical Oncology at Weston Park Hospital, Sheffield. She was a Specialist Registrar/CRUK Clinical Research Fellow in Pharmacology at the Christie Hospital, Manchester before commencing work in Sheffield in 2006. Sarah's clinical and research interests are novel anticancer therapies and systemic treatments for lung cancer and melanoma. She has enrolled patients into multiple clinical trials with novel drugs, immunotherapy and bone-targeted agents, such as denosumab, radium-223 and saracatanib. She is EORTC Chief Investigator on the phase III SPLENDOUR study of denosumab combined with chemotherapy in non-small cell lung cancer.

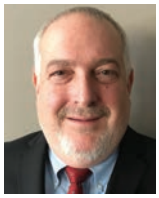
Timothy Dreyer

BSc(Hons), MSc (Med), PhD student, University of Pretoria, South Africa. UCB Celltech Ltd, Berkshire. Timothy Dreyer is a sclerosteosis patient, highly motivated and determined to develop a treatment for sclerosteosis that will ultimately improve the lives of those afflicted with the condition. To accomplish this he has embarked on a PhD program at the University of Pretoria and UCB Celltech Ltd, investigating the development of potential therapeutics to treat sclerosteosis.

Richard Eastell

Richard Eastell qualified in medicine from Edinburgh in 1977. He trained in endocrinology in Edinburgh, Northwick Park and at the Mayo Clinic (Dr B L Riggs). He leads a research group on the pathogenesis, diagnosis and treatment of osteoporosis; of particular note is his contribution to the use of bone turnover markers and the development of treatments for osteoporosis. He was the first European elected to the Council of ASBMR and was its 2013 meeting clinical co-chair. His work has recently been recognised by the Ian MacIntyre Medal (2011), Philippe Bordier Award (2012) (European Calcified Tissue Society), Frederic C Bartter Award 2014 (American Society for Bone and Mineral Research) and IBIS Team Member awarded 2014 Translational Cancer Research Prize, Cancer Research UK, 2014.

Faculty Profiles



Hal Ebetino

Dr Hal Ebetino has been involved in medicinal chemistry research for over 35 years. He has maintained a strong research interest in bisphosphonate drug design and mechanism, and new therapeutics for bone related diseases. He spent over 25 years at Procter & Gamble and was part of the team that discovered the drug Actonel® for osteoporosis. His research and publications also span a variety of other therapeutic areas including arthritis, obesity, infectious diseases, gastrointestinal disease, and cancer. Recently, he led the Drug Discovery Department at Warner Chilcott. He currently leads a startup company, BioVinc, which is involved in the development of bone targeted diagnostics and therapeutic drug leads. Dr Ebetino also continues research efforts with several academic collaborators. He has held adjunct academic roles at USC, Los Angeles and Queen's University, Belfast; and continues associations with the University of Sheffield, the Structural Genomics Consortium at Oxford, and as Professor (Research) at the University of Rochester, NY.

Aris Economides

Dr Aris N Economides received his PhD in Biochemistry from Michigan State University in 1992, and promptly joined Regeneron Pharmaceuticals. He currently holds the position of Vice President, leading two groups: Genome Engineering Technologies, and Skeletal Diseases Therapeutic Focus Area. In addition, he is a co-founder of Regeneron Genetics Center (RGC), where he is also Head of Functional Modelling. Dr Economides co-invented Cytokine Traps, VelociGene®, and VelocImmune®, all part of an integrated methodology for target discovery, validation, and the generation of biologic drugs such as the IL1 and VEGF traps, as well as therapeutic antibodies. More recently, he has been developing a new method for Enzyme Replacement Therapy (ERT), one that addresses two of the main limitations of current ERT, namely immunogenicity and inefficient uptake by the tissues most affected in the corresponding Lysosomal Diseases. As part of his involvement with the RGC, Dr Economides has been working to elucidate the molecular pathophysiology of genetically-driven disorders. An example is his work in Fibrodysplasia Ossificans Progressiva, where he and his team discovered a novel mechanism that explains important aspects of FOP's pathophysiology and pinpoints a new potential route to therapy.

John Eisman

Professor John Eisman is Director of Clinical Translation and Advanced Education at Garvan Institute; Senior Staff Specialist Endocrinology, St Vincent's Hospital Sydney; Associate Dean for Clinical Leadership and Research, School of Medicine Sydney, University of Notre Dame Australia; and Adjunct Professor, School of Medicine, UNSW Australia. The focus of his research is the epidemiology and genetics of osteoporosis, encompassing population, family and twin studies as well as molecular and cellular mechanisms for gene effects. His major commitment and focus is translating osteoporosis research findings to real improvements in health care delivery to the general community through the education of patients and their doctors.

Florent Elefteriou

Dr Florent Elefteriou contributed to the first experimental evidence supporting the role of the central and sympathetic nervous systems in the control of bone remodeling, and currently investigates the potential biological and clinical relevance of these findings in the context of bone metastasis, age-related bone loss and vestibular dysfunction. Dr Elefteriou's research program also focuses on the etiology of the skeletal maladies in children with Neurofibromatosis type I (NF1). From this research, his group generated preclinical models of NF1 bone dysplasia that support the model of somatic NF1 second hit mutations as the initiating event and skeletal stem cells as the cell of origin for this condition. His group also identified novel targeted approaches to prevent and treat these skeletal pediatric conditions.

Dr Elefteriou is Associate Professor of Molecular and Human Genetics and Orthopedic Surgery at Baylor College of Medicine (Houston, TX), and the co-director of the Baylor Center for Skeletal Medicine and Biology.

Erik Fink Eriksen

Erik Fink Eriksen is Professor of Endocrinology and Internal Medicine, Section Head at Oslo University Hospital, Aker, Norway. Previous appointments include Global Medical Director at Eli Lilly (2002-2005) and Novartis Pharmaceuticals (2005-2008), responsible for the global development programme and approval of the osteoporosis drugs, Teriparatide

and Aclasta; Department Head and Consultant, Department of Endocrinology and Internal Medicine, Aarhus Amtssygehus (1995–2001); and Associate Professor, University of Aarhus (1995).

He has authored over 300 publications and 3 books, his work is cited 980 times per year and each paper has an average citation index of 42 (H-index 59). He has mentored a total of 16 PhD candidates.

He received the Gold medal in Biochemistry at Århus University 1979; ASBMR Young Investigator Award 1987; and the NOVO-Nordisk research grant for postdoctoral researchers 2001. In 2002 two of his papers were among the 21 most cited in the last 25 years in the Journal of Bone and Mineral Research. His team at Novartis received the Good Clinical Practice Award 2007.

Roger Francis

Roger Francis developed a major clinical and research interest in vitamin D and bone disease, whilst working at the Medical Research Council (MRC) Mineral Metabolism Unit in Leeds. He was Consultant Physician running the Bone Clinic in Newcastle from 1986 until 2011, when he retired from clinical practice. He is now Emeritus Professor at the Institute of Cellular Medicine, Newcastle University, where he continues his research into vitamin D and male osteoporosis. Professor Francis is Chair of the Board of Trustees of the Paget's Association and was previously a Trustee of the National Osteoporosis Society (NOS). He chaired the Writing Group who developed the NOS Practical Clinical Guideline on Vitamin D and was also a member of the Scientific Advisory Committee on Nutrition (SACN) Working Group on Vitamin D, which published the Report on vitamin D and Health in 2016.

Luigi Gennari

Luigi Gennari was born in Siena in 1968. He received his MD degree at the University of Siena (1993); an advanced degree in Endocrinology and Metabolic Diseases at the University of Florence (1998); and a PhD in Endocrinology (2003). Since October 2016 he has served as Associate Professor of Internal Medicine at the Metabolic Disease Unit, Dept. Medicine, Surgery and Neurosciences, University of Siena. In 2000 he received the "IOF-Servier Young Investigator Research Fellowship" and in 2002 the "Young Investigator Award for Innovative Research" from the International Osteoporosis Foundation. In 2004 he was recipient of the American Society for Bone and Mineral Research-Young Investigator Award. In 2004 he was appointed as a member of the Advisory Medical Panel of the Paget Foundation. In 2005, he was recipient of the "Forum in Bone and Mineral Research 2005" award, and in 2009 was recipient of the "John G. Haddad, Jr Research Award" of the Paget Foundation. He is member of the Editorial Boards of Osteoporosis International and the Journal of Bone and Mineral Research and Associate Editor of Journal of Bone and Mineral Research Plus. His main research interests include calcium and phosphate metabolism, metabolic bone disease, Paget's disease of bone, hereditary skeletal diseases, genetics and endocrinology. He is author of several publications in peer reviewed journals and of chapters in several books on these and other related topics. In the same fields, he has lectured at both national and international meetings and received numerous research grants.

Lovorka Grgurevic

Lovorka Grgurevic is Head of the Institute of Anatomy and leads the Proteomic Research Laboratory at the Center for Translational and Clinical Research, University of Zagreb School of Medicine. She conducts scientific programs in regenerative medicine with particular reference to bone regeneration and development of novel therapies for posterolateral fusion in patients with back pain due to degenerative disc disease. She made a special contribution to the development of a novel autologous bone graft implant to substitute for the use of patient's own iliac crest. She explores the structure and function of bone morphogenetic proteins in biological fluids, has discovered circulating osteogenic proteins and associated molecules in the plasma, and then investigated their effectiveness in bone healing, models of acute and chronic renal and liver fibrosis. Professor Grgurevic has published more than ninety scientific manuscripts, received the award from the Croatian Academy of Sciences and Arts for outstanding contribution to science, and patented more than twelve discoveries, two of which are currently in late pre-clinical and Phase II/III clinical testing. In addition, Dr Grgurevic discovered novel prognostic markers for bone repair, breast and prostate cancer. She co-coordinates innovative scientific European consortium programs "Osteogrow" and "OSTEOproSPINE" with multiple partners in more than seven European countries funded by the European Commission for Science.

Faculty Profiles

Núria Guañabens

Núria Guañabens is Professor of Medicine at the University of Barcelona, and was Head of the Department of Rheumatology at the Hospital Clinic in Barcelona from 2004 until 2017. At present, she is Consultant Senior. Dr Guañabens trained in Internal Medicine and Rheumatology, and obtained her PhD from the University of Barcelona. She has published over 145 papers. She was awarded with the Professional Excellence Award from the Medical Association of Barcelona and the Steven Boonen Award from the European Calcified Tissue Society. She is Past-President of the Catalan Society of Rheumatology and the Spanish Society for Bone and Mineral Research. She serves on the ASBMR Ethics Advisory Committee and on the Board of Directors of ECTS. She is currently Editor of Bone as well as Editorial Board Member of Bone Reports and Journal of Bone and Mineral Research. Her fields of interest are bone turnover markers, bone disorders in liver diseases and Paget's disease of bone.

Theresa Guise

Theresa A Guise, MD, is Professor of Medicine and Jerry W and Peg S Throgmartin Professor of Oncology in the Department of Medicine, Division of Endocrinology at Indiana University. She completed medical school and internal medicine residency at the University of Pittsburgh School of Medicine and fellowship in endocrinology and metabolism at the University of Texas. She served on the faculty of the University of Texas until 2002, where she also held the Zachry Chair for Translational Research at the Institute for Drug Development of the Cancer Therapy and Research Center. She joined the University of Virginia in 2002 as the Gerald Aurbach Professor in the Division of Endocrinology and Mellon Investigator, where she directed a research in skeletal complications of malignancy and the Metabolic Bone Disease Clinic until July 2009 at which time she moved to Indiana University. Currently the Jerry and Peggy Throgmartin Professor of Oncology, Medicine and Pharmacology at the Indiana School of Medicine, Dr Guise directs translational and clinical research on the musculoskeletal effects of cancer and cancer treatment. She received the Fuller Albright Award in 1999 and the Paula Stern Achievement Award in 2012 from the American Society for Bone and Mineral Research (ASBMR). She was elected to the American Society for Clinical Investigation (ASCI) in 2004 and the Association of American Physicians (AAP) in 2008. She was Secretary-Treasurer and Councilor of the ASCI (2006-2010) and permanent member of NIH study section for Skeletal Biology and Skeletal Regeneration (2004-2009; Chair 2008, 2009) as well as Councilor for ASBMR (2004-2007). She served as Vice President and President of the International Bone and Mineral Society (2011-2015), Scholar of the Susan Komen Scientific Advisory Council (2010-2015) and Chairman of the Board of the Paget Foundation and Bone and Cancer Foundation (2010-2015). Her research interests include the effect of cancer and cancer treatment on the musculoskeletal system. Her research has been continuously funded by the NIH since 1992 and has also included funding from the Department of Defense, Susan G Komen Foundation, Prostate Cancer Foundation, V-Foundation, Mary K Ash Foundation and the Indiana Economic Development Corporation.

Mathias Hackl

Dr Matthias Hackl is the current CEO of TAmiRNA GmbH, which was founded in 2013 and is located in Vienna, Austria. Matthias holds a PhD in biotechnology. Prior to co-founding TAmiRNA in 2013, he led various genomic research projects in academia, including fellowships at the University of Minnesota and University Bielefeld. He has several years of experience in biomarker development with a focus on non-coding RNA analysis and liquid biopsies. Within TAmiRNA Dr Hackl is currently preparing the clinical performance evaluation of microRNA biomarkers for patient stratification in osteoporosis and cardiovascular disease. Dr Hackl has received Young Investigator Awards from ASBMR and ECTS for work on microRNA biomarkers discovery and validation in osteoporosis.

Peyman Hadji

Professor Peyman Hadji obtained his medical degree from the University of Frankfurt, Germany, in 1990, and went on to complete his postgraduate training in obstetrics and gynaecology at the Hamburg Institute of Endocrinology and Reproductive Medicine and the Philipps-University of Marburg, where he received his PhD in 2001. In June 2006, he was appointed as a full Professor of Medicine at the Philipps-University of Marburg. Since July 2014, Dr Hadji has been head of the Department of Bone Oncology, Endocrinology and Reproductive Medicine at the Krankenhaus Nordwest in Frankfurt, Germany

His current research interest is on the management of women with breast cancer, with a special focus on cancer induced bone loss (CIBL), as well as studies on side-effect management in cancer therapies and outcome research. He is the first author of a recent practical guidance for the management of aromatase inhibitor-associated bone loss of seven international societies. Dr Hadji is also a co-author of the ESMO practice guidelines on bone health in cancer patients. He is additionally a co-author of the guidance on the use of bisphosphonates in solid tumours, a consensus recommendation from the second Cambridge conference on advancing treatment for metastatic bone cancer and a clinical experience and treatment recommendation on aromatase inhibitor-induced arthralgia. In addition to this, Dr Hadji has performed a number of studies on compliance and persistence in oncology and osteoporotic therapies, and is involved in several clinical studies on different pharmacological interventions for osteoporosis including bisphosphonates, denosumab, parathyroid hormones, raloxifene, hormone therapy and tamoxifen - in collaboration with a number of national and international centres.

Dr Hadji is a co-author of the ESMO clinical practice guideline for bone health in cancer patients, the German S-III guidelines for the diagnosis and treatment of breast cancer (DGGG), the German S-III guidelines for ONJ (DGMK), the German Osteoporosis guidelines (DVO), use of HRT in postmenopausal women (DGGG) as well the German guidelines on hormonal contraception (DGGG).

Currently, Dr Hadji is the vice president of the Dachverband Osteologie (DVO) and a board member of the Cancer and Bone Society as well as the German Menopause Society. He is additionally an active member of several oncology and osteoporosis societies with a special interest in diagnosis and treatment of bone oncology in women with breast cancer. He has published over 250 peer-reviewed articles and book chapters in these fields. His editorial activities extend to co-editor in chief of the journal of bone oncology and refereeing for a number of national and international journals.

Freddy Hamdy

Freddie Hamdy joined the University of Oxford in 2008 as Nuffield Professor of Surgery and Head of the Nuffield Department of Surgical Sciences, Professor of Urology, and Honorary Consultant Urological Surgeon, as well as Fellow of Balliol College. He trained in Surgery and Urology at Liverpool, Sheffield and Newcastle, and was founding chair of Urology, Director of the Section of Oncology and of the Division of Clinical Sciences at Sheffield. He has introduced a robot-assisted surgical programme to Oxford in 2009. He leads the Oxford NIHR BRC (Biomedical Research Centre) Surgical Innovation and Evaluation Theme, and is co-Director of the first Surgical Intervention Trials Unit in the UK. His research activities include clinical, translational and basic science programmes on the biology of urological malignancies. He is Chief Investigator of many studies including the HTA NIHR ProtecT trial on prostate cancer, the largest of its kind worldwide. He was appointed Director of the Division of Surgery and Oncology at the Oxford University Hospitals NHS Foundation Trust in November 2010. This is OUH's largest Division with over 2000 staff, mainly based on the Churchill Hospital site, encompassing a range of surgical and oncological activities with additional specialties such as Haematology and Gastroenterology. He was elected Fellow of the Academy of Medical Sciences in 2007 and NIHR Senior Investigator in 2010.

Fadil Hannan

Fadil Hannan is a Senior Clinical Lecturer in Musculoskeletal Biology at the University of Liverpool and Honorary Consultant Chemical Pathologist at the Royal Liverpool University Hospital, UK. He studied Medicine at the University of Bristol, where he also obtained a first-class Honours degree in Biochemistry. Fadil then trained as a physician in London and Oxford. He obtained a Master's Degree in Clinical Biochemistry from University College London (UCL), and undertook a PhD as a Medical Research Council (MRC) Clinical Research Training Fellow at the University of Oxford. Fadil subsequently conducted postdoctoral research as a National Institute for Health Research (NIHR) Academic Clinical Lecturer, and his work has focused on elucidating the role of the calcium-sensing receptor (CaSR) and partner proteins in mineral metabolism. Fadil was awarded the 2013 Association for Clinical Biochemistry (ACB) Professor's Prize for Sustained Research in the field of Clinical Biochemistry.

Dominique Heymann

Dominique Heymann is Professor of Histology and Embryology at the University of Nantes (France). From 2004 to 2016 he was the head of a joint research unit recognized by INSERM and the University of Nantes dedicated to the pathogenesis of bone sarcomas. In 2015 he joined the

Faculty Profiles

Department of Oncology and Metabolism at the University of Sheffield (UK) and since 2017 he has been Professor at the Integrated Cancer Centre (Nantes, FR) and honorary-Professor at the University of Sheffield. In Nantes he heads the laboratory "Tumour Heterogeneity and Precision Medicine" and an Associated European Laboratory "Sarcoma Research Unit" recognized by Inserm and the Universities of Sheffield and Nantes. His works are focused more specifically on the role of microenvironment (e.g. bone cells, cytokines and growth factors) in tumour growth. He was a member of the national INSERM scientific advisory board (2008-2012) and was Co-chairman of an INSERM scientific commission (2012-2016). He was/is member of various editorial boards: Life Sciences, PLoS ONE, Current Medicine Chemistry, European Journal of Pharmacology, Current Pharmaceutical Design, Journal of Bone Oncology, Journal of Sarcoma Research. He has authored more than 240 publications in peer-reviewed journals mainly in the field of bone cancer and osteoclast differentiation, as well as more than 300 abstracts, 2 books and 20 book chapters.

Melita Irving

Dr Melita Irving is a consultant in Clinical Genetics at Guy's and St Thomas' NHS Trust. She sub-specialises in skeletal dysplasia condition and established dedicated multidisciplinary clinics at the Evelina London Children's Hospital over ten years ago to provide diagnostic expertise and ongoing management advice to children with skeletal dysplasia and their families. She was also instrumental in establishing next generation sequencing using a clinical whole exome sequencing platform as a mainstay in the diagnostic pipeline, expediting the time to diagnosis. This has laid open the way for focus to shift to novel therapeutic approaches and Melita is principal investigator for a number of clinical trials in skeletal dysplasia, both commercial and non-commercial. In addition, she has her own basic research programme with a view to maximising opportunities to develop new therapies for skeletal dysplasia patients using a drug repurposing strategy.

Nick James

Professor Nick James is Consultant in Clinical Oncology at the Queen Elizabeth Hospital Birmingham and Professor of Clinical Oncology at the University of Birmingham.

Professor James is internationally renowned for his work in Urological Cancer, particularly on the groundbreaking STAMPEDE trial, which has been used to evaluate, to date, 10 different therapies for advanced prostate cancer in more than 10,000 men. He is a regular educational speaker at conferences worldwide, recently including the American Society of Clinical Oncology, European Society of Medical Oncology and European Association of Urologists Annual Meetings. Results from STAMPEDE with both first line docetaxel chemotherapy and abiraterone have shown that big survival gains can be made by using existing treatments in novel settings.

In the bladder cancer field he has led a series of trials of chemoradiotherapy culminating in the largest randomised trial in the field, published in the New England Journal of Medicine, with an accompanying editorial describing the study as "landmark" & "practice changing". The trial demonstrated that low dose synchronous chemotherapy reduced invasive bladder cancer relapse rates by 43%.

Outside the clinical and research spheres, Professor James is closely engaged with patient education initiatives. This is best exemplified by a series of music concerts, in collaboration with the world famous saxophonist Courtney Pine, entitled "It's a Man Thing". He also co-founded the leading website CancerHelp UK (www.cancerhelp.org.uk) in 1994. In 2002 it became the main patient resource on the Cancer Research UK website.

Richard Keen

Dr Richard Keen graduated from St Mary's Hospital Medical School in 1988. After training in general rheumatology, he developed his interest in osteoporosis and rare bone diseases. He completed his PhD examining the genetic epidemiology of postmenopausal osteoporosis and was the recipient of Young Investigator Awards from the American Society for Bone and Mineral Research and the European Calcified Tissue Society. In 1999 he was appointed as Consultant in Metabolic Bone Disease at the Royal National Orthopaedic Hospital, Stanmore, UK.

Dr Keen is involved with clinical trials into a number of rare diseases, including Osteogenesis Imperfecta (OI), X-linked hypophosphataemic rickets and Fibrodysplasia Ossificans Progressiva (FOP). He is a member of International Executive Council on Clinical Care and Treatment of FOP. He is also the lead for adult metabolic bone disease in the Musculoskeletal GeCIP Domain of NHS England's 100,000 Genome Project. His work on the medical advisory board for the UK's Brittle

Bone Society and with the European Reference Network for Rare Bone Diseases (BOND) is looking to develop management guidelines for OI and improve patient care.

Sundeep Khosla

Dr Sundeep Khosla is the Dr Francis Chucker and Nathan Landow Research Professor of Medicine and Physiology and a Mayo Foundation Distinguished Investigator. He also serves as Director of the Center for Clinical and Translational Science and Dean for Clinical and Translational Science at Mayo Clinic. Dr Khosla's research interests include mechanisms of age-related bone loss and sex steroid regulation of bone metabolism. Dr Khosla has served as President of ASBMR and has received numerous awards and honors for his work, including the Frederic C Bartter Award for Clinical Investigation and the William F Neuman Award for Outstanding Scientific Contributions from the ASBMR, the presentation of the Louis V Avioli Plenary Lecture at the ASBMR annual meeting, and the Outstanding Clinical Investigator Award and Plenary Lecture from the Endocrine Society. He currently serves as the Editor-in-Chief of Bone.

Michaela Kneissel

Michaela Kneissel is Global Head of the Musculoskeletal Disease Area (MSD) at the Novartis Institutes for Biomedical Research. MSD is based in Basel, Switzerland and Cambridge, Massachusetts, United States. The mission of MSD is to target musculoskeletal diseases and injuries to restore mobility. Thus MSD pursues the identification of therapies for muscle wasting and weakness, neuromuscular diseases, bone disorders as well as for tendon and joint degeneration and injury.

Michaela Kneissel received her doctoral degree from the University of Vienna, Austria. She performed part of her Ph.D. work at the Hard Tissue Research Unit, University College London, UK and was postdoctoral fellow at the Radiobiology Division, University of Utah, Salt Lake City, USA before joining Novartis in 1996 where she has held positions of increasing responsibility. Michaela Kneissel has explored and published on the role of the WNT antagonist sclerostin in bone homeostasis and has received awards from international societies in recognition of this work. She currently serves on scientific and industrial advisory boards of societies and academic institutes in the field musculoskeletal research. She serves also as secretary to the Novartis Research Foundation and as chairwoman of the board of trustees of the Friedrich Miescher Institute for Biomedical Research.

Gary Krishnan

Dr Krishnan received his PhD in Chemistry/Biochemistry from Texas A&M University in 1994. Earlier he received his Master's degree in Biochemistry from the University of Bombay. He completed postdoctoral fellowship training in Cell Biology at Baylor College of Medicine in the 1997. He was employed as a senior scientist in Science and Technology at Eli Lilly and Company in 1998. He was promoted to Research Scientist in 2002 and later as the Head of Musculoskeletal Research in Science and Technology at Lilly in 2004. In 2006 Dr Krishnan was promoted to Sr. Research Advisor and later served as the Chief Scientific Officer for the therapeutic area. He has an Adjunct faculty appointment at the Indiana University School of Medicine, since 1999. Since 1992, Dr Krishnan is a co-inventor on 19 patents and has published more than 70 articles in peer-reviewed journals, including Science, PNAS, J. Clinical Investigation, Molecular Pharmacology, Molecular Endocrinology, Journal of Bone and Mineral Research, and Journal of Biological Chemistry. He is an invited speaker to several Osteoporosis and Steroid Receptor Meetings, and was invited in 2004 and 2008 to speak on Estrogen Signalling at the 48th and 52nd Nobel Symposia, in Stockholm, Sweden. He was awarded the International Sr. Investigator Award in 2006 by Science Spectrum magazine and the Lilly Research labs President's award in 2005. In 2015 he was selected as a member of the Scientific Advisory Board for the Indiana Biomedical Research Institute and later to the Advisory Board for the Global Biological Standards Institute. He is currently serving as a Senior Research Fellow in External Technology & Innovation at Lilly.

Michael LaCroix-Fralish

Dr Michael LaCroix-Fralish is currently a Senior Staff Scientist in the Neuroscience group at Regeneron Pharmaceuticals in Tarrytown, NY. He and his group are currently working to develop new antibody-based therapies for the treatment of chronic pain disorders, peripheral neuropathies, and motor neuron diseases. Michael received a BS degree in Biology with emphasis in

Faculty Profiles

Toxicology from Minnesota State University, Mankato in 2002. Following his undergraduate studies, he pursued graduate training at Dartmouth College where he received a PhD in Pharmacology and Toxicology in 2006. He continued his studies with postdoctoral training in the Pain Genetics Laboratory at McGill University in Montreal, Canada.

Bente Langdahl

Bente Langdahl graduated from the medical school at Aarhus University in 1988 and did clinical training in internal medicine and endocrinology at Aarhus University Hospital. She received her PhD at Aarhus University in 1995: "Investigations on a possible pathogenic role of thyroid hormones in postmenopausal osteoporosis" and received a DMSc at the same university in 2004: "The genetics of bone mass and risk of osteoporotic fractures". In 2004 she was appointed consultant at the department of Endocrinology and Internal Medicine at Aarhus University Hospital and research lecturer at Aarhus University. In 2012 she was appointed professor at Aarhus University.

Bente Langdahl's main research interests are identification and further investigation of genetic variants that imply increased risk of osteoporotic fractures, osteogenesis imperfecta in adult patients, interactions between fat and bone tissues, the impact of thyroid diseases and diabetes on bone health, the effects of vitamin D and K on bone metabolism, and the development of new treatments for osteoporosis. Bente Langdahl is past-President of the European Calcified Tissue Society and the co-chair of the International Federation for Musculoskeletal Research.

Robert Layfield

Rob Layfield is a Biochemist at the University of Nottingham who has studied familial Paget's disease of bone (PDB) since 2002 when the SQSTM1 gene - which he was investigating in the context of neurodegenerative diseases - was found to be mutated in some patients. Work since that time relates to PDB mechanisms and has included investigation of: the structure and function of the SQSTM1 protein; the different biochemical pathways it regulates; and the impact of PDB-associated mutations. Recent research has focussed on ancient forms of PDB and in this presentation he will detail new findings from a study investigating the molecular basis of an unusual Medieval PDB-like disorder, including its significance for contemporary PDB.

Janet Lord

Janet Lord is director of the Institute for Inflammation and Ageing at Birmingham University and the MRC-Arthritis Research UK Centre for Musculoskeletal Ageing Research. She is a theme lead in the NIHR BRC in Inflammation. Her primary research focus is in the effect of ageing upon immune function and how this limits the ability of older adults to resolve inflammation and predisposes them to chronic inflammatory disease such as rheumatoid arthritis. She also researches the link between chronic systemic inflammation, sarcopaenia and physical frailty in old age and chronic disease. In 2013 she was awarded the Lord Cohen of Birkenhead medal for her outstanding research in human ageing by the British Society for Research in to Ageing. She was elected a Fellow of the Academy of Medical Sciences in 2015. She has published over 200 original papers and reviews.

John Loughlin

Professor John Loughlin is a molecular and cell biologist with a background in genetics. He did his PhD in developmental biology at Leeds University and his postdoctoral studies at the Institute of Molecular Medicine, University of Oxford. These involved a molecular genetic analysis of musculoskeletal diseases. He subsequently obtained a fellowship from the Arthritis Research Campaign and established a group at the Wellcome Trust Centre for Human Genetics. At that point, his focus became the genetics of osteoarthritis (OA). In 2002, he was awarded a tenured lectureship at Oxford and in 2008 he moved to Newcastle as Professor of Musculoskeletal Research.

His team focuses on the identification and characterization of those genes that confer risk towards OA development, including an analysis of epigenetic effects. He is the past-president of OARSI and a member of three ongoing large scale consortia focusing on OA and other musculoskeletal diseases: CIMA, Approach and MA-PODS.

Clemens Löwik

Clemens Löwik obtained his master of science degree in Biology (cum laude) at Radboud University in Nijmegen and his Ph.D degree at the Leiden University Medical Center (LUMC). In 2006 he was appointed as full professor in Experimental Endocrinology and Molecular

Imaging at LUMC. He was involved in the discovery and clinical translation of new bisphosphonates and sclerostin for the treatment of bone diseases. As PI of the national CTMM project MUSIS he was involved in the clinical implementation of fluorescence guided surgery of tumors and sentinel lymph nodes. In May 2015 he joined the Department of radiology in Erasmus MC. Löwik is one of the pioneers in the field of whole body optical imaging and one of the co-founders and past president of the European Society for Molecular Imaging (ESMI). He is co-author of 271 peer reviewed papers, H-index 72 and holds 7 patents.

Frank Luyten

Frank P Luyten, MD, PhD is board certified Rheumatologist, tenured full Professor and Head of the Division of Rheumatology at the University Hospitals Leuven; Director of the Skeletal Biology and Engineering Research Center and of Prometheus, the Tissue Engineering Division of Leuven Research and Development.

Career Track: He obtained his MD, PhD degree and Board Certification in Rheumatology at the University of Ghent, Belgium in 1986. He spent his postdoctoral training at the National Institute of Dental Research, National Institutes of Health in Bethesda, USA between 1986 and 1991. He subsequently became group leader of the Developmental Biology Unit at the Bone Research Branch of the NIDR, NIH, Bethesda, MD, USA until 1997. In the fall of 1997, he accepted the position of Head of the Division of Rheumatology at the University Hospitals Leuven and became Professor at the KU Leuven.

Research expertise: Discovery of novel molecular players in both BMP and Wnt signalling pathways and their role in skeletal and joint biology and human arthritic diseases. Expertise in Regenerative Medicine and Tissue Engineering supported by contributions in the field of cellular therapeutics and adult stem cells for the regeneration of skeletal tissues. His clinical expertise focuses mostly in the field of osteoarthritis and osteoporosis.

Some Senior International Activities:
European Research Council: Advanced Grant holder 2012-2017. Permanent Member of the Interdisciplinary Expertpanel 2010-2016, Research Foundation Flanders. Founder, scientific and medical advisor of TiGeniX (Haasrode, BE).
Member of the board of directors of Pharmacell (Maastricht, NL).. Member of the Science Board of REGMEDXB (BE-NL)

Ilaria Malanchi

Ilaria Malanchi has a long-standing interest in understanding the cancer cells functional heterogeneity driving their tumourigenic potential. After a PhD at the DKFZ in Heidelberg with Dr Tommasino, she began her animal studies in Prof Joerg Huelsken lab in 2004 at the ISREC, Federal University (EPFL) of Lausanne, Switzerland. During these Postdoc years she began to investigate the importance of tumour microenvironment during metastatic progression. Building on this expertise in mouse tumour models, Ilaria set up her laboratory at the Cancer Research UK London Research Institute in 2011 (now part of the Francis Crick Institute) and has since focused the scope of investigation on the interaction that cancer cells have with the surrounding tissue during tumorigenesis and metastatic progression.

Patrick Mantyh

Dr. Patrick Mantyh received his PhD in neuroscience from the University of California, San Francisco in 1981 and completed a postdoctoral fellowship in pharmacology at the University of Cambridge in 1983. Dr. Mantyh's lab developed the first rodent model of bone cancer pain in 1999 and then a model of bone fracture and orthopedic surgery pain in 2007. These models are now used by labs around the world. Dr. Mantyh's lab pioneered the use of intrathecal Substance P-Saporin, targeting acidosis (Densumab & bisphosphonates), and the use of anti-NGF antibodies and TrkA antagonists for the relief of skeletal pain. More recently, his focus has been to investigate the cellular and molecular mechanisms that regulate skeletal pain, bone remodeling and ectopic nerve sprouting in the bone and joint. The major goal of his lab is understand the mechanisms that drive skeletal pain and translate these findings into novel therapies that alleviate skeletal pain.

Fernando Marin

Fernando Marin, MD, PhD is a Senior Medical Fellow at Eli Lilly, and currently the Therapeutic Area Medical Leader for the Musculoskeletal portfolio in the International Business Unit. He received his Medical and PhD degrees with Honors from the University Complutense, Madrid, Spain, and completed his residency in Endocrinology at Hospital Universitario

Puerta de Hierro, Madrid. He also received a diploma of Health Sciences Statistics from the Autonomous University of Barcelona. He completed a post-doctoral fellowship in Endocrine Pathology at the St Michael's Hospital, University of Toronto, and has been Associate Professor of the Department of Cell Biology, University Complutense of Madrid. He joined the European Medical Team at Lilly in 2001, where he was involved in medical research activities of Raloxifene (Evista®), Teriparatide (Forsteo®), and the newer compounds in the autoimmune, muscle, bone and joint portfolios. He has supported the European Regulatory Team for the initial registration of Teriparatide and its new indications.

T. John Martin

T. John Martin is Emeritus Professor of Medicine, University of Melbourne and John Holt Fellow, St Vincent's Institute of Medical Research. After being Professor of Chemical Pathology at the University of Sheffield (UK) from 1974 until 1977, he was Professor and Chairman of the University of Melbourne Department of Medicine until 1999, and Director of St Vincent's Institute of Medical Research from 1988 – 2002. His research has been in bone cell biology, the mechanisms of action of hormones that influence bone and calcium metabolism, intercellular communication in bone and the differentiation of bone cells, and the effects of cancers upon the skeleton. He is a Fellow of the Royal Society and of the Australian Academy of Science.

Laurie McCauley

Laurie K McCauley is the William K and Mary Anne Najjar Professor and Dean of the School of Dentistry, and Professor in the Department of Pathology at the Medical School at the University of Michigan. Dr McCauley earned her BS, DDS, MS and PhD (Veterinary Pathobiology) all from The Ohio State University. She has had several visiting scientist/professor appointments including the Institut de Genetique et de Biologie Moleculaire et Cellulaire, the École Normale Supérieure de Lyon, and the Center for Experimental Therapeutics and Reperfusion Injury, Brigham and Women's Hospital, Harvard Medical School. Dr McCauley is a diplomate of the American Board of Periodontology, a fellow in the American Association for the Advancement of Science, a former council member of the American Society for Bone and Mineral Research (ASBMR), former Associate Editor of the Journal of Bone and Mineral Research (JBMR), a Fellow in the American College of Dentists and the International College of Dentists, and also served on the National Institutes of Health, National Advisory Dental & Craniofacial Research Council. For more than twenty years, Dr McCauley has led an active research program in hormonal controls of bone remodeling, parathyroid hormone anabolic actions in bone, and prostate cancer skeletal metastasis. Among her many recognitions are the inaugural Paula Stern Achievement award from the ASBMR, a distinguished scientist award from the International Association for Dental Research, The Ohio State College of Dentistry Distinguished Alumnus award, and membership in the National Academy of Medicine.

Eugene McCloskey

Eugene McCloskey is Professor in Adult Bone Diseases in the Academic Unit of Bone Metabolism and Mellanby Centre for Bone Research at the University of Sheffield. In addition to clinical work, he is also the past president of the Bone Research Society and the current Sheffield Director of the MRC ARUK Centre for Integrated research in Musculoskeletal Ageing (CIMA). He has published over 360 peer-reviewed publications, book chapters and reviews and is an acknowledged authority in the fields of vertebral fracture definition, osteoporosis epidemiology and treatment, fracture risk assessment and bone health in cancer. He contributed to the development of the FRAX tool and the subsequent guideline from the National Osteoporosis Guideline Group. He is on a number of editorial boards and is a member of committees within organisations including the Boards of IOF and ESCEO. In 2016, he was awarded the IOF Medal of Achievement, presented annually to recognise an individual researcher who has significantly advanced the field of osteoporosis through original and outstanding scientific contributions.

Adam Mead

Dr Adam Mead earned his medical degree from the University of Oxford and trained in haematology at St Bartholomew's Hospital and University College London. In 2007 he earned his PhD at UCL, which focused on the analysis of FLT3 mutations in acute myeloid leukaemia. He is now Associate Professor of Haematology and MRC Senior Clinical Fellow at

the WIMM, University of Oxford. His research group focuses on myeloid diseases and normal blood stem cell biology. Dr Mead is the lead clinician for myeloproliferative neoplasms (MPN) and chronic myeloid leukaemia (CML) in the Thames Valley Strategic Clinical Network and is the chief investigator for several CML and MPN clinical trials. Additionally, Dr Mead has helped shape the diagnostic and treatment guidelines for MPNs in the United Kingdom and serves as the chair of the MPN clinical study subgroup of the National Cancer Research Institute.

Gareth Morgan

Gareth Morgan, MD, FRCP, FRCPath, PhD, Professor of Hematology, is the Director of the Myeloma Institute and Deputy Director of the Winthrop P Rockefeller Cancer Institute at the University of Arkansas for Medical Sciences (UAMS).

Dr Morgan is an internationally recognized clinician scientist with expertise in the field of molecular genetics and treatment of multiple myeloma. He has authored more than 450 articles in high-impact peer-reviewed journals. He came to the Myeloma Institute in 2014 from the Royal Marsden NHS Foundation Trust and the Institute of Cancer Research in London where he was the Director of the Centre for Myeloma Research.

Dr Morgan's current research is based on characterizing the myeloma genome to identify disease drivers, which can be used to define specific subsets of disease and to design personalized therapeutic strategies against each subtype. He has developed, used, and audited novel molecular techniques including sensitive PCR based tests, molecular cytogenetics, expression microarrays, and more recently, NGS based mutational analysis suitable for application to the peripheral blood.

Dr Morgan's other research interests include molecular genetics, myeloma bone disease, intraclonal heterogeneity, the inherited basis of myeloma, and clinical trials. His research aims to cure myeloma by targeting treatment to the biology underlying each patient's cancer.

Dr Morgan received his doctorate on the genetics of leukemia from the University of London in 1991 and his bachelor of medicine in 1981 from the Welsh National School of Medicine. His post graduate medical training was completed in Wales and at the Royal Postgraduate Medical School in London.

Udo Oppermann

Udo Oppermann is Professor of Molecular Biology at the Nuffield Department of Orthopaedics, Rheumatology and Musculoskeletal Sciences (NDORMS), holds the chair in Musculoskeletal Sciences and is Director of Laboratory Sciences at the Botnar Research Centre. Furthermore, he is Principal Investigator of the Structural Genomics Consortium (SGC) in Oxford since its inception in 2003, and investigator at the Oxford Stem Cell Institute (www.stemcells.ox.ac.uk). He obtained his PhD (1994) in Toxicology and Pharmacology from Philipps University, Marburg, Germany, after receiving his Diploma (MSc equivalent) in Human Biology from the same university (1990). He went for his post-doc training to the Karolinska Institute (Stockholm, Sweden), where he became Associate Professor at the Department of Medical Biochemistry and Biophysics, before joining the Oxford Structural Genomics Consortium in 2003 as Principal Investigator, leading a research team centred around "Metabolic Enzymes and Epigenetics".

His research interests are analysis of structure-function relationships of human protein families as well as using this knowledge for drug target identification by various molecular biology and informatics methods.

Trained in toxicology, protein chemistry and molecular biology with 25+ years of research experience, his research continues on the biology and structure-activity relationships of human metabolic protein families of all types. The use of chemical biology to understand human biology is a major focus of the group and is applied to the field of epigenetic mechanisms in musculoskeletal biology comprising stem cell biology, bone oncology as well as chronic inflammatory and metabolic diseases.

Maurizio Pacifici

Maurizio Pacifici is Director of the Translational Research Program in Pediatric Orthopedics at the Children's Hospital of Philadelphia (CHOP) and Professor of Orthopedic Surgery at the University of Pennsylvania. He received a doctorate degree in Developmental Biology from the University of Rome and then joined the faculty at the University of Pennsylvania where he rose to the rank of Professor. He subsequently moved to Thomas Jefferson University Medical School where he

served as Director of Research in Orthopedics and was then recruited to his current position at CHOP about 8 years ago. Dr Pacifici's biomedical research work focuses on the cellular and molecular mechanisms that regulate skeletal development, growth and morphogenesis in fetal and postnatal life. The information deriving from these basic science research projects is used to uncover and understand the pathogenesis of congenital pediatric musculoskeletal disorders - including Hereditary Multiple Exostoses (HME) and Fibrodysplasia Ossificans Progressiva (FOP) - and test possible therapies in disease mouse models. Dr Pacifici's biomedical research work has been continuously funded by the NIH for over 3 decades.

Belinda Parker

Dr Belinda Parker co-leads the Cancer Theme and is Head of the Cancer Microenvironment and Immunology Laboratory at the La Trobe Institute for Molecular Science. After obtaining her PhD in 2002, Dr Parker began postdoctoral training in the Breast Cancer Program, Department of Oncology at Johns Hopkins University, USA in the field of breast cancer biology and invasion. She then returned to Australia to work on cell specific mechanisms of breast cancer metastasis at the Peter MacCallum Cancer Centre, where she was promoted to Team Leader in 2012 and moved to La Trobe University as a group leader in 2013. Dr Parker's research focuses on dissecting the interactions between tumour cells and surrounding "normal cells" that promote cancer invasion and metastasis. She has a particular interest in cross talk between tumour cells and immune effector and suppressor cells, with a key focus on type I IFN signaling and immunotherapeutic response. A current focus of her laboratory is predicting and targeting bone metastatic outgrowth.

Ken Poole

Research in Ken Poole's group focuses on osteoporotic fragility fractures and osteoarthritis by examining bone structure, shape and biology in health and disease. In collaboration with Cambridge University Engineering department, Ken's team developed a way of assessing the 3D structure and shape of cortical bone structure in life called Cortical Bone Mapping (CBM). The Cambridge team have used CBM, histology and microCT to discover that there are defined patches of focal osteoporosis in older people's femurs that predispose them to hip fracture. CBM measurements from clinical CT predict hip fracture well. Analysing separate clinical trials, they found that both teriparatide and denosumab treatment of osteoporotic women improved bone in patches of the femur at risk of fracture. Older men undertaking high-impact short-duration exercise (the HIPHOP study) also responded well, with focal patches of cortical bone improving on CT. In recent work, the team have identified and mapped the bone anabolic effects of romosozumab within human vertebrae. Ken works 50% in clinical practice, looking after patients with osteoporosis, joint disease and rare bone diseases.

Stuart Ralston

Professor Stuart H Ralston graduated from Glasgow University in 1978 and subsequently undertook postgraduate training in general medicine, endocrinology and rheumatology. He has been Professor of Rheumatology at Edinburgh University since 2005 and was founding director of Edinburgh Clinical Trials Unit between 2009 and 2016. Prior to that he was Professor of Medicine and Bone Metabolism at Aberdeen University. Professor Ralston is currently clinical director of the rheumatology service for NHS Lothian and clinical lead for the osteoporosis service. He has researched widely on the pathogenesis and treatment of bone diseases and has contributed more than 300 publications to the world literature. He special interests in the genetic determinants of bone disease and in the pathogenesis and management of Paget's disease of Bone. He received the Laurence Raisz Award of the ASBMR in 2014, the Mike Horton Award of the ECTS in 2012 and the Harold Copp award of the IBMS in 2011. He is joint editor-in-chief of Calcified Tissue International and senior editor of Davidson's Principles and Practice of Medicine. He is currently chair of the Commission on Human Medicines (CHM) which advises the UK medicines regulatory authority (MHRA) on matters relating to safety and efficacy of medicinal products.

Ian Reid

Ian Reid is an endocrinologist and Distinguished Professor at the University of Auckland, where he is Deputy Dean of the Faculty of Medical and Health Sciences. His research interests include calcium metabolism, vitamin D and osteoporosis. He is a past-president

of the International Bone and Mineral Society (IBMS), and a recipient of research awards nationally and internationally, including the New Zealand Prime Minister's Science Prize.

Dave Roodman

Dr G. David Roodman is the Director of Hematology/Oncology and Kenneth Wiseman Professor of Medicine, Indiana University School of Medicine. His laboratory has focused on studies of the contributions that cell-cell interactions between hematopoietic cells and cells in the bone marrow microenvironment make to the control of normal and malignant hematopoiesis. In particular, his research group has focused on the pathogenesis and progression of myeloma bone disease. Dr Roodman's lab identified multiple factors driving osteoclastogenesis in myeloma, including the identification and cloning of M1P-1?, and the contributions that bone cells make to myeloma cell growth and bone destruction in myeloma patients. They identified several factors produced or induced by myeloma cells that result in epigenetic changes on the RUNX2 and Osterix promoters that cause protracted inhibition of osteoblast differentiation. His group has also recently shown the important role of osteocytes to tumor growth and bone destruction in myeloma.

Eileen Shore

Eileen M Shore is the Cali/Weldon Professor at the Perelman School of Medicine at the University of Pennsylvania in the Departments of Orthopedic Surgery and Genetics, and is the co-Director of the Center for Research in FOP and Related Disorders. She received her PhD in Cell and Molecular Biology from the University of Pennsylvania and postdoctoral training at the Fox Chase Cancer Center. She investigates cell differentiation and development in human genetic disease, with a focus on two rare disorders of de novo formation of extra-skeletal bone, fibrodysplasia ossificans progressiva (FOP) and progressive osseous heteroplasia (POH), to explore the cellular and molecular basis of dysregulated osteogenesis. Her goals are to develop treatments for FOP, POH, and other more common bone disorders, and gain new understanding of the processes that regulate bone and cartilage formation and regeneration.

Nidhi Sofat

Dr Nidhi Sofat is a clinician scientist and her research interest is primarily in rheumatic diseases, osteoarthritis and pain perception. She joined St George's in 2009 and is a Clinical Reader at St George's, University of London and an Honorary Consultant Rheumatologist at St George's Healthcare NHS Trust. Nidhi completed her medical training at University College London with an Intercalated BSc in Immunology. Dr Sofat was awarded a Clinical Research Training Fellowship by the Wellcome Trust in 2003 which supported her training at the Kennedy Institute of Rheumatology where she investigated the mechanisms driving tissue damage in osteoarthritis. She was awarded a British Society for Matrix Biology prize in 2005. She completed her specialist rheumatology training in 2007 and in the same year, obtained a PhD at the Kennedy Institute for Rheumatology (then part of Imperial College London). In 2013, Nidhi was awarded the Michael Mason Prize in Rheumatology by the British Society for Rheumatology (BSR) in recognition of innovative work in rheumatology research.

Stephen Tuck

Dr. Tuck attended Leeds University where he completed a biochemistry degree before qualifying from the Medical School in 1993. He did his specialist training in Rheumatology on the Northern Deanery rotation and was appointed Consultant Rheumatologist in Middlesbrough in 2004. He undertook an MD with Professor Francis in Newcastle into the pathogenesis of low trauma fractures and osteoporosis in men, which was awarded in 2007. In 2011 he was appointed Honorary Senior Lecturer at Newcastle University. He has published widely on osteoporosis and continues to undertake research including on forearm fractures in men. He is the Vice Chairman of the Paget's Association, serves on the editorial board of Osteoporosis Review and the research grants committee for the National Osteoporosis Society. Outside work his interests include model railways, TVR cars and table tennis.

Faculty Profiles

Thomas Tzschentke

Professor Thomas M Tzschentke is a project scientist at Grünenthal GmbH and a honorary professor at RWTH Aachen University. After his studies of biology, behavioural pharmacology and neuropharmacology in Tübingen, Brighton and Montreal, he joined Grünenthal in 1999 as laboratory head. In 2005 he joined the Grünenthal tapentadol development team and was responsible for preclinical pharmacology and publications. In his current role he continues to support late stage development projects and marketed products. He acted on the executive committee of the EBPS (European Behavioural Pharmacology Society) for several years. He is on the editorial board of Addiction Biology and has (co-) authored over 80 scientific publications.

André Uitterlinden

André G Uitterlinden is Professor of Complex Genetics at Erasmus University Medical Center (EMC) in Rotterdam where he holds positions in 3 departments: Internal Medicine, Epidemiology and Clinical Chemistry.

His research focuses on identification and characterization of genetic factors for common traits and diseases including anthropometry, endocrine disorders, and osteoporosis and osteoarthritis. At the Erasmus MC he is also head of one of Europe's largest high-throughput DNA facilities, the Human Genomics Facility Huge-F (www.glimdna.org) which provides services for DNA isolation, genotyping and sequencing. Recently, he initiated a large global consortium based on a new SNP array from Illumina, the GSA, involving 145 research groups and ~1 million DNA samples currently being genotyped at HuGE-F. He co-ordinates all molecular genetic analyses in 2 major cohort studies: the Rotterdam Study (20,000 elderly subjects) and the Generation R birth-cohort (8,000 children + 12,000 parents), including Genome Wide Association Study (GWAS) data. He collaborates with many (large) international study populations and has coordinated the GENOMOS, GEFOS, and Reprogen consortia. He is a founding member of the Research Steering Committee of the Cohorts for Heart and Aging Research in Genomic Epidemiology (CHARGE) consortium, and has been director of the Netherlands Consortium for Healthy Aging (NCHA, 100 researchers, 2008-2014).

André Uitterlinden has published 1050 scientific papers in refereed journals (H-index 123, December 2017) and he is listed in the Thomson Reuters' list of Most Cited Researchers globally. Currently, he is head of the Genetic Laboratory research group in the Erasmus MC (35 members) in which he now (co)supervises 11 PhD students. Under his supervision 24 PhD students have obtained their doctoral degree during the last 16 years. In the educational field he organizes annual international courses on complex genetics which are very well attended, and regularly gives lectures.

Tonia Vincent

Tonia Vincent studied medicine at UCL, qualifying in 1993. She trained as a junior doctor in London, later specialising in Rheumatology. In 1998 she took time out to do a PhD at the Kennedy Institute of Rheumatology under Professor Jeremy Saklatvala (awarded 2002). She continued at the Kennedy Institute as a Wellcome Trust clinician scientist and is currently an Arthritis Research UK Senior Fellow. In 2012 the Kennedy Institute moved to the University of Oxford and she was appointed Professor of Musculoskeletal Biology. She directs the Arthritis Research UK Centre for OA Pathogenesis. Her research interests include pathways that drive mechanosensitive responses in cartilage, the role of the pericellular matrix in determining these responses and how they modulate osteoarthritis in vivo. She continues to be clinically active, running both osteoarthritis clinics and the multidisciplinary Marfan Syndrome clinic.

Slobodan Vukicevic

Slobodan Vukicevic is a full professor and head of Laboratory of Mineralized Tissues, Translational and Clinical Research, University of Zagreb School of Medicine. He is a full member of the Croatian Academy of Sciences and Arts. His scientific interests comprise bone and cartilage morphogenetic proteins and development of drugs for regeneration of bone, kidney and heart muscle. More than 170 times he has been invited as speaker and/or chairman at international conferences and universities. He has received international awards for achievements in science, he has been chairman and organizer of six international conferences on calcified tissues and is President of the Croatian Calcified Tissue Society, member of EMBO, Croatian Academy of Sciences and Arts (CASA) and World Academy of Arts and

Sciences (WAAS). He is author of more than 200 manuscripts with an h-index 51, inventor of more than 30 patents and editor of 4 books on BMPs. He is chairman of the LS7 biomedical panel of the European Research Council. He was founder of Genera Research, an innovation-based biotechnology company developing a novel regenerative therapy for bone defects via coordinating the collaborative European Commission for Science funded programs.

Matthew Warman

Dr Matthew Warman is Professor of Genetics and Orthopaedic Surgery at Harvard Medical School, Boston. He also serves as the Director of the Orthopaedic Research Laboratories at Boston Children's Hospital. Dr Warman received a ScB in Engineering from Brown University in Rhode Island and an MD from Cornell University in New York. He was fortunate to have received excellent mentoring during his scientific training with Drs Adele Boskey and Bjorn Olsen. Dr Warman's research focuses on patients with genetic diseases that affect the skeleton. He and members of his lab have contributed to the identification of disease-causing genes for Mendelian disorders, including Stickler syndrome, Boston-type Craniosynostosis, Metachondromatosis, Achondrogenesis type 1A, and Camptodactyly-Arthropathy-Coxa Vara-Pericarditis syndrome. His lab's discovery that mutations in the WNT co-receptor LRP5 cause the autosomal recessive skeletal fragility disorder Osteoporosis-Pseudoglioma syndrome highlighted the importance of WNT signaling in skeletal growth and homeostasis. Current projects in the lab include studying non-heritable genetic skeletal diseases, such as the CLOVES and Klippel-Trenanay syndromes.

Dr Warman describes the overall goal of his work being the discovery of interventions that can prevent, delay, or reverse consequences of heritable and acquired skeletal diseases. Toward this goal, his lab has generated animal models for several human skeletal diseases and is employing these models to perform "proof of principle" studies testing therapeutic interventions that could then be used in patients. His work is currently supported by grants from the Howard Hughes Medical Institute and the National Institutes of Health – National Institute of Arthritis, Musculoskeletal and Skin Diseases (NIAMS).

Dr Warman serves as the Chair of the Institutional Animal Care and Use Committee at Boston Children's Hospital. He also is a member of the Medical Advisory Board of the Osteogenesis Imperfecta Foundation.

Kathy Weilbaecher

Dr Kathy Weilbaecher received her BA degree from Harvard University, her MD degree at Stanford Medical School and medical oncology training at the Dana Farber Cancer Institute at Harvard Medical School. In 2000, she joined the faculty at Washington University School of Medicine, St Louis and is currently the Oliver M Langenberg Distinguished Professor of the Science and Practice of Medicine. She is a practicing breast cancer medical oncologist and her research investigates tumor reprogramming of the bone microenvironment, with a focus on molecular regulators of bone, immune and tumor cells such as 1) integrin beta 3 pathway genes 2) the bone "homing" molecules, CXCR4 and G-CSF and 3) HTLV1 viral oncogenes Tax and HBZ. She has developed several clinical trials stemming from her laboratory. Dr Weilbaecher was elected to the American Society for Clinical Research and the American Association of Physicians, and is co-leader of the Breast Cancer Research program at the Siteman Comprehensive Cancer Center.