













ECTS Academy Mentoring Programm, List of Mentors (in alphabetic order)


Basic Research			
<p>Andrea Burden</p> 	<p>ETH Zurich, Department of Chemistry and Applied Biosciences, Institute of Pharmaceutical Sciences</p>	<p>Zurich, Switzerland</p>	<p>Andrea Burden is received her PhD from the University of Toronto at the Department of Pharmaceutical Sciences in the area of pharmacoepidemiology and completed her post-doctoral fellowship at Maastricht University Medical Centre+ in the Netherlands. Andrea was recently appointed as an Assistant Professor at the ETH Zurich in the Institute of Pharmaceutical Sciences where she is developing a new research group in pharmacoepidemiology. The aim of the research group is to advance pharmacoepidemiologic methods to assess medication safety and effectiveness in chronic disease management. Of primary clinical interest is the role of metabolic syndrome, including obesity, on the safety and effectiveness of medications in musculoskeletal and rheumatic diseases. This includes an improved understanding of the multimorbidity within these patients and developing methods to improve prediction of treatment success.</p>
<p>Björn Busse</p> 	<p>University Medical Center Hamburg-Eppendorf</p>	<p>Hamburg, Germany</p>	<p>Björn Busse is currently head of a 'Emmy Noether Research Group' (eq. Assistant Professor). The group of Björn is hosted by the Department of Osteology and Biomechanics at the University Medical Center Hamburg-Eppendorf. Björn has finished his Ph.D. work (Free and Humboldt University Berlin, 2006-2009) with honors, where he has focused on research regarding bone biomechanics and bone mineralization. In particular, he has developed strong skills in scanning and backscattered electron microscopy, microanalysis, image analysis, materials testing and bone histomorphometry. Björn's work provides a contribution to our understanding on the fracture of bone, specifically by focusing on aspects of bone quality, such as structural and compositional osseous changes with aging, osteoporosis, osteoporosis treatment, Paget's disease of bone, and other musculoskeletal disorders, from both a medical and engineering perspective.</p>
<p>Mattia Capulli</p> 	<p>Department of Biotechnological and Applied Clinical Sciences, University of L'Aquila</p>	<p>L'Aquila, Italy</p>	<p>Mattia Capulli received his PhD in Biotechnology at the University of L'Aquila, Italy, in 2010 under the supervision of Prof. Anna Teti. He recently was appointed as an Assistant Professor of Histology at the University of L'Aquila, where he is building up an independent research group. His fields of interest are: rare genetic bone diseases, bone metastases from breast and prostate cancer, adaptation of bone cells to mechanical forces and disuse osteoporosis. He conducts both basic and translational research, working with in vitro and in vivo models of bone diseases.</p>

<p>Graziana Colaianni</p> 	<p>Department of Basic Medical Science, Neuroscience and Sense Organs. University of Bari.</p>	<p>Bari Italy</p>	<p>Graziana Colaianni received her PhD in Science and Cellular Technologies from the University of Bari (Italy) in 2005. During her post-doc, she was involved in analyzing the effects of hypothalamic and steroids hormones by studying the bone phenotype of mice genetically modified for the oxytocin receptor, vasopressin receptor and double knock out for both receptors. Some of these studies have been carried out at the Mount Sinai School of Medicine (New York, USA), where she has been working as post-doctoral fellow for 1 year. During her post-doc, she has also been involved in two projects supported by National Aeronautics and Space Administration (NASA), European and Italian Space Agency (ESA and ASI) for studying the effect of microgravity on bone tissue, during the Space flight missions Columbia STS-107 and FOTON-M3. These projects generated her major interest in the field of osteoporosis and muscle atrophy related to microgravity and mechanical loading. Therefore, during the last four years of the post-doc, she mainly worked on bone-muscle interaction by demonstrating that the miokine Irisin, secreted by skeletal muscle during physical activity, plays a central role in bone metabolism, driving positive effects on bone mineral density and cortical bone geometry.</p>
<p>Marietta Herrmann</p> 	<p>IZKF Group Tissue Regeneration in Musculoskeletal Diseases, University Hospital Wuerzburg and Orthopedic Center for Musculoskeletal Research, University of Wuerzburg</p>	<p>Wuerzburg, Germany</p>	<p>Marietta Herrmann studied biology in Aachen, Germany, where she received her PhD in 2012. Marietta's PhD was focused on the role of the plasma protein fetuin-A in the regulation of mineral homeostasis. Her thesis, involving in vivo work using transgenic animals as well as in vitro cell biological studies, was specifically focused on the natural mechanisms responsible for the inhibition of ectopic mineralization. After her PhD, Marietta joined the AO Foundation Research Institute in Davos, Switzerland for postdoctoral training. The main focus of this post-doc was on bone regeneration with emphasis on strategies to promote neovascularization and the role of mesenchymal stem cells (MSC) herein. Since 2017 Marietta is group leader of a junior research group at the University of Wuerzburg, Germany. The research focus of the group is on MSC biology, in particular their interaction with the microenvironment, immunomodulatory properties as well as their involvement in bone regeneration.</p>
<p>Carmen Huesa</p> 	<p>University of the West of Scotland / University of Glasgow</p>	<p>Glasgow, UK</p>	<p>I am a bone biologist with great interest in biomechanics. It could be said that my specialty is microCT, but I also work with molecular biology techniques as well as animal models. I am keen on the interaction with engineers and computer scientists in the lab. Ultimately, I love science and this is why I am trying to make my way in academia. I have learnt a few things on the way and I'm happy to share any knowledge acquired. "Post-doc-ing" is fun but one must be smart about it.</p>

<p>Alex Ireland</p> 	<p>Research Centre for Musculoskeletal Science & Sports Medicine, Department of Life Sciences, Manchester Metropolitan University</p>	<p>Manchester, UK</p>	<p>I am a Senior Lecturer in Physiology, working in the Musculoskeletal Science and Sports Medicine Research Centre within the Department of Life Sciences at Manchester Metropolitan University. My primary research interest is in bone mechanoadaptation, and I also work in neuromuscular and skeletal development and ageing. My work is entirely with humans, and my primary expertise is musculoskeletal imaging and assessment of neuromuscular function.</p>
<p>Abbas Jafari</p> 	<p>Institute of Cellular & Molecular Medicine, University of Copenhagen</p>	<p>Copenhagen, Denmark</p>	<p>Abbas Jafari is Assistant Professor at Institute of Cellular & Molecular Medicine, University of Copenhagen. Abbas received his PhD in Stem Cells & Regenerative Medicine from University of Southern Denmark in 2012. Abbas's research deals with understanding the mechanisms regulating differentiation fate of skeletal (mesenchymal) stem cells (MSC). During PhD studies he designed and developed a quantitative platform for high-throughput screening of bioactive compounds to identify novel druggable targets to enhance osteoblast differentiation of MSC. During postdoctoral training, he has investigated the role of MSC-secreted factors in autocrine regulation of MSC fate specification. His current research is aimed at understanding the role of MSC-secreted factors in maintaining bone marrow homeostasis and pathophysiology of disturbed homeostasis under inflammatory conditions.</p>
<p>Katharina Jähn</p> 	<p>Institut für Osteologie und Biomechanik Universitätsklinikum Hamburg-Eppendorf</p>	<p>Hamburg, Germany</p>	<p>Senior postdoc with a background in biochemistry. Experienced in bone histology, bone histomorphometry, and μCT analysis; ex vivo bone organ culture; osteocyte culture, functional characterizations and imaging; as well as fracture healing processes and muscle-bone crosstalk</p>

<p>Nerea Lopez</p> 	<p>University of Edinburgh</p>	<p>Edinburgh, UK</p>	<p>I did my PhD in Salamanca, Spain, focused on patients with Gorlin syndrome, a rare disease involving developmental alterations and appearance of basal cell carcinomas. In 2008, I moved to the Rheumatology and Bone Disease Unit at the University of Edinburgh, with Prof Stuart Ralston. During my first postdoc, I characterised a model for early onset Paget's disease of bone, a focal disorder of bone remodelling mainly affecting older people. During my second postdoc in Prof Ralston's group, I focused on genetics and genomics in osteoporosis. I have led a large collaborative genome-wide association analysis in women with clinical vertebral fractures. Currently, I am the PI of a pharmacogenomics and personalised medicine project for osteoporosis, as well as the laboratory manager. Besides, I am the director of the Scottish Constituency of the Spanish Researches in the UK Society. During these years, I have gained experience in different aspects that could be useful to guide young investigators. For example: moving country and research field for a postdoc, applying for fellowships, supervising students, reviewing papers, evaluating PhD thesis, setting and leading large collaborative efforts, managing laboratory resources and staff, public engagement, seminar organisation, funding management.</p>
<p>Michelle McDonald</p> 	<p>Garvan Institute of Medical Research University of New South Wales</p>	<p>Sydney, Australia</p>	<p>I am a Group Leader of the Bone Microenvironment Group in the Bone Division, I graduated from my PhD in 2008. My research focuses on understanding how tumour cell dormancy and growth is regulated by the local bone microenvironment and how we can exploit this interaction to improve outcomes and treatments for patients with metastatic bone disease and multiple myeloma. My group also uses novel intravital imaging approaches to examine normal and pathological bone cell dynamics in addition to their interactions with tumour cells.</p>
<p>Petar Milovanovic</p> 	<p>Laboratory for Anthropology and Skeletal Biology, Institute of Anatomy, Faculty of Medicine, University of Belgrade</p>	<p>Belgrade, Serbia</p>	<p>Dr. Milovanovic obtained his MD degree at the University of Belgrade as the best graduate in 2009. He defended the PhD thesis about nanostructural and microarchitectural signs of bone fragility in postmenopausal women in 2014 at University of Belgrade. He received numerous awards for academic achievements, including the Best young scientist award at the Faculty of Medicine (2016) and New Investigator award at ECTS 2017. He has a strong orientation towards international cooperation and maintains successful research communication with the bone group at University Medical Center Hamburg-Eppendorf, which he visited as a DAAD doctoral fellow and as a postdoctoral fellow of the Alexander von Humbolt foundation. Currently, he is an Assist. Professor at the University of Belgrade. His expertise encompasses human anatomy and anthropology, bone aging, bone quality, bone imaging in both research and clinical settings. His current research focuses on age- and disease-related structural and compositional changes in skeleton and determinants of bone fragility, with a particular emphasis on the role of osteocytes in bone quality. His research is largely based on interdisciplinary work, and he emphasizes communication with scientists from various disciplines (from life sciences to clinical sciences).</p>

<p>Isabel Orris</p> 	<p>Royal Veterinary College</p>	<p>London, UK</p>	<p>I am a lecturer at the RVC. The research focus of my group is the regulation of bone cell function and vascular calcification by local endocrine and paracrine signalling molecules. Experimental approaches include primary bone cell cultures, molecular biology, imaging and in vivo rodent models of bone disease and vascular calcification.</p>
<p>Martina Rauner</p> 	<p>Medical Faculty of the Technische Universität Dresden</p>	<p>Dresden, Germany</p>	<p>Martina Rauner is a biotechnologist and specialised in biomedical research during her doctoral studies at the Medical University of Vienna. She is currently the Scientific Director of the Bone Lab and is focusing on the role of Wnt signaling in metabolic, inflammatory, and hematologic bone diseases.</p>
<p>Katherine Staines</p> 	<p>Edinburgh Napier University</p>	<p>Edinburgh, UK</p>	<p>Katherine Staines is a Vice Chancellor's Research Fellow at Edinburgh Napier University. Her research is focused on the development, regulation and pathology of the musculoskeletal system – in particular on the degenerative joint disease osteoarthritis. Katherine completed her PhD in 2012, with a thesis that examined the role of Mepe in chondrocyte matrix mineralisation, under the direction of Prof. Colin Farquharson, University of Edinburgh. In 2012, Katherine started her first postdoctoral position with Prof. Andy Pitsillides at the Royal Veterinary College, London. It was during this Arthritis Research UK funded post that Katherine's interest in osteoarthritis developed. In 2014, Katherine moved back to the University of Edinburgh to work on another Arthritis Research UK postdoctoral position looking at the subchondral bone in osteoarthritis. Katherine is the New Investigator representative for the Bone Research Society and currently sits on the Editorial Board for the Journal of Endocrinology, the Journal of Molecular Endocrinology, BMC musculoskeletal disorders, and Frontiers in Endocrinology, Bone Research.</p>

<p>Hanna Taipaleenmäki</p> 	<p>Molecular Skeletal Biology Laboratory (MSB-Lab), University Medical Center Hamburg-Eppendorf</p>	<p>Hamburg, Germany</p>	<p>Hanna Taipaleenmäki is a group leader at the University Medical Center Hamburg-Eppendorf, Germany. During her PhD and post-doctoral training in Finland, Denmark, USA and Germany she has investigated the contribution of microRNAs in physiological and pathological bone remodeling with specific focus on cancer-induced bone disease. Her current research is aimed at understanding the malignant cross-talk between the bone cells and cancer cells in breast cancer metastases using clinical samples, in vivo models and in vitro approaches.</p>
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Basic Research / Scientific Publishing

Mauro Alini



AO Research Institute Davos,
Switzerland




Davos, Switzerland





I graduated in Chemistry from the University of Lausanne (Switzerland) in 1983. After my PhD defence at the same University, in 1988, I joined the Joint Diseases Laboratory at the Shriners Hospital in Montreal to work on the growth plate tissue. In January 1995, I was appointed as an Assistant Professor at the Division of Orthopaedic Surgery of the McGill University and head of the Biochemistry Unit of the Orthopaedic Research Laboratory, working to develop new biological approaches to treating intervertebral disc damage. Since July 2000, I am in charge of the Musculoskeletal Regeneration Program (40 scientists) at the AO Research Institute (Davos, Switzerland), focusing on cartilage, bone and intervertebral disc tissue engineering.




Since 2000, I am in the Scientific Editorial Board of the eCM journal, a journal run by scientists for scientists. In 1999, eCM started the concept of free science publication. eCM was one of the first open access scientific journals in the world and initiated the transparent review process (now known as open peer review), including a transparent route to becoming a member of the eCM International Review Panel.



In 2018, I was appointed as the Co-Editors in Chief of the JOR Spine, a new journal created by the Orthopaedic Research Society (ORS) from USA, together with Wiley. JOR Spine originated from a specific request from the ORS Spine section, which identified a need within our scientific community for a more basic and translational research-oriented spine journal.

So, my Editorial experience span from pure reviewing, to run a journal, to interact and deal with the publishing company.

Clinicians / Clinical Scientists				
Athanasios Anastasilakis	424 General Military Hospital	Thessaloniki, Greece	Athanasios Anastasilakis is an endocrinologist in 424 General Military Hospital. His PhD was related to the OPG/RANKL bipole, and he is interested in clinical research in relation to osteoporosis pathophysiology and treatment, Paget's disease of bone and Langerhans Cell Histiocytosis. Additionally, he is interested in the effect of myokines on the skeleton and the interaction between bone and muscle	
				
Natasha Appelman-Dijkstra	Leiden University Medical Center	Leiden, Netherlands	I am a Endocrinologist at the Leiden Center for Bone Quality, of which I have been the Director since April 2016 and I am the Chair of the LUMC Academic Residency Program in Endocrinology. I successfully developed specific research lines in Osteoporosis and Rare Bone Diseases; specific projects during the past 5 years: <ul style="list-style-type: none"> - Novel diagnostic approaches in Osteoporosis: Impact Microindentation Technique (IMT). - Mechanisms of disease: Clinical, biochemical, imaging, and genetic studies of rare bone diseases characterized by high bone mass and/or alterations of bone turnover. FD/MAS has been a major focus of my research and I am the project leader of the multicenter PROFID study, a PROspective study in FibrousDysplasia/McCune Albright. - Patient empowerment/patient related outcomes in osteoporosis but in rare bone diseases as well. Last but not least I am the mother of 3 beautiful children.	
				
Karine Briot	Rheumatology Department, Cochin Hospital, INSERM U1153	Paris, France	I'm rheumatologist , specialized in the field of bone diseases. I work as rheumatologist and perform clinical research in osteoporosis , secondary osteoporosis and rare bone diseases, in a department of Epidemiology of musculoskeletal diseases. I offer my expertise in the field of my main topics which are fracture risk assessment, pharmacological and non pharmacological treatment of bone fragilities, and relationships between systemic inflammation and bone fragility	
				

<p>Thomas Funck-Brentano</p> 	<p>Center for Bone & Arthritis Research, Institute of Medicine, Sahlgrenska Academy, University of Gothenburg</p>	<p>Paris, France</p>	<p>Thomas Funck-Brentano is a rheumatologist in Paris Diderot University, France with a special clinical interest in osteoporosis and rare bone diseases. He has a preclinical background in the bone & cartilage field which gives him a special interest in translational medicine. He has moved to Gothenburg University, Sweden, as a post-doctorant, to fulfill his skills in bone physiology and in clinical epidemiology before returning to his home University. Thomas was president of the Young Rheumatologist Section of the French Society of Rheumatology from 2010 to 2013.</p>
<p>VitoGuarnieri</p> 	<p>Medical Genetics, IRCCS Casa Sollievo della Sofferenza Hospital</p>	<p>San Giovanni Rotondo (FG), Italy</p>	<p>Vito Guarnieri is a geneticist and he received his PhD in Genetics and Molecular Evolution at the University of Bari in 2007 (supervisor: Mariano Rocchi). In 2008-2009 he was Visitor Scholar at the McGill University/Royal Victoria Hospital in Montreal at the Calcium Research Laboratory of Geoffrey N Hendy. Currently he is responsible for molecular diagnosis of calcium and phosphate dismetabolism genetic diseases. His research focuses on Primary Hyperparathyroidism and associated endophenotypes (FHH, NSHPT, HPT-JT, MEN1, MEN4). In 2012 he got a Young Investigator Research Award from the Italian Ministry of Health.</p>
<p>Polyzois Makras</p> 	<p>251 Hellenic Air Force & VA General Hospital, Dpt of Endocrinology & Diabetes</p>	<p>Athens, Greece</p>	<p>Polyzois Makras is an Endocrinologist at 251 Hellenic Air Force & VA General Hospital, Athens, Greece. Since 2006 he has been continuously engaged in research in disorders of calcium and bone metabolism as well as in rare diseases (mainly Langerhans Cell Histiocytosis)</p>
<p>Daniela Merlotti</p> 	<p>San Raffaele Scientific Institute</p>	<p>Milan, Italy</p>	<p>Daniela Merlotti is a clinician specialized in internal medicine; she received her MD and PhD degree at the University of Siena, Italy. Actually she is PI of a Young Investigator Research Award Italian Ministry of Health at the San Raffaele Scientific Institute in Milan. Her research interest are metabolic bone disorders, osteoporosis, Paget's disease of bone and rare bone disorders. Actually she is investigating the extraskeletal effects of p62 mutations both in mouse models and humans.</p>

<p>Nicola Napoli</p> 	<p>Diabetes and Bone network, Department Endocrinology and Diabetes, University Campus Bio-Medico of Rome & Division of Bone and Mineral Diseases, Washington University in St Louis</p>	<p>Rome, Italy & St Louis, MO, USA</p>	<p>Dr Napoli received his medical degree in 2000 and completed his clinical fellowship and PhD in Metabolic Diseases at Washington University in St Louis. He is Assistant Professor of Endocrinology at University Campus Bio-Medico of Rome and Adjunct Assistant Professor of Medicine at Washington University in St Louis. His research is funded by national and international institutions. At the moment his group is mostly engaged on analyzing the effect of WNT pathway, inflammation, sarcopenia on bone strength in obesity and Type 2 diabetes using both human and animal models. He is also interested on the effect of lifestyle intervention and antidiabetic medications on memory, frailty and bone fragility in diabetic patients. His research interests cover also the study of predictors and risk factors for fragility fractures in large population cohorts and their treatment through new anti-osteoporotic treatment.</p>
<p>Julien Paccou</p> 	<p>Lille University Hospital, France, Member of the bone unit and of the research unit into the department of rheumatology. Member of the lab (EA 4490): Pathophysiology of inflammatory bone diseases</p>	<p>Lille, France</p>	<p>Julien Paccou, MD, PhD is an assistant professor in Rheumatology at Lille University Hospital, France. He received his MD from Lille University Hospital in 2008. He has prepared and obtained his PhD thesis in 2013 on Vascular Calcification in Rheumatoid Arthritis in the INSERM U1088 laboratory at Amiens University Hospital, France. Then, he completed his postdoctoral fellowship in 2014 at the MRC Lifecourse Epidemiology Unit, University of Southampton, UK under the supervision of Professor Cyrus Cooper. His recent research has examined Vascular Calcification in Rheumatoid Arthritis. In a review recently published in JCEM, Dr Paccou and colleagues describe the role of the Bone Marrow Fat in Skeletal Health. One of his current projects is assessing body composition changes under ustekinumab among patients with psoriatic arthritis. Further, Dr Paccou would like to initiate a research project evaluating the bone marrow fat content in postmenopausal women with and without fragility fracture.</p>
<p>Annegreet Veldhuis-Vlug</p> 	<p>Academic Medical Center Amsterdam</p>	<p>Amsterdam, Netherlands</p>	<p>Annegreet Veldhuis-Vlug is a clinical fellow in Endocrinology at the Academic Medical Center in Amsterdam and specializes in metabolic bone disease in the Bone Center of the Erasmus Medical Center in Rotterdam. She was a postdoc in the Rosen lab at the Maine Medical Center Research Institute in 2017 and her research focuses on endocrine regulation of human marrow bone marrow fat.</p>

Industry				
Nicolas Bonnet		Nestlé research center & Department of Internal Medicine Specialties Service of Bone Diseases, University Geneva Hospital (HUG), Faculty of Medicine (UNIGE)	Geneva, Switzerland	<p>Dr. Bonnet received his PhD degree from the University of Orleans, France, in 2006, after which he has been working as a post-doctoral fellow in the group of Prof. S Ferrari at the research laboratory of the Division of Bone Diseases, in Geneva, Switzerland. Dr. Bonnet has a keen interest in the molecular and signaling mechanisms for mechanotransduction of physical activity to the skeleton. He has been promoted senior lecturer and received is private docent in 2015 by the faculty of medicine of Geneva where he focused on the role of the bone tissue in glucose homeostasis. In April 2019, he joins the musculoskeletal department in Nestlé research center as a senior scientist in bone and joint physiology. His new areas of research are focus on how nutrition and physical activity can impact (1) Bone mass acquisition in infant, toddler and children, with the idea that osteoporosis is a pediatric disease. (2) Bone and muscle loss, with the idea to improve mobility, implication in aging and metabolic disease.</p>
Graeme Campbell		Philips	Hamburg, Germany	<p>Graeme Campbell received his PhD in Biomedical Engineering from the University of Calgary, Canada in 2011, after which he worked for three years at the Molecular Imaging North Competence Centre (MOIN-CC) in Kiel, Germany headed by Claus Glüer. There he developed novel image-processing techniques and computational models to study bone fragility in osteoporosis, diabetes and cancer using micro- and clinical CT. He then moved to the Institute of Biomechanics at the Hamburg University of Technology where he studied collagen deficiencies and micro-damage accumulation in diabetic bone and investigated the factors leading to instability in orthopaedic implants. He now works as a Clinical Scientist at Philips in the area of Computed Tomography, with a focus on spectral CT. There, he works with clinicians and researchers at university hospitals to carry out clinical studies using the latest developments in imaging and image processing software in order to improve diagnosis and therapeutic strategies for patients.</p>