

### **Paolo Bianco**

Paolo Bianco is Professor of Pathology and Director, Anatomic Pathology, at Sapienza Università di Roma, Italy, and Chief, Stem Cell Laboratory at San Raffaele Biomedical Science Park of Rome. He works on skeletal diseases and on non-hematopoietic stem cells found in the bone marrow stroma. His earlier work focused among other things on the crucial role of stem cell for modeling genetic diseases of the skeleton, in particular fibrous dysplasia (FD, OMIM#174800), in vitro and in vivo. These studies provided significant advances in the understanding of the disease pathogenesis. His more recent work is directed at identifying and characterizing postnatal progenitors in the human bone marrow as subendothelial cells (see Sacchetti et al, *Cell* 2007), and to the definition of tissue-specific progenitors in microvascular niches in different tissues (Dellavalle et al *Nature Cell Biology* 2007, Bianco et al *Cell Stem Cell* 2008), moving the understanding of the topic beyond the paradigm of so-called “mesenchymal stem cells”. A specific facet of this issue is represented by the role of skeletal stem cells in providing a niche for cancer cells homing to bone. Dr Bianco has published over 130 peer-reviewed articles.

### **Brendan Boyce**

Dr Boyce is Professor of Pathology and Laboratory Medicine and Director of Anatomic Pathology at The University of Rochester Medical Center, Rochester, NY, USA. He received his medical degree and training in Pathology from Glasgow University, Scotland. He has had a research interest in metabolic bone disease and bone cell biology since 1976. He identified an essential role for SRC tyrosine kinase in osteoclast ruffled border formation in 1992 and has studied the efficacy of SRC inhibitors in preclinical models of metastatic bone disease. His NIH-funded research program focuses on the roles of canonical and non-canonical NF- $\kappa$ B signaling on the formation and activation of osteoclasts in a variety of common diseases, including post menopausal osteoporosis, rheumatoid arthritis and metastatic bone disease.

**Rowan T. Chlebowski, MD, PhD**, is a professor of Medicine at the David Geffen School of Medicine at UCLA, as well as chief of the Division of Medical Oncology and Hematology at the Harbor-UCLA Medical Center. His PhD is in Reproductive Biology. He serves on advisory, executive, and steering committees for several ongoing multi-center clinical trials including the Women’s Intervention Nutrition Study (WINS), a multi-center adjuvant breast cancer trial evaluating fat intake reduction on breast cancer outcome and the Women’s Health Initiative (WHI), a multi-center study of women’s health including trials of menopausal hormone therapy, dietary change and calcium and vitamin D supplementation influence on chronic diseases including breast cancer. Dr. Chlebowski’s major research interests include therapy and prevention of breast cancer and chronic diseases impacting women’s health. He has published extensively with over 200 peer reviewed publications, many in major journals including the *New England Journal of Medicine*, *JAMA*, *Lancet*, *Journal of National Cancer Institute*, and the *Journal of Clinical Oncology*. Recent presentations include plenary presentations in both 2005 and 2006 at the American Society of Clinical Oncology (ASCO) Annual Meeting. Dr. Chlebowski has been named one of “America’s Top Doctors” in medical oncology for the past seven years.

### **Mark Clemons**

Mark Clemons is a Clinical Investigator at the Ottawa Hospital Research Institute (Cancer Therapeutics Program), staff medical oncologist (Ottawa Hospital Cancer Centre) and Associate Professor (University of Ottawa). A proponent of high quality clinical trials research, he is involved in a large number of experimental therapeutic studies for patients with early stage, locally advanced and metastatic breast cancer. He has published widely on the management of breast cancer and has a large research program evaluating the mechanisms of resistance and sensitivity to treatment for bone metastases and locally advanced breast cancer.

### **Philippe Clézardin**

Dr Philippe Clézardin is Research Director at INSERM (National Institute for Health and Medical Research), Head of the Research Unit UMR664 working on the pathophysiology of bone metastasis, and Director of the Research Institute “IFR62” entitled: “Cancer, Nutrition and Metabolism” (2007-2010). He is also President of the international Cancer and Bone Society (2010-2011). After being awarded a PhD in Biochemistry from the University of Lyon (1983), he completed a postdoctoral fellowship at the Medical Research Council / Scottish National Blood Transfusion Center in Edinburgh, UK (1984-1986). He then specialized in research on cancer and hemostasis at the General Hospital in Ottawa, Canada, and Edouard Herriot Hospital in Lyon, France (1990-1991), and he obtained his DSc. from the University of Lyon (1991). For the past ten years, Dr Clézardin focused his research interests on the mechanisms of bone metastasis formation of breast and prostate cancers, with the goal of developing new anticancer therapies.

### **Bill Dougall**

In his role as Scientific Director of Research, Cancer Biology, Dr. Dougall leads Amgen’s oncology research efforts to develop inhibitors of RANKL for the treatment of skeletal complications of malignancies. Dr. Dougall was part of the research group that identified RANK and RANKL and subsequently demonstrated the obligate role for RANK in osteoclastogenesis using genetic models. His research interests include the function of the RANK/RANKL/OPG axis and the role of osteoclasts and osteoblasts in cancer-induced bone diseases. Additional research interests include osteotropism of breast and prostate cancer, development of the mammary gland and basic mechanisms of breast cancer. Dr. Dougall received his Ph.D. in Biochemistry and Molecular Biology at the University of Florida and completed a post-doctoral fellowship at the University of Pennsylvania Department of Pathology, Division of Immunology.

### **Riccardo Fodde**

Riccardo Fodde studied biology and molecular genetics at the University of Pavia, Italy. His PhD was carried out at the Dept. of Human Genetics of the University of Leiden and has led to the characterization of the spectrum of mutations leading to thalassemia in The Netherlands. In 1990 he started his post-doctoral work on the molecular genetic basis of colorectal cancer in the same department. As a fellow of the Royal Dutch Academy of Science (KNAW) he visited the laboratory of prof. Raju Kucherlapati at the A. Einstein College of Medicine in New York, where he developed the first targeted mouse model for intestinal tumorigenesis. In 2001, he became full professor of Cancer Genetics at the Centre for Human & Clinical Genetics of the Leiden University Medical Center (LUMC). His group has contributed to the elucidation of the molecular basis of hereditary colorectal cancer in man, developed a large number of pre-clinical mouse models for colorectal carcinogenesis, and characterized novel functional aspects of the APC tumour suppressor gene. Most recently, the focus of his research has been centred on the role of stem cells in cancer. Since 2003 he is professor of Experimental Pathology at the Erasmus Medical Centre in Rotterdam. In 2005, he became member of the European Molecular Biology Organization (EMBO).

### **Margaret Frame**

Margaret Frame graduated with a first class honours BSc in Biochemistry, followed by a PhD from the Medical Faculty, both at the University of Glasgow. She worked for a brief period in industry, and then joined the MRC Virology Unit in Glasgow as a post-doctoral scientist until 1987. After the arrival of three sons, she returned to work at the Beatson Institute for Cancer Research in 1992, first as a post-doc and then subsequently as a group leader. In 1996, Margaret was jointly appointed as Professor of Cancer Research in the Faculty of Medicine at the University of Glasgow and the Beatson Institute, where she

became Deputy Director in 2002. She was awarded the Tenovus Medal in 1999 for her work on Src family kinases, was elected a Fellow of the Royal Society of Edinburgh in 2003, and EMBO Fellow in 2009. Margaret's current research interests are in cancer invasion and metastasis, and the role of tyrosine kinases in controlling tumour cell spread. Margaret joined the new Edinburgh Institute of Genetics and Molecular Medicine in October 2007, to head up translational Cancer Research within that. She co-directs the Edinburgh Cancer Research Centre (along with Professor David Cameron), in the role of scientific lead in the new Cancer Research UK Centre (from January 2010).

### **Irene Ghobrial**

Dr Irene Ghobrial is Assistant Professor of Medicine at the Dana-Farber Cancer Institute (DFCI), Boston, MA, USA. She received her MD in 1995 from Cairo University and went on to complete her residency in internal medicine at Wayne State University, Sinai-Grace Hospital in Detroit, Michigan, and her hematology/oncology fellowship at the Mayo Clinic in Rochester, Minnesota. She joined DFCI in October, 2005. Her research focuses on understanding the regulation of cell trafficking including homing and migration in Multiple Myeloma (MM) and Waldenstrom Macroglobulinemia (WM), and on identifying deregulated signaling proteins that can be specifically targeted with novel therapeutic agents, specifically focusing on the role of the CXCR4/PI3K pathway in MM and WM. Dr. Ghobrial is the recipient of the American Society of Hematology Scholar Award, the American Society of Clinical Oncology Foundation Young Investigator Award, and a Smokler Award from the Research Fund for Waldenstrom Foundation. She is also a Leukemia and Lymphoma Society scholar and a Lymphoma Research Foundation scholar.

### **Michael Gnant**

Dr Michael Gnant is Full Professor of Surgery at the Medical University of Vienna, Austria, where he also serves as President of the Austrian Breast and Colorectal Cancer Study Group. His medical career began in 1988 when he graduated in medicine in Vienna. He then specialised in surgery (1994) and surgical oncology. In 1997 and 1998 he worked as a Visiting Scientist at the National Cancer Institute, NIH, Bethesda, USA, and in 2004 he became Full Professor at the Medical University of Vienna. In 2005 he was elected President of the Austrian Breast & Colorectal Cancer Study Group (ABCSCG). In 2009, he was appointed as future Chairman of the Department of Surgery at the Medical University of Vienna. Professor Gnant has published more than 250 original papers in peer-reviewed journals, more than 700 abstracts, and he has given more than 800 lectures at national and international meetings. In addition, he has been the recipient of multiple national and international awards including the Grand Central European Award for Clinical Cancer Research, Best Paper / Best Poster Awards, and the Award for Interdisciplinary Research in Oncology. He also serves on the famous St. Gallen Consensus Panel for Early Breast Cancer, and was nominated to the European Academy of Science in 2009. Dr Gnant's research interests include several fields of surgical oncology, in particular breast and pancreatic cancer, immunotherapy using antibodies, vaccination with dendritic cells, endocrine intervention, dormant tumor cells, and the use of bisphosphonates. He has been the Principal Investigator of more than 25 clinical trials.

### **Dominique Heymann**

Dominique Heymann studied cell biology, biochemistry and immunology in INSERM unit 211 at the University of Nantes and received his doctorate in 1995. He obtained first a technician and an engineer position thereafter at the University Hospital of Nantes before to be appointed Assistant-Professor in 2001 in the Department of Histology and Embryology. In 2009, he was awarded a personal Chair and heads a laboratory research group (INSERM URM957) of 40 people studying the pathogenesis of primary bone tumours and more specifically the role of bone microenvironment (osteoclasts, mesenchymal stem

cells, OPG/RANK/RANKL, IL-6 cytokine family) in the tumour growth. In 2006, he obtained the ‘Paul Mathieu’ price of the National Academy of Medicine for the work entitled “From the osteolytic process associated to primary bone tumours to the development of bi-therapies for osteosarcoma”. Since 2008, he is member of the INSERM scientific council. He is Associate Editor of *Life Sciences*, member of the Editor board of *Current Medicine Chemistry* and *European Journal of Pharmacology*, and Editor-in-Chief of the *Open Bone Journal*.

### **Christoph Klein**

Christoph Klein studied Medicine (1995) and performed his M.D. thesis at the Ludwig-Maximilians-University in Munich and Toronto at the Ontario Cancer Institute (1998). In Munich (Institute of Immunology, LMU) he continued his work on the development of single cell techniques. In 2001 he obtained the BioFuture young investigator award to found his own research team. He then joined the University of Regensburg where he has been Head of the Division of Oncogenomics in the Department of Pathology since 2006. He currently focuses on the characterization of disseminated tumour cells and metastatic progression to guide the development of adjuvant therapies.

### **Claire Lewis**

Claire is head of the Academic Unit of Inflammation & Tumour Targeting in the Medical School in Sheffield where she runs a team of postdoc and graduate scientists investigating the role of macrophages in driving important processes in tumours like invasion, angiogenesis and metastasis. Her group is also developing ways of using macrophages to target gene therapy to tumours.

### **Sabine Linn**

Sabine Linn received her medical degree (1991, *cum laude*) at the State University Leiden, and her internal medicine board certification (2000) at the University Medical Center Utrecht, The Netherlands. She earned her PhD (1998) on the subject of multidrug resistance in solid tumours from the Free University of Amsterdam. At the Netherlands Cancer Institute-Antoni van Leeuwenhoek Hospital in Amsterdam, she received her medical oncology certification and became a senior staff member of the Division of Medical Oncology (2003). Since 2005 she is also group leader at the Division of Molecular Biology where she and her research group focus on personalized medicine for breast cancer, which resulted in a Dutch Cancer Society Clinical Research Award in 2006.

### **Allan Lipton**

Dr Allan Lipton is Professor of Medicine and Oncology at the MS Hershey Medical Center in Hershey, PA, USA. Dr Lipton has a longstanding interest in the natural history and treatment of bone metastases. His group was the first in the United States to treat a patient with pamidronate for bone metastases and he has been involved in trials of zoledronic acid and denosumab.

### **Matthias Lutolf**

Matthias Lutolf is trained in Materials Engineering at ETH Zurich where he also carried out his PhD studies with Jeffrey Hubbell on the development of a novel class of biologically responsive synthetic materials for tissue engineering (awarded with ETH medal in 2004). In 2005, Lutolf joined the Baxter Laboratory in Genetic Pharmacology of Helen Blau at the Stanford University to work on hematopoietic stem cells (work sponsored by a Swiss National Science Foundation and Leukemia and Lymphoma Society fellowship). Since 2007 he is Tenure Track Assistant Professor within the Institute of

Bioengineering at EPF Lausanne. Lutolf won a prestigious European Young Investigator (EURYI) award to start up his lab at EPFL.

### **Jack Martin**

Jack (TJ) 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. He was 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. A Fellow of the Royal Society and of the Australian Academy of Science, he has been President of the International Bone and Mineral Society and Vice President of the international Cancer and Bone Society, and serves as Associate Editor or Board Member of a number of journals. Among awards were the Dale Medal in 1992 (UK), the Chemofux Research Prize in 1988 (Vienna), the William F Neuman Award in 1994 (USA), Pieter Gaillard Award of IBMS in 2003, the Ramaciotti Award in 2004, and the Gideon A Rodan Award for Mentorship in 2007. He has published more than 600 scientific articles and reviews and 6 books.

### **Eugene McCloskey**

Eugene McCloskey is currently a Professor in Adult Bone Disease at the University of Sheffield. Professor McCloskey has worked in the field of calcium and bone disorders since 1986. Initially training as an endocrinologist, he developed an interest in the mechanisms of malignant hypercalcaemia and osteolytic bone disease. He has been involved in several clinical trials of bisphosphonates in multiple myeloma and breast cancer that have established the role of anti-osteoclastic therapy in malignant disease. He subsequently trained in rheumatology before deciding to focus on metabolic bone diseases exclusively. Within the field of osteoporosis, Professor McCloskey has been principal investigator in a large number of MRC and pharmaceutical funded studies. He is an acknowledged expert in the fields of vertebral fracture definition and epidemiology as well as non-invasive assessments of bone strength and fracture risk. He has been involved with writing groups for guidelines in the Royal College of Physicians, the British Association of Surgical Oncologists and the Bone Research Society as well as Health Technology Assessments. More recently, he has contributed to the development of the FRAX tool for estimating fracture risk and the National Osteoporosis Guidance Group. He is a member of the BRS Board, the ASBMR Ancillary Program Committee and the National Specialty Group for Musculoskeletal Diseases. He has published over 120 peer-reviewed publications, book chapters and reviews.

### **Alain Puisieux**

Alain Puisieux is Professor of Biochemistry, University Claude Bernard Lyon 1, and is the Director of the U590 INSERM Unit in Lyon, France. His research theme is focused on the identification of mechanisms allowing pre-cancer and cancer cells to evade oncogene-induced senescence and apoptosis. He recently demonstrated that the reactivation of the embryonic transcription factors Twist1 and Twist2 can allow such an escape through the inhibition of both p53- and Rb-dependent pathways. His team further showed that, in epithelial cells, this escape is associated with an EMT, a trans-differentiation process associated with the acquisition of cellular motility as well as stem-like properties. These observations suggest that the reactivation of the Twist proteins might concomitantly provide growth advantage at the primary site by overriding failsafe programs and favour early cancer dissemination by inducing an EMT.

### **Sabine Riethdorf**

Dr Sabine Riethdorf is Group Leader at the Institute of Tumor Biology, Center of Experimental Medicine, University Medical Center Hamburg-Eppendorf, Germany. After studying biology at the University of Greifswald in Germany she went on to work for her PhD thesis in the Institute of Microbiology and Molecular Biology, also in Greifswald. She then moved on to the Institute of Pathology in Hamburg, during which time she spent 6 months in the Department of Pathology at the Harvard Medical School in Boston, MA, USA. Her research interests focus on the detection and phenotypical/molecular characterization of disseminated and circulating tumour cells in cancer patients.

### **David Roodman**

G David Roodman received his medical degree from the University of Kentucky College of Medicine and a doctorate in biochemistry from the University of Kentucky. Dr Roodman currently serves as Director of the Myeloma Program at the University of Pittsburgh Cancer Institute and Vice Chair for Research in the University of Pittsburgh School of Medicine's Department of Medicine. Dr Roodman also holds positions of prominence with several advisory and regulatory bodies, including Chair of the Paget Foundation. Dr Roodman has been in the forefront of research to understand the role of the marrow microenvironment in promoting hematologic malignancies. His research spans studies of both normal and pathologic conditions associated with increased osteoclast and osteoblast activity.

### **Salvatore Ruggiero**

Dr. Ruggiero received his DMD degree from Harvard Dental School and his MD degree from Harvard Medical School. He completed his Oral and Maxillofacial Surgery residency at Massachusetts General Hospital in Boston. After completion of his surgical training Dr Ruggiero joined the full time faculty of the Division of Oral and Maxillofacial Surgery at Long Island Jewish Medical Center and the University Hospital at Stony Brook. During his 14-year tenure at LIJ he served as Program director, Chief of Oral Surgery and Associate Chairman of the Department of Dental Medicine. Dr. Ruggiero is now in private practice as a member of the New York Center for Orthognathic and Maxillofacial Surgery and Associate Professor in the Division of Oral and Maxillofacial Surgery at the Stony Brook School of Dental Medicine

### **Karin Vanderkerken**

Karin Vanderkerken is professor at the Vrije Universiteit Brussel in the Myeloma Center Brussels. Her research has been focussed in the past on the mutual interactions of multiple myeloma cells with the bone marrow microenvironment with special emphasis on endothelial cells and the homing of the myeloma cells to the bone marrow. Dr Vanderkerken's current research focus is on epigenetic regulation of these interactions. The current research team comprises 14 people, including 3 post-doctoral fellows.

### **Toshiyuki Yoneda**

Toshiyuki Yoneda, DDS, PhD is a Professor (1997~) of Biochemistry and a Dean (2007~) at Osaka University Graduate School of Dentistry, Osaka, Japan. Dr Yoneda graduated from Osaka University Faculty of Dentistry, earning DDS in 1972. He obtained PhD in biochemistry at Osaka University Graduate School of Dentistry in 1976. He worked as a postdoctoral fellow at University of Connecticut Health Center (1977-1979) and NIDR (1979-1980). He was a professor of Department of Molecular and Cellular Biology at Medical Research Institute at Tokyo Medical and Dental University (2002-2003). His major interest has been to understand the molecular mechanism of cancer metastasis to bone with a long-term goal of development of mechanism-based specific treatment for bone metastasis. Over the last several years, he has been also studying the molecular mechanism of bone pain due to cancer metastasis to and colonization in bone.

