



**BOYCE, BRENDAN F.** Professor, University of Rochester Medical Center, Rochester, NY, USA

Place of Birth: Coatbridge, Scotland, United Kingdom

Education/Training/Positions: M.B. Ch.B., University of Glasgow Medical School, Scotland, 1966-1972; Member, Royal College of Pathologists (MRCPATH), United Kingdom, 1979; Fellow of the Royal College of Pathologists (FRCPath), United Kingdom, 1991; Resident House Officer in Gen. Medicine, Western Infirmary, Glasgow, and in Gen. Surgery, Royal Infirmary, Glasgow, 1972-73; Senior House Officer and Registrar in Pathology, Royal Infirmary, Glasgow, 1973-76; Lecturer in Pathology, Department of Pathology, University of Glasgow, 1976-85; Peel International Research Fellow and Visiting Professor of Medicine, Division of Endocrinology University of Texas Health Science Center, San Antonio, TX (UTHSCSAT), 1986-88; Senior Lecturer, University of Glasgow, 1985-90; Associate Professor and Professor, Department of Pathology, UTHSCSAT, 1990-1999; Professor, Department of Pathology and Laboratory Medicine and Department of Orthopaedics, University of Rochester, New York, 1999-present

Honors/Awards: Jean Mackintosh Traveling Research Fellowship (Scotland), 1977; McCunn Trust Traveling Fellowship (Scotland), 1986-87; Pathological Society Travel Award (England), 1986-87; Peel International Research Fellowship (England), 1986-87; Most Outstanding Abstract of the Meeting President's Award from ASBMR, 1997; President, International Society of Bone Morphometry (ISBM), 2002-2006; Secretary/Treasurer, Association of Osteobiology, 2003-2006; Vice Chair and Chair, Gordon Research Conference on Bones and Teeth, 2007, 2009, respectively

Editorial Duties/Peer Review Panels: Consulting Editor, *Journal of Clinical Investigation*, 2008-present; Editorial Board: *JBM*, 2004-Present; *Calcified Tissue International*, 2000-2002; *Endocrinology*, 1998-2002, 2005-2009; NIH Study Section panels: Orthopaedic, 2003; Otolaryngology, 2005; NCI, 2006; National Center for Complimentary and Alternative Medicine, 2007; Chair, Musculoskeletal, Oral, and Skin Sciences Integrated Review Group (MOSS IRG) Special Emphasis Panel, 2008-2009; Member: Skeletal Biology Structure & Regeneration (SBSR), 2008-2009; Musculoskeletal, Oral, and Skin Sciences Integrated Review Group (MOSS IRG) STTR, 2008; Reviewer: NASA; American Cancer Society; Veterans Administration (USA); Wellcome Research Trust, England; Medical Research Council of Great Britain; Medical Research Council of Canada; The Patrick and Catherine Weldon Donaghue Medical Research Foundation; Arthritis Research Campaign, United Kingdom; Arthritis Rheumatism Council, United Kingdom; Australian National Health Medical Research Council; Austrian Science Fund

Professional Societies: Royal College of Pathologists, 1979-present; ASBMR, 1987-present; ISBM, 1993-present; IBMS, 1994-present; NYAS, 2005-present; Vice Chair, Scientific Review Committee, ISBM, 2008; Member, Scientific Program Committee, European Calcified Tissue Society, 2006-present; Member, Scientific Advisory Committee, 1<sup>st</sup> Asian Pacific Congress on Bone Morphometry, 2004; Member, Scientific Program Committee, Orthopaedic Research Society, 2003-2006; Member, Education Committee, ASBMR, 2003-2006; Council Member, Association of Osteobiology, 2001-2007; Member, Scientific Program Committee, ISBM IXth Congress, 2002-present; Board Member, ISBM, 1999-present; Member, Scientific Program Committee, ASBMR, 1991-2007; ; Member, Scientific Program Committee, European Calcified Tissue Society, 2004-Pres; Trustee, Biological Stain Commission, 2009-present;

Current Research: Study of the effects of cytokines, including TNF, RANKL and IL-1, and role the transcription factors, NF- $\kappa$ B, c-Fos and NFATc1 in osteoclast formation, activation and survival, with emphasis on canonical and non-canonical NF- $\kappa$ B signaling pathways; the role of SRC tyrosine kinase in osteoclast and osteoblast activity and of the efficacy of SRC inhibitors in prevention of metastatic cancer-induced osteolysis in animal models of metastatic bone disease; NF- $\kappa$ B and RANK signaling in endochondral ossification.

Statement of Interest: I have been a member of ASBMR since 1987, a year after I went on Sabbatical as the Peel International Research Fellow to Greg Mundy's lab in San Antonio to learn to do basic research, having spent 10 years in Scotland doing clinical bone research and bone histomorphometry with Iain Boyle and colleagues in Glasgow. My research has focused on osteoclast biology using animal models of common bone diseases. My research highlights include: discovery that Src tyrosine kinase expression is required for osteoclast ruffled border formation; that osteoclasts typically die by apoptosis; that bisphosphonates and estrogen induce osteoclast apoptosis and opening the field of apoptosis research to the bone field; that expression of NF- $\kappa$ B1 and 2 is required for osteoclast and B cell differentiation; and more recently that in addition to stimulating osteoclast formation, TNF limits osteoclastogenesis through the inhibitory effects of NF- $\kappa$ B3, whose expression TNF up-regulates. I have attended all ASBMR meetings since 1987 and served on the Education Committee 2003-2006. I am the Past-President of the International Society of Bone Morphometry (2002-2006). As such, I organized and raised all of the financial support for the 2006 Congress in Philadelphia, and improved the Society's bank balance significantly. I am Past-Secretary/Treasurer of the Association of Osteobiology (2002-2006) and during that period also improved the Association's financial status such that a reduction in annual dues became possible. Through these activities, I have come to know many leaders in the field as well as numerous rank and file members. I was elected Chair of the 2009 Gordon Research Conference on Bones and Teeth in 2005. I asked a group of leading researchers in the field to become Discussion Leaders and they helped choose outstanding speakers for the Conference. I also wrote several grant applications to NIH and Pharmaceutical companies to support the costs of running the Conference. Thus, I have significant experience raising support for organizations and with the

day to day activities that a Secretary/Treasurer of a Society is engaged in. I am also a practicing clinician as a surgical pathologist at Strong Memorial Hospital and am head of Anatomic Pathology, which has 33 clinical faculty members in several sub-divisions. I am interested in serving the ASBMR further because it plays a key role in pulling together researchers in the musculoskeletal field in the US and throughout the world and representing musculoskeletal research interests in many organizations and forums in the US and elsewhere. Recently, major pharmaceutical companies have been reorganizing and merging. Consequently, we will likely face a period of growing economic challenges for the Society. This will mean more careful planning of future activities and more arduous efforts to raise funds, while still supporting the major educational role the Society plays in fostering the career development of young scientists. I am prepared to devote the time and effort necessary to help meet these challenges, if I am elected Secretary/Treasurer. I will work diligently to help the Society remain the major vehicle driving efforts to grow Government and other support for musculoskeletal research.

Disclosures: Kinex Corporation 2

*The following numerical key was used to characterize the potential conflicts of interest listed in the “Disclosures” section above.*

1. *research grants or financial support from commercial entities*
2. *consultant or member of advisory board to a commercial entity*
3. *participant in a speakers bureau*
4. *employment or executive positions in pharmaceutical, medical device, or diagnostic companies*
5. *stock holdings in pharmaceutical, medical device, or diagnostic companies*
6. *any other situation or transaction in relation to the ASBMR in which a formal role or interest exists (e.g., candidate is a member of another bone-related organization’s board, or committee, or serves on its journal, etc.)*