

Recent Publications DAVID B. BURR

EXTRAMURAL INVITED LECTURES

Domestic

- [1] The Effects of Bone Active Agents on Bone Tissue Quality, Ohio State University Dept. of Rheumatology (June, 2003)
- [2] Bone Quality: Shifting the Osteoporosis Paradigm, Osteoporosis Global Medical Conference, Indianapolis, IN (Sept. 2003)
- [3] Effects of Bone Active Agents on Microdamage Accumulation and Repair, Indianapolis Osteoporosis Group (April, 2004)
- [4] The Role of the Subchondral Mineralized Tissues in the Initiation and Progression of Osteoarthritis, Experimental Biology 2004 (April, 2004)

International

- [1] The Effects of Bone Active Agents on Bone Quality, Grand Rounds, Dept. of Obstetrics and Gynecology, Hôpital du Sacre-Cœur, Montreal; also at the Jewish Hospital, McGill University, Montreal (May 2003)
- [2] Bone Quality: An Innovative Angle, European Congress on Clinical and Economic Aspects of Osteoporosis and Osteoarthritis, Nice (Nov. 2003)
- [3] The Role of Bone Microdamage Accumulation and Repair in Skeletal Fragility, Toronto City-Wide Endocrine Rounds (Nov. 2003)
- [4] Effects of Bone Active Agents on Bone Quality, Toronto City-Wide Osteoporosis Rounds (Nov. 2003)
- [5] Is Bone Quality Important in the Treatment of Osteoporosis? Osteoporosis: From Osteoprotection to Osteoformation. The New Paradigm, Salzburg, Austria (Jan 2004)
- [6] The Role of Anti-Resorptives and PTH on Bone Quality, Osteoporosis National Executive Network Meeting, Toronto (Feb 2004)
- [7] Bone Quality: Understanding What Matters, Satellite Symposium of the 4th International Workshop on Musculoskeletal and Neuronal Interactions (ISMNI), Chaldikiki, Greece (May 2004)
- [8] Effects of Raloxifene and Teriparatide on Bone Quality and Fracture Risk Reduction, 4th International Workshop on Musculoskeletal and Neuronal Interactions (ISMNI), Chaldikiki, Greece (May 2004)
- [9] Ultrastructural Defects, Bone Mineralization and Response to Treatment, International Osteoporosis Foundation (IOF) World Congress on Osteoporosis, Rio de Janeiro (May 2004)
- [10] Bone Quality as a Means of Assessing Strength and Fracture Risk, Combined Seminar for the Japanese Society of Bone Morphometry and the 1st Asian Pacific Congress of Bone Morphometry, Kagawa, Japan (June 2004)

ABSTRACTS, POSTERS AND PAPERS PRESENTED FROM THE PLATFORM

- [1] Reconstruction of bone loads from *in vivo* strain measures. J.C. Coleman, R.T. Hart and D.B. Burr, Trans Orthop. Res. Soc. Vol. 28, 2003.
- [2] Bone remodeling at the iliac crest can predict the changes in remodeling dynamics, microdamage accumulation and mechanical properties in the lumbar vertebrae. T Mashiba, CH Turner, S Mori, H Norimatsu and DB Burr. Presented at the International Bone and Mineral Society, Osaka, Japan, 2003.
- [3] Raloxifene and estrogen do not affect microdamage accumulation or state of mineralization in monkey vertebra. J. Li, D. Burr, J.Y. Rho, C. Jerome, M. Sato, and C. Turner. J Bone Miner Res 18 (Suppl 2): S164, 2003.

REFEREED PUBLICATIONS

- [1] A model for mechanotransduction in bone cells: The load-bearing mechanosomes. F. M. Pavalko, S.M. Norvell, D.B. Burr, C.H. Turner, R.L. Duncan and J.P Bidwell. *J Cellular Biochem* 88:104-112, 2003.
- [2] Characterization of dynamic three-dimensional strain fields in the canine radius. J.C. Coleman, R.T. Hart, I. Owan, Y. Tankano [sic], and D.B. Burr. *J Biomech* 35:1677-1683, 2003.
- [3] Effects of broad frequency vibration on cultured osteoblasts. S.M. Tanaka, J. Li, R.L. Duncan, H. Yokota, D.B. Burr and C.H. Turner *J Biomech* 36:73-80, 2003.
- [4] Parathyroid hormone enhances mechanically induced bone formation, possibly involving L-type voltage-sensitive calcium channels. J. Li, R.L. Duncan, D.B. Burr, V.H. Gattone and C.H. Turner. *Endocrinol* 144:1226-1233, 2003.
- [5] Bone mineral and collagen quality in humeri of ovariectomized cynomolgus monkeys given rhPTH(1-34) for 18 months. E.P. Paschalis, D.B. Burr, R. Mendelsohn, J.M. Hock, and A.L. Boskey. *J Bone Miner Res* 18:769-775, 2003.
- [6] Canine cancellous bone microarchitecture after one year of high-dose bisphosphonates. M. Ding, J.S. Day, D.B. Burr, T. Mashiba, T. Hirano, H. Weinans, D.R. Sumner and I. Hvid. *Calcif Tiss Int* 72:737-744, 2003.
- [7] Microfractures and microcracks in subchondral bone: are they relevant to osteoarthritis? D.B. Burr and E.L. Radin. *Rheumat Dis Clinics of N Amer* 29:675-685, 2003.
- [8] Effects of physical training on proprioception in older women. K.R. Thompson, A.E. Mikesky, R.E. Bahamonde and D.B. Burr. *J Musculoskel Neuron Interact* 3:223-231, 2003.
- [9] Microdamage and bone strength. D. Burr, *Osteoporos Int* 15 (Suppl 5):S67-S72, 2003.
- [10] Reconstructed bone end loads on the canine forelimb during gait. J.C. Coleman, R.T. Hart and D.B. Burr. *J Biomech* 36:1837-1844, 2003.
- [11] Tissue mineralization is increased following 1-year treatment with high doses of bisphosphonates in dogs. D.B. Burr, L. Miller, M. Grynypas, J. Li, A. Boyde, T. Mashiba, T. Hirano, and C.C. Johnston. *Bone* 33:960-969, 2003.
- [12] Bisphosphonate treatment affects trabecular bone apparent modulus through micro-architecture rather than matrix properties. J.S. Day, M. Ding, P. Bednarz, J.C. van der Linden, T. Mashiba, T. Hirano, C.C. Johnston, D.B. Burr, I. Hvid, D.R. Sumner and H. Weinans. *J Orthop Res* 22:465-471, 2004.
- [13] Anatomy and physiology of the mineralized tissues: Role in the pathogenesis of osteoarthritis. *Osteoarthritis and Cartilage* 12:S20-S30, 2004.
- [14] The importance of subchondral bone in the progression of osteoarthritis. D.B. Burr, *J Rheumatol Suppl* 70:77-80, 2004.
- [15] A comparison of bone strain measurements at anatomically relevant sites using surface gauges versus strain gauged bone staples. C. Milgrom, A. Finestone, A. Hamel, V. Mandes, D. Burr and N. Sharkey. *J Biomech* 37:947-952, 2004.

NON-REFEREED PUBLICATIONS

- [1] Bone quality: Understanding what matters. D.B. Burr. *J Musculoskel Neuron Interact* 4:184-186, 2004.

BOOK CHAPTERS

- [1] Biomechanics of bone. D. B. Burr and C.H. Turner, In: *Primer on the Metabolic Bone Diseases and Disorders of Mineral Metabolism*. M. Favus (ed). 5th Ed. Washington DC: American Society for Bone and Mineral Research, 2003.
- [2] Subchondral bone. D.B. Burr. In: *Osteoarthritis*, Chapter VII (K. Brandt, M. Doherty and S. Lohmander, eds.). Oxford: University Press, pp. 125-133, 2003.