



Founder Publications

Selected abstracts, peer-reviewed articles, and book chapters by **Keyvan Behnam, Ph.D., MBA**, Founder & Managing Director.

ABSTRACTS

Fitch JL, Knaack D, Behnam K, Gerstenfeld LC. DBM bioactivity in vitro demonstrates unique osteo- and chondro-inductive properties separate from BMP. Fifty-first annual meeting of the Orthopedic Research Society. February, 2005. Paper 174.

Behnam K, Murray SS, Murray EJB. Identification and characterization of the ubiquitin-proteasome pathway targeting molecular chaperone, valosin-containing protein (VCP/p97) in untransformed osteoblast-like cells. Journal of Bone and Mineral Research. October, 2004. 19 (Suppl. 1):M220.

Murray SS, Behnam K, Silva JDP, Duarte MEL, Murray EJB. Secreted phosphoprotein-24 (SPP-24) reduces bone mass in transgenic mice whereas BMP binding peptide (BBP), a polypeptide deduced from the sequence of SPP-24, enhances the activity of rhBMP-2 in vivo. Journal of Bone and Mineral Research. October, 2004. 19 (Suppl. 1): SA 074.

Murray EJB, Behnam K, Murray SS. Ubiquitin-proteasome pathway activity increases during chondrocyte differentiation and maturation. Journal of Bone and Mineral Research. September, 2000. 15 (Suppl. 1): S242.

Behnam K, Murray EJB, Coulson R, Murray SS. The mechanochaperone alpha B crystallin is abundant in bone. Journal of Bone and Mineral Research. September, 2000. 15 (Suppl. 1): S271.

Peel SAF, Behnam K, Coulson R, Murray SS, Murray E and Clokie CML. An in vitro assay to screen bone proteins for factors that modulate BMP. J Dent Res. 2000. vol 79(3571): 590.

Behnam K, Murray SS, Grisanti MS, Mach MQ, Murray EJB. PTH stimulates the ubiquitin-proteasome pathway in clonal RCJ3.1C5 chondrocytic cells. Journal of Bone and Mineral Research. September, 1999. 14 (Suppl. 1): S285.

PEER-REVIEWED ARTICLES

Sun A, Murray SS, Simon RJ, Jawien J, Behnam K, Miller TA, Brochmann EJ. Alanine-scanning mutations of the BMP-binding domain of recombinant secretory bovine spp24 affect cytokine binding. Connect Tissue Res. 2010 51(6): 445-51.

Taghavi CE, Lee KB, He W, Keorochana G, Murray SS, Brochmann EJ, Uludag H, Behnam K, Wang JC. Bone morphogenetic protein binding peptide mechanism and enhancement of osteogenic protein-1 induced bone healing. Spine. 2010 35(23): 2049-56.

Brochmann EJ, Behnam K, Murray SS. Bone morphogenetic protein-2 activity is regulated by secreted phosphoprotein-24 kd, an extracellular pseudoreceptor, the gene for which maps to a region of the human genome important for bone quality. Metabolism. 2009 May;58(5):644-50.

Sintuu C, Murray SS, Behnam K, Simon R, Jawien J, Silva JD, Duarte ME, Brochmann EJ. Full-length bovine spp24 [spp24 (24-203)] inhibits BMP-2 induced bone formation. J Orthop Res. 2008. 26(6): 753-8.

Murray EJ, Murray SS, Simon R, Behnam K. Recombinant expression, isolation, and proteolysis of extracellular matrix-secreted phosphoprotein-24 kDa. Connect Tissue Res. 2007 48(6): 292-9.



Behnam K, Murray SS, Brochmann EJ. BMP stimulation of alkaline phosphatase activity in pluripotent mouse C2C12 cells is inhibited by dermatopontin, one of the most abundant low molecular weight proteins in demineralized bone matrix. *Connect Tissue Res.* 2006 47(5): 271-7.

Behnam K, Murray SS, Brochmann EJ. Identification and characterization of valosin-containing protein (VCP/p97) in untransformed osteoblast-like cells. *J Orthop Res.* 2005 23(3): 618-24.

Behnam K, Phillips ML, Silva JD, Brochmann EJ, Duarte ME, Murray SS. BMP binding peptide: a BMP-2 enhancing factor deduced from the sequence of native bovine bone morphogenetic protein/non-collagenous protein. *J Orthop Res.* 2005 23(1): 175-80.

Behnam K, Brochmann E, Murray SS. Alkali-urea extraction of demineralized bone matrix removes noggin, an inhibitor of bone morphogenetic proteins. *Connect Tissue Res.* 2004 45(4-5): 257-60.

Behnam K, Murray SS, Whitelegge JP, Brochmann EJ. Identification of the molecular chaperone alpha B-crystallin in demineralized bone powder and osteoblasts. *Journal of Orthopedic Research.* 2002 20(4): 1190-1196.

Brochmann Murray EJ, Beamer WG, Duarte ME, Behnam K, Grisanti MS, Murray SS. Effects of dietary restriction on appendicular bone in the SENCAR mouse. *Metabolism Clinical and Experimental.* 2001 50(4): 436-442.

Urist MR, Behnam K, Kerendi F, Bagga D, Adkisson HD, Nevenzel J, Malinin T. Neutral lipids facilitate transfer of bone morphogenetic proteins and other noncollagenous proteins. *Medical Hypotheses.* 1997 49(6): 465-475.

Urist MR, Behnam K, Kerendi F, Raskin K, Nuygen TD, Shamie AN, Malinin T. Lipids closely associated with bone morphogenetic protein (BMP)-and induced heterotopic bone formation. With preliminary observations of deficiencies in lipid and osteoinduction in lathyrism in rats. *Connective Tissue Research.* 1997 36(1): 9-20.

BOOK CHAPTERS

Murray EJ, Behnam K, Grisanti MS, Murray SS. Purification and quantification of calcium-activated neutral proteases I and II and novel isoforms from cultured osteoblastic cells by ion-exchange fast protein liquid chromatography. *Methods Mol. Biol.* 2000, 144:25-32.