



March 21, 2013

Chairman Crum,

Thank you for allowing us to provide additional information regarding the adult stem cell research activities at the University of Kansas. I hope this information is helpful.

The University of Kansas' Lawrence campus receives an appropriation of \$130,702 (down from an initial appropriation of \$150,000). This funds a portion of the salary of Michael Detamore, PhD, professor of Chemical & Petroleum Engineering.

Dr. Detamore's peer-reviewed publications involving umbilical cord research include:

Devarajan K, Forrest ML, Detamore MS, Staecker H, "Adenovector mediated gene delivery to human umbilical cord mesenchymal stromal cells induces inner ear cell phenotype," Cellular Reprogramming, 15(1): 43-54, 2013

Wang Q, Jamal S, Detamore MS, Berkland CJ, "PLGA-chitosan/PLGA-alginate nanoparticle blends as biodegradable colloidal gels for seeding human umbilical cord mesenchymal stem cells," Journal of Biomedical Materials Research Part A, 96A (3): 520-527, 2011

Wang L, Zhao L, Detamore MS, "Human umbilical cord mesenchymal stromal cells in a sandwich approach for osteochondral tissue engineering," Journal of Tissue Engineering and Regenerative Medicine, 5(9): 712-721, 2011

Zhao L, Tang M, Weir MD, Detamore MS, Xu HHK, "Osteogenic media and rhBMP-2 induced differentiation of umbilical cord mesenchymal stem cells encapsulated in alginate microbeads and integrated in an injectable calcium phosphate-chitosan fibrous scaffold," Tissue Engineering Part A, 17(7-8): 969-979, 2011

Wang L, Ott LM, Seshareddy K, Weiss ML, Detamore MS, "Tissue engineering with human umbilical cord mesenchymal stromal cells," Regenerative Medicine, 6(1): 95-109, 2011

Zhao L, Detamore MS, "Chondrogenic differentiation of stem cells in human umbilical cord stroma with PGA and PLLA scaffolds," Journal of Biomedical Science and Engineering, 3(11): 1041-1049, 2010

Xu HHK, Zhao L, Detamore MS, Takagi S, Chow LC, "Umbilical cord stem cell seeding on fast-resorbable calcium phosphate bone cement," *Tissue Engineering Part A*, 16(9): 2743-2753, 2010

Wang L, Dormer NH, Bonewald L, Detamore MS, "Osteogenic differentiation of human umbilical cord mesenchymal stromal cells in polyglycolic acid scaffolds," *Tissue Engineering Part A*, 16(6):1937-1948, 2010

Wang L, Singh M, Bonewald LF, Detamore MS, "Signalling strategies for osteogenic differentiation of human umbilical cord mesenchymal stromal cells for 3D bone tissue engineering," *Journal of Tissue Engineering and Regenerative Medicine*, 3 (5) 398-404, 2009

Wang L, Tran I, Seshareddy K, Weiss ML, Detamore MS, "A comparison of human bone marrow-derived mesenchymal stem cells and human umbilical cord-derived mesenchymal stromal cells for cartilage tissue engineering," *Tissue Engineering Part A*, 15 (8): 2259-66, 2009

Wang L and Detamore MS, "Insulin-like growth factor-I improves chondrogenesis of predifferentiated human umbilical cord mesenchymal stromal cells," *Journal of Orthopaedic Research*, 27 (8): 1109-1115, 2009

Wang L, Seshareddy K, Weiss ML, Detamore MS, "Effect of initial seeding density on human umbilical cord matrix mesenchymal stromal cells for fibrocartilage tissue engineering," *Tissue Engineering Part A*, 15 (5): 1009-1017, 2009

Bailey MM, Wang L, Bode CJ, Mitchell KE, Detamore MS, "A comparison of human umbilical cord matrix stem cells and TMJ condylar chondrocytes for tissue engineering TMJ condylar cartilage," *Tissue Engineering*, 13 (8): 2003-2010, 2007 (Special Issue on 'Emerging Technologies and New Basic Science Directions in Tissue Engineering').

The Legislature also directed that the Kansas Department of Health and Environment work to establish umbilical cord banks in Kansas. Further information about those efforts might best be obtained via KDHE. Thank you for your service to Kansas!

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