



**GRADUATE PROGRAM  
ACADEMIC ACCOMPLISHMENTS**

**ANNUAL REPORT  
2008-2009**



## **2008 Graduate Student Summary**

- **Peer Reviewed Publications: 61**
- **Proceedings Publications: 12**
- **Abstracts / Meeting Presentations: 117**
- **Awards and Fellowships: 38**

## **Graduate Student Peer-Reviewed Publications – 2008 (61 in Number)**

Liao, W., **Alba, N.J.**, Randall, B., & Cui, X.T. (2008). Conducting polymer-based impedimetric aptamer biosensor for in situ detection. *Analytical and Bioanalytical Chemistry*, 392(5), 861-864.

Almarza, A.J., **Augustine, S.**, & Woo, S.L.-Y. (2008). Changes in gene expression of matrix constituents with respect to passage of ligament & tendon fibroblasts. *Annals of Biomedical Engineering*, 36(12), 1927-1933.

**Azemi, E.**, Stauffer, W. R., Gostock, M. S., Lagenaur, C. F., & Cui, X. T. (2008). Surface immobilization of neural adhesion molecule L1 for improving the biocompatibility of chronic neural probes: In vitro characterization. *Acta Biomater*, 4, 1208-1217.

**Beschorner, K.**, & Cham, R. (2008). Impact of joint torques on heel acceleration at heel contact, a contributor to slips and falls. *Ergonomics*, 51(12), 1799-1813.

**Brayfield, C.A.**, Marra, K., Leonard, J.P., Cui, X.T., & Gerlach, J. (2008). Excimer laser channel creation in polyethersulfone hollow fibers for compartmentalized in vitro neuronal cell culture scaffolds. *Acta Biomaterialia*, 4(2), 244-255.

**Bell, K.M.**, Frazier, E.C., Shively, C.M., **Hartman, R.A.**, Ulibarri, J.A., Lee, J.Y., Kang, J.D., & Donaldson, W.F. (2008). Assessing range of motion to evaluate the adverse effects of ill-fitting cervical orthoses. *The Spine Journal*, [Epub ahead of print].

Tsai, M.G., Musahl, V., Steckel, H., **Bell, K.M.**, Zantop, T., Irrgang, J.J., & Fu, F.H. (2008). Rotational knee laxity: reliability of a simple measurement device in vivo. *BMC Musculoskeletal Disorders*, 18, 9-35.

Zantop, T., Ferretti, M., **Bell, K.M.**, Brucker, P.U., Gilbertson, L.G., & Fu, F.H. (2008). Effect of tunnel-graft length on the biomechanics of ACL reconstructed knees-intra-articular study in a goat model. *American Journal of Sports Medicine*, 36(11), 2158-2166.

**Brennan, E.P.**, Tang, X-H., Stewart-Akers, A.M., Gudas, L.J., & Badylak, S.F. (2008). Chemoattractant activity of degradation products of fetal and adult skin extracellular matrix for keratinocyte progenitor cells. *Journal of Tissue Engineering and Regenerative Medicine*, 2(8), 491-498.

Brose, S.W., Boninger, M.L., Fullerton, B., McCann, T., **Collinger, J.L.**, **Impink, B.**, & Dyson-Hudson, T.A. (2008). Shoulder ultrasound abnormalities, physical examination findings and pain in manual wheelchair users with spinal cord injury. *Archives of Physical Medicine and Rehabilitation*, 89(11), 2086-2093.

**Collinger, J.L.**, Boninger, M.L., Koontz, A.M., Price, R., Sisto, S.A., Tolerico, M., & Cooper, R.A. (2008). Shoulder biomechanics during the push phase of wheelchair propulsion: A multi-site study of individuals with paraplegia. *Archives of Physical Medicine and Rehabilitation*, 89(4), 667-676.

Cooper, R.A., **Dicianno, B.E.**, Brewer, B., LoPresti, E.F., Ding, D., Simpson, R.C., **Grindle, G.**, & Wang, H. (2008). A perspective on intelligent devices & environments in medical rehabilitation. *Medical Engineering and Physics*, 30(10), 1387-1398.

**Dicianno, B.E.**, Aguila, E.D., Cooper, R.A., Pasquina, P.F., Clark, M.J., Collins, D.M., Fitzgerald, S.G., & Wichman, T.A. (2008). Acute mountain sickness in disability and adaptive sports: Preliminary data. *Journal of Rehabilitation Research and Development*, 45(4), 479-488.

**El-Kurdi, M.S.**, Hong, Y., Stankus, J.J., **Soletti, L.**, Wagner, W.R., & Vorp, D.A. (2008). Transient elastic support for vein grafts using a constricting microfibrillar polymer wrap. *Biomaterials* 29, 3213-3220.

**El-Kurdi, M.S.**, Viperman, J.S., & Vorp, D.A., (2008). Control of circumferential wall stress and luminal shear stress within intact vascular segments perfused ex vivo, *J Biomech Eng*, 130(5), 051003-7.

**El-Kurdi, M.S.**, Viperman, J.S., & Vorp, D.A., (2008). Design and subspace system identification of an ex-vivo vascular perfusion system. *J Biomech Eng (online)*.

- Karaoglu, S., **Fisher, M.B.**, Woo, S.L-Y., Fu, Y.C., Liang, R., & Abramowitch, S.D. (2008). Use of a bioscaffold to improve healing of a patellar tendon defect after graft harvest for ACL reconstruction: a study in rabbits. *Journal of Orthopaedic Research*, 26(2), 255-263.
- Kelly, T-A. N., **Fisher, M.B.**, Oswald, E.S., Tai, T., Mauck, R.L., Ateshian, G.A., & Hung, C.T. (2008). Low-serum media and dynamic deformational loading in tissue engineering of articular cartilage. *Annals of Biomedical Engineering*, 36(5), 769-779.
- Woo, S.L-Y., **Fisher, M.B.**, & **Feola, A.J.** (2008). Contribution of biomechanics to management of ligament and tendon injuries (Review Article). *Molecular and Cellular Biomechanics* 5(1) 49-68.
- Freytes, D.O.**, Martin, J., Velankar, S.S., Lee, A.S., & Badylak, S.F. (2008). Preparation and rheological characterization of a gel form of the porcine urinary bladder matrix. *Biomaterials*, 29, 1630-1637.
- Freytes, D.O.**, **Stoner, R.**, & Badylak, S.F. (2008). Uniaxial and biaxial properties of terminally sterilized porcine urinary bladder matrix. *J Biomaterials Research-B*, 84(2), 408-414.
- Freytes, D.O.**, Tullius, R.S., **Valentin, J.E.**, Stewart-Akers, A.M., & Badylak, S.F. (2008). Hydrated vs lyophilized forms of porcine extracellular matrix derived from the urinary bladder. *J Biomaterials Res-A*, 87(4), 862-872.
- Stankus, J.J., **Freytes, D.O.**, Badylak, S.F., & Wagner, W.R. (2008). Hybrid nanofibrous scaffold from electrospinning of a synthetic elastomer and urinary bladder matrix. *J Biomater Sci Polym Edn*, 19(5), 635-652.
- Gabriele, M.L.**, Bahary, N., Wei, X., Fujimoto, J.G., & Schuman, J.S. (2008). Repeated, noninvasive, high resolution spectral domain optical coherence tomography imaging of zebra fish embryos. *Mol Vis*, 14, 2157-2170.
- Gabriele, M.L.**, Ishikawa, H., Wollstein, G., Bilonick, R.A., Townsend, K.A., Kagemann, L., Wojtkowski, M., Srinivasan, V.J., Fujimoto, J.G., Duker, J.S., & Schuman, J.S. (2008). Optical coherence tomography scan circle location and mean retinal nerve fiber layer measurement variability. *Invest Ophthalmol Vis Sc.*, 49(6), 2315-2321.
- Gabriele, M.L.**, Wollstein, G., Bilonick, R.A., Burgansky-Eliash, Z., Ishikawa, H., Kagemann, L.E., & Schuman, J.S. (2008). Comparison of parameters from Heidelberg retina tomographs 2 and 3. *Ophthalmology*, 115(4), 673-677.
- Kagemann, L., Ishikawa, H., Wollstein, G., Brennen, P.M., Townsend, K.A., **Gabriele, M.L.**, & Schuman, J.S. (2008). Ultrahigh-resolution spectral domain optical coherence tomography imaging of the lamina cribrosa. *Ophthalmic Surg Lasers Imaging*, 39(4 Suppl), S126-131.
- Kagemann, L., Ishikawa, H., Zou, J., Charukamnoetkanok, P., Wollstein, G., Townsend, K.A., **Gabriele, M.L.**, Bahary, N., Wei, X., Fujimoto, J.G., & Schuman, J.S. (2008). Repeated, noninvasive, high resolution spectral domain optical coherence tomography imaging of zebra fish embryos. *Mol Vis*, 14, 2157-2170.
- Kagemann, L., Mumcuoglu, T., Wollstein, G., Bilonick, R., Ishikawa, H., Townsend, K.A., **Gabriele, M.**, Fujimoto, J.G., & Schuman, J.S. (2008). Sources of longitudinal variability in optical coherence tomography nerve-fibre layer measurements. *Br J Ophthalmol*, 92(6), 806-809.
- Manassakorn, A., Ishikawa, H., Kim, J.S., Wollstein, G., Bilonick, R.A., Kagemann, L., **Gabriele, M.L.**, Sung, K.R., Mumcuoglu, T., Duker, J.S., Fujimoto, J.G., & Schuman, J.S. (2008). Comparison of optic disc margin identified by color disc photography and high-speed ultrahigh-resolution optical coherence tomography. *Archives of Ophthalmology*, 126(1), 58-64.
- Mumcuoglu, T., Wollstein, G., Wojtkowski, M., Kagemann, L., Ishikawa, H., **Gabriele, M.L.**, Srinivasan, V., Fujimoto, J.G., Duker, J.S., & Schuman, J.S. (2008). Improved visualization of glaucomatous retinal damage using high-speed ultrahigh-resolution optical coherence tomography. *Ophthalmology*, 115(5), 782-789.
- Townsend, K.A., Wollstein, G., Danks, D., Sung, K.R., Ishikawa, H., Kagemann, L., **Gabriele, M.L.**, & Schuman, J.S. (2008). Heidelberg retina tomography III machine learning classifiers for glaucoma detection. 92(6):814-818.
- Rice, I., **Impink, B.**, Niyonkuru, C., & Boninger, M. (2008). Manual wheelchair stroke characteristics during an extended period of propulsion. *Spinal Cord*, 47(5), 413-417. Epub 2008 Nov 11.

- Roy, P., **Jaramillo, M.**, **Bae, Y.H.**, & Das, T. (2008). Actin cytoskeleton and cancer. In: The motile actin system in health and disease. (C. Ampe and A. Lambrechts, eds.) *Research Signpost*. 93-122.
- Johnson, C. A. Jr.**; Snyder, T.A.; **Woolley, J.R.**, & Wagner, W.R. (2008). Flow cytometric assays for quantifying activated ovine platelets. *Artif Organs*, 32(2), 136–145.
- Liao, J., **Joyce, E.**, & Sacks, M.S. (2008). Effects of decellurization on the mechanical and structural properties of the porcine aortic valve leaflet. *Biomaterials*, 36(5), 700-712.
- Ishikawa, H., **Kim, J.S.**, Friberg, T.R., Wollstein, G., Kagemann, L., **Gabriele, M.L.**, Townsend, K.A., Sung, K.R., Duker, J., Fujimoto, J.G., & Schuman, J.S. (2008). Three dimensional optical coherence tomography (3d-oct) image enhancement with segmentation free contour modeling c-mode. *Invest Ophthalmol Vis Sci*, 50(3), 1344-9 (E-pub).
- Manassakorn, A., Ishikawa, H., **Kim, J.S.**, Wollstein, G., Bilonick, R.A., Kagemann, L., **Gabriele, M.**, Sung, K.R., Mumcuoglu, T., Duker, J.S., Fujimoto, J.G., & Schuman, J.S. (2008). Comparison of optic disc margin identified by color disc photography and high-speed ultrahigh-resolution optical coherence tomography. *Archives of Ophthalmology*, 126(1), 58-64.
- Yu, W.J., Jeong, S.Y., **Kim, K.K.**, Kang, B.R., Bae, D.J., Lee, M., Hong, S., Gaunkar, S.P., Pribat, D., Perello, D., Yun, M. Choi, J-Y. & Lee, Y.H. (2008). Bias-induced doping engineering with ionic adsorbates on single-walled carbon nanotube thin film transistors. *New J. Phys.*, 10, 113013.
- Matsumoto, T., Kubo, S., **Meszaros, L.B.**, Corsi, K.A., Cooper, G.M., Li, G., Usas, A., Osawa, A., Fu, F.H., & Huard, J. (2008). The influence of sex on the chondrogenic potential of muscle-derived stem cells: implications for cartilage regeneration and repair. *Arthritis Rheum*, 58(12), 3809-3819.
- Moalli, P., **Papas, N.**, Menefee, S., Albo, M., Meyn, L., & Abramowitch, S.D. (2008). Tensile properties of six commonly used mid-urethral slings. *International Urogynecology Journal*, 19(5), 655-663.
- Crisan, M., Yap, S., Casteilla, L., Chen, C.W., Corselli, M., **Park, T.S.**, Andriolo, G., Sun, B., Zheng, B., Zhang, L., Norotte, C., **Teng, P.N.**, Traas, J., Schugar, R., Deasy, B.M., Badylak, S., Buhring, H.J., Giacobino, J.P., Lazzari, L., Huard, J., & Péault, B. (2008). A perivascular origin for mesenchymal stem cells in multiple human organs. *Stem Cell*, 3(3), 301-313.
- Park, S.H.**, Kazuto, M., Hendrich K., Kanno, I., & Kim, S.G. (2008). Imaging brain vasculature with BOLD microscopy: MR detection limits determined by in vivo two-photon microscopy. *Magnetic Resonance in Medicine*, 59, 855-865.
- Velliste, M., **Perel, S.**, **Spalding, M.C.**, **Whitford, A.S.**, & Schwartz, A.B. (2008). Cortical control of a prosthetic arm for self-feeding. *Nature*, 453(7198), 1098-1101. (E-pub).
- Schmidt, B.T.**, Feduska, J., Witt, A., & Deasy, B. (2008). Robotic cell culture system for stem cell assays. *Industrial Robot*, 35(2), 116-124.
- Sharma, V.**, Simpson, R.C., LoPresti, E., Mostowy, C., Olson, J., Puhlman, J.R., Hayashi, S., Cooper, R.A., Konarsky, E., & Kerley, B. (2008). Participatory design in the development of the wheelchair convoy system. *Journal of NeuroEngineering and Rehabilitation*, 5(1).
- Wang, D., Amesur, N., **Shukla, G.**, Bayless, A., Weiser, D., Scharl, A., Mockel, D., Banks, C., Mandella, B. Klatzky R, & Stetten G. (2008). Peripherally inserted central catheter placement with the Sonic Flashlight: Initial clinical trial by nurses. *Journal of Ultrasound in Medicine*.
- Engelmayr, G.C. Jr., **Soletti, L.**, Vigmostad, S.C., Budilarto, S.G., Federspiel, W.J., Chandran, K.B., Vorp, D.A., & Sacks, M.S. (2008). A novel flex-stretch-flow bioreactor for the study of engineered heart valve tissue mechanobiology. *Annals of Biomedical Engineering*, 36(5), 700-712.
- Nieponice, A., **Soletti, L.**, Guan, J., Deasy, B.M., Huard, J., Wagner, W.R., & Vorp, D.A., (2008). Development of a tissue-engineered vascular graft combining a biodegradable scaffold, muscle-derived stem cells and a rotational vacuum seeding technique. *Biomaterials*, 29, 825-833.

- Stella, J.**, Liao, J., Hong, Y., Merryman, W.D., Wagner, W.R., & Sacks, M.S. (2008). Tissue-cellular deformation coupling in cell micro-integrated elastomeric scaffolds. *Biomaterials*, 29(22), 3228-3236.
- Gilbertson, L.G., Ahn, S.H., MD, **Teng, P.N.**, Studer, R.K., Niyibizi, C., & Kang, J.D. (2008). The effects of recombinant human bone morphogenetic protein-2, recombinant human bone morphogenetic protein-12, and adenoviral bone morphogenetic protein-12 on matrix synthesis in human annulus fibrosus and nucleus pulposus cells. *Spine J.*, 8(3), 449-456. Epub 2007 Jan 31.
- Toosi, K.K.**, Nagatomi, J., Chancellor, M.B., & Sacks, M.S. (2008). The effects of long-term spinal cord injury on the mechanical properties of the rat urinary bladder. *Annals of Biomedical Engineering*, 36(9), 1470-1480.
- Badylak, S.F., **Valentin, J.**, Ravindra, A., McCabe, G., & Stewart-Akers, A. (2008). Macrophage phenotype as a determinant of biologic scaffold remodeling. *Tissue Engineering*, 14(11), 1835-1842.
- Valentin, J.** (2008). Macrophage phenotype as a determinant of biologic scaffold remodeling *Tissue Engineering: Part A*, 14(11), 1835-1842.
- Valentin, J.** (2008). Oxygen diffusivity of biologic and synthetic scaffold materials for tissue engineering. In *J Biomedical Material Research Part A*, Epub.
- Valentin, J.** (2008). Hydrated versus lyophilized forms of porcine extracellular matrix derived from the urinary bladder. *J Biomedical Materials Research Part A*, 87(4), 862-872.
- Urish, K.L., **Vella, J.B.**, Okada, M., Deasy, B.M., Tobita, K., Keller, B.B., Cao, B., Piganelli, J.D., & Huard, J. (2008). Antioxidant levels represent a major determinant in the regenerative capacity of muscle stem cells. *Molecular Biology of the Cell*, 20(1), 509-520. (E-pub).
- Phillippi, J.A., Miller, E., Weiss, L., Huard, J., **Waggoner, A.**, & Campbell, P. (2008). Microenvironments engineered by inkjet bioprinting spatially direct adult stem cells toward muscle-and bone-like subpopulations. *Stem Cells*, 26(1), 127-134.
- Wescoe, K.E.**, Schugar, R.C., Chu, C.R., & Deasy, B.M. (2008). The role of the biochemical and biophysical environment in chondrogenic stem cell differentiation assays and cartilage tissue engineering. *Cell Biochemistry and Biophysics*, 52, 85-102.
- Gilbert, T, **Wognum, S.**, **Joyce, E.M.**, **Freytas, D.O.**, Sacks, M.S., & Badylak, S.F. (2008). Collagen fiber architecture and biaxial mechanical behavior of porcine urinary bladder derived extracellular matrix. *Biomaterials*, 29(36), 4775-4782.
- Andreescu, C., Butters, M.A., Shi, M., Begley, A., Rajji, T., **Wu, M.**, Meltzer, C.C., Reynolds, C.F., & Aizenstein, H. (2008). Gray matter changes in late life depression-a structural MRI analysis. *Neuropsychopharmacology*, 33(11), 2566-2572.
- Yu, W.**, Khandelwal, P., & Apodaca, G. (2008). Distinct apical and basolateral membrane requirements for stretch-induced membrane traffic at the apical surface of bladder umbrella cells. *Laboratory of Epithelial Cell Biology and Renal Electrolyte Division of the Department of Medicine Departments of Bioengineering, and Cell Biology and Physiology*, University of Pittsburgh, Pittsburgh, PA 15261, 20(1), 282-295. Monitoring Editor: Keith E. Mostov.

## **Graduate Student Proceedings Publications / Book Chapters – 2008 (12 in Number)**

Gagnon, D., Boninger, M.L., **Collinger, J.L., Impink, B.G.**, & Koontz, A.M. Do stroke characteristics change during a high-intensity 12 minutes corridor wheelchair propulsion test in experience manual wheelchair users? *31<sup>st</sup> Annual Rehabilitation Engineering Society of North America Conference Proceedings*. Arlington, VA, June 26-30, 2008. (Student Paper Competition Winner).

Gagnon, D., **Collinger, J.L., Impink, B.G.**, Koontz, A.M., & Boninger, M.L. Reliability of quantitative ultrasound measures of the biceps tendon: A preliminary study among non-wheelchair users. *31<sup>st</sup> Annual Rehabilitation Engineering Society of North America Conference Proceedings*. Arlington, VA, June 26-30, 2008.

Gagnon, D., Boninger, M.L., **Collinger, J.L., Impink, B.G.**, & Koontz, A.M. Do stroke characteristics change during a high-intensity 12-minutes corridor wheelchair propulsion test in experienced manual wheelchair users? *Proceedings of the Annual RESNA Conference*, Arlington VA, CD-ROM, June 26-30, 2008.

Wang, H., Koontz, A.M., **Collinger, J.L.**, & Boninger, M.L. Influence of gripping moments during wheelchair propulsion on natural surfaces. *31<sup>st</sup> Annual Rehabilitation Engineering Society of North America Conference Proceedings*. Arlington, VA, June 26-30, 2008. (Student Paper Competition Winner).

**Degenhart, A., Sudre, G., Collinger, J.**, Chang, C-L, Schwartz, A., Tyler-Kabara, E., Weber, D., & Wang, W. Comparison of ECoG signal modulation between hand and brain-controlled cursor movement tasks. *Society for Neuroscience Annual Meeting*. Washington, DC, Nov 15-19, 2008.

Woo, S.L-Y., Almaraz, A.J., Liang, R., & **Fisher, M.B.** Functional tissue engineering of ligament and tendon Injuries in Translational Approaches in Tissue Engineering and Regenerative Medicine. Eds. J. Mao, G. Vunjak-Novakovic, A. Mikos and A. Atala, Artech House, Norwood, Massachusetts, Chapter 9, pp. 163-179, 2008

Brose, S.W., Boninger, M.L., Fullerton, B., McCann, T., **Mercer, J., & Impink, B.** Shoulder ultrasound abnormalities, physical examination findings and pain in manual wheelchair users with spinal cord injury, *Annual Meeting of the Association of Academic Physiatrists*, Anaheim, CA, February 19-23, 2008, published in *American Journal of Physical Medicine and Rehabilitation*, p. S5, Vol. 87, No. 3 (Supplement), March 2008 (Best Resident Presentation).

**Sudre, G., Degenhart, A., Collinger, J.**, Weber, D., & Wang, E. Modulation of MEG signals during overt and imagined wrist movement for brain-computer interfaces. *Society for Neuroscience Annual Meeting*. Washington, DC, Nov. 15-19, 2008.

Wang, W., **Sudre, G., Degenhart, A., Collinger, J.**, & Weber, D. Exploring the high frequency band of MEG for brain-computer interface research. *Fourth International Workshop Statistical Analysis of Neuronal Data (SAND4)*. Pittsburgh, PA, May 29-31, 2008.

Zhang, J., **Sudre, G., Collinger, J.**, Li, X., Wang, W., Weber, D. Paramesh J, & Fedder G. A doubly regularized support vector machine for automatic channel selection of brain computer interface. *Fourth International Workshop Statistical Analysis of Neuronal Data (SAND4)*. Pittsburgh, PA, May 29-31, 2008.

**Wognum, S.**, & Sacks M.S. Towards a structurally based constitutive model of urinary bladder wall tissue remodeling after spinal cord injury. Presented at the *10<sup>th</sup> ASME Summer Bioengineering Conference*, June 28, 2008. Listed Page 51 of the proceedings. Published on CD ROM.

**Wu M.**, Chang, L-C, Walker, L., Lemaitre, H., Barnett, A.S., Marengo, S., & Pierpaoli, C. Comparison of EPI Distortion Correction Methods in Diffusion Tensor MRI using a Novel Framework. *MICCAI 2008 Proceedings* in the Springer Lecture Notes in Computer Science (LNCS) series.

## **Graduate Student Abstract Publications / Meeting Presentations– 2008 (117 in Number)**

**Bacher, D.**, McFerron, J.F., **Krishnamurthy, N.**, & Batista, A.P. An experimental rig for closed-loop neural prosthetics. *Society for Neuroscience* 2008.

**Bae, Y.H.**, **Zou, L.**, Wells, A, Gertler, F., & Roy, P. Loss of Pfn1 expression leads to hypermotile phenotype of breast cancer cell via lamellipodial targeting of Ena/VASP. (*Oral Presentation, The American Society for Cell Biology*).

Krishna, P., Lu, X., **Bae, Y.H.**, & Wells, A. The effect of small leucine chain proteoglycans decorin and biglycan on cell motility and gene expression in the human vocal fold fibroblast. (*SCIENCE 2008, University of Pittsburgh*)

Roy, P., **Bae, Y.**, Das, T., **Jaramillo, M.**, & **Zou, L.** Profilin- as a suppressor of breast cancer cell motility: molecular insights. *BMES 2008*, St. Louis

**Bartlow, P.**, Design of a tailored host cell for highly efficient protein purification. *American Chemical Society, Division of Biotechnology*. Aug. 20, 2008

**Bell, K.M.**, **Hartman, R.A.**, & Kang, J.D. In vitro spine testing control method comparison: Displacement control vs. hybrid control. *54<sup>th</sup> Annual Meeting of the Orthopaedic Research Society (ORS)*, San Fransisco, CA, March 2-5, 2008.

**Bell, K.M.**, Shively, C., Frazier, E.C., **Hartman, R.A.**, Lee, J.Y., Kang, J.D., & Donaldson, W.F. Postoperative outcomes of anterior cervical decompression and fusion. *NASS 23 Annual Meeting*: 0860, Toronto, Canada. October 15-18, 2008.

**Bell, K.M.**, Shively, C., Frazier, E.C., **Hartman, R.A.**, Lee, J.Y., Kang, J.D., & Donaldson, W.F. Comparison of range of motion following cervical spine decompression surgical procedures and the effect on patient satisfaction. *NASS 23 Annual Meeting*: 0795, Toronto, Canada. October 15-18, 2008.

Sowa, G., Zorn, A., Coelho, P., Studer, R., **Bell, K.M.**, Smolinski, P., & Kang, J.D. Effects of compression on gene xpression in Nucleus Pulposus cells. *Intl Soc for the Study of the Lumbar Spine*, 110, 2008.

Vo, N., Seidel, C., Sowa, G., Studer, R., Coelho, P., **Bell, K.M.**, & Kang, J. Microarray gene profiling of human nucleus pulposus cells exposed to TNF- $\alpha$  upregulation of novel cytokine and apoptotic genes. *Intl Soc for the Study of the Lumbar Spine*: Poster 69, 2008.

Vo, N., Seidel, C., Seo, H.S., Studer, R., Sowa, G., Neidernhofer, L., **Bell, K.M.**, & Kang, J. A novel accelerated aging murine model exhibiting severe proteoglycan deficiency in the nucleus pulposus. *Intl Soc for the Study of the Lumbar Spine*, 55, 2008.

**Bourbeau, D.**, **Hokanson, J.**, & Weber, D. A computational model for examining activation of peripheral neurons by electrical microstimulation. *BMES 2008*, St. Louis

**Brennan, E.P.**, Tang, X-H, Stewart-Akers, A.M., Gudas, L.J., & Badylak, S.F., ECM bioscaffold degradation products induce progenitor cell chemotaxis, *8th World Biomaterials Congress*, Amsterdam, The Netherlands on May 30, 2008. (*Podium Presentation*)

**Brennan, E.P.**, Tang, X-H, Stewart-Akers, A.M., Faulk, D., Gudas, L.J., & Badylak, S.F. Tissue-specific chemoattraction of progenitor cells by matricryptic ECM molecules, *12th Annual Hilton Head Workshop*, Hilton Head Island, SC on March 14, 2008. (*Poster Presentation*)

**Brennan, E.P.**, Tang, X-H, Stewart-Akers, A.M., Faulk, D., Gudas, L.J., & Badylak, S.F. Degradation products of biologic scaffolds composed of extracellular matrix induce preferential tissue-specific chemotaxis of lineage-directed progenitor cells, *Biologic Scaffolds for Regenerative Medicine Fifth Symposium*, Phoenix, AZ on February 15, 2008. (*Podium Presentation*)

Beattie, A.J., **Brown, B.N.**, & Badylak, S.F. Nerve cells responses to ECM bioscaffolds. *Biologic Scaffolds for Regenerative Medicine - 5th Symposium*, Phoenix, Arizona. February 15-16, 2008.

**Brown, B.N.**, Barnes, C.A., Sellaro, T.L., Gilbert, T.W., Castner, D.G., Ratner, B.D., & Badylak, S.F. Surface characterization of biologic scaffolds composed of extracellular matrix. *Tissue Engineering and Regenerative Medicine International Society, North American Chapter Conference and Exposition*, San Diego, California. December 7-10, 2008.

**Brown, B.N.**, Barnes, C.A., Sellaro, T.L., Michel, R., **Freytes, D.O.**, Gilbert, T.W., Castner, D.G., Ratner, B.D., & Badylak, S.D. Surface characterization of biologic scaffolds composed of extracellular matrix. *Tissue Engineering and Regenerative Medicine International Society, European Union Chapter Meeting 2008*, Porto, Portugal. June 22-26, 2008.

**Brown, B.N.**, Beattie, A.J., & Badylak, S.F. Growth and proliferation of spinal cord non ECM bioscaffolds. *Regenerative Medicine: Advancing to Next Generation Therapies - Hilton Head Tissue Engineering Workshop 2008*, Hilton Head Island, South Carolina. March 12-16, 2008.

**Brown, B.N.**, Price, I., Chu, Y., Konduru, N., Clermont, G., & Vodovotz, Y. Agent based model of lung inflammation. *6th Congress of the International Federation of Shock Societies, 31st Annual Conference on Shock (American Shock Society), and 7th International Conference on Complexity in Acute Illness*. Cologne, Germany. June 28-July 2, 2008.

**Brown, B.N.**, Sellaro, T.L., Barnes, S.A., Michel, R., **Freytes, D.O.**, Gilbert, T.W., Castner, D.G., Ratner, B.D., & Badylak, S.F. Surface characterization of biologic scaffolds composed of extracellular matrix. *Regenerative Medicine: Advancing to Next Generation Therapies - Hilton Head Tissue Engineering Workshop 2008*, Hilton Head Island, South Carolina. March 12-16, 2008.

**Brown, B.N.**, **Valentin, J.E.**, Stewart-Akers, A.M., & Badylak, S.F. Biologic scaffold remodeling and macrophage response in a rat model. *Tissue Engineering and Regenerative Medicine International Society, North American Chapter Conference and Exposition*, San Diego, California. December 7-10, 2008.

**Brown, B.N.**, **Valentin, J.E.**, Stewart-Akers, A.M., & Badylak, S.F. Biologic scaffold remodeling and macrophage response in a rat model. *The Third International Damage Associated Molecular Pattern Molecules (DAMPs) and Alarmins Symposium*. Pittsburgh, Pennsylvania. August 30 - September 2, 2008.

**Brown, B.N.**, **Valentin, J.E.**, Stewart-Akers, A.M., & Badylak, S.F. Biologic scaffold remodeling and macrophage response in a rat model. *Tissue Engineering and Regenerative Medicine International Society, European Union Chapter Meeting 2008*, Porto, Portugal. June 22-26, 2008.

**Brown, B.N.**, **Valentin, J.E.**, Stewart-Akers, A.M., & Badylak, S.F. Biologic scaffold remodeling and macrophage response in a rat model. *Biologic Scaffolds for Regenerative Medicine - 5th Symposium*, Phoenix, Arizona. February 15-16, 2008.

**Carruthers, C.A.**, & Sacks, M.S. (2008). The role of physiological biaxial deformations on cellular mechanotransduction in the native pulmonary valve. *3rd/Biennial Heart Valve Biology & Tissue Engineering Meeting*, London, England.

**Carruthers, C.A.**, & Sacks, M.S. (2008). Mechanotransduction in the native pulmonary valve. *NIBIB Training Grantees Meeting*, Silver Springs, Maryland.

**Daly, A.R.**, Marascalco, P.J., & Kameneva, M.V. Viscoelastic behavior of ovine blood and its implication for *in vitro* and *in vivo* testing of pediatric VAD. *13<sup>th</sup> International Congress of Biorheology and 6<sup>th</sup> International Conference on Clinical Hemorheology*. University Park, PA, July 2008. Abstract published *Biorheology* 45 (2008) 140-41. (Poster Presentation)

**Daly, A.R.**, Marhefka, J., Wearden, P., & Kameneva, M.V. Blood parameter assessment in sham and PediaFlow™ VAD implanted sheep. *ASAIO 54<sup>th</sup> Annual Conference*. San Francisco, CA, June 2008. Abstract published *ASAIO J* 54 (2008) 7A. (Poster Presentation)

**Dileo, M.**, & Federspiel, W. Improving cytokine removal rate using anti-tnf immobilized beads within a cytokine adsorption device. *BMES 2008*, St. Louis

Alperin, M., **Feola, A.J.**, Duerr, R., Abramowitch, S.D., & Moalli, P.A. Pregnancy and delivery induced changes in rat vagina persist postpartum. *29<sup>th</sup> Annual American Urogynecologic Society Meeting*, Chicago, IL, September 4-6, 2008. (*Podium Presentation*)

Alperin, M., **Feola, A.J.**, Duerr, R., Meyn, L., Badylak, S.F., Abramowitch, S.D., & Moalli, P.A. Collagen scaffold improves healing after simulated maternal birth injury. *29<sup>th</sup> Annual American Urogynecologic Society Meeting*, Chicago, IL, September 4-6, 2008. (*Basic Science Award/Podium*)

Alperin, M., **Feola, A.J.**, Abramowitch, S.D., & Moalli, P.A. Collagen scaffold improves healing of simulated maternal birth injury. *2008 Midwest Tissue Engineering Conference (M-TEC)*, Cincinnati, OH, April 11-12, 2008. (*Podium Presentation*)

**Feola, A.J.**, Alperin, M., Moalli, P.A., & Abramowitch, S.D. Changes in biochemical and biomechanical properties of the vagina due to pregnancy. *Biomedical Engineering Society 2008 Annual Fall Meeting*, St. Louis, MI, October 2-4, 2008. (*Poster Presentation*)

**Feola, A.J.**, **Candiello, J.**, Moalli, P.A., & Abramowitch, S.D. Atomic force microscopy: a potential tool to track vaginal tissue changes prior to the onset of pelvic organ prolapse. *Biomedical Engineering Society 2008 Annual Fall Meeting*, St. Louis, MI, October 2-4, 2008. (*Poster Presentation*)

**Feola, A.J.**, Duerr, R., Abramowitch, S.D., & Moalli, P.A. Biomechanical changes of vaginal tissue in premenopausal women with prolapse. *29<sup>th</sup> Annual American Urogynecologic Society Meeting*, Chicago, IL, September 4-6, 2008. (*Poster Presentation*)

**Feola, A.J.**, Duerr, R., Moalli, P.A., & Abramowitch, S.D. The rheological properties of the vaginal wall from prolapsed and non-prolapsed women. *2008 International Conferences on Mechanics in Medicine and Biology (ICMMB)*, Pittsburgh, PA, July 23-25, 2008. (*Podium Presentation*)

**Feola, A.J.**, Jones, K., Abramowitch, S.D., & Moalli, P.A. Determining the biomechanical properties of nulliparous and parous vaginal tissue. *2008 North American Congress on Biomechanics*, Ann Arbor, MI, August 5-9, 2008. (*Podium Presentation*)

Jones, K., **Feola, A.J.**, Abramowitch, S.D., & Moalli, P.A. Parity negatively impacts the biomechanical properties of vaginal tissue non-human primates. *29<sup>th</sup> Annual American Urogynecologic Society Meeting*, Chicago, IL, September 4-6, 2008. (*Poster Presentation*)

Jones, K., Jallah, Z., **Feola, A.J.**, Abramowitch, S.D., & Moalli, P.A. Parity is associated with altered collagen ratios in the primate vagina. *29<sup>th</sup> Annual American Urogynecologic Society Meeting*, Chicago, IL, September 4-6, 2008. (*Poster Presentation*)

Debski, R.E., **Fisher, M.B.**, Jolly, J.T., & Woo, S.L-Y. Use of robotic technology at the musculoskeletal research center: technical challenges. *International Symposium on Robotic Applications in Biomechanics*. Banff, Canada. May 2008.

Woo, S.L-Y., Almarza, A.J., **Fisher, M.B.**, & Liang, R. Biologic effects of ecm bioscaffolds for ligament and tendon healing and regeneration. *5<sup>th</sup> Symposium on the Use of Extracellular Matrix as a Biological Scaffold for Tissue Reconstruction*. Scottsdale, Arizona. February 2008.

Woo, S.L-Y., **Fisher, M.B.**, & Liang, R. Biomechanical and functional assessment of acl reconstruction. *International Symposium on Ligaments and Tendons – Hong Kong*. Hong Kong, China. April 2008.

Woo, S.L-Y., & **Fisher, M.B.** Evaluation of knee stability using a robotic testing system. *AAOS/ORS Advanced Imaging and Computer Assisted Surgery of the Hip and Knee Research*. Providence, RI. May 2008.

Woo, S.L-Y., **Fisher, M.B.**, & Almarza, A.J. Regeneration of ligaments and tendons by application of bioscaffolds. *ASME International Mechanical Engineering Congress & Exposition*. Boston, MA. October 2008.

Woo, S.L-Y., Liang, R., & **Fisher, M.B.** Biomedical engineering and its important role to the healing, repair, and regeneration of ligaments and tendons. *10<sup>th</sup> Shanghai Round Table on Biomedical Engineering*. November 2008.

Zamarra, G., **Fisher, M.B.**, Cerulli, G., & Woo, S.L-Y. Utilization of only one hamstrings tendon for ACL reconstruction: An “all-inside” technique. *16th International Conference on Mechanics in Medicine and Biology*. Pittsburgh, PA. July 2008.

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**Gabriele, M.L.**, Ishikawa, H., Bilonick, R.A., Wollstein, G., Kagemann, L., Xu, J., Kim, J.S., Jurisic, V., Fujimoto, J.G., & Schuman, J.S. The effect of axial scan location on signal quality and thickness measurements obtained with spectral domain optical coherence tomography. *2008 Annual Meeting, Association for Research in Vision and Ophthalmology*. (Poster Presentation 4637)

**Gabriele, M.L.**, Wollstein, G., McKenna, K.C., Develapally, H., Amiji, M., & Schuman, J.S. Nanoparticle contrast agents for ocular optical coherence tomography. *2008 Annual Meeting, International Society for Imaging in the Eye*. (Poster Presentation 20)

**Haworth, D.J.**, Miyazato, M., Furuta, A., Kim, D.K., Chew, D.W, Yoshimura, N., Chancellor, M.B., & Vorp, D.A. Evaluation of a tissue engineered urethral wrap following implantation in *TERMIS-NA*, San Diego, California, December 2008.

**Haworth, D.J.**, Miyazato, M., Furuta, A., Kim, D.K., Chew, D.W., Yoshimura, N., Chancellor, M.B., & Vorp, D.A. In vivo effects and ex vivo characteristics following implantation of a tissue engineered urethral wrap in *ASME – SBC*, Marco Island, Florida, June 2008. 2nd place in Masters Student Paper Competition.

**Haworth, D.J.**, VanEpps, J.S., Maul, T.M., Chew, D.W., & Vorp, D.A. implementation of a novel multi-chamber bioreactor for a tissue engineered urethral wrap in *ICMMB*, Pittsburgh, PA, July 2008.

**Haworth, D.J.**, VanEpps, J.S., Maul, T.M., Chew, D.W., & Vorp, D.A. Implementation of a novel multi-chamber bioreactor for a tissue engineered urethral wrap in *TERMIS-NA*, San Diego, California, December 2008. Finalist in Student Paper Competition.

**Hofer, H., Teng, B.P.**, Sfeir, C.S., & Little, S.R. Composite biomaterials to enhance gene delivery for bone tissue engineering. Poster Session, *Biomedical Engineering Society (BMES)*, St. Louis, MO.

**Hofer, H., Teng, P.N.**, Tapriyal, D., Enick, R.M., Sfeir, C., & Little, S.R., (2008) Tissue engineering through gene delivery. *McGowan Institute Scientific Retreat*, Pittsburgh, PA, USA, March 10-12.

**Hokanson, J., Wagenaar, J.**, & Weber, D. Recruitment of DRG neurons by electrical microstimulation. *BMES 2008*, St. Louis.

**Jhunjhunwala, S.**, Raimondi, G., Thomson, A.W., & Little, S.R. Title - Delivery of Rapamycin to dendritic cells using degradable microparticles. *Experimental Biology 2008*. April 5-9 (San Diego).

Dasse, K.A., Wearden, P., Webber, S., Gempp, T., Marks, J.D., Kent, S., Wagner, W.R., Kameneva, M.V., **Johnson, C., Woolley, J.**, Gellman, B., Richardson, S., Franklin, S., & Borovetz, H.S. Development of the Levitronix® PediVAS™ Assist System. *Fourth International Conference on Pediatric Mechanical Circulatory Support Systems and Pediatric Cardiopulmonary Perfusion 2008*; page 77.

**Johnson, Jr., C.A.** Biocompatibility of Pediatric Ventricular Assist Devices. *36<sup>th</sup> Annual Ohio Doctors Interested in Congenital Hearts*, Children’s Hospital of Pittsburgh, Pittsburgh, PA; 4-18-2008.

**Johnson Jr. C.A.**, Wearden, P., **Woolley, J.**, Ye, S.E., Borovetz, H., & Wagner, W. Platelet activation in ovines implanted with the PediaFlow™ pediatric ventricular assist device. *BMES 2008*, St. Louis.

**Johnson, Jr., C.A.**, Wearden, P.D., **Woolley, J.R.**, Ye, S.H., Koert, A., Richardson, J.S., Gellman, B., Borovetz, H.S., Dasse, K.A., & Wagner, W.R. Platelet activation in ovines implanted with the Levitronix® PediVAS™. *ASAIO Journal 200*, 54, 35A.

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Wearden, P.D., **Johnson, C.A.,** Kelley, J.R., Antaki, J.F., **Arnold, D., Bachman, T.N.,** Bearnson, G.B., **Daly, A.R.,** Drummond, A., Kameneva, M.V., Keller, B.B., Khanwilkar, P., **Kirk, J.,** Kormos, R.L., Kouretas, P.C., Maul, T.M., Morell, V.O., Paden, B.E., Paden, D.B., Ricci, M., Shu, F., Snyder, S., Vandenberghe, S., Verkaik, J., Wagner, W.R., Webber, S.A., Wu, J., Ye, S.H., & Borovetz, H.S. (2008). *In vitro* and *in vivo* testing of the PediaFlow™ pediatric ventricular assist device. in *ASAIO*. San Francisco, CA.

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Ye, S.H., **Johnson, Jr., C.A., Woolley, J.R.,** & Wagner, W.R. Single Step Modification of a Titanium Alloy Surface to Reduce Thrombotic Deposition. *ASAIO Journal* 2008;54: 11A.

Broyld, T., **Mercer, J.L., Impink, B.,** & Boninger, M.L. Identifying clinically relevant features of biceps tendon ultrasound images, *National Conference on Undergraduate Research*, Salisbury University, April 10-12, 2008.

**Kimmel, J.,** & Federspiel, W. Cytokine hemoadsorption dynamics using confocal laser scanning microscopy. *ASAIO Journal* 54(2):7A, 2008.

**Kimmel, J.,** Gibson, G., Watkins, S., & Federspiel, W. Cytokine hemoadsorption dynamics using confocal laser scanning microscopy. *BMES 2008*, St. Louis.

**Kirk, J.,** Naghshin, J., Shroff, S., & O'Donnell, C. Effects of chronic intermittent hypoxia on cardiac muscle force and calcium transients in mice. *BMES 2008*, St. Louis.

**Lo Surdo, J.L.,** Chew, D.W., Nieponice, A., & Vorp, D.A. Mechanical and chemical stimulation of bone-marrow stem cells in a three-dimensional fibrin matrix: preliminary results. *McGowan Institute for Regenerative Medicine Retreat*, March 10-12, 2008; Farmington, PA. (Poster Presentation)

Li, G.H., Zheng, B., **Meszaros, L.B.,** Corsi, K.A., Usas, A., & Huard, J. Heterogeneous populations of muscle-derived cells exhibit greater chondrogenic potential than more purified populations. Poster 518. *54th Annual Meeting of Orthopaedic Research Society*, 2008.

Li, G.H., Zheng, B., Quintero, A.J., Wang, B., Corsi, K.A., **Meszaros, L.B.,** & Huard, J. Therapeutic utility of heterotopic ossification induced by AAV-BMP4 in skeletal muscle. Poster 1084. *54th Annual Meeting of Orthopaedic Research Society*, 2008.

Matsumoto, T., Cooper, G.M., Gharaibeh, B., **Meszaros, L.B.,** Li, G., Fu, F.H., & Huard, J. Blocking VEGF as a potential approach to improve cartilage healing after osteoarthritis. Podium. *11<sup>th</sup> Annual Meeting of American Society of Gene Therapy*, 2008.

Matsumoto, T., Cooper, G.M., Gharaibeh, B., **Meszaros, L.B.,** Li, G., Usas, A., Fu, F.H., & Huard, J. Blocking VEGF as a potential approach to improve cartilage healing after osteoarthritis. Podium. *38<sup>th</sup> International Sun Valley Workshop on Skeletal Tissue Biology* (ASBMR/Harold M. Frost Young Investigator Award), 2008.

Matsumoto, T., Kubo, S., Corsi, K., **Meszaros, L.B.,** Pollet, J., Cooper, G.M., Li, G., Osawa, A., Deasy, B., Fu, F.H., & Huard, J. Sex differences in stem cell-mediated cartilage regeneration. Poster. *54<sup>th</sup> Annual Meeting of Orthopaedic Research Society*, 2008.

Matsumoto, T., Kubo, S., Corsi, K., **Meszaros, L.B.,** Pollet, J., Cooper, G.M., Li, G., Osawa, A., Deasy, B., Fu, F.H., & Huard, J. Sex differences in stem cell-mediated cartilage regeneration. Poster. *2<sup>nd</sup> Annual Meeting of Organization for the Study of Sex Differences* 2008.

**Meszaros, L.B.,** Karthikeyan, T., Quintero, A.J., Usas, A., Ambrosio, F., Ferrari, R., & Huard, J. Influence of vascularity on muscle regeneration, fibrosis and heterotopic ossification. Poster 1606, *54th Annual Meeting of Orthopaedic Research Society*, 2008.

**Meszaros, L.B.**, Kubo, S., Corsi, K.A., & Huard, J. Sex difference in osteogenic potential of muscle-derived stem cells after long-term expansion. Abstract #607, *6th Annual Meeting of International Society for Stem Cell Research*, 2008.

**Meszaros, L.B.**, Kubo, S., Corsi, K.A., & Huard, J. Sex difference in osteogenic potential of muscle-derived stem cells after long-term expansion. Poster 832, *54th Annual Meeting of Orthopaedic Research Society*, 2008.

**Meszaros, L.B.**, Usas, A., & Huard, J. Effect of host animal sex on ectopic bone formation by mdscs. Poster 831, *54th Annual Meeting of Orthopaedic Research Society*, 2008.

Bae, K.T., **Park, S.H.**, Shim, H., Moon, C.H., & Kwoh, C.K. Improved cartilage-joint tissue contrast in deswe knee MR imaging with the use of geometric-mean reconstruction of dual-echo images. *Osteoarthritis Research Society International*, 2008.

Moon, C.H., **Park, S.H.**, & Kyongtae, T.B. Application of high-resolution MR imaging at human 7 Tesla to neurodegenerative diseases. *38th Annual Meeting of Society for Neuroscience*, 2008, Washington, DC, USA 4.

**Park, S.H.**, Kazuto, M., Kanno, I., & Kim, S.G. Venous detectability with 9.4-T BOLD 3D microscopy: comparison with two-photon microscopy, *Proceedings of International Society for Magnetic Resonance in Medicine*, p2230, 2008.

**Park, S.H.**, & Kim, S.G. Oxygenation-dependent 9.4-T BOLD 3D microscopy, *Proceedings of International Society for Magnetic Resonance in Medicine*, p2239, 2008 3.

**Perel, S.** On the relation between single unit activity, hand EMG and kinematic parameters during reach to grasp movements. *Society for Neuroscience Conference*, Washington D.C., 2008.

Velliste, M., Whitford, A., **Perel, S.**, **Palazzolo, M.**, & Schwartz, A. Cortical control of a prosthetic arm during target tracking, *Neuroscience 2008*, Washington Convention Center, November, 2008.

**Ruffner, M.A.**, Bianco, N.R., Kim, S.H., Francisco, L.M., Shufesky, W.J., Morelli, A.E., Sharpe, A.H., & Robbins, P.D. Role of B7 family members for suppressive effects of dendritic cells and exosomes in DTH. *Keystone Symposia: "Tolerance in Transplantation and Autoimmunity"* Keystone, CO.

McCall, M., **Stella, J.**, & Sacks, M. Quantitative finite element mesh incorporating the microanatomy of the aortic valve leaflet. *BMES 2008*, St. Louis.

Sacks, M., **Stella, J.**, & Wagner, W. Scale dependent kinematics of fibrous elastomeric scaffolds for tissue engineering. *BMES 2008*, St. Louis.

**Sudre, G.**, **Degenhart, A.**, **Collinger, J.**, Weber, D., & Wang, W. MEG analysis of motor-related brain activity during overt and imagined wrist movement. *BMES 2008*, St. Louis.

Duan, Y., **Teng, P.N.**, Day, B.W., & Sfeir, C. (2008) Phospho-proteomics of DMP-1. *American Association for Dental Research Annual Meeting*, Dallas, TX, USA, April 2-5.

Robertson, N., **Teng, P.N.**, Heemstra, P., **Park, T.S.**, Crisan, M., Logar, A., Péault, B., & Sfeir, C. (2008) Multi-lineage differentiation potential of pericytes isolated from human dental pulp. *International Association of Dental Research Annual Meeting*, Toronto, Canada, July 2-5.

Robertson, N., **Teng, P.N.**, Heemstra, P., **Park, T.S.**, Crisan, M., Logar, A., Péault, B., & Sfeir, C. (2008) Multi-lineage differentiation potential of pericytes isolated from human dental pulp. *American Association for Dental Research Annual Meeting*, Dallas, TX, USA, April 2-5.

**Teng, P.N.**, Crisan, M., Park, T., Logar, A., Heemstra, P., Robertson, N., Sun, B., Péault, B., & Sfeir, C. (2008) Characterization, isolation, and osteogenic differentiation of human adult dental pulp perivascular stem cells. *McGowan Institute Scientific Retreat*, Pittsburgh, PA, USA, March 10-12.

- Teng, P.N.**, Li, J.H., Lee, P.Y., Feng, J., & Sfeir, C. (2008) DMP-1 Signals through MAPK in hMSC, MDPC23 and MC3T3 Cells. *International Association of Dental Research Annual Meeting*, Toronto, Canada, July 2-5.
- Teng, P.N.**, Li, J.H., Pillippi, J.A., Wu, H., & Sfeir, C. Phosphoryn directed human mesenchymal stem cells differentiation into the osteogenic lineage and its signaling mechanisms. (2008) *International Society for Stem Cell Research 6<sup>th</sup> Annual Meeting*, Philadelphia, PA, USA, June 11-14.
- Wu, H., Li, J.H., **Teng, P.N.**, Lee, P.Y., Feng, J., & Sfeir, C. (2008) DMP-1 Signaling role in hMSC, MC3T3 and MDPC23 cells. *American Association for Dental Research Annual Meeting*, Dallas, TX, USA, April 2-5.
- Tengood, J.**, Wagner, W., Gerlach, J., Russell, A., & Little, S. Dissolvable hollow fibers for delivery in wound healing. *2008 World Biomaterials Congress*, Amsterdam, The Netherlands
- Brown, A.J., **Voycheck, C.A.**, McMahon, P.J., & Debski, R.E. Injury to the anteroinferior glenohumeral capsule: nonrecoverable strain and implications for surgical repair techniques. *54th Annual Meeting of the Orthopaedic Research Society*, 2008, Moscone West Convention Center, San Francisco, CA. (*Poster Presentation*).
- Voycheck, C.A.**, Brown, A.J., McMahon, P.J., & Debski, R.E. Are the Mechanical Properties of the inferior glenohumeral ligament and the axillary pouch similar? *International Symposium on Ligaments & Tendons VIII*, 2008, Stanford University, Stanford CA. (*Podium Presentation*).
- Voycheck, C.A.**, Brown, A.J., McMahon, P.J., & Debski, R.E. Effects of simulated injury on tissue deformation and mechanical properties of the anteroinferior glenohumeral capsule, *2008 Summer Bioengineering Conference*, Marco Island, FL, Abstract BIO2008-193013, June 25-29, 2008. (*Podium Presentation*).
- Voycheck, C.A.**, Maas, S.A., Weiss, J.A., McMahon, P.J., & Debski, R.E. Should a constitutive model for the glenohumeral capsule include its random fiber orientation?, *Mechanics of the Upper Extremity, XVIth International Conference on Mechanics in Medicine and Biology*, Pittsburgh, PA, July 23-25, 2008. (*Podium Presentation*).
- Maul, T.M., **Wacker, E.L.**, Kelly, K., Morell, V.O., & Wearden, P.D. (2008). Coagulation times and heparin management for pediatric patients requiring extracorporeal membrane oxygenator support. *Fourth International Conference on Pediatric Mechanical Circulatory Support Systems and Pediatric Cardiopulmonary Perfusion*. Portland, OR.
- Wagenaar, J., Hokanson, J.**, Ventura, V., & Weber, D. Real-time feedback control of functional electrical stimulation based on primary afferent recordings. *BMES 2008*, St. Louis.
- Wescoe, K.E.**, Bencherif, S.A., Sun, S., Schugar, R.C., Washburn, N.R., & Deasy, B.M. (2008). Cartilage repair potential of UC-derived stem cells seeded in 3D tissue-engineered scaffolds. *Science 2008 Meeting*; Pittsburgh, PA, USA. (*Poster Presentation*).
- Wescoe, K.E.**, Evron, J.M., Schugar, R.C., Chirieleison, S.M., Nance, J.J., & Deasy, B.M. (2008). The potential of FGF-2 in the chondrogenic differentiation of human umbilical cord-derived mesenchymal stem cells. *Children's Hospital of Pittsburgh Research Symposium*; Pittsburgh, PA, USA. (*Poster Presentation*).
- Wescoe, K.E.**, Schugar, R.C., Askew, Y.S., & Deasy, B.M. 2008. Chondrogenic activity of novel umbilical cord stem cells is sustained after ex vivo cell expansion. *Orthopaedic Research Society*; Las Vegas, NV. (*Poster Presentation*).
- Wescoe, K.E.**, Schugar, R.C., Askew, Y.S., & Deasy, B.M. (2008). Chondrogenic activity of novel umbilical cord stem cells (UCSCS) is sustained after ex vivo cell expansion. *American Society for Cell Biology Annual Meeting*; San Francisco, CA, USA (*Poster Presentation*).
- Wescoe, K.E.**, Schugar, R., & Deasy, B. Cartilage repair potential of UC-derived stem cells seeded in tissue-engineered scaffolds. *BMES 2008*, St. Louis.
- Withers, C., Stoner, R., Vishwanathan, A.**, & Zeringue, H. *In silico* and *in vitro* characterization of recurrent activity in patterned neuronal networks. *BMES 2008*, St. Louis.

**Wognum, S., & Sacks, M.S.** Towards a structurally based constitutive model of urinary bladder wall tissue remodeling after spinal cord injury, *Presented at the 10th ASME Summer Bioengineering Conference*, June 28, 2008. Listed Page 51 of the proceedings. Published on CD ROM.

**Woolley, J.R., Johnson, Jr., C.A., Ye, S., & Wagner, W.** *In vitro* assessment of ovine platelet sensitivity to orally delivered anti-platelet agents. *BMES 2008*, St. Louis.

**Woolley, J.R., Ye, S.H., Johnson, Jr., C.A., & Wagner, W.R.** Clotting Time Assessment of Candidate Materials for Use as Blood Contacting Surfaces in Blood Pumps. *ASAIO Journal* 2008;54: 58A.

Rischall, M.A., Gianaros, P.J., **Wu, M.**, Reynolds, C.F., Studenski, S.A., & Aizenstein, H.J. The relationship of medial temporal lobe volume to mood and cognition in the ADNI dataset. *American Geriatric Society Conference*. 2008.

**Wu, M.**, Barnett, A.S., Marengo, S., Walker, L., Lemaitre, H., & Pierpaoli, C. Comparison of EPI distortion correction methods in diffusion tensor MRI. *ISMRM 2008*, Toronto, Canada.

**Wu, M.**, Tamburo, R., Butters, M., Reynolds, C.F., III, & Aizenstein, H.J. Resting State fMRI in geriatric depression before and after treatment. *ISMRM 2008*, Toronto, Canada.

**Zou, L., Das, T., Bae, Y.H., Wells, A., & Roy, P.** Pfn1 modulates proliferation & survival of breast cancer cells. (*American Association for Cancer Research*)

## **Graduate Student Awards & Fellowships – 2008 (38 in Number)**

**Augustine, S.**, NSF Graduate Research Fellowship Program

**Azemi, E.**, IGERT Training Fellowship

**Bourbeau, D.**, IGERT Training Fellowship

**Brayfield, C.** Pre-Doctoral Fellowship from the Provost's Development Fund

**Bourbeau, D.** IGERT fellowship award through the CNBC

**Brennan, E.** Ruth L. Kirschstein National Research Service Award for Individual Predoctoral Fellows (NIH F31 Individual Training Grant)

**Brown, B.** Ruth L. Kirschstein National Research Service Awards for Individual Predoctoral Fellows (F31) National Institute of Biomedical Imaging and Bioengineering National Institutes of Health

**Brown, B.** East Asia and Pacific Summer Institutes Fellowship National Science Foundation/Japan Society for the Promotion of Science

**Brown, B.** 50 Best Abstracts Award: Tissue Engineering and Regenerative Medicine International Society European Chapter

**Clause, K.**, American Heart Association Pre-doctoral Fellowship

**Coley, B.** Ruth L. Kirschstein National Research Service Award for Individual Predoctoral Fellows (NIH F31 Individual Training Grant)

**Eckert, C.**, American Heart Association Pre-doctoral Fellowship

**Eckert, C.**, NSF EAPSI grant for summer study in New Zealand

**Fisher, M.**, Outstanding Graduate Student Award, Musculoskeletal Research Center

**Fisher, M.**, Biomechanics in Regenerative Medicine T-32 Fellowship

**Gabriele, M.**, 2008 NIH Institutional NRSA (T32) Interdisciplinary Visual Science Training Grant Recipient

**Gonzalez, O.**, NSF Graduate Research Fellowship Program

**Haney, J.L.**, National Science Foundation Graduate Research Fellowship Award

**Hartman, R.**, University Scholar (08-09)

**Haworth, D.**, Second place in the MS Student Paper Competition in the Tissue Engineering and Cellular Biomechanics Category at the Summer Bioengineering Conference; Finalist in the Student Poster Competition in the TERMIS-NA Conference

**Henderson, S.**, Biomechanics in Regenerative Medicine Training Program, George M. Bevier Fellowship

**Hill, M.**, NSF EAPSI grant for summer study in Japan

**Hofer, H.**, Cellular Approaches to Tissue Engineering and Regeneration (CATER) T-32 Fellowship

**Impink, B.**, VA Pre-doctoral Rehabilitation Research Fellowship

**Johnson, Jr., C.A.**, American Association for the Advancement of Science /Science Program for Excellence in Science, June 2008

**Joyce, E.**, Pre-Doctoral Fellowship from the Provost's Development Fund

**Kimmel, J.**, ASAIO Fellowship

**Meszaros, L.B.**, New Investigator Poster Award, 2nd Annual Meeting of Organization for the Study of Sex Differences, 2008

**Park, S.H.**, Bracco Young Investigator Award at Korean Society for Magnetic Resonance in Medicine 13th Scientific Meeting

**Ruffner, M.**, NIH NIDDK F30 Individual Ruth L. Kirschstein National Research Service Award

**Shukla, G.**, CTSI (Clinical and Translational Science Institute) pre-doctoral fellowship, 2008-09

**Teng, B.**, Second Place Winner, Best Poster Award, Biomaterials and Tissue Engineering Category, McGowan Institute for Regenerative Medicine Scientific Retreat, 2008

**Toosi, K.**, NIH T32 Postdoctoral Fellowship in Rehabilitation

**Valentin, J.**, Travel Award to TERMIS 2008

**Valentin, J.**, Travel Award to Biomaterials World Congress 2008

**Voycheck, C.**, Erin McGurk Research Award, Orthopaedic Research Laboratories Alumni Council, 2008

**Wescoe, K.**, May 2008 MTEC Third Place Poster Award

**Wescoe, K.**, AAAS/Science Program for Excellence in Science, one-year sponsored membership

**Wescoe, K.**, Catalyst Fellowship, Clinical and Translational Science Institute, University of Pittsburgh

**Worobey, L.**, National Science Foundation Graduate Research Fellowship Honorable Mention