

## Peer Reviewed Publications

- Kirane, Y.M., Michelson, J.D., Sharkey, N.A.: Contribution of the flexor hallucis longus to loading of the first metatarsal and first metatarsophalangeal joint. *Foot and Ankle International*, 29(4):367-377, 2008. J. Leonard Goldner Award 2007.
- Shahnazari, M., Lang, D.H., Fosmire, G.J., Sharkey, N.A., Mitchell, A.D., Leach, R.M. Strontium administration in young chickens improves bone volume and architecture but does not enhance bone structural and material strength. *Calcified Tissue International* 80:160-166, 2007.
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- Bower, A.L., Lang, D.H , Vogler, G.P., Vandenberg, D.J., Blizard, D.A., Stout, J.T., McClearn, G.E, Sharkey, N.A.: QTL analysis of trabecular bone in BXD F<sub>2</sub> and RI mice. *Journal of Bone and Mineral Research* 21:1267-1275, 2006.
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- Olson, S.A., Connolly E.A., Smith, S., Hamel, A.J., Sharkey, N.A., Bay, B.K.: Development of an animal model of acetabular fractures. *Clinical Orthopaedics and Related Research*, 423:64-73, 2004.
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### **Invited Works, Books, and Book Chapters**

- Walker, M.R., Buczek, F.L., Cooney, K.M., Sharkey, N.A., Sanders, J.O.: Multi-segment foot biomechanics in dynamic hindfoot varus. In: *Foot and Ankle Motion Analysis: Clinical Treatment and Technology*, Ed.: Harris, G., Smith, P. and Marks, R. CRC Press LLC, Boca Raton, Florida. 2007.
- Sharkey, N.A.: One step at a time: lessons learned from cadaver simulation of locomotion. *Journal of Orthopaedic and Sport Physical Therapy* 34(9) A7-A9, 2004.
- Sharkey, N.A., Michelson, J.D., Piazza, S.J.: Basic science of the foot and ankle. *Current Opinion in Orthopaedics* 12:125-130, 2001.
- Martin, R.B., Sharkey N.A.: In: Cowin, S. C. (Ed.) *Bone Mechanics Handbook. Mechanical Effects of Postmortem Changes, Preservation, and Allograft Bone Treatments.* (20-1)-(20-24). CRC Press LLC, Boca Raton, Florida. 2001.
- Sharkey, N.A., Williams, N.I., Guerin, J.B.: The role of exercise in the prevention and treatment of osteoporosis and osteoarthritis. *Nursing Clinics of North America* 35(1):209-221, 2000.
- Martin, R.B., Sharkey, N.A., Burr, D.B.: *Skeletal Tissue Mechanics.* Springer-Verlag, New York Inc. New York, NY. 1998.

### **Published Abstracts**

- Meyers, S.A., Okita, N., Sharkey, N.A.: Acute kinematic changes due to posterior tibialis tendon dysfunction: A cadaveric gait simulator study. *Gait and Clinical Movement Analysis Society 13<sup>th</sup> Annual Meeting*, Richmond, VA, April 2-5, 2008, pp. 212-213.
- Bryce, C.D., Davison, A.C., Okita, N., Sharkey, N.A., Armstrong, A.D.: The critical threshold of posterior glenoid bone loss. *Combined Meeting of the American*

Orthopaedic Association and Canadian Orthopaedic Association, Quebec City, Quebec, Canada, June 4-7, 2008.

- Sharkey, N.A., Hoskins, A.H.: A robotic dynamic activity simulator: Design, performance and application. American Society of Mechanical Engineers, 2008 Summer Bioengineering Conference, Lake Buena Vista, FL, June 7-11, 2008.
- Kirane, Y.M., Michelson, J.D., Sharkey, N.A.: Contribution of the flexor hallucis longus to axial loading of the first metatarsal and metatarso-phalangeal joint. Podium presentation at The American Orthopedic Foot & Ankle Society 23<sup>rd</sup> Annual Meeting, Toronto, Canada, July 13-25, 2007.
- Heller, M., Sharkey, N.A.: Hindfoot flexibility and orthotic interventions as determinants of ankle kinematics during jogging. International Society of Biomechanics, XXI World Congress, Taipei, Taiwan, July 1-5, 2007.
- Kirane, Y.M., Michelson, J.D., Sharkey, N.A.: The potential role of flexor hallucis longus stenosis in the pathogenesis of hallux rigidus: a dynamic cadaver model. 53<sup>rd</sup> Annual Meeting of the Orthopaedic Research Society, San Diego CA, February 11-14, 2007.
- Lang, D.H., Conroy, D.E., Lionikas, A., Mack, H.A., Larsson, L., Vogler, G.P., Vandenberg, D.J., Blizard, D.A., Stout, J.T., McClearn, G.E., Sharkey, N.A.: Bone mechanics, muscle mass, and activity-related behavior: structural equation modeling of their relationships and genetic influence. 53<sup>rd</sup> Annual Meeting of the Orthopaedic Research Society, San Diego CA, February 11-14, 2007. Winner of the 2007 New Investigator Award.
- Lang, D.H., Sharkey, N.A., Lionikas, A., Mack, H.A., Larsson, L., Vogler, G.P., Vandenberg, D.J., Blizard, D.A., Stout, J.T., McClearn, G.E. Bone, muscle mass, and activity-related behavior: structural equation modeling of their relationships and genetic influence. 28<sup>th</sup> Annual Meeting of the American Society for Bone and Mineral Research, Philadelphia, PA, September 2006.
- Kirane, Y., Hoskins, A., Sharkey, N.A.: Evidence of isometric of the flexor hallucis longus muscle in normal gait. 30th Annual Meeting of the American Society of Biomechanics, Virginia Tech, Blacksburg, Virginia, September 6-9, 2006.
- Shahnazari, M., Fosmire, G., Lang, D., Sharkey, N., Leach, R. Strontium treatment in an avian model increases  $\mu$ CT indices of bone and has no significant effect on structural properties. *Experimental Biology Conference*, San Francisco, CA, April 2006.
- Heller, M.F. and Sharkey, N.A.: Foot type as a determinant of jogging kinematics. ASME Summer Bioengineering Conference, Amelia Island, FL, June 21-25, 2006.
- Sharkey, N.A., Lang, D.H., Okita, N., Zigrossi, L., Woods, C.W., Koch, L.G., Britton, S.L.: Skeletal divergence in rats selectively bred for high and low aerobic capacity. 52<sup>nd</sup> Annual Meeting of the Orthopaedic Research Society, Chicago IL, March 19-22, 2006.

- Fauth, A.R., Sharkey, N.A., Michelson, J.: 3D Geometrical optimization of the talar dome. ISB XXth Congress - ASB 29th Annual Meeting, July 31 - August 5, Cleveland, OH, 2005.
- Heller, M.F., Challis, J.H., and Sharkey, N.A. The Effects of External Weight Carriage on Postural Stability. ISB XXth Congress - ASB 29th Annual Meeting, July 31 - August 5, Cleveland, OH, 2005.
- Sommer, H.J., Heller, M.F., Sharkey, N.A., and Challis, J.H. Postural Control Related to Flexibility of the Hindfoot When Bearing Heavy Loads. ISB XXth Congress - ASB 29th Annual Meeting, July 31 - August 5, Cleveland, OH, 2005.
- Lang, D.H., Sharkey, N.A., Vogler, G.P., Vandenberg, D.J., Blizard, D.A., Stout, J.T., McClearn, G.E.: Quantitative trait loci influencing bone quality in young and old mice. ISB XXth Congress - ASB 29th Annual Meeting, July 31 - August 5, Cleveland, OH, 2005.
- Okita, N., and Sharkey, N.A.: An image rotation protocol using Matlab and IPL. Scanco Users Meeting, Valley Forge, PA, June, 2005
- Lang, D.H., Sharkey, N.A., Vogler, G.P., Vandenberg, D.J., Blizard, D.A., Stout, J.T., McClearn, G.E.: Genetic loci influencing age-related declines in bone quality. 27<sup>th</sup> Annual Meeting of the American Society for Bone and Mineral Research, September 23-27, Nashville, TN; JBMR 20: Supp1, p. S340, 2005.
- Lang, D.H., Sharkey, N.A., Vogler, G.P., Vandenberg, D.J., Blizard, D.A., Stout, J.T., McClearn, G.E.: Genetic loci influencing age-related declines in bone quality. NIH/NIAMS Sponsored Meeting. Bone Quality: What Is It and Can We Measure It? Bethesda, MD, May 2-3, 2005.
- Lang, D.H., Sharkey, N.A., Vogler, G.P., Vandenberg, D.J., Blizard, D.A., Stout, J.T., McClearn, G.E.: Quantitative trait loci influencing age related changes in bone quality. 51<sup>st</sup> Annual Meeting of the Orthopaedic Research Society, Washington, DC, February 20-23, 2005.
- Bower, A.L., Sharkey, N.A., Lang, D.H., Vogler, G.P., Vandenberg, D.J., Blizard, D.A., Stout, J.T., McClearn, G.E.: Genetic determinants of trabecular bone density and architecture. 51<sup>st</sup> Annual Meeting of the Orthopaedic Research Society, Washington, DC, February 20-23, 2005.
- Hoskins, A.H., Fauth, A.R., Sharkey, N.A.: Dynamic cadaveric gait simulation: Steps into the future. Twenty-Eighth Annual Meeting of the American Society of Biomechanics, July 19-22, 2004, Portland, OR, p. 238-239. September 8-11, 2004.
- Fauth, A.R., Sharkey, N.A.: Characterization of plantar tissues under the metatarsal heads. Twenty-Eighth Annual Meeting of the American Society of Biomechanics, Portland, OR, p. 162-163. September 8-11, 2004.
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