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ASME Announces 2013 Outstanding Paper Awards at The Second Global Congress on NanoEngineering for Medicine and Biology

Breakthrough research from post-doctoral scholars — from tissue-engineered human gut to bio-inspired robots — garnered Outstanding Paper Awards at the ASME Second Global Congress on NanoEngineering for Medicine and Biology (NEMB 2013). These award-winning papers were selected from among all eligible conference submissions by a committee of the conference organizers.

The Congress, held February 4 through 6 in Boston, focused on collaboration in the use of nanoscale engineering, medicine, and the life sciences to improve health care. The attendees represented a wide range of experts and peers from around the world, with 100 of the attendees hailing from countries spread from Singapore to Denmark. Programming included sessions in eight technical tracks and keynote and plenary sessions led by leading scientists, engineers, and clinicians in nanotechnology disciplines.

The following were presented with the 2013 ASME Outstanding Paper Awards:

Track 1: Nanoengineering for Medical Diagnostics, Therapeutics and Imaging

Emily Day, Northwestern, for the paper: Emily Day, Samuel A. Jensen, Lisa A. Hurley, Alexander H. Stegh, and Chad A. Mirkin, "Spherical Nucleic Acids for In Vivo Cancer Gene Regulation," Paper Number NEMB2013-93288, *Proceedings of the 2013 ASME Second Global Congress on NanoEngineering for Medicine and Biology*.

Netanel Korin, Harvard, for the paper: Netanel Korin, Mathumai Kanapathipillai, Benjamin Matthews, Alexander Brill, Denisa Wagner, and Donald E. Ingber, "Shear Responsive Nanotherapeutics for Targeted Drug Delivery," Paper Number NEMB2013-93165, *Proceedings of the 2013 ASME Second Global Congress on NanoEngineering for Medicine and Biology*.

Track 2: Nano-/Microfluidics in Biology and Medicine: Analysis, Diagnostics and Therapeutics

Anne van de Ven, The Methodist Health System, for the paper: Anne van de Ven, M. D. Landis, L. A. Paskett, Hermann Frieboes, J. C. Chang, and Mauro Ferrari, "Leveraging Tumor-Specific Flow Conditions for Nanotherapeutics Delivery in Drug-Resistant Triple-Negative Breast Cancer," Paper Number NEMB2013-93410, *Proceedings of the 2013 ASME Second Global Congress on NanoEngineering for Medicine and Biology*.

Track 3: Nanoengineering for Regenerative Medicine and Tissue Engineering

Dmitry Shvartsman, Harvard, for the paper: Dmitry Shvartsman, Hannah Storrie-White, Kangwon Lee, Corey McCann, Erin Anderson, John Koullias, Juan C. Tapia, Herman Vandenburg, Jeff W. Lichtman, and David J. Mooney, "Sustained delivery of VEGF activates reinnervation and reperfusion in ischemic skeletal muscles via NGF/GDNF signaling," Paper Number NEMB2013-93372, *Proceedings of the 2013 ASME Second Global Congress on NanoEngineering for Medicine and Biology*.

Track 4: Manufacturing and Materials for Nanomedicine, Biology and Nanoengineering

Archana Swami, Harvard, for the paper: Archana Swami, Pamela Basto, Jinhe Liu, and Omid Farokhzad, "Bone Targeted Nanoparticles for Spatio-Temporal Delivery of Therapeutics," Paper Number NEMB2013-93419, *Proceedings of the 2013 ASME Second Global Congress on NanoEngineering for Medicine and Biology*.

Track 5: Multiscale Modeling and Experiment in Biology and Medicine

Baptiste Depalle, MIT, for the paper: Baptiste Depalle, Arun K. Nair, and Markus J. Buehler, "Influence of Carbonate Substitutions on Bone Apatite Mechanical Properties," Paper Number NEMB2013-93341, *Proceedings of the 2013 ASME Second Global Congress on NanoEngineering for Medicine and Biology*.

Track 6: Biological Nanomechanics: Materials Factors in Physiology, Disease and Treatment

Mandana Veiseh, Lawrence Berkeley National Laboratory, for the paper: Mandana Veiseh, Eva A. Turley, and Mina J. Bissell, "Hyaluronan-based Microenvironmental Probes Distinguish Heterogeneous Breast Cancer Cell Subsets and Predict their Invasive Behavior," Paper Number NEMB2013-93336, *Proceedings of the 2013 ASME Second Global Congress on NanoEngineering for Medicine and Biology*.

Track 7: Natural, Biomimetic and Bioinspired Materials and Structures

Zi Chen, Washington University, for the paper: Zi Chen, Qiaohang Guo, Huang Zheng, Wei Li, Yiting Ding, Guiping Su, Junjie Lin, Yuxin Liu, Wenzhe Chen, and Larry Taber, "Mechanics without Muscles: Fast Motion of the Venus flytrap and Bio-inspired Robotics," Paper Number NEMB2013-93214, *Proceedings of the 2013 ASME Second Global Congress on NanoEngineering for Medicine and Biology*.

Track 8: Nanotechnology and Public Health

Ian Wong, Brigham and Women's Hospital/Harvard, for the paper: Ian Wong, Mehmet Toner, and Daniel Irimia, "Emergence of Heterogeneous Invasion and Resistance after the Epithelial-Mesenchymal Transition," Paper Number NEMB2013-93446, *Proceedings of the 2013 ASME Second Global Congress on NanoEngineering for Medicine and Biology*.