

Keynote: Donald E. Ingber, MD, PhD

Founding Director & Core Faculty Member
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Judah Folkman Professor of Vascular Biology
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Don is the Founding Director of the Wyss Institute for Biologically Inspired Engineering at Harvard University; the Judah Folkman Professor of Vascular Biology at Boston Children's Hospital and Harvard Medical School; and Professor of Bioengineering at the Harvard School of Engineering and Applied Sciences. Dr. Ingber is a leader in the emerging field of biologically inspired engineering, and at the Wyss Institute, he oversees a multifaceted effort to identify the mechanisms that living systems use to build, control and manufacture, and to apply these design principles to develop advanced materials and devices. He also leads the Biomimetic Microsystems platform in which microfabrication techniques from the computer industry are used to build tiny, complex, three-dimensional models of living human organs. These „organs on chips,“ which mimic complicated human functions, are being designed to replace traditional animal-based methods for testing of drugs and toxins. Ingber has made major contributions to mechanobiology, tissue engineering, tumor angiogenesis, systems biology, and nanobiotechnology. He was the first to recognize that tensegrity architecture (in which a system stabilizes itself mechanically by balancing local compression with continuous tension) is a fundamental principle that governs how living cells are structured at the nanometer scale.

Don has authored more than 325 publications and 70 patents and has received numerous honors including the Holst Medal, Pritzker Award from the Biomedical Engineering Society, Rous-Whipple Award from the American Society for Investigative Pathology, Lifetime Achievement Award from the Society of In Vitro Biology, and the Department of Defense Breast Cancer Innovator Award. He is also a member of the Institute of Medicine of the National Academies and a fellow of the American Institute for Medical and Biological Engineering.

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