

**International Society for Biofabrication
Board of Directors Nomination**

John P. Fisher

Dr. John P. Fisher is the Fischell Family Distinguished Professor and Department Chair in the Fischell Department of Bioengineering at the University of Maryland. Dr. Fisher is also the Director of the newly established NIH Center for Engineering Complex Tissue (CECT) that aims to create a broad community focusing on 3D printing and bioprinting for regenerative medicine applications. Dr. Fisher completed a B.S. in biomedical and chemical engineering at The Johns Hopkins University (1995), M.S. in chemical engineering at the University of Cincinnati (1998), Ph.D. in bioengineering at Rice University (2003), and postdoctoral fellowship in cartilage biology and engineering at the University of California Davis (2003).

Dr. Fisher is committed to the role of professional societies, particularly the International Society for Biofabrication (ISBF), in the establishment of scientific fields as well as the growth of its members. Key goals for ISBF include the further growth of biofabrication in the fields of chip-based technologies, tissue and organ models, and regenerative medicine. In addition, the fostering of the careers of young investigators and student researchers should continue to be promoted. Additional endeavors include the expansion of ISBF's geographical footprint, the inclusion of a diverse group of investigators within ISBF, as well as the key participation of government entities throughout the world in ISBF. Dr. Fisher is committed to working with the leadership and membership of ISBF to promote its impact in the physical, biological, and medical fields.

As the Director of the Tissue Engineering and Biomaterials Laboratory, Dr. Fisher's group investigates biomaterials, stem cells, bioprinting, and bioreactors for the regeneration of lost tissues, particularly bone, cartilage, and cardiovascular tissues. Initially, the laboratory developed a novel class of biodegradable polymers, based upon an acetal monomer, that result in non-acidic degradation products upon hydrolysis. The laboratory utilized these, and other polymer systems (both natural and synthetic) to create biomimetic environments for cell culture and, critically, demonstrated the relationship between cell microenvironment and endogenous protein signal expression. Subsequent efforts focused on the development of a novel perfusion bioreactor for dynamic cell culture. Most recently, Dr. Fisher's laboratory has developed strategies for the 3D printing of a variety of tissue engineering biomaterials and scaffolds.

Overall, the laboratory has published over 140 articles, book chapters, and proceedings (4900+ citations / 39 h-index) as well as delivered over 285 invited and contributed presentations, while utilizing over \$15M in financial support from NIH, NSF, FDA, NIST, DoD, and other institutions. Fisher has advised 8 postdoctoral fellows (3 current), 23 doctoral students (12 current), 6 Master students, and supported the research activities of over 65 undergraduates (8 current). Students in Dr. Fisher's laboratory have received a number of awards and honors: University of Maryland Undergraduate Researcher of the Year (3), Bioengineering Department Outstanding Graduate Researcher of the Year (2), NSF Graduate Fellows (2), AHA Graduate Fellow (3), NIH Postdoctoral Fellow (1), Fulbright Fellow (2), and TERMIS / Mary Ann Liebert Outstanding Student (1).

Fisher has been elected Fellow of both the American Institute for Medical and Biological Engineering (2012) and the Biomedical Engineering Society (2016). Fisher has received the NSF CAREER Award (2005), Arthritis Foundation's Investigator Award (2006), Outstanding Graduate Alumnus Award from the Department of Bioengineering at Rice University (2007), Engalitcheff Award from the Arthritis Foundation (2008), Next Power Professorship from Tsing Hua University in Taiwan (2015), and a Fulbright Fellowship to study at the National University of Ireland, Galway (2015). At the University of Maryland, Fisher has received the Invention of the Year Award (2006 & 2014), First Place in the Venture Fair Competition (2009 & 2013), Teaching Excellence Award from the Fischell Department of Bioengineering (2011), Graduate Faculty Mentor of the Year Award (2015), and the Outstanding Director of Graduate Studies Award (2015). Fisher is currently the Editor-in-Chief of the journal *Tissue Engineering, Part B: Reviews*. In addition, Fisher has edited or co-edited 6 monographs in the field of tissue engineering. In 2014, Fisher was the Chair of the Tissue Engineering and Regenerative Medicine International Society–Americas (TERMIS-AM) Chapter Annual Meeting in Washington, DC. In 2014, Fisher was elected Chair of TERMIS-AM, and in 2015 started his term as Chair-Elect of the society.