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ASME Journal of Medical Devices
Special Issue on Biomimetic Medical Devices: Microfluidics, MEMS, and NEMS

Description:
Biomimetic devices typically encompass many different geometries, factors, and sometimes must maintain physiological relevance in order to be used in applications ranging from, drug discovery, cell growth, disease studies, diagnosis, sensing, mixing or filtration applications, and many others.

The biomedical device industry increasingly relies on complex Microfluidic, Microelectromechanical and Nanoelectromechanical Systems (MEMS and NEMS) devices in order to quickly and cost effectively generate results. The benefits of such biomedical device research are present in the medical, pharmaceutical, biotechnology, and life science industries. As such, continued advances are required in order to continue to meet the ever increasing needs of the scientific, medical and commercial communities. Various organ-on-chip devices have been developed in the past few years to mimic the biological and physiological functions of living systems for drug evaluation or disease study. Further exposure of the public to new and novel research in the field of medical devices helps support understanding, acceptance and funding of future work and scientific breakthroughs.

This special issue of the Journal of Medical Devices is intended to be a collection of original research that highlights the use of microfluidic devices, MEMS, and NEMS towards biomedical applications. Papers submitted for the special issue should involve the use of new and novel microfluidic, MEMS, or NEMS devices towards overcoming a current issue faced in the biomedical community. Both experimental and computational works are welcome.

Topic Areas:
Microfluidics, MEMS, NEMS, Biomimetic, Lab on Chip, Organ on Chip, Biomimetics, Medical Device, Nanotechnology, disease diagnosis, drug screening, biosensing

Publication Target Dates:

Paper Submission Deadline:	Dec 31, 2017
Initial Review Completed:	March, 2018
Special Issue Publication Date:	June, 2018

Special Issue Editor:

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Yaling Liu is an associate professor in the Mechanical Engineering and Mechanics department and Bioengineering department at Lehigh University. His research interests include: Biotransport at the micro/nano scale, microfluidics, bioMEMS, cardiovascular fluid dynamics, bionano interfacial phenomena, nanomedicine, and biosensing.

Submission Instructions
Papers should be submitted electronically to the Journal at **http://journaltool.asme.org**. If you already have an account, log in as author and select **Submit Paper** at the bottom of the page. If you do not have an account, select **Submissions** and follow the steps. In either case, at the **Paper Submittal page**, select the ***Journal of Medical Devices*** and then select the special issue **Biomimetic Devices**.