Postdoctoral Fellow/Research Tech –
microsystem for study and development of micro-organs

Karp Lab, Boston, Massachusetts

The Karp Lab at Brigham & Women’s Hospital, Harvard Medical School, aims to create advanced cell therapeutics and cellular engineering strategies through multidisciplinary approaches. A major focus of our research is to develop technologies that can be rapidly translated to the clinic in order to improve the quality of life of suffering patients. For more information, visit www.karplab.net.

The Karp Lab is a dynamic and fast-paced environment that thrives on collaboration and ingenuity. We have a diverse international talent pool working simultaneously on multiple projects across several disease areas. We are focused on the development of platform technologies supporting a broad range of potential applications in medicine and bioengineering. Our emphasis on translational research enables us to train the next generation of bioengineers and expand the boundaries of this exciting field. With that in mind, the Karp Lab seeks members with highly developed interpersonal skills who will contribute to our dynamic lab community.

The successful candidate is expected to help in the development of lab-on-a-chip devices, from the development of novel microfluidic device elements, instrumentation for chip operation and basic measurement methods, to the application of lab-on-a-chip technology to mimic organ-level function on a chip. This microfluidic platform will be used to study micro-organs (such as pancreatic islets) and develop relevant disease models. The chip will have on-chip pumping, valve control systems, mixing chambers, multiple reagent ports, and collection chambers.

The candidate will have strong organizational and communication skills for assisting and collaborating with multidisciplinary groups of technology innovators and engineers, as well as biologists and clinicians, in a dynamic team environment.

Basic Qualifications
M.S./Ph.D. in relevant field. Because of the interdisciplinary nature of this work, we are seeking applicants from diverse fields including chemistry, biology, physics, materials science, engineering or other related departments. Ideally will have ample experience in microfluidic systems, micro-fabrication and corresponding instrumentation. Candidates with M.S. will be considered for research tech position.

Additional Qualifications
Proficiency in biochemical assays, immunocytochemistry (ICC), ELISAs. Strong candidates will have experience in mammalian cell culture. The candidate for this position will bring strong expertise and background in experimental design (including proper controls and statistical analysis of data). Proficiency in use of Lab-view or similar tools is needed.

Applications, assembled as single pdf files, should contain a C.V., a cover letter describing research interests and goals, a full list of publications, copies of up to three relevant scientific papers, and names and contact information for at least three writers of letters of recommendation, who might be contacted as references. Send applications to gchitnis@mit.edu with subject “Micro-organ-chip: Postdoctoral/Tech Application.”

Keywords: Organ-on-a-chip; Microfluidics; Mass Spectrometry; Instrumentation; Microfabrication