

Postdoc/Student/Technician Positions at Harvard Medical School

Immediate postdoc, student or technician positions supported by NIH R01 grants are available. The main focus of the laboratory is to investigate novel immunological aspects of stem cells and their niche. We are testing whether the niche acts as an immunological sanctuary for stem cells, termed an immune privileged site, which 1) protects stem cells from stress and inflammation, 2) promotes engraftment of transplanted allogeneic stem cells, and 3) shields malignant stem cells from immune attack and therapeutic insults, including tumor immunotherapy. Immune privilege was originally demonstrated in the 1950s to exist within the testis and placenta—organs accommodating embryonic and germline stem cells. Although more recent stem cell research has identified various tissue-committed stem cells and their microenvironments, or niches, the niche has not been discussed in the immunological context. Little is known about whether niches are immune privileged.

We have recently demonstrated that the hematopoietic stem cell (HSC) niche within the bone marrow accommodates a unique regulatory T cell population which renders the niche immune privileged (*Cell Stem Cell* 22, 445-453, 2018; *Nature* 474(7350), 216-9, 2011). Our group has demonstrated that these niche-residential Tregs and their product, extracellular adenosine, play critical roles in BM transplantation, injury and malignancies. Our work has further identified these niche-residential Tregs as a promising source of cell therapy for transplantation and tissue injury. Current research focuses include (but are not limited to) studies to further uncover fundamental mechanisms of immune privilege and to translate our knowledge into the clinical settings of cancer, transplantation, tissue injury and infection. Multiple experimental approaches, including transgenic animal models, sequencing, and intravital two-photon microscopy, will be used.

Successful candidates of postdoctoral fellows will have a Ph.D. and/or M.D. degree. Candidates are preferred to (but do not need to) possess expertise in one of the following fields: stem cell biology; immunology; cancer biology; RNA/DNA sequencing; T cell receptor sequencing; and computational biology. We are looking for candidates who are interested in pursuing multidisciplinary research. To apply for this position, please send your CV with names/contact info of 3 references to Dr. Joji Fujisaki (jfujisak@bidmc.harvard.edu).

Dr. Fujisaki is a former Associate Professor at Columbia University in NY. Dr. Fujisaki has been most recently recruited as Deputy Director at a newly built Center for Inflammation Research within Beth Israel Deaconess Medical Center, Harvard Medical School. Dr. Fujisaki is also an affiliate faculty of Harvard Stem Cell Institute. Dr. Fujisaki's laboratory is located within the Center for Life Science Building in the Longwood Medical Area.

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