



# Duke University

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## **Postdoctoral Fellow in Cardiac Tissue Engineering and Regeneration**

Over the last 2 decades, our group (<http://bursaclab.pratt.duke.edu/>) has developed various techniques for engineering highly functional human cardiac tissues made of pluripotent stem cells for use in drug development, disease modeling, and cardiac regenerative therapy. We are looking for a talented postdoctoral fellow with expertise in cardiac cell biology, physiology, and differentiation of human iPSCs to pursue basic experimental studies and therapeutic applications of human engineered heart tissues. The project will involve *in vitro* studies in human iPSC derivatives aimed at stimulating cardiomyocyte maturation, hypertrophy, proliferation, and regeneration and understanding the roles that cardiomyocyte-nonmyocyte interactions play in these processes. Furthermore, engineered human heart tissues will be implanted and tested for the ability to exert or undergo repair in rodent and porcine models of cardiac injury. Basic biology studies will be complemented with physiological measurements of cardiac electrical and mechanical function at a variety of spatial scales from a single cell to tissue and whole organ. This work is a part of a collaborative project involving cardiac biologists, bioengineers, and clinical scientists.

This position is immediately available. Qualifications include PhD in cell and developmental biology, biomedical engineering, physiology, or other related areas. The applicant is required to have experience in human pluripotent stem cell culture, cardiomyocyte differentiation, and good knowledge of cardiac biology and physiology. Candidates with expertise in gene editing techniques (CRISPR/Cas9), molecular biology, cardiac physiological measurements, and animal experimentation will be given special consideration. The candidate needs to be self-motivated, independent, good communicator, and able to work within a large team of scientists with diverse backgrounds. Our group provides a stimulating environment with excellent opportunities for scientific growth and pursuit of academic and industry careers. Interested candidates should apply with their resume, statement of research goals, and at least three names for letters of recommendations by directly writing to Dr. Nenad Bursac ([nbursac@duke.edu](mailto:nbursac@duke.edu)).