

Postdoctoral Position in Modeling and Treatment of Human Skeletal Muscle Diseases. A

postdoctoral position is immediately available in the area of human skeletal muscle tissue engineering and disease modeling. The goal of the project is application of miniature human skeletal muscle tissues (“organoids”) made of primary muscle progenitors or induced pluripotent stem cells (iPSCs) to disease modeling and drug discovery. Specifically, human engineered muscle microtissues will be used to study exercise-induced changes in muscle physiology and metabolism and develop therapies for insulin resistance in diabetes and other diseases. Furthermore, human iPSC and primary cell derived muscle organoids will be used to develop models and gene correction therapies for Pompe disease (glucogen storage disease type II) and different types of muscle dystrophies (e.g. DMD, LGMD, FSHD). All studies in engineered muscle microtissues will involve non-invasive monitoring of generated contractile force and intracellular calcium transients, biochemical and molecular assays, genetic modifications, and potential evaluation *in vivo*.

Qualifications include PhD in cell and developmental biology, biomedical engineering, or other relevant areas of biomedical sciences. The ideal candidate will be highly self-motivated and possess strong training in the cell culture, molecular biology, biochemical and histological assays and tissue engineering. Experience in culturing and differentiation of human pluripotent stem cells and culture of muscle cells are highly desired. Our group is a highly diverse and stimulating environment that provides excellent opportunities for scientific growth in the pursuit of both academic and industry careers. Interested candidates should send their resume, statement of research goals, and three letters of recommendation to Dr. Nenad Bursac (nbursac@duke.edu).