

Postdoctoral Fellow - In Vitro Modeling of Human Skeletal Muscle Disease. A

postdoctoral position is immediately available in the area of human skeletal muscle biology and tissue engineering. The goal of the project is the development of 3-D cell culture models of functional human skeletal muscle tissue using primary myogenic cells from human muscle biopsies as well as satellite cells derived from human induced pluripotent stem cells (hiPSCs). Myogenic cells will be derived from patients with diverse pathologies including the glycogen storage disease type II (Pompe disease) and different types of muscle dystrophies. Resulting engineered muscle tissues will be optimized for functionality, validated for a pathophysiological phenotype, and utilized in molecular, pharmacological, and gene therapy studies. Functional measures will include non-invasive monitoring of generated contractile force and intracellular calcium transients. Studies in rodents will be further employed to explore the utility of the human engineered muscle for predictive screening of novel therapeutics *in vivo*.

Qualifications include PhD in biomedical engineering, biology, physiology, or other relevant areas of biomedical sciences. The ideal candidate will be highly self-motivated and possess strong training in muscle biology and physiology, tissue engineering, and stem cell biology. Significant experience in culturing and differentiation of muscle cells and human pluripotent stem cells, molecular biology, and animal experimentation and handling are highly preferred. 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).

Lab website: <http://bursaclab.bme.duke.edu/index.php>