KAINOMYX

Biosketch

Anastasia Karabina, PhD in biophysics

Dr. Karabina has a PhD degree from Boston University and conducted postdoctoral research with Leslie Leinwand at the University of Colorado Boulder.

Dr. Karabina's PhD research employed fluorescence microscopy and *in vitro* motility assays to investigate the effects of familial hypertrophic cardiomyopathy mutations and myosin regulatory light chain phosphorylation on cardiac myosin contractility. She also used molecular dynamics simulations to investigate the tertiary and quaternary structure of smooth muscle tropomyosin heterodimers. After receiving her PhD, Dr. Karabina conducted further studies with Jeffrey Moore on the regulation and contractility of actomyosin using fluorescence microscopy and optical tweezers, and also worked as an adjunct faculty at the University of Massachusetts Lowell where she taught the undergraduate/graduate laboratory course in cardiovascular physiology.

Dr. Karabina's postdoctoral work with Leslie Leinwand examined the genotype-phenotype relationship of four homologous mutations expressed in either embryonic, perinatal, or beta-cardiac myosin isoforms which lead to three distinct clinical phenotypes. For these studies, she employed virus-mediated recombinant myosin expression in terminally differentiated C2C12 muslce cells to assess *in vitro* protein function and cellular dynamics. She also investigated the dynamics of myosin unfolding and refolding through single molecule atomic force spectroscopy.

Dr. Karabina's work has been recognized by an American Heart Association Founders Affiliate Predoctoral Fellowship and a National Research Service Award Institutional Research Training Grant (T32).

Dr. Karabina engaged in extensive university service at Boston University, including functioning as the representative of the Department of Biophysics and Physiology for the Boston University Medical Sciences Student Organization (GMSSO).