RESPECTIVE CONTRIBUTIONS

The applicant's section of this proposal was prepared entirely by Austin Minton. The Sponsor, Dr. Kenneth Campbell provided edits and suggestions for revisions for clarity and format.

The global hypothesis that TTNtvs contribute to NICM pathogenesis by overloading cellular turnover pathways, leading to increased lipofuscin accumulation, incorporation of truncated titin into sarcomeres, and reduced isometric active and passive forces, was developed by the applicant, Austin Minton. The applicant developed the aims and experiments proposed in this project with some input and refinement by his PhD advisory committee.

Development of Training Plan

Austin aims to pursue a career in translational medicine and basic science, which has led him to conduct research in the laboratory of Dr. Campbell. Dr. Campbell's background in cardiac muscle biophysics, biochemistry, and computational modeling will help him develop the skills needed to succeed as an independent scientist. The applicant has started off strong since joining the lab by leading the effort of multi-omic characterization of over 300 human hearts, learning MATLAB code to build segmentation script for analyzing all histological images (fluorescent and brightfield), building skills in muscle mechanics using rat skeletal and human cardiac tissue, and presenting corresponding data at 8 conferences. The training plan developed in this proposal aims to provide Austin with the training and mentorship necessary to maintain a high level of productivity and pursue a career in research as a principal investigator.

Review and Editing of Training Plan

Austin developed the training plan and other submitted documents with edits from Dr. Campbell. Austin presented this proposal to his PhD advisory committee after passing his qualifying exam and becoming a PhD candidate. Members of his advisory committee provided written feedback on the proposal, which Austin used to make revisions and improvements. Additional edits to the training plan were discussed during weekly 1-on-1 meeting with Dr. Campbell, allowing a personalized training plan to form.

Respective Roles in Accomplishing the Proposed Research

Austin Minton will be the principal investigator for this project, conducting all experiments and analyzing subsequent results. Drs. Ebbert and Kampourakis will provide support when their expertise will be helpful. Dr. Campbell will continue to provide mentorship on various aspects of each assay and support with experimental design, data analysis, and interpretation.