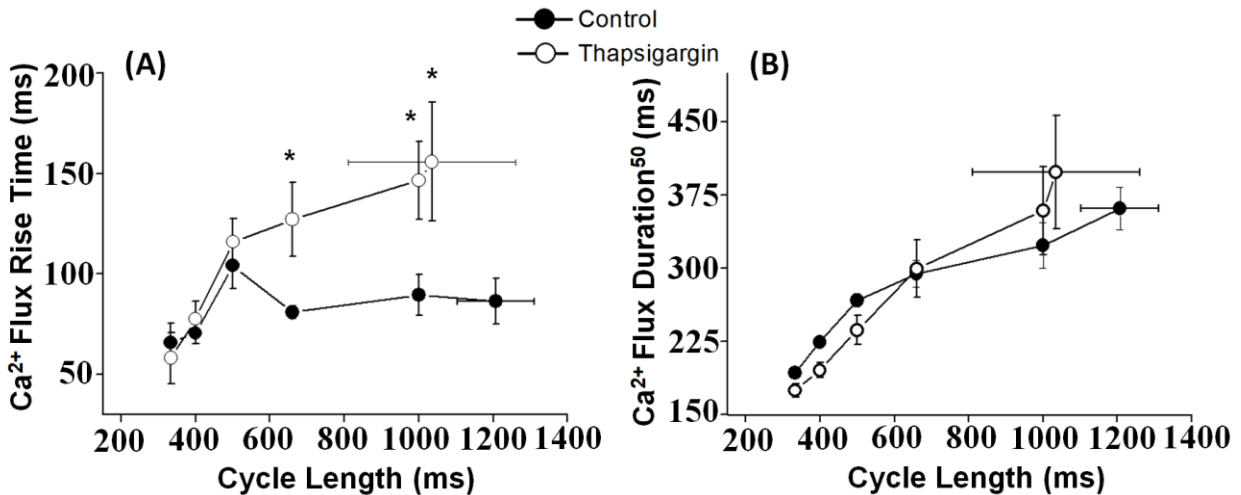


**Supplemental Figure 5: Cycle Length and Calcium Flux Characteristics**



**Supplemental Figure 5.** Fura4 florescent calcium indicator and thapsigargin, an irreversible SERCA2a inhibitor, were utilized on engineered cardiac grafts (n=5). Each engineered cardiac graft was assessed prior to exposure to thapsigargin so as to generate the control dataset.

(A) Calcium (Ca<sup>2+</sup>) flux rise time in milliseconds (ms) versus cycle length in ms. The control grafts exhibited relative consistency in Ca<sup>2+</sup> rise time (black circles) while thapsigargin-treated grafts (white circles) had a statistically significant delay in rise time at higher cycle lengths. \* two-tailed unpaired t test versus Control, p<0.05.

(B) Ca<sup>2+</sup> flux duration to fifty percent in ms versus cycle length in ms. No statistically significant relationships were found between the control (black circles) and thapsigargin-treated grafts (white circles).