**ABSTRACT**

Heart failure is associated with decreased muscle function and exercise intolerance. Small molecule, fast skeletal troponin activators increase sarcomere calcium sensitivity and muscle force at sub-maximal nerve stimulation rates while reducing muscle Ca2+ load. CK-2127107 IMPROVES MUSCLE FUNCTION AND EXERCISE CAPACITY IN A RAT HEART FAILURE MODEL.

**RESULTS**

**Changes in EDL muscle in HF rats**

![Figure 1: a) Comparison of vehicle and CK-2127107 effects on diaphragm force frequency relationship. b) Photomicrographs of ATPase stained sections showing increased atrophy in HF compared to Sham. c) Changes in muscle distribution and cross sectional area in diaphragm from HF rats compared to Sham.](image1)

**Changes in Diaphragm Muscle in HF Rats**

![Figure 2: b) Photomicrographs of ATPase stained sections showing increased atrophy in HF compared to Sham. c) Changes in muscle distribution and cross sectional area in diaphragm from HF rats compared to Sham.](image2)

**Summary and Conclusions**

In rats with heart failure and decreased exercise tolerance compared to sham operated, CK-2127107 increased exercise performance. Diaphragm and certain limb muscles atrophy in this model of heart failure. CK-2127107 increases their calcium sensitivity and increases overall, sub-maximal force development.

**REFERENCES**


