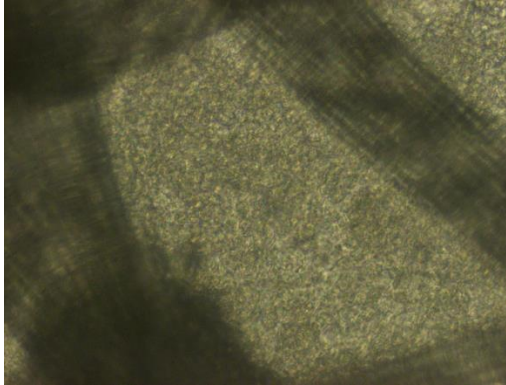


Supplemental Video 1: *In Vitro* Graft Exhibits Spontaneous and Synchronous Mechanical Activity



Supplemental Video 1. Video of engineered cardiac graft in 6-well plate (10X magnification). The synthetic bioabsorbable biomaterial of the graft can be visualized as woven bundles of fibers, creating a lattice extracellular matrix for the human dermal fibroblasts and human induced pluripotent stem cell-derived cardiomyocytes. Wave fronts of spontaneous and synchronous mechanical activity can be observed via diffraction of the microscope fluorescent light.