

EQUIPMENT

The applicant has access to all major equipment needed for the completion of this project.

Tissue Processing and Biochemical Assays

Histology and biochemical assays will be performed in all Aims of this proposal using equipment in the Sponsor's lab, which is fully equipped for these techniques. Relevant equipment within the lab includes an ultra-pure deionized water supply, a top-ban balance, dissection microscopes, a modern cryostat, gel electrophoresis and Western blot setups, a ChemiDoc, ventilated fume hoods, refrigerated centrifuges, -20°C freezers, a -80°C freezer, cryogenic storage systems.

Slides in Aims 2.2 and 3.1 will be imaged using a Zeiss Axioscan Z7 and Nikon AXR Confocal microscope in the University of Kentucky's Light Microscopy Core.

Contractile Measurements

Contractile assays using permeabilized multicellular preparations will be performed as part of Aim 3 using 1 of 3 highly specialized setups available in the Sponsor's lab. Relevant equipment includes an inverted microscope with video attachment, a vibration isolation table, a force transducer, a length controller, and high speed (>1000 frames per second) video cameras.