

Multiphoton Intravital Tissue Imaging Facility Rigor and Reproducibility Statement

To ensure consistent equipment performance, the MITI Research Core performs weekly maintenance on all instruments and maintains comprehensive preventative maintenance and service contracts with Olympus and Newport/Spectra Physics to maintain the research core's microscope and laser systems in optimal condition. To further ensure consistent reproducibility and rigor during ongoing/long term imaging experiments (individual studies which may vary greatly in system configuration), both IR laser output (power at a given wavelength) and detector responses (intensity under identical collection parameters) are measured prior to each imaging session and are not allowed to vary by more than 10% throughout the complete imaging process. In addition to maintaining equivalent system functioning, all imaging configurations for a given experimental series are kept identical throughout the