Siobhan Malany

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Siobhan Malany studies the effects of microgravity on human muscle biology using an automated tissue chip system.

Biography

Siobhan Malany's research seeks to implement improved in vitro cell-based systems to better predict human drug efficacy, particularly for muscle diseases. Her lab has developed a microphysiological system -- also referred to as a ?tissue chip? -- to study age-related muscle wasting (sarcopenia). The lab is using patient-specific muscle primary cells in 3D culture integrated into a microfluidic device that was sent to the International Space Station research laboratory in 2020. Another experiment will be sent in 2022 to serve as a micro-scale model for studying physical changes induced in microgravity that may mimic aging and for predictive drug and toxicology testing to aide in the development of therapeutics for sarcopenia.

Areas of Expertise

Space, Age-related Msucle Atrophy, Drug Discovery and Screening, Space Medicine, Human Muscle Biology, Tissue chips, Receptor Pharmacology