SIMULATED MICROGRAVITY NEGATIVELY EFFECTS A549 AND JAWSII CELL LINES

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Abstract

Adverse health consequences associated with spaceflight has be well documented, but more research is needed to fully identify and understand the impact of microgravity on the cellular and molecular level.

A current limitation to advancing such knowledge is due to a lack of experimental approaches that adequately simulate microgravity on earth in a research setting.

The purpose of the current study was to develop and test a laboratory method that could be used to simulate microgravity using an in vitro cellular model platform. Specifically, we tested how low centrifugal rotation could be applied to a human cell line for downstream cellular and molecular analysis.

Based on these results, future studies will address improvement of the current technique as a model to further in-depth studies on the role of microgravity and immune cell dysregulation.