



Microgravity and Space Medicine in Cancer Cell Activity

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Message from the Guest Editor

Cancer is a disease exhibiting uncontrollable cell growth and spreading to other parts of the organism. Studies have shown that real and simulated microgravity impact survival, apoptosis, proliferation, migration, and adhesion as well as the cytoskeleton, the extracellular matrix, focal adhesion, and growth factors in cancer cells. This SI focuses on the effects of real and simulated microgravity on different types of cancer cells and on cancerous stem cells. The new studies will demonstrate that microgravity has become an important new technology for increasing current knowledge of cancer biology. In addition, we will focus on the impact of cosmic radiation, available countermeasures, and possible applications on Earth. All available platforms to study real microgravity and ground-based facilities available to simulate microgravity on Earth can be used for studying changes in various cancer cell types. Articles and reviews will be published that examine either the molecular biological background of external signals in cancer or the cellular mechanisms responsible for the manifold changes occurring in cancer cells, cancer stem cells as well as animals when exposed to microgravity.





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Message from the Editor-in-Chief

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