Special Issue

Ultrastructure and Function in In Vitro Cancer Models: From Morphology to Mechanism

Message from the Guest Editors

This Special Issue aims to bridge a critical gap by applying ultrastructural insights to functionally validate and mechanistically decode in vitro cancer models. While the existing literature often emphasizes genetic or molecular profiling, this Special Issue will highlight how high-resolution imaging moves beyond descriptive morphology to provide mechanistic explanations for phenomena like tumor heterogeneity, stromal crosstalk, and therapy response. We welcome studies that correlate structural alterations with functional phenotypes, thereby offering a complementary perspective that is essential for comprehensive and validated cancer modeling.We are pleased to invite you to contribute to the Special Issue titled "Ultrastructure and Function in In Vitro Cancer Models: From Morphology to Mechanism", hosted in Biology (MDPI). This Special Issue aims to explore the ultrastructural features of cancer in vitro models, including organoids, spheroids, and other advanced 3D culture systems, using high-resolution imaging techniques such as Transmission Electron Microscopy (TEM), Scanning Electron Microscopy (SEM), Focused Ion Beam (FIB), and related modalities.

Guest Editors

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A major strength of biological science is the diversity of approaches that biological scientists apply to their research problems. *Biology* reflects this diversity and brings together studies employing the varied experimental and theoretical approaches that are fueling biological discovery. *Biology*, the journal, is a fully peer-reviewed publication with a rapid and economical route to open access publication and is listed on PubMed. All articles are peer-reviewed and the editorial focus is on determining that the work is scientifically sound rather than trying to predict its future impact.

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