Special Issue

Molecular Mechanisms and Signaling Pathways in Melanoma

Message from the Guest Editors

Alteration in signaling pathways is the prime mechanism of oncogenesis in the development of several cancers. In melanoma, these mechanisms are reflected in mutations in genes involved in several signaling pathways, such as the one leading to activation of the mitogen-activated protein kinase (MAPK) cascade. This important pathogenic molecular pathway includes alterations in *BRAF, NRAS, KIT*, and *NF1*. Pathways involved in cell cycle progression, including CDKN2A, RB protein, cyclin D1, and CDK4/6, are also widely involved in melanoma pathogenesis. Molecular analysis has revealed different drivers in different subtypes of melanoma. The discovery of these drivers and related molecular pathways has afforded the opportunity to develop life-changing therapeutics, as exemplified by the adoption of BRAF and MEK inhibitors as standard of care for melanoma, in addition to immunotherapy. This SI explores known and emerging molecular mechanisms and signaling pathways in the development and progression of melanoma, highlighting the opportunity for future development of novel drugs and drug combinations for the personalized care of melanoma patients.

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Message from the Editor-in-Chief

Cancers is an international online journal addressing both clinical and basic science issues related to cancer research. The journal is publishing in Open Access format, which will certainly evolve to ensure that the journal takes full advantage of the rapidly changing world of information and knowledge dissemination. It publishes high-quality clinical, translational, and basic science research on cancer prevention, initiation, progression, and treatment, as well as other related topics, particularly to capture the most seminal studies in the rapidly growing area of immunology, immunotherapy, and tumor microenvironment.

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