

## Special Issue

# Molecular Genetics and Molecular Diagnosis in Precision Oncology

### Message from the Guest Editor

The landscape of cancer treatment is undergoing a fundamental transformation, moving away from a one-size-fits-all approach to an era of precision oncology. At the core of this paradigm shift is the integration of molecular genetics and advanced molecular diagnostics, which enable the comprehensive characterization of a tumor's unique genetic and molecular landscape. By deciphering the specific genomic alterations, transcriptomic changes, and other molecular signatures that drive a patient's cancer, clinicians can move beyond organ-based classifications to provide personalized, targeted therapies that maximize efficacy and minimize toxicity.

This Special Issue explores the latest advances in harnessing molecular insights to drive precision oncology. Contributions cover a wide spectrum from cutting-edge technologies like next-generation sequencing (NGS) and liquid biopsy for real-time monitoring to the interpretation of complex genetic profiles. We also delve into the critical challenges and future directions, including overcoming tumor heterogeneity, improving actionable target identification, and ensuring equitable access to these technologies.

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### Guest Editor

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## Biomolecules

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*Biomolecules* is a multidisciplinary open-access journal that reports on all aspects of research related to biogenic substances, from small molecules to complex polymers. We invite manuscripts of high scientific quality that pertain to the diverse aspects relevant to organic molecules, irrespective of the biological question or methodology. We aim for a competent, fair peer review and rapid publication. Please look at some of the exciting work that has been published in *Biomolecules* so far. We would be delighted to welcome you as one of our authors.

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