

Special Issue

Research on the Key Role of Ubiquitination in Signaling and Cancer

Message from the Guest Editor

Ubiquitination plays a pivotal role in regulating key cellular signaling pathways, including those involved in cell proliferation, DNA repair, and apoptosis. By controlling the stability, localization, and activity of critical proteins such as tumor suppressors and oncoproteins, the ubiquitin–proteasome system ensures precise signal transduction and cellular homeostasis. However, dysregulation of ubiquitination—through mutations in E3 ligases, deubiquitinating enzymes, or ubiquitin-binding proteins—can lead to aberrant signaling, the promotion of cancer initiation, progression, and metastasis. Given its central role in oncogenic and tumor-suppressive pathways, understanding the intricate mechanisms of ubiquitination in signaling networks provides critical insights into cancer biology and potential precision medicine approaches. Therefore, in this Special Issue, we will focus on the role of ubiquitination in signal transduction, tumor proliferation and progression, as well as recent advances in drug development and the underlying molecular mechanisms.

Guest Editor

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Deadline for manuscript submissions

30 December 2025



International Journal of Molecular Sciences

an Open Access Journal
by MDPI

Impact Factor 4.9
CiteScore 9.0
Indexed in PubMed



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*International Journal of
Molecular Sciences*
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