

Special Issue

Multi-Modal and Molecular Imaging of Cellular Microenvironment and Tissue Development

Message from the Guest Editor

The physiological process within the organism involves the reciprocal interaction of tissue cells with each other, with stromal cells, and with the surrounding ECM. The three-dimensional position of cells in a tissue determines the supply of oxygen, nutrients, and soluble factors, such as cytokine and hormones. Altogether, this interplay of physical and chemical signals represents the “cellular microenvironment”. The microenvironment regulates cell proliferation, motility, migration, aggregation, and differentiation. In organism development, cues from the microenvironment are essential for the differentiation of organs. Sudden or chronic alterations of the microenvironment induce a perturbation of tissue homeostasis and can lead to a pathology. Visualizing cell dynamics in their three-dimensional tissue context is essential to understand the cellular and molecular processes in action. The aim of this Issue is presenting the most advanced developments in multi-modal microscopy and molecular imaging of the tissue microenvironment, applied to the study of the development of organisms, tissue differentiation, and the onset and progression of pathological processes.

Guest Editor

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Message from the Editor-in-Chief

The International Journal of Molecular Sciences (*IJMS*, ISSN 1422-0067) is an open access journal, which was established in 2000. The journal aims to provide a forum for scholarly research on a range of topics, including biochemistry, molecular and cell biology, molecular biophysics, molecular medicine, and all aspects of molecular research in chemistry. *IJMS* publishes both original research and review articles, and regularly publishes special issues to highlight advances at the cutting edge of research. We invite you to read recent articles published in *IJMS* and consider publishing your next paper with us.

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