

## Special Issue

# Interactions of Cells with Biomaterials for Regenerative Medicine

### Message from the Guest Editor

Biocompatibility has a very broad meaning, including non-toxicity of the materials, their ability to support cell adhesion, proliferation, and differentiation, as well as their non-immunogenic properties. Therefore, the evaluation of major cell–biomaterial interactions is a key factor determining the biocompatibility and clinical usefulness of new biomaterials. It is important to know that in vitro tests can effectively replace animal models in the preliminary evaluation of: 1) cytotoxicity, 2) cell adhesion, spreading, and proliferation on a biomaterial, 3) cell differentiation, and 4) immune response to a biomaterial.

The main goal of this Special Issue is to highlight the recent progress in molecular biology and biotechnological techniques that allow a better exploitation of the potential of in vitro cellular models for biocompatibility testing of novel biomaterials, suggesting molecular mechanisms of cell adhesion, proliferation, and biomaterial-induced activation of immune cells. All papers (reviews and original research articles) dealing with in vitro and ex vivo determination of cell–biomaterial interactions are welcome.

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### Guest Editor

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### Deadline for manuscript submissions

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## International Journal of Molecular Sciences

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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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### Editor-in-Chief

Prof. Dr. Maurizio Battino

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