

Special Issue

Biomolecular Characterization of Brain Gliomas and Molecular Alterations Caused by Therapy

Message from the Guest Editor

The WHO classifies glial tumors into different subgroups. Formerly, gliomas were classified according to their histological appearance, while the recent update in addition takes molecular markers into account. The mutation status of IDH distinguishes between a slowly growing subcategory of IDH-mutated gliomas WHO grade II and III and IDH-wildtype gliomas of the same grade. Whereas the former display a comparatively better prognosis, the latter show a growth pattern and patients' clinical course that resembles those of glioblastoma multiforme. Methylation of the MGMT promoter is associated with improved response to temozolomide (TMZ) chemotherapy and has emerged as a strong prognostic factor. Meanwhile, it has been shown that TMZ has the potential to induce hypermutation in a subset of IDH-mutant gliomas. However, how this affects the expression of the biomolecular signaling network in glioma cells remains elusive. This Special Issue shall provide an introduction to the biomolecular characteristics of these CNS tumors. Reports on therapeutic and prognostic molecular biomarkers and the alterations therapy may provoke on biomolecules are of particular interest.

Guest Editor

Dr. Carsten Hagemann
Universitätsklinikum Würzburg, Würzburg, Germany

Deadline for manuscript submissions

closed (31 March 2022)



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*
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
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Editor-in-Chief

Prof. Dr. Maurizio Battino

Department of Odontostomatologic and Specialized Clinical Sciences,
Sez-Biochimica, Faculty of Medicine, Università Politecnica delle
Marche, Via Ranieri 65, 60100 Ancona, Italy

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