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Biosensors for Liquid Biopsy

Guest Editors:

Dr. Ying Zhu

School of Biomedical Engineering, Faculty of Engineering and IT, University of Technology Sydney, NSW 2007, Australia

Dr. Gungun Lin

Faculty of Science, University of Technology Sydney, Sydney, NSW 2007, Australia

Dr. Esther Serrano-Pertierra

Universidad de Oviedo, Department of Physical and Analytical Chemistry, Oviedo, Spain

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Message from the Guest Editors

Dear colleagues,

Liquid biopsy is to examine tumor-derived materials such as circulating tumor cells, cell-free tumor DNA, proteins, miRNAs, and extracellular vesicles in biological fluids. Liquid biopsy has been shown as a novel approach for cancer diagnosis, prognosis, and treatment monitoring. The advantages of liquid biopsy include minimal invasive sample collection to avoid unnecessary surgical biopsies, valuable information that allows evaluation of time and tumor heterogeneity, and the possibility of early detection. However, conventional analytical methods for these biomarkers, such as ELISA and PCR, are time-consuming and require centralized laboratories, experienced personnel, and bulky equipment. As a biosensor is an analytical device that converts molecular recognition of target analyte into a measurable signal, they are immediately suitable for detecting these cancer biomarkers in liquid biopsy which are sensitive, rapid, user-friendly, and affordable for clinical translation.

The main objective of this Special Issue is to report advances in science and engineering-based research in biosensors for liquid biopsy.





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Editor-in-Chief

Prof. Dr. Giovanna Marrazza

Department of Chemistry "Ugo Schiff", University of Florence, Via della Lastruccia 3, 50019 Sesto Fiorentino, Italy

Message from the Editor-in-Chief

Biosensors is a leading journal, devoted to fast publication of the latest achievements, technological developments and scientific research in the exciting multidisciplinary area of biosensors. Both experimental and theoretical papers are published, including all aspects of biosensor design, technology, proof of concept and application. Special issues are devoted to specific technologies and applications, and a selection of the most outstanding papers each year is recognized. Pushing the boundaries of the discipline, we invite original papers, as well as timely reviews on cutting edge fields within the subject area.

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Biosensors Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland

Tel: +41 61 683 77 34
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