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Flow Cytometry: Basic Principles and Applications

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closed (20 April 2023)

Message from the Guest Editors

Flow cytometry is an indispensable technique in clinical diagnostics and immunological and hematological research. This Special Issue in *Cells* will highlight the powerful applications of this technique as well as the pitfalls in both data acquisition and interpretation. Several aspects will be discussed in detail: Firstly, data pre-processing with a focus on: i. correct settings of the hardware and ii. correct transformation of the data to avoid erroneous results caused by inadequate processing. Secondly, the vast increase in fluorescent labels comes with essential and complex issues associated with correct compensation. Thirdly, as the data obtained via cytometry are multidimensional in nature, the choice of dimension reduction algorithms is key. Finally, the translation of algorithms described in complex software environments such as R, Matlab and Python must be applied to easy-to-use and intuitive graphical user interfaces, aiding care professionals' clinical decision making with limited background in flow cytometry. Several articles will describe newly developed applications both based on multicolor fluorescence and multi-mass cytometry.



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Special Issue



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Message from the Editorial Board

Cells has become a solid international scientific journal that is now indexed on SCIE and in other databases. We have successfully introduced a special issues format so that these issues serve as mini-forums in specific areas of cell science. *Cells* encourages researchers to suggest new special issues, serve as special issues editors, and volunteer to be reviewers. Our main focus will remain on cell anatomy and physiology, the structure and function of organelles, cell adhesion and motility, and the regulation of intracellular signaling, growth, differentiation, and aging. We are open to both original research papers and reviews.

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