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Innovative Methods to Monitor Single Live Cells

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Message from the Guest Editors

Dear Colleagues,

In this Special Issue, we are assembling a collection of recent methods that enable non-invasive monitoring of biological processes in single cells. Following the same cell over time and acquiring molecular information without disrupting its physiology is arguably one of the most underserved areas in the current technical toolbox of molecular biology. Although significant strides have been made in the past several years, it is still challenging to learn and employ methods that allow real-time measurements of abundance, localization, or interactions of specific molecules inside cells, particularly if the relevant biological process unfolds over hours or days. The cell systems biology community stands to benefit from rigorous and transparent discussions about successful applications and pitfalls of available techniques. We hope to address the need in this issue with a latest set of advances in live-microscopy approaches and related methods.

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