

BUILDING A CELL FROM ITS COMPONENT PARTS



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The cell interior is another world that we are only beginning to explore. Although there are a number of approaches for examining the inner workings of the cell, the reductionist approach of building up complexity appeals to many with physical science and engineering backgrounds. This volume of *Methods in Cell Biology* spans a range of spatial scales from single protein molecules to vesicle and cell sized structures capable of complex behaviors. Contributions include: methods for combining different motors and cytoskeletal components in defined ways to produce more complex behaviors; methods to combine cytoskeletal assemblies with fabricated devices such as chambers or pillar arrays; reconstituting membrane fission and fusion; reconstituting important biological processes that normally take place on membrane surfaces; and methods for encapsulating protein machines within vesicles or droplets.

KEY FEATURES

- Contributions from leading experts in this specialized field of research
- Methods and protocols for building a cell from its component part, bridging the gaps between different experimental systems

Cover image by Jennifer L. Ross

Volume 128 of **METHODS IN CELL BIOLOGY**
Series Editors: Leslie Wilson and Phong Tran



ACADEMIC PRESS

An imprint of Elsevier
store.elsevier.com

ISBN 978-0-12-802450-8



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