

Condensed and easy step-in resource to the vast universe of cell cycle control and cell division

Two from One: A Short Introduction to Cell Division Mechanisms is an easy and solid step-in for students and all individuals starting to learn about cell and molecular biology, as well as professionals looking for an avenue into the subject, emphasizing general concepts and universal aspects of eukaryotic cell division without getting lost in the vast amount of detail across the overall field. The text enables readers to learn about general concepts and discoveries from various systems and approaches to elucidate the process of cell division, with descriptions of scientific processes included throughout in order to aid in reader comprehension.

The content and material have been taught, revised, and simplified based on student feedback, to be as accessible as possible to a broader audience. It can be read in a few hours by anyone with an interest in the topic and an undergraduate background.

In *Two from One*, readers can expect to find coverage on a myriad of essential topics, such as:

- Cell theory, mitosis, chromosome theory of heredity, DNA, and why/how cell cycles come in many flavors
- Cell growth and division, covering balanced growth and cell proliferation, measures of cell growth, and the relationship between cell growth and division
- Assaying cell cycle progression, covering measuring cell cycle phases, single-cell imaging, labeled mitoses, and frequency distributions
- Duplicating the genome, covering DNA replication, origin firing, chromatin, checkpoints, and the DNA damage checkpoint

Undergraduates, graduate students, and early career professionals in cell biology, biomedicine, and biology, along with post docs changing subject area or needing further information on cell division, will find *Two from One* to be an immensely useful, accessible, and reader-friendly resource in a traditionally highly complex field.

Michael Polymenis is a Professor of Biochemistry and Biophysics at Texas A&M University. His research focuses on the coordination of cell growth with cell division, with funding from the National Institutes of Health and the National Science Foundation. He has published numerous articles on the subject and regularly serves on various federal research proposal review panels. His editorial service includes ad hoc reviews of primary research articles on mechanisms of cell division.

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