

Second Edition

Plant Cell Biology

Randy Wayne

Plant Cell Biology connects the fundamentals of plant anatomy, plant physiology, plant growth and development, plant taxonomy, plant biochemistry, and plant molecular biology to plant cell biology. It covers all aspects of plant cell biology without emphasizing any one plant, organelle, molecule, or technique. Although most examples are biased toward plants, basic similarities between all living eukaryotic cells (animal and plant) are recognized and used to best illustrate cell processes.

This is a must-have reference for scientists with a background in plant anatomy, plant physiology, plant growth and development, plant taxonomy, plant biochemistry, and plant molecular biology needing a reference in plant cell biology.

Key Features

- The new edition includes a chapter on the genetic approaches used in plant cell biology research and the -omic technologies used to generate the big data used in systems biology.
- The new edition provides the quantitative foundations and first principles necessary to understand plant cells to apply the techniques of multiscale modeling of system networks used by computational biologists.
- The new edition thoroughly explains the physiological underpinnings of biological processes to bring original insight related to plants.
- The new edition includes examples throughout from physics, chemistry, geology, and biology to bring understanding to plant cell development, growth, chemistry, and diseases.
- New edition provides the essential tools for students to be able to evaluate and assess the mechanisms involved in cell growth, chromosome motion, membrane trafficking, and energy exchange.



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