

## BOOK REVIEWS

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**CELLS: A LABORATORY MANUAL (3-volume set).** Edited by D. L. Spector, R. D. Goldman and L. A. Leinwand. Cold Spring Harbor Laboratory Press, 1998, ISBN: 0-87969-521-8, US\$250.00.

During the last decade there has been a massive expansion of the field of cell biology. Its growth has been fueled primarily by the cloning revolution of the 1970s and 1980s and by the development of new cell-imaging techniques. These technical advances formed the foundation for investigators in many different fields to attempt to decipher the localization and functions of the genes, RNAs, and proteins being studied, and there was a growing need for a laboratory manual to provide a source of reliable protocols. These three volumes contain protocols elaborated by over 125 experts in the field and are a comprehensive collection of methods and techniques of proven value to cell biologists, but also extremely useful to molecular biologists, and biomedical researchers such as pathologists and hospital laboratory technologists. The contents range from the essentials of culturing vertebrate and nonvertebrate cells; through the isolation of cellular organelles; to advanced detection methods using immunological, cytochemical, and molecular approaches to analyze cells and tissues. The microscopy procedures cover the classic applications of light and electron microscopy, as well as the more recent imaging techniques such as confocal, deconvolution, and multiphoton microscopy.

The different protocols are divided into the following main sections:

*Volume 1: Culture and biochemical analysis of cells.*

- Cell culture and analysis.
- Metabolic labeling and protein modification.
- Subcellular fractionation.
- Protein identification and analysis.
- Protein expression and interactions.
- Antibodies as tools in cell biology.

*Volume 2: Light microscopy and cell structure.*

- Observation of live cells and cellular dynamics.
- Preparation of macromolecules and introduction into cells.
- Light and epifluorescence microscopy.
- Confocal microscopy, multiphoton microscopy, and deconvolution.

*Volume 3: Subcellular localization of genes and their products.*

- Visualization of organelles, proteins, and gene expression.
- In situ hybridization.
- Electron microscopy.
- Appendix 1—Stock solutions, buffers, and media commonly used in cell biology.
- Appendix 2—Basic information for cell biologists.
- Appendix 3—Microscopy: lenses, filters, and emission/excitation spectra.
- Appendix 4—Localization markers for subcellular components.
- Appendix 5—Cautions.
- Appendix 6—Suppliers.

This three-volume set represents an essential tool for every laboratory studying cell or tissue biology. It will be very useful to molecular biologists, cell biologists, pathologists, and cytogeneticists, as well as to graduate students.

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**OSTEOPOROSIS: DIAGNOSTIC AND THERAPEUTIC PRINCIPLES.** Edited by C. J. Rosen. 'Current Clinical Practice' series. Humana Press, Totowa, 1996, 297 pp. ISBN: 0-89603-374-0, US\$99.50.