Spector, D.L., Goldman, R.D., Leinwand L.A. (ed.): **Cells: A Laboratory Manual.** Volume 1: **Culture and Biochemical Analysis of Cells**. - Cold Spring Harbor Laboratory Press, New York 1998. 950 pp. ISBN 0-87969-521-8.

Cells: A Laboratory Manual is organized into three broad themes: the culture and biochemical analysis of cells, light microscopy and cell structure, and subcellular localization of genes and their products. In recent times the field of cell biology has broadened extensively, and scientists from many different areas of specialization continue to turn to this field to learn more about the structural and functional organization of the cell. In this book, the big collection of practical protocols is assembled that are suitable for using for all.

The presented Volume 1 contains 6 sections, which covered main regions concerning the culture and biochemical analysis of the cells (metabolic labeling and protein modification, subcellular fractionation, protein identification and analysis, protein expression and interactions). Last chapter is devoted to using of antibodies in cell biology. All sections are further divided into smaller chapters, every of them deals with the individual specific problem.

This practical book provides information on all aspects of the technical procedures, material requirements and organisation for the effective operation with the cells. It is essential reading for researches and advanced students in all branches of pure and applied biology and will also be of value for laboratory studying cell and tissue biology.

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Spector, D.L., Goldman, R.D., Leinwand L.A. (ed.): **Cells: A Laboratory Manual**. Volume 2: **Light Microscopy and Cell Structure**. - Cold Spring Harbor Laboratory Press, New York 1998. 370 pp. ISBN 0-87969-521-8.

Another one from the series of excellent laboratory manuals from the CSHL Press concerns both theoretical and practical aspects of microscopic *in vivo* observations of eucaryotic cells. The handbook is divided into four main sections of topically related chapters. Each chapter starts with an extensive theoretical introduction to the given topic followed with exemplary step-by-step protocol, list of necessary chemicals and equipment. The protocol is usually enriched with notes explaining individual steps and recommendations for their adaptation to particular conditions. Each chapter contains also the list of references and in some cases also links to on-line resources. Well-selected pictures form additional valuable part of the book.

The first section named "Observation of live cells and cellular dynamics" provides information on basic techniques and essential equipment for observation of live cells. Different approaches to study molecular dynamics *in vivo* are explained on several examples as heterologous expression of green fluorescent protein (GFP) or imaging and measurement of intracellular calcium, or other. "Preparation of macromolecules and introduction into cells" is the topic of the second, the most extensive section. It covers problems of labeling antibodies or DNA molecules with fluorescent moieties and many different means of their delivery to the living cells including injection, transfection, electroporation and the use of recombinant viral vectors. The last two sections are more theoretical. The third section "Light and epifluorescence microscopy" discusses advantages and disadvantages of different microscope and lens arrangements. It also covers advanced techniques of image enhancement and the use of video microscopy. The last section "Confocal microscopy, multiphoton microscopy and deconvolution" is the introduction to techniques established to avoid limitations of conventional fluorescence microscopy, *e.g.* microscopy of thick specimens.

The book is an essential resource for all advanced students, lecturers and research workers who use or would like to use direct microscopical observation of living cells.

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