
Preface

Of all scientific instruments, probably none has had more applications in the life sciences than the light microscope. Advances in microscope instrumentation, sample preparation and imaging techniques have been producing fundamental insights into the functions of cells and tissues.

The protocols in *Light Microscopy: Methods and Protocols* cover a variety of bright-field and fluorescence microscopy-based approaches central to the study of a range of biological questions. The book provides information on how to prepare cells and tissues for microscopic investigations, including detailed staining procedures and how to analyze images and interpret results accurately. Techniques are presented in a friendly, step-by-step fashion with helpful information and useful tips. Section I covers selected applications of bright-field microscopy to the study of animal and plant biology. Section II covers the fundamental principles of fluorescence microscopy as well as its applications to multiple fields including immunology, ecology, cancer biology and cell signaling. *Light Microscopy: Methods and Protocols* addresses different needs of researchers, who are exploring the microscopic and intriguing world of the cell.

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