

Light microscopy**Methods and protocols****Hélio Chiarini-Garcia and Rossana C.N. Melo (eds), 2011****Humana Press - Springer Protocols****Methods in molecular biology, vol 689****ISBN: 978 -1- 60761- 949 - 9****214 pp – 68 figs - 94,95€**

The first part of the book (six chapters) is devoted to some selected applications of bright-field microscopy, while the second part (eight chapters) to some fluorescence microscopy studies. Both animal and plant biology investigations are presented covering multiple fields like immunology, cell signaling, cancer biology and, surprisingly to me, ecology. This chapter is titled: *Light microscopy in aquatic ecology: Methods for plankton communities studies* and it is due to Maria Carolina S. Soares and colleagues from the Laboratory of Aquatic Ecology, Dept. of Biology, Federal University of Juiz de Fora (Brazil). Here they present methods to quantify the different component of planktonic communities in a step-by-step manner so that virus, bacteria, algae and animals pertaining to different taxa can be recognized and the contribution they made to the plankton composition evaluated. It descends that even how the plankton composition is changing due to environmental variations can be accurately determined. Very, very interesting, it's amazing that light microscopy

can tell us in such a detailed manner about environmental changes in ponds, lakes and oceans.

The book is superbly illustrated with the great majority of the figures in colours and is certainly a must not only for beginners (e.g. the introduction to fluorescence microscopy; how to process large plant samples; nuclear and chromosomal DNA quantification and some others chapters devoted to basic microscopic sample preparations and techniques) but I am pretty sure that even the practised colleagues in doing every day use of microscopic methods will find very usefull tricks (e.g. how to process for the intravital microscopic study of leukocytes recruitment; how to study tissue parasitism during *Trypanosoma cruzi* infection; how to carry on imaging markers for nascent blood vessels in mouse models of cancer and some other quite intriguing applications of highly specialized microscopic techniques).

No other technique like microscopy and no other instrument like the microscope have contributed to the scientific advances in our knowledge of cell biology; however, thanks to this well planned and clearly written book we are stimulated to imagine new applications.

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