

Calcium measurement methods**Alexei Verkhratsky, Ole H. Petersen****(Eds)****Humana press, Totowa, NJ (USA)****Series: Springer Protocols****Neuromethods, Volume 43, 2010****Pages: 254; €124.75****ISBN: 978-1-60761-475-3**

Rightly stressed by prof. Wolfgang Walz in the Preface to the series *Neuromethods* series, the “careful application of methods is probably the most important step in the process of scientific inquiry”. Thus, I strongly suggest to all those interested in calcium signaling and especially to the new-comers in the hot topic of neuroscience (which has so much space even in science-society debate for its implications in legal issues and in the judge-decision process) to take profit from this so well edited book. I am saying this since prof. Verkhratsky and prof. Petersen, for their part as volume editors, in the preface of this volume dedicated to calcium signaling measurement and imaging, recall that “the fluorescent calcium indicators introduced in 1981 by Roger Tsien revolutionized cellular physiology” and the detailed characterization of the “omnipresent and

pluripotent” calcium signaling system was an instant success. From that time, real-time monitoring of the calcium “movements” has become a reality thanks to a wide range of technologies that span from immunohistochemical to electrophysiological. Thus, especially the new-comers, need to get a sound knowledge of the techniques that grounded this revolution for a successful application of the new one. This volume let them, and even those researchers already active in the use of calcium imaging techniques, to have an up-to-date view of, and an easily manageable desk-book on, the techniques to perform high quality calcium measurements and imaging in neural (and generally speaking “excitable”) cells. Twelve chapters provide theoretical principles, recording techniques (from microscopes fittings to camera!) and methods to follow calcium movements at the cellular level, both properly speaking of the cell itself and of the intracellular organelles (notably, mitochondria and endoplasmic reticulum). A complete overview.

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