

## **Book review**

### **A. Sitaramayya (edt): Introduction to cellular signal transduction.**

Birkhäuser, Boston, Berlin, Basel, 1999, ISBN 0-8176-3982-9, CHF  
128.00

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There is no doubt that cellular sociology needs complex information transfer in order to guarantee a continuous existence of the organ and adequate reaction against external disturbances. Information is usually provided by signals which can be of various nature such as electrical peaks, hormones, antibodies, lectins, ions, etc. The understanding of macromolecules is provided by specific receptor molecules. Earlier studies have emphasized compartments of receptor - ligand interactions. The recent progress in understanding intercellular signaling is based upon interactions between steroid and protein hormones and other messengers, and the induced diverse functional responses. To demonstrate the changes in research, for many years the function of cyclic nucleotide second messengers was assumed to solely activate protein kinases. Now-a-days, the existence of cyclic-AMP-gated ion channels has been confirmed by several investigators. The textbook is divided into five parts starting with the description of cell surface receptors and the involved G-proteins, their structure, regulation, and signaling mechanisms. These chapters are followed by analysis of the present status of knowledge about second messengers, i.e., cyclic nucleotides, phospholipases, and cyclic nucleotide phosphodiesterases. Information about novel messengers such as nitric oxides is presented in chapter 3, regulatory mechanisms and ion transport in signal transduction in chapter 4. The last chapter focuses on application of signal transduction, i.e. in disease and drug abuse. The textbook provides only an excellent overview and describes the relevant information in a comprehensive and easy to understand manner. In addition, the latest relevant information is presented, and researches can find details reaching from the basis to clinical application. The book can be recommended to anybody who wants to inform himself about or is working in the field of signal transduction in mammalian cells.

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