
BOOK REVIEW

Reelin Glycoprotein. Structure, Biology and Roles in Health and Disease

(S. Hossein Fatemi, ed., Springer-Verlag, Berlin-Heidelberg-New York, 2008, 443 p., \$159)

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The whole book is dedicated just to one biopolymer, reelin, which is a major secretory glycoprotein with biological activity in various processes of our body. The primary functions of reelin are the regulation of corticogenesis and neuronal cell positioning in the prenatal period, but the protein is also implicated in a number of other processes.

The book consists of 28 chapters presented by international group of experts. In chapters 1-6 features of the reelin gene are discussed, as well as reelin binding to apolipoprotein E receptor, chemistry of reelin, its structure including crystal structure, function and comparative anatomy, and evolutionary roles of reelin.

Chapters 7-15 highlight ultrastructural localization of reelin, its role in developing cerebral cortex, in the cerebellum, radial glial cells, as well as relationships with cyclin-dependent kinase 5, protein kinases, oxytocin, and thyroid hormone.

The following chapters 16-20 consider reelin expression in several peripheral organs (liver cells, lymphatic capillaries), characterize homozygous and heterozygous reelin mouse mutants, describe brain-derived neurotrophic factor (BDNF), which regulates reelin expression, and also discuss the role of reelin in tooth development.

Chapters 21-28 highlight significant topics that which should be designated as reelin and diseases. Separate chapters analyze the role of reelin in etiology, pathogenesis, and treatment of psychiatric disorders such as schizophrenia, autism, Alzheimer's disease, and also stroke and pancreatic cancer.

The book will be very useful as foundation for analysis of this emerging novel glycoprotein for biochemists, molecular biologists, neuroscientists, and clinicians specialized in psychiatric disorders.

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