

## *The Secretory and Endocytic Paths*

by A.M. Tartakoff

*John Wiley and Sons; Chichester, New York, 1987*

235 pages. £50.45

Tartakoff's book on the secretory and endocytic paths continues a series of monographs on major contemporary issues in cell biology. Previous volumes are on photosynthesis, cell and tissue regeneration, plant membranes, mammalian cell genetics and phospholipid bilayers.

The two main chapters of the book, on the secretory and the endocytic paths, have some resemblance to the historical development of the field starting with steady-state distributions of transported molecules to dynamic aspects of transport up to molecular mechanisms involved in the specificity of transport. Separate chapters deal with essential physical chemical principles underlying the structure and function of biological mem-

branes, and the perturbation of the secretory and endocytic paths by drugs, altered temperature, etc. The final chapter describes eukaryotic cellular mutants defective in secretory or endocytic transport.

In line with the general concept of this series, the author focusses on unifying principles rather than summarising diverse details. Much attention is given to experimental techniques. The very condensed and clear presentation will help anybody entering the field as well as established researchers wishing to refresh their knowledge in these two classical aspects of cell biology.

H. von Grafenstein

## *The Liver, Biology and Pathobiology (Second Edition)*

Edited by I.M. Arias, W.B. Jacoby, D. Schacter and D.A. Shafritz

*Raven Press; New York, 1987*

xxv + 1377 pages. \$244.00

This attractively presented book is the 'bible' of hepatology. A series of short chapters by experts in the relevant areas has been skilfully coordinated by the managing editors into a clear account of almost all aspects of liver anatomy, histology, physiology, biochemistry and pharmacology. Some overlap between chapters is unavoidable (e.g. in dealing with blood coagulation in one chapter and vitamin K in another, and in discussing hormonal regulation of liver function in several chapters) but it has been minimized and cross-referencing is good. Topics covered include the structure of parenchymal and non-parenchymal cells, the extracellular matrix, liver blood flow, biliary

secretion, liver biochemistry and its interaction with that of other organs, xenobiotic metabolism, metal metabolism and its disorders, lymphocytes, the nervous supply of the liver and the hepatotoxicity of a wide range of products, including ethanol. Each chapter is supplied with appropriate references, for which full titles are given.

Some minor criticisms include the fact that the contrast of several of the electron micrographs could have been better, there is very little on the problems of liver transplantation other than rejection (e.g. organ preservation), or on fulminant hepatic failure, and the process of lipid peroxidation is referred to in several chapters but not clear-

ly explained anywhere. The function of caeruloplasmin is only dealt with sketchily. The mention of 'high-energy compounds' in one of the chapters on hepatocyte metabolism also set up an allergic reaction in me, but this is a personal prejudice.

Overall, this is an excellent book and I recommend it highly. I learned a lot from it, including the fact that lemurs are prone to haemosiderosis and that indigo snakes can suffer from unconjugated hyperbilirubinaemia.

B. Halliwell

## *Brain Iron, Neurochemical and Behavioural Aspects*

(Topics in Neurochemistry and Neuropharmacology, Volume 2)

Edited by M.B.H. Youdim

*Taylor and Francis; London, 1988*

ix + 148 pages. £30.00

It has been known since at least 1887 that areas of the human brain are very rich in iron. It is also established that iron-deficiency anaemia, perhaps the world's commonest nutritional disorder, is associated with behavioural changes and impairment of learning ability in children (the evidence for this is reviewed in detail by Pollitt and Kim in Chapter 5). Recent suggestions that iron release from injured brain tissue promotes rapid free radical reactions have led at least one pharmaceutical company to make a major investment in the use of antioxidants, hopefully to prevent degeneration of nervous tissue after trauma or hypoxia.

Despite this, it is surprising how very little is known about brain iron; even its precise molecular nature is in doubt. This small but well-presented book summarizes current knowledge of the area. The book is timely and I hope that it will stimulate further research.

In Chapter 1, Hill reviews the distribution of iron in the brain and its relation to the GABAergic system; most data have come from rats. This chapter overlaps slightly with the beginning of Chapter 4, in which Yehuda and Youdim first describe brain iron and then detail their interesting studies on the effects of iron deficiency on the

function of dopamine D2 receptors. Despite the overlap, both chapters are well-written and authoritative, with up-to-date references. Equally valuable is Chapter 2, in which Wrigglesworth and Baum set out clearly what is known about iron-dependent enzymes in the nervous system, showing that iron plays a critical role in both neurotransmitter synthesis and in energy metabolism. My only criticism of this otherwise excellent account is that the authors persist in referring to 'xanthine oxidase', when it is well established that NAD-dependent xanthine dehydrogenase is the major xanthine-oxidising enzyme *in vivo*.

I found Chapter 3 ('trace metals and neurochemistry') to be the weakest part of the book. It seemed to me to be irritatingly vague and uncritical, and very few references to recent work were included (in contrast with the other chapters, in which references are up-to-date). Thus, recent (post 1984) work on zinc metabolism, copper in Parkinson's disease and the neurotoxicity of manganese complexes is not included.

Despite these criticisms, the book is very useful overall, and I hope that it will provoke further research in this important area. The price is not unreasonable by today's standards.

B. Halliwell

Only RUB 220.84/month. The secretory and endocytic pathways. Study. Flashcards. Learn. Write. Spell. Test. 51 terms. heathergm1. lysosome the secretory pathway. 51 terms. heathergm1. Studying cells biological techniques. 29 terms. heathergm1. death pathways and the role of the mitochondria in. In endocytosis, substances are internalized by a cell through the formation of vesicles. Types of endocytosis include phagocytosis and pinocytosis. Regina Bailey is a board-certified registered nurse, science writer and educator. Her work has been featured in "Kaplan AP Biology" and "The Internet for Cellular and Molecular Biologists." our editorial process. Regina Bailey. Updated June 20, 2019. Endocytosis is the process by which cells internalize substances from their external environment. It is how cells get the nutrients they need to grow and develop. Substances internalized by endocytosis include fluids, electrolytes, proteins, and other macromolecules. The secretary is called the faithful assistant and the right hand of the chief and for a good reason. The duties of the secretary of the CEO include ensuring effective management and administrative activities. The secretary of the top manager is engaged in the preparation and execution of business papers and documents, helps the director in affairs, solves many organizational issues. The position of assistant secretary can also be considered representative, as she is the face of the company. She welcomes guests, answers calls and letters. Duties of a secretary in a company also include organization of business trips of the CEO: order of air and railway tickets, book hotels. Everything you need to know about a business development executive job. Basic secretary responsibility. Secretaries perform basic clerical, organizational and office responsibilities for a company, department or executive. Businesses of all sizes employ secretaries to help manage the front office and handle administrative matters. Duties of a secretary are often unseen by the public but can be vital to helping a company stay organized and on track. Job Description. The duties of a secretary or administrative assistant vary by industry and employer, but some tasks are common to many work settings. Reception. In general office positions, secretarial duties involve helping new employees and visitor Start by marking "The Secretary and Endocytic Paths: Mechanism and Specificity of Vesicular Traffic in the Cell Cytoplasm" as Want to Read: Want to Read saving. Want to Read. A broadly-based, highly readable account of the intracellular transport of macromolecules along the secretory and endocytic paths, emphasizing basic concepts and essential methods of cell biology and challenges for future research.