New Books

The Hygiene Hypothesis and darwinian medicine
Progress in Inflammation research
Ed. Michael J. Parnham. Birkhauser Verlag ag. 2009.
ISBN 978-3-7643-8902-4

Man has moved rapidly from the hunter-gatherer environment to the living conditions of the rich industrialized countries. The hygiene hypothesis suggests that the resulting changed and reduced pattern of exposure to micro-organisms has led to disordered regulation of the immune system, and hence to increases in certain chronic inflammatory disorders. The concept began with the allergic disorders, but there are now good reasons for extending it to autoimmunity, inflammatory bowel disease, atherosclerosis, depression associated with raised inflammatory cytokines, some cancers and perhaps neuroinflammatory disorders such as Alzheimer's and Parkinson's.

This book discusses the evidence for and against in the context of Darwinian medicine, which uses knowledge of evolution to cast light on human diseases. It is the first book to consider the broader implications of the hygiene hypothesis in areas of medicine where it has not previously been applied. The approach is interdisciplinary, looking at man's microbiological history, at the biology of the effects of microorganisms on the immune system, and at the implications for chronic inflammatory disorders in multiple organ systems. Finally, the authors describe progress in the exploitation of microorganisms or their components as novel prophylactics and treatments in several branches of medicine.

Cell migration: signalling and mechanisms
Translation Research in Biomedicine, Vol 2
Editors Entschladen F, Zänker KS. KARGER. VIII + 176 p., 20 Fig., 2 tab., hard cover, 2010. ISBN 978-3-8055-9321-2.

Cell migration is a highly complex process which involves several compartments of the cell, including surface receptors, signalling elements and the cytoskeleton. It plays an essential role in embryogenesis, wound healing and inflammatory responses, and a dysregulation of cell movement can cause pathological states such as developmental deffects, chronic inflammation, cancer invasion and metastasis.

Covering extracellular regulatory signals and intracellular signal transduction pathways as well as the molecular mechanisms of migration in stem cells, leukocytes and tumor cellsin the adult human organism, this book summarizes the current state of knowledge about cell migration. In the first part, the major aspects of different migratory cells in health and disease are covered, with special emphasis on T lymphocytes. The second part provides a comprehensive overview of the principal molecular mechanisms of migration such as adhesion receptors, cytoskeletal rearrangements and locomotor force generation, which, together, can be referred to as a cell's "migrosome".

TNF Pathophysiology
Molecular and Cellular Mechanisms
Editors George Kollias, Petros P. Sfikakis. KARGER. VIII + 216 p., 15 fig., 2 in color, 5 tab., hard cover, 2010. ISBN 978-3-8055-9383-0

TNF is a multifunctional proinflammatory cytokine central to the development and homeostasis of the immune system and a regulator of the cell activation, differentiation and death. Recent decades have seen an enormous scientific and clinical interest in the function of TNF in physiology and disease. A vast amount of data has been accumulated at the biochemical, molecular and cellular level, establishing TNF as a prototype for in-depth understanding of the physiological and pathogenic functions of cytokines.

This volume covers several current aspects of TNF regulation and function, including transcriptional and posttranscriptional control mechanisms, cellular modes of action, signaling networks that mediate its effect, involvement in pathogenesis and clinical outcomes of TNF antagonists. It combines basic science at the molecular and cellular levels with research in animal models of disease and clinical findings to provide a comprehensive review of recent developments in TNF biology. A thorough understanding of the mechanisms by which this key molecular player is produced and functions to regulate cell biology, immunity and disease postulates novel paradigms on how genes contribute to the development and physiology of biological systems. This book is mandatory reading for molecular and cell biologists, immunologists and clinicians interested in TNF function.

Nasal polyposis
Pathogenesis, Medical and Surgical Treatment
Ed. Önerci, T. Meting; Ferguson, Berrylin J. SPRINGER. 2010. XI, 311 p., 139 illus., 80 in color. With online files/ update. Hardcover. ISBN 978-3-642-11411-3

Nasal polyposis not only decreases the quality of life of affected patients, but the relationship between the upper and lower respiratory tract makes the treatment of this condition of critical importance.

New research findings, as well as new technical developments, have changed the conventional medical and surgical approaches to the treatment of nasal polyposis, which has resulted in significant advances in the management of the disease.

This reader-friendly and lavishly illustrated book is written by authors internationally recognized for their laboratory research and clinical practice in this field. It includes the latest information, and aims to help the reader improve the daily management of patients affected by nasal polyposis.

ERRATUM

Change in author affiliation:
JIACI vol 21, no. 1
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