Exploring the Basis of Disease

Pathobiology

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Since 1989 an increasing number of patients has been described who all have a low concentration of coenzyme Q_{10} in skeletal muscle and/or fibroblasts but display diverse pathological phenotypes of mainly neuromuscular and nephrotic diseases. The biosynthesis pathway of coenzyme Q_{10} is very complex and partially unknown. The objective of this publication is to provide an update for basic and clinical scientists on the current knowledge of this pathway and its defects including the genes involved and the role of coenzyme Q_{10} in the mitochondrial respiratory chain. Different approaches to studying the syndrome are discussed such as biochemical and genetic diagnosis, clinical presentations and pathogenesis. Major advances in the understanding of the development of the diseases caused by coenzyme Q_{10} deficiency and their variability come from the study of animal models; they are covered in the chapters on invertebrate and mice models. Finally, currently available therapies as well as new therapeutic approaches are presented.

Reflecting the current view of coenzyme Q_{10} biosynthesis and its major role in the respiratory chain, this publication is of interest to biochemists and neurologists working on mitochondria and bioenergetics, particularly those involved in the diagnosis and treatment of mitochondrial diseases.
Pathobiology

Aims and Scope
Pathobiology offers a valuable forum for high quality original research into the pathophysiologial and pathogenetic mechanisms underlying human disease. Aiming to serve as a bridge between basic biomedical research and clinical medicine, the journal welcomes articles from scientific areas such as pathology, oncology, anatomy, virology, internal medicine, surgery, cell and molecular biology, and immunology. Published bimonthly, the journal features original research papers, reviews, short communications and editorials. Papers highlighting the clinical relevance of pathological data are encouraged.

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Examples
(b) Papers published only with DOI numbers: Theolairides TC, Boucher W, Spear K: Serum interferon-κ6 reduces disease severity and osteoporosis in mastocytosis patients. Int Arch Allergy Immunol DOI: 10.1159/000063858.

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Aging inspired a large number of theories trying to rationalize the aging process common to all living beings. In this publication the most important environmental and intrinsic mechanisms involved in the aging process and in its pathological consequences are reviewed. Furthermore theoretical and experimental evidence of the most important theoretical elements based on Darwinian evolution, cellular aging, role of cell membranes, free radicals and oxidative processes, receptor-mediated reactions, the extracellular matrix and immune functions as well as the most important environmental and intrinsic mechanisms involved in the aging process and its pathological consequences are discussed. These presentations of theories and related experimental facts give a global overview of up to date concepts of the biology of the aging process and are of essential reading not only for specialists in this field but also for practitioners of scientific, medical, social and experimental sciences.
Learn more about this promising new technique

Liquid-Based Techniques in Non-Gynecological Cytology
From Morphology to Molecular Methods

Editors
Adhemar Longatto-Filho
Kari J. Syrjänen

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