Lipid Metabolism In Mosses Springer

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□□□□□□□□□ - 1982

Biotechnology of Vitamins, Pigments and Growth Factors - Erick J. Vandamme 2012-12-06
Vitamins and related growth factors belong to the few chemicals with a positive appeal to most people; the name evokes health, vitality, fitness, strength . . . . each one of us indeed needs his daily intake of vitamins, which should normally be provided via a balanced and varied diet. However, current food habits or preferences, or food processing and preservation methods do not always assure a sufficient natural daily vitamin supply, even for a healthy human being; this is all the more true for stressed or sick individuals. Although modern society is seldom confronted with the notorious avitaminoses of the past, they do still occur frequently in overpopulated and poverty- and famine-struck regions in many parts of the world. Apart from their in-vivo nutritional-physiological roles as growth factors for man, animals, plants and micro-organisms, vitamin compounds are now being introduced increasingly as food/feed additives, as medical-therapeutical agents, as health-aids, and also as technical aids. Indeed, today an impressive number of processed foods, feeds, cosmetics, pharmaceuticals and chemicals contain extra added vitamins or vitamin-related compounds, and single or multivitamin preparations are commonly taken or prescribed. These reflections do indicate that there is an extra need for vitamin supply, other than that provided from plant and animal food resources. Most added vitamins are indeed now prepared chemically and/or biotechnologically via fermentation/bioconversion processes. Similarly, other related growth factors, provitamins, vitamin-like com pounds, i. e.
Cumulated Index Medicus - 1985

ADP-Ribosylation: Metabolic Effects and Regulatory Functions - Joel Moss 2012-12-06
Considering the current interest in cellular regulation and intracellular signalling systems, it is surprising that the contribution of ADP-ribosylation reactions to the modulation of a variety of specific cell processes, in parallel with other post-translational modifications such as phosphorylation, has not been generally recognized. While it is not feasible to cover all aspects of ADP-ribosylation, the thirty-one articles contained in this volume provide a valuable overview of recent progress in the field within the context of cell control mechanisms. For the convenience of the reader, the various topics have been grouped into several sections: (a) poly(ADP-ribosyl)ation; (b) mono-ADP-ribosylation; (c) toxin mono-ADP-ribosylation; (d) inhibitors and activators; (e) protein modification with ADP-ribose and its analogues; and (f) non-modification forms of ADP-ribose. The contents of the individual chapters reflect the

ideas of the contributors, many of whom have spent their careers attempting to resolve the biological functions of ADP-ribosylation. We hope that this publication will serve as a useful reference for those investigators that are new to the area as well as those who are actively studying ADP-ribosylation.

Drugs Affecting Lipid Metabolism - W. Holmes 2012-12-06

Giardia - Hugo D. Lujan 2011-06-30

Giardia is a relatively simple eukaryotic microbe, causing acute and chronic diarrhea which has been used as a model to understand complex biological processes occurring in eukaryotic cells. Further, due to its parasitic lifestyle, Giardia is an excellent system for the study of the mechanisms of adaptation and cell differentiation from the perspectives of molecular and cell biology. This book presents a comprehensive review of the current state of knowledge regarding all aspects of Giardia's biology, including epidemiology, cell and molecular biology, genetics, pathogenesis, diagnostics, and clinical treatment. It was written by internationally renowned authors, the leading researchers in the field including several chapters with techniques and resources available for the study of this microorganism. Questions that need to be addressed to fully understand the molecular mechanisms of the parasite as well as the cause of its pathology are presented. Furthermore, Giardia's biology is compared with that of other parasites in relation to their complexity. This volume is an indispensable resource for researchers working with this parasite. It is a "must" for libraries and the bookshelves of everyone interested in the biology of parasites and early-branching eukaryotes.

Pharmacological Control of Lipid Metabolism - W. Holmes 2013-06-29

This Symposium was the fourth in a series which began in Milan, Italy, in 1960. Each meeting has introduced or developed some new concepts in the areas of lipid metabolism and drugs. The meetings have served as a springboard for new ideas which have, between meetings, become accepted and exploited. This meeting has been no exception. Principal among the many new concepts discussed were lipoprotein synthesis and metabolism, apoprotein structure and function, whole body metabolism of cholesterol, and aspects of myocardial and aortic metabolism. The Symposium also included a summary of current thought on management of hyperlipemias and atherosclerosis. Data on more than 30 drugs were introduced and discussed. We have every expectation that the next Symposium will include material which is now only in the formative stage. The Organizing Committee would like to acknowledge the invaluable assistance of Miss Mary Constant, Mr. Ralph H. Hollerorth, Mrs. Carolyn P. Hyatt and Miss Jane T. Kolimaga, whose efforts contributed significantly (p

Vasculopathies - Marc Thiriet 2019-02-18

This volume presents one of the clinical foundations of vasculopathies: the biological markers and risk factors associated with cardiovascular disease. A detailed biological and clinical framework is provided as a prerequisite for adequate modeling. Chapter 1 presents cardiovascular risk factors and markers, where the search for new criteria is aimed at improving early detection of chronic diseases. The subsequent chapters focus on hypertension, which involves the kidney among other organs as well as many agents, hyperglycemia and diabetes, hyperlipidemias and obesity, and behavior. The last of these risk factors includes altered circadian rhythm, tobacco and alcohol consumption, physical inactivity, and diet. The volumes in this series present all of the data needed at various length scales for a multidisciplinary approach to modeling and simulation of flows in the cardiovascular and ventilatory systems, especially multiscale modeling and coupled simulations. The cardiovascular and respiratory systems are tightly coupled, as their primary function is to supply oxygen to and remove carbon dioxide from the body's cells. Because physiological conduits have deformable and reactive walls, macroscopic flow behavior and prediction must be coupled to nano- and microscopic events in a corrector scheme of regulated mechanisms. Therefore, investigation of flows of blood and air in anatomical conduits requires an understanding of the biology, chemistry, and physics of these systems together with the mathematical tools to describe their functioning in quantitative terms.

Bioenergetics of the Cell: Quantitative Aspects - Valdur A. Saks 2012-12-06
This volume continues the discussion of the problems of in vivo and in vitro. The recently solved X-ray structure of the mitochondrial creatine kinase and its molecular biology cellular bioenergetics - the tradition we started in 1994 by publication of the focused issue of Molecular and Cellular are analyzed with respect to its molecular physiology and Biochemistry, volume 133/134 and a book 'Cellular Bio functional coupling to the adenine nucleotide translocase, as energetics: role of coupled creatine kinases' edited by V. Saks well as its participation, together with the adenylate kinase and R. Ventura-Clapier and published by Kluwer Publishers, system, in intracellular energy transfer. The results of the Dordrecht -Boston. In the present volume, use of quantitative studies of creatine kinase deficient transgenic mice are methods of studies of organized metabolic systems, such as summarized and analyzed by using mathematical models of mathematical modeling and Metabolic Control Analysis, for the compartmentalized energy transfer, thus combining two investigation of the problems of bioenergetics of the cell is powerful new methods of the research. All these results, described together with presentation of new experimental together with the physiological and NMR data on the cardiac results. The following central problems of the cellular bio metabolic and mitochondrial responses to work-load changes energetics are the focus of the discussions: the mechanisms concord to the concept of metabolic networks of energy of regulation of oxidative phosphorylation in the cells in vivo transfer and feedback regulation.
Microalgae in Health and Disease Prevention - Ira Levine 2018-06-29
Microalgae in Health and Disease Prevention is a comprehensive reference that addresses the historical and potential use of microalgae, its extracts, secondary metabolites, and molecular constituents for enhancing human health and preventing diseases. Each chapter features an overview, and the book includes coverage of microalgae biology, harmful algae, the use of microalgae in alcohol and food, and as sources of macronutrients, micronutrients, vitamins, and minerals. The historical use of microalgae, in addition to its potential use as a nutraceutical and cosmeceutical, is also addressed. The book provides coverage of relevant, up-to-date research as assembled by a group of contributors who are dedicated to the advancement of microalgae use in health, diet and nutrition. Discusses research findings on the relationship between microalgal diet, nutrition and human health Presents the medicinal, anti-allergic and psychoactive properties of microalgae Identifies toxic and harmful microalgae Addresses microalgal lipids, proteins and carbohydrates
Amphioxus Immunity - An-Long Xu 2015-12-31
Amphioxus Immunity: Tracing the Origin of Human Immunity covers a remarkable range of information about Amphioxus and its evolutionary context. This compilation of what is currently known about Amphioxus, with a sharp focus on its immune system, includes 13 topics, such as: Amphioxus as a model for understanding the evolution of vertebrates basic knowledge of immunology immune organs and cells of amphioxus a genomic and transcriptomic view of the Amphioxus immunity pattern recognition system in Amphioxus transcription factors in Amphioxus the complement system of Amphioxus the oxidative burst system in Amphioxus immune effectors in Amphioxus lipid signaling of immune response in Amphioxus apoptosis in amphioxus; primitive adaptive immune system of Amphioxus and future research directions This valuable reference book is loaded with information that will be useful for anyone who wishes to learn more about the origin of vertebrates and adaptive immunity. Provides new evidence on the origin of the adaptive immune system, the evolution of innate immunity, and evolution-stage specific immune defense mechanisms Not only presents the cells and molecules involved in the adaptive immune response in Amphioxus, but also characterizes the origination and evolution of the gene families and pathways involved in innate immunity Includes much pioneering work, from the molecular, genomic, and cellular to the individual level
Pseudomonas - Thomas C. Montie 1998-10-31
The genus Pseudomonas represents a large group of medically and envi ronmentally important bacteria. Interest in these bacteria is reflected in

the extensive number of publications devoted to original research, re views, and books on this subject. In this volume selected areas of Pseu domonas research are presented in depth by persons who have been active in their fields over many years. The extensive reviews presented are an effort to provide a balanced perspective in a number of areas not readily available in the current literature. In the style of the previous Biotechnology Handbooks most of these topics have not been reviewed at all, and several are also presented from a new direction. For example, in addition to structural and compositional aspects, the chapter on lipids provides shifts in lipid parameters that result from environmental changes. This information will be invaluable to a cross section of Pseu domonas researchers in pathogenesis and bioremediation. The chapters presented include basic aspects of plasmid biology and carbohydrate metabolism and regulation. A major emphasis is placed on the Pseudomonas aeruginosa cell surface. Chapters cover lipo polysaccharide, capsular polysaccharide and alginate, the outer mem brane, transport systems, and the flagellum. Uptake of iron is also neces sarily an important portion of the chapter on iron metabolism.

Canadian Journal of Botany - 1988

New Frontiers in Bryology - Andrew J. Wood 2013-03-20

The mosses (Bryophatea, Musci) are a diverse and widely distributed group of land plants. Mosses are attractive experimental plants because they exhibit the traditional attributes of good model systems (Le. ease of growth & maintenance, fast generation time, and amenable genetics) with the added advantage of a haploid gametophyte that allowed developmental mutants to be recovered with relative ease. In addition, mosses with the ability to tolerate extreme environmental conditions offer realistic models for the analysis of environmental stress-tolerance; particularly when compared to tracheophytes such as Arabidopsis thaliana in which these important plant phenotypes are either not clearly expressed or entirely lacking. And, in one of the most exciting developments in Plant Biology, efficient homologous recombination occurs in the moss Physcomitrella patens. The ability to perform efficient homologous recombination (Le. gene knock-outs) in P. patens is at present unique amongst all plants and represents an extremely powerful technique for the functional analysis of many plant genes. Over the past 5 years, a world-wide community of moss researchers has evolved. A highly successful "Moss" conference has been held annually (l998-Mumbai, India; 1999-Carbondale, IL, USA; 2000-Villars, Switzerland; 200l-0kazaki, Japan; 2002-Ambleside, UK; 2003-St. Louis, MO, USA) with "Moss 2004" planned to be held in Frieburg Germany. These conferences have been instrumental in the creation & development of strong collaborative ties, and the free exchange of both ideas and materials.

Diabetes Literature Index - 1976

Lipids in Photosynthesis - Hajime Wada 2009-11-07

Lipids in Photosynthesis: Essential and Regulatory Functions, provides an essential summary of an exciting decade of research on relationships between lipids and photosynthesis. The book brings together extensively cross-referenced and peer-reviewed chapters by prominent researchers. The topics covered include the structure, molecular organization and biosynthesis of fatty acids, glycerolipids and nonglycerolipids in plants, algae, lichens, mosses, and cyanobacteria, as well as in chloroplasts and mitochondria. Several chapters deal with the manipulation of the extent of unsaturation of fatty acids and the effects of such manipulation on photosynthesis and responses to various forms of stress. The final chapters focus on lipid trafficking, signaling and advanced analytical techniques. Ten years ago, Siegenthaler and Murata edited "Lipids in Photosynthesis: Structure, Function and Genetics," which became a classic in the field. "Lipids in Photosynthesis: Essential and Regulatory Functions," belongs, with its predecessor, in every plant and microbiological researcher's bookcase.

Plant Physiology, Development and Metabolism - Satish C Bhatla 2018-11-28

This book focuses on the fundamentals of plant physiology for undergraduate and graduate students. It consists of 34 chapters divided into five major units. Unit I discusses the unique mechanisms of water

and ion transport, while Unit II describes the various metabolic events essential for plant development that result from plants' ability to capture photons from sunlight, to convert inorganic forms of nutrition to organic forms and to synthesize high energy molecules, such as ATP. Light signal perception and transduction works in perfect coordination with a wide variety of plant growth regulators in regulating various plant developmental processes, and these aspects are explored in Unit III. Unit IV investigates plants' various structural and biochemical adaptive mechanisms to enable them to survive under a wide variety of abiotic stress conditions (salt, temperature, flooding, drought), pathogen and herbivore attack (biotic interactions). Lastly, Unit V addresses the large number of secondary metabolites produced by plants that are medicinally important for mankind and their applications in biotechnology and agriculture. Each topic is supported by illustrations, tables and information boxes, and a glossary of important terms in plant physiology is provided at the end.

Photosynthesis, Photorespiration, And Plant Productivity - Israel Zelitch 2012-12-02

Photosynthesis, Photorespiration, and Plant Productivity provides a basis for understanding the main factors concerned with regulating plant productivity in plant communities. The book describes photosynthesis and other processes that affect the productivity of plants from the standpoint of enzyme chemistry, chloroplasts, leaf cells, and single leaves. Comprised of nine chapters, the book covers the biochemical and photochemical aspects of photosynthesis; respiration associated with photosynthetic tissues; and photosynthesis and plant productivity in single leaves and in stands. It provides illustrated and diagrammatic discussion and presents the concepts in outlined form to help readers understand the concepts efficiently. Moreover, this book explores the rates of enzymatic reactions and the detailed structure and function of chloroplasts and other organelles and their variability. It explains the mechanism of photosynthetic electron transport and phosphorylation and the importance of diffusive resistances to carbon dioxide assimilation, especially the role of stomata. It also discusses the importance of dark respiration in diminishing productivity; the differences in net photosynthesis that occur between many species and varieties; and the influence of climate to photosynthetic reactions. The book is an excellent reference for teachers, as well as undergraduate and graduate students in biology, plant physiology, and agriculture. Research professionals working on the disciplines of plant production and food supply will also find this book invaluable.

Biogenesis of Fatty Acids, Lipids and Membranes - Otto Geiger 2019-04-29

Concise chapters, written by experts in the field, cover a wide spectrum of topics on lipid and membrane formation in microbes (Archaea, Bacteria, eukaryotic microbes).All cells are delimited by a lipid membrane, which provides a crucial boundary in any known form of life. Readers will discover significant chapters on microbial lipid-carrying biomolecules and lipid/membrane-associated structures and processes.

Lipids in Plant and Algae Development - Yuki Nakamura 2016-03-29

This book summarizes recent advances in understanding the functions of plant and algal lipids in photosynthesis, in development and signaling, and in industrial applications. As readers will discover, biochemistry, enzymology and analytical chemistry, as well as gene knock-out studies have all contributed to our rapidly increasing understanding of the functions of lipids. In the past few decades, distinct physical and biochemical properties of specific lipid classes were revealed in plant and algal lipids and the functional aspects of lipids in modulating critical biological processes have been uncovered. These chapters from international authors across relevant research fields highlight the underlying evolutionary context of lipid function in photosynthetic unicellular and multicellular organisms. The book goes on to encompass what lipids can do for industrial applications at a time of fascination with plants and algae in carbon fixation and as sources for production of food, energy and novel chemicals. The developmental context is a part of the fresh and engaging perspective that is presented in this work which graduate students and scientists will find both illuminating and useful.

Medicinal and Aromatic Plants VI - Y.P.S Bajaj 2012-12-06

27 chapters cover the distribution, economic importance, conventional propagation, micropropagation, tissue culture studies, and in vitro production of important medicinal and other pharmaceutical compounds in various species of Anchusa, Brucea, Catharanthus, Chrysanthemum, Coleus, Corydalis, Coreopsis, Emilia, Ginkgo, Gloriosa, Hypericum, Inonotus, Leucosceptrum, Lilium, Linum, Mosses, Nandina, Penstemon, Prunus, Pteridium, Quassia, Ribes, Senecio, Taraxacum, Thermopsis, Vanilla, and Vitiveria. Like the previous five volumes on medicinal and aromatic plants (Volumes 4, 7, 15, 21, and 24), this book contains a wealth of useful information for advanced students and researchers in the field of plant biotechnology and chemical engineering, pharmacy, botany and tissue culture.

Lipid Metabolism in Plants - Thomas S. Moore 2018-02-01

This text presents a comprehensive description of the fundamental principles of plant lipid metabolism and then uses this base to examine current research in the field. The importance of molecular biology and the incorporation of new analytical methods are discussed, and the contributions of current research to agricultural and industrial uses are covered in depth. Chapters are illustrated with tables and figures to support key concepts, and projections for future researc in the field are also explored.

Improving Abiotic Stress Tolerance in Plants - M. Iqbal R. Khan 2020-05-13

Abiotic stresses such as drought, flooding, high or low temperatures, metal toxicity and salinity can hamper plant growth and development. Improving Abiotic Stress Tolerance in Plants explains the physiological and molecular mechanisms plants naturally exhibit to withstand abiotic stresses and outlines the potential approaches to enhance plant abiotic stress tolerance to extreme conditions. Synthesising developments in plant stress biology, the book offers strategies that can be used in breeding, genomic, molecular, physiological and biotechnological approaches that hold the potential to develop resilient plants and improve crop productivity worldwide. Features · Comprehensively explains molecular and physiological mechanism of multiple abiotic stress tolerance in plants · Discusses recent advancements in crop abiotic stress tolerance mechanism and highlights strategies to develop abiotic stress tolerant genotypes for sustainability · Stimulates synthesis of information for plant stress biology for biotechnological applications · Presents essential information for large scale breeding and agricultural biotechnological programs for crop improvement Written by a team of expert scientists, this book benefits researchers in the field of plant stress biology and is essential reading for graduate students and researchers generating stress tolerant crops through genetic engineering and plant breeding. It appeals to individuals developing sustainable agriculture through physiological and biotechnological applications.

Managing and Preventing Obesity - Timothy Gill 2014-12-03

Obesity is an increasing problem on a global scale, and strategies for its prevention involve experts from many disciplines including nutritionists, physicians, policy-makers and public health professionals. This book covers the latest advances in obesity development, management and prevention with specific focus on dietary interventions. Part one covers the development of obesity and key drivers for its continuation and increase. Part two looks at the role of specific dietary components in obesity management, and part three discusses the role of behavioural factors such as eating patterns in managing and preventing obesity. Part four focuses on structured dietary interventions for obesity treatment, and part five looks at public interventions and consumer issues. Reviews how different foods and diets can affect obesity management Examines various ways of preventing and treating obesity Explores how governments and industries are preventing and treating obesity

Plant Lipid Metabolism - J.C. Kader 2013-04-18

A collection of papers that comprehensively describe the major areas of research on lipid metabolism of plants. State-of-the-art knowledge about research on fatty acid and glycerolipid biosynthesis, isoprenoid metabolism, membrane structure and organization, lipid oxidation and degradation, lipids as intracellular and extracellular messengers, lipids and environment, oil seeds and gene technology is reviewed. The

different topics covered show that modern tools of plant cellular and molecular biology, as well as molecular genetics, have been recently used to characterize several key enzymes of plant lipid metabolism (in particular, desaturases, thioesterases, fatty acid synthetase) and to isolate corresponding cDNAs and genomic clones, allowing the use of genetic engineering methods to modify the composition of membranes or storage lipids. These findings open fascinating perspectives, both for establishing the roles of lipids in membrane function and intracellular signalling and for adapting the composition of seed oil to the industrial needs. This book will be a good reference source for research scientists, advanced students and industrialists wishing to follow the considerable progress made in recent years on plant lipid metabolism and to envision the new opportunities offered by genetic engineering for the development of novel oil seeds.

Lipids in Photosynthesis: Structure, Function and Genetics - Paul-André Siegenthaler 2006-04-11

Lipids in Photosynthesis provides readers with a comprehensive view of the structure, function and genetics of lipids in plants, algae and bacteria, with special emphasis on the photosynthetic apparatus in thylakoid membranes. This volume includes the historical background of the field, as well as a full review of our current understanding of the structure and molecular organization of lipids and their role in the functions of photosynthetic membranes. The physical properties of membrane lipids in thylakoid membranes and their relationship to photosynthesis are also discussed. Other topics include the biosynthesis of glycerolipids and triglycerides; reconstitution of photosynthetic structures and activities with lipids; lipid-protein interactions in the import of proteins into chloroplasts; the development of thylakoid membranes as it relates to lipids; genetic engineering of the unsaturation of membrane glycerolipids, with a focus on the ability of the photosynthetic machinery to tolerate temperature stress; and the involvement of chloroplast lipids in the reactions of plants upon exposure to stress. This book is intended for a wide audience and should be of interest to advanced undergraduate and graduate students and to researchers active in the field, as well as to those scientists whose fields of specialization include the biochemistry, physiology, molecular biology, biophysics and biotechnology of membranes.

Bryophyte Ecology and Climate Change - Zoltán Tuba 2011-01-06

Bryophytes, especially mosses, represent a largely untapped resource for monitoring and indicating effects of climate change on the living environment. They are tied very closely to the external environment and have been likened to 'canaries in the coal mine'. Bryophyte Ecology and Climate Change is the first book to bring together a diverse array of research in bryophyte ecology, including physiology, desiccation tolerance, photosynthesis, temperature and UV responses, under the umbrella of climate change. It covers a great variety of ecosystems in which bryophytes are important, including aquatic, desert, tropical, boreal, alpine, Antarctic, and Sphagnum-dominated wetlands, and considers the effects of climate change on the distribution of common and rare species as well as the computer modeling of future changes. This book should be of particular value to individuals, libraries, and research institutions interested in global climate change.

Advanced Research on Plant Lipids - N. Murata 2013-03-14

The 15th International Symposium on Plant Lipids was held in Okazaki, Japan, in May 12th to 17th, 2002, at the Okazaki Conference Center. The Symposium was organized by the Japanese Organizing Committee with the cooperation of the Japanese Association of Plant Lipid Researchers. The International Symposium was successful with 225 participants from 29 countries. We acknowledge a large number of participants from Asian countries, in particular, from China, Korea, Malaysia, Taiwan, Thailand and the Philippines, presumably because this was the fIrst time that the International Symposium on Plant Lipids was held in Asia. We also acknowledge a number of scientists from Canada, France, Germany, UK and USA, where plant lipid research is traditionally very active. The Symposium provided an opportunity for presentation and discussion of 68 lectures and 93 posters in 11 scientific sessions, which together covered all aspects of plant lipid researches, such as the structure, analysis, biosynthesis, regulation, physiological function, environmental

aspects, and the biotechnology of plant lipids. In memory of the founder of this series of symposia, the Terry Galliard Lecture was delivered by Professor Ernst Heinz from Universitat: Hamburg, Germany. In addition, special lectures were given by two outstanding scientists from animal lipid fields, Professor James Ntambi from University of Wisconsin, USA, and Dr. Masahiro Nishijima from the National Institute for Infectious Diseases, Japan. To our great honor and pleasure, the session of Lipid Biosynthesis was chaired by Dr.

Essentials of Biochemistry - Herbert J. Fromm 2012-01-05

This textbook, Essentials of Biochemistry is aimed at chemistry and biochemistry undergraduate students and first year biochemistry graduate students. It incorporates the lectures of the authors given to students with a strong chemistry background. An emphasis is placed on metabolism and reaction mechanisms and how they are studied. As the title of the book implies, the text lays the basis for an understanding of the fundamentals of biochemistry.

Clinical Research in Diabetes and Obesity, Volume 2 - Boris Draznin 2013-03-09

An unprecedented compilation of state-of-the-art advances in clinical research by premier clinical scientists around the world. This volume discusses the methods of clinical research and the interpretation of their results in studies of normal individuals, obese subjects, and patients with diabetes mellitus. Along the way, the authoritative contributors writing here illuminate how changes in the hormone action and substrate metabolism of healthy humans may lead to obesity and noninsulin-dependent diabetes mellitus.

Health Consequences of Smoking - C. Everett Koop, M.D. 1988-09-01

Examines the scientific evidence that cigarettes and other forms of tobacco are addicting. Concludes that processes that determine tobacco addiction are similar to those that determine addiction to other drugs such as heroin and cocaine. Tables and figures. Bibliography. Index.

Plant Secondary Metabolism - David S. Seigler 2012-12-06

Life has evolved as a unified system; no organism exists similar role also has been suggested for fatty acids from alone, but each is in intimate contact with other organisms cyanolipids. Nonprotein amino acids, cyanogenic glyco and its environment. Historically, it was easier for workers sides, and the non-fatty-acid portion of cyanolipids also are in various disciplines to delimit artificially their respective incorporated into primary metabolites during germination. areas of research, rather than attempt to understand the entire Secondary metabolites of these structural types are accumu system of living organisms. This was a pragmatic and neces lated in large quantities in the seeds of several plant groups sary way to develop an understanding for the various parts. where they probably fulfill an additional function as deter We are now at a point, however, where we need to investi rents to general predation. gate those things common to the parts and, specifically, those The second type of relationship involves interaction of things that unify the parts. The fundamental aspects of many plants with other organisms and with their environment. Bio of these interactions are chemical in nature. Plants constitute logical interactions must be viewed in the light of evolution an essential part of all life systems; phytochemistry provides ary change and the coadaptation, or perhaps coevolution, of a medium for linking several fields of study.

Lipid Metabolism in the Healthy and Disease Heart - Ger J. van der Vusse 2012-12-06

Proceedings of the Third International Symposium on Lipid Metabolism in the Normoxic and Ischemic Heart, September 9 & 10, 1991, Rotterdam, The Netherlands

Bryology for the Twenty-first Century - Jeffrey W. Bates 2018-02-02

A compilation of state of the art papers on key topics in bryology from invited speakers at the Centenary Symposium, University of Glasgow, 57 August 1996.

Sulphur in Plants - Y.P. Abrol 2003-05-31

Sulphur (S) plays a pivotal role in various plant growth and development processes being a constituent of sulphur-containing amino acids, cysteine and methionine, and other metabolites viz., glutathione and phytochelatins, co-factor of enzymes which contribute to stress repair and amelioration of heavy metal toxicity. Besides, a number of S-

containing components are biologically active and, thus, a source for use as medicinal value. The basic global issue before the agricultural scientist and world community is to evolve cultivars and develop methodologies for efficient use of inputs to enhance agricultural productivity. This is particularly true of the developing countries which are going to see maximum rise in population with changing food demands and declining availability of land. Amongst the inputs, nutrients play a crucial role. The major requirement is for N, P and K followed by several micro-nutrients. In this context reports of world-wide S deficiency in the agricultural systems are relevant. The reasons are many. Broadly speaking reduction inS emission, use of S-free N, P and K fertilizers and higher biomass production contributed the maximum. Despite the need for sulphur as an essential plant nutrient and the substantial returns expected from its use, very little attention has been given to fill the gap between supply and demand of S.

Stearoyl-CoA Desaturase Genes in Lipid Metabolism - James M. Ntambi, Ph.D. 2013-08-15

Obesity and diabetes develop as a complex result of genetic, metabolic and environmental factors and are characterized by increased lipogenesis and lipid accumulation in many tissues. Stearoyl-CoA desaturase (SCD) genes are a critical regulator of lipogenesis and catalyzes the synthesis of monounsaturated fatty acids (MUFA), mainly oleoyl- (18:1n9) and palmitoleoyl-CoA (16:1n7). These MUFAs are the major fatty acid substrates for the synthesis of triglycerides, cholesterol esters, wax esters and membrane phospholipids. There are 4 SCD isoforms (SCD1-4) in mice and two (hSCD1 and hSCD5) expressed in humans. At first glance, stearoyl-CoA desaturase enzyme would be considered a housekeeping enzyme because it synthesizes oleate a well-known fatty acid that is abundant in many dietary sources. However numerous studies have shown that SCD is a very highly regulated enzyme that features in so many physiological processes ranging from fat differentiation, carbohydrate and fat metabolism, inflammation and cancer. The editor’s studies using stearoyl-CoA desaturase knockout (SCD1-/-) mice and studies of other investigators using pharmacological approaches to reduce SCD1 expression in mouse tissues have all established that the expression of SCD1 gene isoform represents a key step in partitioning of lipids between storage and oxidation. High SCD expression favors fat storage leading to obesity while reduced SCD expression favors fat burning and leanness. Although these studies clearly illustrated that SCD1 expression is involved in the development of obesity and insulin resistance, questions remain in the elucidation of the mechanisms involved and role of SCD1. This book includes chapters by leading researchers on SCD Genes in the brain, heart, muscle, liver metabolism, Colitis, and more.

Diet and Health - National Research Council 1989-01-01

Diet and Health examines the many complex issues concerning diet and its role in increasing or decreasing the risk of chronic disease. It proposes dietary recommendations for reducing the risk of the major diseases and causes of death today: atherosclerotic cardiovascular diseases (including heart attack and stroke), cancer, high blood pressure, obesity, osteoporosis, diabetes mellitus, liver disease, and dental caries.

Lipid metabolism in mammals - Fred Snyder 2012-12-06

During the past decade we have witnessed a vast expansion in our knowl edge of lipid metabolism, especially for mammalian tissues. One obvious conclusion arising from these studies is that no single overall scheme of lipid metabolism can be classed as distinctly characteristic of all mamma lian organs. Although certain synthetic and degradative lipid pathways are similar in a variety of organs, I have been impressed by the notable exceptions. I was motivated to organize this work on Lipid Metabolism in Mammals because of the lack of a single reference source containing a comparative organ approach to lipid metabolism in mammals that empha sizes the uniqueness of pathways in the various organs of the body. Because of the escalation in lipid research, I also feel strongly that there is an urgent need for an updated concise account of this field. The group of authors for the chapters in the two volumes of Lipid Metabolism in Mammals were selected for their expertise and personal experience with the lipid metabolism of the organs or blood constituents that are the subjects of the chapters. Sufficient leeway has been given each author to

approach the subject matter from a personal viewpoint. How ever, the overall direction of each chapter has been slanted to emphasize the similarities and differences in lipid metabolism among organ systems. The introductory chapter on general pathways provides a convenient refer ence to illustrations of specific reaction sequences that are well established and that occur in a number of organs.

Lipid Metabolism in Tumor Immunity - Yongsheng Li 2021-03-19

This book focuses on lipid metabolism in tumor immunity, covering the application of lipidomics in tumor immunity and all aspects of lipid metabolism in tumor microenvironment. During the progression of tumors, tumor cells and immune cells interact in a dynamic microenvironment. Targeting the immune system has a high potential for treating cancer. However, due to the high heterogeneity of the tumor microenvironment, only a small percentage of patients experience such clinical benefits of tumor immunotherapy. Therefore, understanding the tumor microenvironment is crucial for tumor immunity. Recently, lipid metabolism is an emerging research direction and contributes to cell survival and biofunctions in tumor microenvironment, which is of great interest and significance to be elucidated. This book provides the doctors, researchers, and scientists with a cutting-edge overview of the lipid metabolism and its role in tumor immunity. It also yields benefits for pharmaceutical companies regarding drug discovery.

Selective Neurotoxicity - Hans Herken 2012-12-06

Following the overwhelmingly successful response to the first printing in hardcover, the hottest topics in Selective Neurotoxicity are now available in this special softcover edition". Researchers are provided with well-grounded information on the cellular and subcellular targets of neurotoxins and their mode of action at the level of ion-channels, receptors and neurotransmitters. The use of bacterial toxins as a tool in neuroscientific research is an important aspect in this context. The chapters that interest clinicians as well deal with protective barriers in the peripheral and central nervous system and metabolic disorders that cause neurotoxins to be built up in the human body. The induction of tumors by neuroptropic carcinogens is included.