

Natural And Selected Synthetic Toxins Biological Implications Acs Symposium Series

Thank you totally much for downloading Natural And Selected Synthetic Toxins Biological Implications Acs Symposium Series. Most likely you have knowledge that, people have seen numerous times for their favorite books bearing in mind this Natural And Selected Synthetic Toxins Biological Implications Acs Symposium Series, but stop up in harmful downloads.

Rather than enjoying a fine ebook with a mug of coffee in the afternoon, instead they juggled considering some harmful virus inside their computer. Natural And Selected Synthetic Toxins Biological Implications Acs Symposium Series is handy in our digital library an online admission to it is set as public consequently you can download it instantly. Our digital library saves in combined countries, allowing you to acquire the most less latency era to download any of our books taking into account this one. Merely said, the Natural And Selected Synthetic Toxins Biological Implications Acs Symposium Series is universally compatible later than any devices to read.

Organic Synthesis W. A. Smit 1998 A concise and readable account of the role of synthesis in modern science, Organic Synthesis. Research Awards Index 1986

Chemical hazards in foods of animal origin Frans J.M. Smulders 2019-01-01 The authorship of this book is comprised of a total of 65 experts of worldwide repute, originating from 13 different countries and representing various scientific disciplines such as human and veterinary medicine, agricultural sciences, (micro)biology, pharmacology/toxicology, nutrition, (food) chemistry and risk assessment science. In 25 chapters the various chemical hazards - 'avoidable' or 'unavoidable' and possibly prevailing in major foods of animal origin [muscle foods (including fish), milk and dairy, eggs, honey] - are identified and characterised, the public health risks associated with the ingestion of animal food products that may be contaminated with such xenobiotic chemical substances are discussed in detail, and options for risk mitigation are presented. This volume targets an audience with both an industry and academic background, and particularly those professionals who are (or students who aspire to become) involved in risk management of foods of animal origin. Entomology Abstracts 1999

Selected Water Resources Abstracts 1991

Chemical Analysis Charles Lee Wilkins 1941

Guidebook to Protein Toxins and Their Use in Cell Biology Rino Rappuoli 1997-05-29 Many bacteria, animals, and plants produce toxins that can prove lethal to other organisms. Toxins are a form of "biological warfare" that helps their producer to survive and so confer an evolutionary advantage. They display an extraordinary range of complexity, from the formic acid provided by ants to bacterial proteins composed of thousands of amino acids. This Guidebook considers the more complex protein and peptide toxins and groups them according to their mode of action. Topics covered include: membrane-permeabilizing toxins; toxins affecting signal transduction and protein synthesis; cytoskeleton-affecting toxins; toxins affecting the immune and inflammatory response. This class of biomolecules will be of interest to a wide range of researchers in cell biology, neuroscience, and toxicology.

Transformation Products of Synthetic Chemicals in the Environment Alistair Boxall 2009-09-22 When a synthetic chemical is released into the environment it may be degraded by abiotic and biotic processes. These degradation processes usually involve a cascade of reactions resulting in the formation of a number of transformation products. While we usually know a great deal about the environmental properties, fate and effects of parent synthetic chemicals, our understanding of the impacts of transformation products is much less developed. As such, this volume brings together chapters from leading researchers in the field of transformation products in the environment and describes how these products are formed, how they move through the environment, and their environmental effects. The book also presents modelling and analytical approaches for understanding the occurrence, fate and effects of transformation products in the environment. It is of interest to scientists in academia, the chemicals industry and regulators, as well as graduate students in Environmental Chemistry and Ecotoxicology.

South African Journal of Science 2003

Pesticide Residues in Food and Drinking Water Denis Hamilton 2004-05-14 This book explores human exposure and consumer risk assessment in response to issues surrounding pesticide residues in food and drinking water. All the three main areas of consumer risk assessment including human toxicology, pesticide residue chemistry and dietary consumption are brought together and discussed. Includes the broader picture - the environmental fate of pesticides Takes an international approach with contributors from the European Union, USA and Australia Highlights the increasing concerns over food safety and the risks to humans

Selected Topics in the Chemistry of Natural Products

Small Animal Toxicology Michael Edward Peterson 2006-01-01 Diagnose and determine treatment for toxic exposures in small animals with this quick reference! Small Animal Toxicology, 3rd Edition covers hundreds of potentially toxic substances, providing the information you need to manage emergency treatment and prevent poisonings in companion animals. To help you identify an unknown poison, this guide provides a list of potential toxins based on clinical signs or symptoms. It also includes a NEW color insert with 85 full-color photographs of toxic plants and of lesions associated with various poisonings. Written by respected veterinarian Michael E. Peterson and board-certified veterinary toxicologist Patricia A. Talcott, along with a team of expert contributors, this edition covers a wide variety of topics including toxicodynamics, toxicokinetics, effective history taking, recognizing clinical signs of toxic exposures, managing emergencies, and supportive care of the poisoned patient. Comprehensive coverage of toxins/poisons includes the full range of substances from acetaminophen to zinc, including home products, prescription medicines, recreational drugs, and more. Guidelines to evaluation, diagnosis and treatment include examinations of the source, toxic dose, toxicokinetics, clinical signs, minimum database, confirming tests, treatment progress and differential diagnosis for each specific toxicant. Coverage of common poisonous substances includes grapes and raisins, nicotine, mercury, mushrooms, Christmas-time plants, and snake and spider venoms. Toxicological Concepts section provides information on toxicologic principles such as history taking, providing supportive care, and managing emergency treatment. General Exposures section addresses nontraditional toxicology such as indoor environmental air, pesticides, pharmaceuticals, and toxicities in pregnant and lactating animals. Miscellaneous Toxicant Groups section covers commonly encountered specific toxicants, the proper use of diagnostic laboratories, use of human poison control centers, and antidotes for specific toxins. More

than 50 international contributors provide up-to-date, authoritative advice on treating poisonings and intoxications. 8 NEW chapters cover topics including legal considerations in toxicology cases, responding to mass exposures, and poisonings in birds, small mammals, and geriatric patients. NEW color insert shows 85 of the most commonly encountered toxic substances for at-a-glance identification. UPDATED Signs and Symptoms index makes it easier to find information on a toxic agent by presenting signs rather than requiring the formulation of a diagnosis. UPDATED information on agents most likely to cause a toxic reaction includes natural flea products and an expanded section on human medications. NEW quick-access format with bold headings and convenient tables and boxes allows quick retrieval of information in emergency situations.

Wiley Encyclopedia of Molecular Medicine, Volume 1 Wiley 2001-11-01

Biology-I (Zoology) 2022-23 TGT/PGT/GIC/LT/GDC/UPPCS/NVS/ KVS/DSSSB YCT Expert Team 2022-23

TGT/PGT/GIC/LT/GDC/UPPCS/NVS/ KVS/DSSSB Biology-I Zoology Chapter-wise Solved Papers

Synthetic Biology of Yeasts for the Production of Non-Native Chemicals, 2nd Edition Farshad Darvishi 2021-10-22

Introduction to Food Toxicology Takayuki Shibamoto 2012-12-02 The area of food toxicology currently has a high profile of interest in the food industry, universities, and government agencies, and is certainly of great concern to consumers. There are many books which cover selected toxins in foods (such as plant toxins, mycotoxins, pesticides, or heavy metals), but this book represents the first pedagogic treatment of the entire range of toxic compounds found naturally in foods or introduced by industrial contamination or food processing methods. Featuring coverage of areas of vital concern to consumers, such as toxicological implications of food adulteration (as seen in ethylene glycol in wines or the Spanish olive oil disaster) or pesticide residues, Introduction to Food Toxicology will be of interest to students in toxicology, environmental studies, and dietetics as well as anyone interested in food sources and public health issues. The number of students who are interested in toxicology has increased dramatically in the past several years. Issues related to toxic materials have received more and more attention from the public. The issues and potential problems are reported almost daily by the mass media, including television, newspapers, and magazines. Major misunderstandings and confusion raised by those reports are generally due to lack of basic knowledge about toxicology among consumers. This textbook provides the basic principles of food toxicology in order to help the general public better understand the real problems of toxic materials in foods. Principles of toxicology Toxicities of chemicals found in foods Occurrence of natural toxins in plant and animal foodstuffs Food contamination caused by industry Toxic chemicals related to food processing Food additives Microbial toxins in foods

Pure and Applied Chemistry 2009 Vol. 1, no. 1 contains the Proceedings of the Radioactivation Analysis Symposium (1959 : Vienna, Austria).

Environmental Health Perspectives 1993

Australian Journal of Agricultural Research 2005

Synthetic Biology Joachim Boldt 2015-11-26 Assessing synthetic biology from a societal and ethical perspective is not only a matter of determining possible harms and benefits of synthetic biology applications. Synthetic biology also incorporates a specific technoscientific understanding of its research agenda and its research objects that has philosophical and ethical implications. This edited volume sets out to explore and evaluate these synthetic biology worldviews and it proposes appropriate governance measures. In addition, legal challenges are discussed.

Sensors for Chemical and Biological Applications Manoj Kumar Ram 2018-10-03 In recent years, sensor research has undergone a quiet revolution that will have a significant impact on a broad range of applications in areas such as health care, the environment, energy, food safety, national security, and manufacturing. Sensors for Chemical and Biological Applications discusses in detail the potential of chemical and biological sensors and examines how they are meeting the challenges of chem-bio terrorism by monitoring through enhanced specificity, fast response times, and the ability to determine multiple hazardous substances. Exploring the nanotechnology approach, and carrying this theme throughout the book, the chapters cover the sensing principles for, chemical, electrical, chromatographic, magnetic, biological, fluidic, optical, and ultrasonic and mass sensing systems. They address issues associated with cost, synthesis, and testing of new low cost materials with high sensitivity, selectivity, robustness, and speed for defined sensor applications. The book extensively discusses the detailed analysis of future impact of chemical and biological sensors in day-to-day life. Successful development of improved chemical sensor and biosensor systems and manufacturing procedures will not only increase the breadth and depth of the sensor industry, but will spill over into the design and manufacture of other types of sensors and devices that use nanofabrication and microfabrication techniques. This reference not only supplies versatile, hands-on tools useful in a broad array of disciplines, but also lays the interdisciplinary groundwork required for the achievement of sentient processing.

Poisoning By Plants, Mycotoxins, and Related Toxins Franklin Riet-Correa 2011 This comprehensive collection of up-to-the-minute research in the field of poisonous plants investigates the effects of toxins on animals and humans. It covers the effects of poisonous plants on the liver, the reproductive system, and the nervous system, as well as exploring the field of herbal medicine. In a specialized section devoted to control measures, the book highlights techniques such as vaccination and taste aversion, providing the reader with important information on safeguarding against disaster. This volume is an essential reference for veterinarians, researchers, toxicologists and.

Natural and Selected Synthetic Toxins Anthony T. Tu 2000 This book looks at the latest information on a number of natural toxins, narcotics, and doping agents derived from marine, fungal, microbial, plant and animal origins. It examines the diversity of chemical classes among natural toxins and venoms as well as the biological effect and diverse action of toxicosis from these materials. There is a section on forensic toxicology that details selected synthetic toxins and several chapters on the biological effect of nerve agents such as sarin, which was used on human victims in the 1994 and 1995 subway attacks in Japan.

Synthetic Biology engineering complexity and refactoring cell capabilities Pablo Carbonell 2015-10-26 One of the key features of biological systems is complexity, where the behavior of high level structures is more than the sum of the direct interactions between single components. Synthetic Biologists aim to use rational design to build new systems that do not already exist in nature and that exhibit useful biological functions with different levels of complexity. One such case is metabolic engineering, where, with the advent of genetic and protein engineering, by supplying cells with chemically synthesized non-natural amino acids and sugars as new building blocks, it is now becoming feasible to introduce novel physical and chemical functions and properties into biological entities. The rules of how complex behaviors arise, however, are not yet well understood. For instance, instead of considering cells as inert chassis in which synthetic devices could be easily operated to impart new functions, the presence of these systems may impact cell physiology with reported effects on transcription, translation, metabolic fitness and optimal resource allocation. The result of these changes in the chassis may be failure of the synthetic device, unexpected or reduced device behavior, or perhaps a more permissive environment in which the synthetic device is allowed to function. While new efforts have already been made to increase standardization and characterization of biological components in order to have well known parts as building blocks for the construction of more complex devices, also new strategies are emerging to better understand the biological dynamics underlying the phenomena we observe. For

example, it has been shown that the features of single biological components [i.e. promoter strength, ribosome binding affinity, etc] change depending on the context where the sequences are allocated. Thus, new technical approaches have been adopted to preserve single components activity, as genomic insulation or the utilization of prediction algorithms able to take biological context into account. There have been noteworthy advances for synthetic biology in clinical technologies, biofuel production, and pharmaceuticals production; also, metabolic engineering combined with microbial selection/adaptation and fermentation processes allowed to make remarkable progress towards bio-products formation such as bioethanol, succinate, malate and, more interestingly, heterologous products or even non-natural metabolites. However, despite the many progresses, it is still clear that ad hoc trial and error predominates over purely bottom-up, rational design approaches in the synthetic biology community. In this scenario, modelling approaches are often used as a descriptive tool rather than for the prediction of complex behaviors. The initial confidence on a pure reductionist approach to the biological world has left space to a new and deeper investigation of the complexity of biological processes to gain new insights and broaden the categories of synthetic biology. In this Research Topic we host contributions that explore and address two areas of Synthetic Biology at the intersection between rational design and natural complexity: (1) the impact of synthetic devices on the host cell, or "chassis" and (2) the impact of context on the synthetic devices. Particular attention will be given to the application of these principles to the rewiring of cell metabolism in a bottom-up fashion to produce non-natural metabolites or chemicals that should eventually serve as a substitute for petrol-derived chemicals, and, on a long-term view, to provide economical, ecological and ethical solutions to today's energetic and societal challenges.

War of Nerves Jonathan Tucker 2007-12-18 In this important and revelatory book, Jonathan Tucker, a leading expert on chemical and biological weapons, chronicles the lethal history of chemical warfare from World War I to the present. At the turn of the twentieth century, the rise of synthetic chemistry made the large-scale use of toxic chemicals on the battlefield both feasible and cheap. Tucker explores the long debate over the military utility and morality of chemical warfare, from the first chlorine gas attack at Ypres in 1915 to Hitler's reluctance to use nerve agents (he believed, incorrectly, that the U.S. could retaliate in kind) to Saddam Hussein's gassing of his own people, and concludes with the emergent threat of chemical terrorism. Moving beyond history to the twenty-first century, *War of Nerves* makes clear that we are at a crossroads that could lead either to the further spread of these weapons or to their ultimate abolition.

Our Violent World Kevin McDonald 2013-05-14 What can the analysis of violence and terror tell us about the modern world? Why is violence often used to achieve religious, cultural or political goals? Can we understand the search for the extreme that increasingly shapes violence today? From 1960s student movements to today's global jihad, this text explores the factors and debates shaping violence and terrorism in our contemporary society. Each chapter confronts examples of disturbing terrorist acts and events of mass violence from recent history and uses these to examine key questions, theories and concepts surrounding this sensitive and controversial topic. In particular, the book: - Identifies core tools for the analysis of public violence - Explores the processes that mutate social movements into violent groups - Describes the cultural, embodied, experiential and imagined dimensions of violence - Highlights different periods and varying forms of terrorist violence - Examines the role of globalization, media, technology and the visual in violence and terror today. *Our Violent World* shows how the social sciences can contribute to an understanding of violence and responses to terror, as well as the construction of a social world less dominated by fear of the other. It is a must-read for students and citizens.

LC Science Tracer Bullet 1972

Chemical Terrorism Anthony T. Tu 2002

Glycobiology Clare Sansom 2007 This glycobiology book is truly unique. Produced to commemorate the 80th birthday of Nathan Sharon, *Glycobiology* is an essential reference tool for anyone working in the field. Most research review volumes are narrowly focused. This book is different. It is a state-of-the-art fully comprehensive review volume covering a deliberately wide spectrum of work in this important field. With 28 chapters, covering over 350 pages, this title describes the latest research findings - from chemistry to biology and from pure science to industrial and medical applications. The book is written by world-class researchers and brings the reader fully up-to-date with the latest advances and forward thinking. All the major areas of glycobiology are covered including the synthesis of carbohydrates and glycoconjugates, their structural and functional analysis, carbohydrate binding proteins, carbohydrate modifying enzymes, and the applications of glycobiology research in medicine and industry. All active researchers in the glycosciences will value access to this important research compendium whether it be in the local library or in the lab.

The SELCTV Database Karen M. Theiling 1987 Documentation of the side effects of pesticides on arthropod natural enemies has expanded rapidly since the 1950's as part of an increase in non-target side effects literature. Most reviews have been based on empirical analysis of selected literature. The SELCTV database was developed to make a larger information base accessible for characterization and analysis. The feasibility of such a database is a function of improving microcomputer technology and database management software. Record structure and scope of the SELCTV database included 40 information fields covering natural enemy biology, pesticide chemistry, toxicology and literature citations. SELCTV was assembled from over 900 published papers, believed to constitute 80-90% of available literature through the early 1980's. Currently, some 12,600 records contain taxonomic, biological, toxicological, reference and summary information for over 600 species of natural enemies in 88 families. Research was conducted in 58 countries around the world and included predators and parasitoids associated with 60 agricultural commodities. All major classes of pesticides are represented, including microbial insecticides. The impact of over 400 agricultural chemicals on natural enemies by means of one of ten basic test types has been distilled into SELCTV. Many different types of natural enemy responses were reported in the literature. In addition to recording these as documented, measurements were translated to a scale ranging from 1 (0% effect) to 5 (90-100% effect). This toxicity rating scale formed the basis for most SELCTV analysis. Selectivity ratios, resistance ratios and sublethal effects were other types of data which were recorded when possible. Lethal and sublethal effects were evaluated for many species, pesticide and test method data groupings. Results showed that predators were less susceptible and more variable in responses to pesticides than parasitoids. Relative susceptibility was computed for important natural enemy species. Among the most tolerant were *Lycosa pseudoannulata*, *Cryptolaemus montrouzieri* and *Chrysopa carnea*. Insecticides were the most toxic of pesticide classes, followed by herbicides, acaricides and fungicides, respectively. Among insecticide classes, a trend of increasing toxicity to natural enemies was demonstrated from the early inorganics to synthetic pyrethroids. More recent microbials and IGR's were less toxic and more selective. In addition to characterizing the natural enemy-pesticide impact literature and conducting selected analyses, several case studies were compiled to demonstrate application of SELCTV to decision making in pest management. Another compares results of SELCTV with a large standardization testing program from Europe. Increased size and degree of specificity of the information base were among research trends elucidated through chronological searches of SELCTV. Specific natural enemies, pesticides and test methods as assessment components have fluctuated relative to pesticide use, as well as testing and pest management philosophies. The study of diverse natural enemy responses to pesticides has led to the identification of unique factors that influence natural enemies in different ways or to a greater or lesser degree than pests. Differences in the susceptibility of pests, predators and parasitoids are discussed.

ABC Warfare Defense

United States. Bureau of Naval Personnel 1960

Hayes' Principles and Methods of Toxicology, Sixth Edition A. Wallace Hayes 2014-10-10 Hayes' Principles and Methods of Toxicology has long been established as a reliable reference to the concepts, methodologies, and assessments integral to toxicology. The new sixth edition has been revised and updated while maintaining the same high standards that have made this volume a benchmark resource in the field. With new authors and new chapters that address the advances and developments since the fifth edition, the book presents everything toxicologists and students need to know to understand hazards and mechanisms of toxicity, enabling them to better assess risk. The book begins with the four basic principles of toxicology—dose matters, people differ, everything transforms, and timing is crucial. The contributors discuss various agents of toxicity, including foodborne, solvents, crop protection chemicals, radiation, and plant and animal toxins. They examine various methods for defining and measuring toxicity in a host of areas, including genetics, carcinogenicity, toxicity in major body systems, and the environment. This new edition contains an expanded glossary reflecting significant changes in the field. New topics in this edition include: The importance of dose–response Systems toxicology Food safety The humane use and care of animals Neurotoxicology The comprehensive coverage and clear writing style make this volume an invaluable text for students and a one-stop reference for professionals.

Biology of Gila Monsters and Beaded Lizards Daniel D. Beck 2005-07-25 No two lizard species have spawned as much folklore, wonder, and myth as the Gila Monster, *Heloderma suspectum*, and the Beaded Lizard, *H. horridum*—the sole survivors of an ancient group of predacious lizards called the Monstersauria. More like snakes on legs, monstersaurs are a walking contradiction: they are venomous yet don't appear to use their venom for subduing prey; their mottled patterns mingle with the broken shadows and textures of their desert and tropical dry forest habitats, yet their bright open mouths hiss a bold warning that a nasty bite awaits those who advance further. And while Gila Monster venom produces excruciating pain, it also contains a peptide that has become a promising new drug for treating type-2 diabetes. Perhaps the ultimate paradox is that monstersaurs are among the most famous of lizards, yet until quite recently they have remained among the least studied. With numerous illustrations, stunning color photographs, and an up-to-date synthesis of their biology, this book explains why the Monstersauria seems poised to change the way we think about lizards. Daniel D. Beck—who has been investigating Gila Monsters and Beaded Lizards for over 22 years—teams up here with award-winning wildlife photographer Tom Wiewandt to produce a comprehensive summary of this small but remarkable family of lizards.

Nature's Chemicals Richard Firn 2009-11-26 Natural Products (NPs) is the term used to describe the hundreds of thousands of chemical compounds or substances that are continually produced by living organisms (plants and microbes). Hundreds of millions of tons of these chemicals are generated annually, and the trade in just a few of these has dominated human economic activity for thousands of years. Indeed the current world geopolitical map has been shaped by attempts to control the supply of a few of these compounds. Every day of our lives each human spends time and money trying to procure the NPs of their choice. However, despite their overwhelming influence on human culture, they remain poorly understood. Yet a knowledge of NPs can help in our search for new drugs, further the debate about GM manipulation, help us address environmental pollution, and enable a better understanding of drug trafficking. Nature's Chemicals is the first book to describe Natural Products (NPs) in an evolutionary context, distilling the few simple principles that govern the way in which organisms (including humans) have evolved to produce, cope with, or respond to NPs. It neatly synthesizes a widely dispersed literature and provides a general picture of NPs, encompassing evolution, history, ecology, and environmental issues (along with some deeper theory relevant to biochemistry), with the goal of enabling a wider section of the scientific community to fully appreciate the crucial importance of Natural Products to human culture and future survival.

Environmental Encyclopedia 2003 Contains alphabetically arranged articles that provide information about people, events, issues, and terms with environmental significance; and includes cross-references, further reading lists, appendices, and a comprehensive general index.

Chemical/biological warfare 2003

Renewable Synthetic Fuels and Chemicals from Carbon Dioxide David S.A. Simakov 2017-07-24 This book outlines the most recent progress in the development of technologies for carbon dioxide utilization into renewable synthetic fuels and platform chemicals via chemical and biological routes. Various processes are discussed, including thermocatalytic, electrocatalytic, photocatalytic, and biological conversion. This SpringerBrief consists of four chapters, each chapter outlining fundamentals and catalytic mechanisms, and discussing main design considerations and major technological challenges, providing also a brief outline of the most recent progress. The book is useful for a broad community of academic and industrial researchers in the fields of chemical reaction engineering, electro- and photo-chemistry, and biochemical engineering, with specific emphasizes on heterogeneous catalysis, reactor design and process development.

The Effects of Anti-nutritive Compounds in Tropical Legumes on Ruminant Nutrient Utilization, Excretion and Decomposition of Manure in the Soil David Mwaura Mbugua 2003 Many smallholder farmers in sub-Saharan Africa are using herbaceous and shrub legumes for livestock feeding and as green manures. Besides their beneficial high nitrogen contents, these legumes also contain a variety of anti-nutritive compounds, such as tannins, alkaloids and saponins. The objectives of this study were: (i) to investigate the roles of anti-nutritive plant compounds in tropical forage legumes on nutrient utilization by ruminants and the consequences of their interactions, (ii) to explore the effects of tannins and alkaloids and their interactions on decomposition and mineralization patterns of animal and compost manures in acidic tropical soils, and (iii) to investigate the role of micro- and meso-fauna on decomposition of soil amendments containing tannins and alkaloids. In vitro, purified condensed tannins (CT) and sparteine (quinolizidine alkaloid) significantly (P

Hazards associated with animal feed Food and Agriculture Organization of the United Nations 2019-11-04 The need for feed for terrestrial and aquatic animals continues to rise with the increasing demand for foods of animal origin; however, the challenge is not only to meet the growing need for feed but also to ensure its safety and thus contributing to the safety of the entire food chain. Feed safety incorporates the impact on human as well as animal health and welfare, which, in turn, can affect productivity. Hazards in feed may be inherent to feed ingredients as well as introduced during feed production, processing, handling, storage, transportation, and use.

Hazards in feed may also result from accidental or deliberate human intervention. The expert meeting reviewed and discussed potential hazards in feed of chemical, biological and physical origin. It addressed hazards, as well as their occurrence in feed are described, and transfer from feed to food, relevance for food safety, impact on animal health, and emerging issues and trends. In addition, specific consideration was given to feed and products of feed production technologies of increasing relevance, for instance insects, former food and food processing by-products, biofuels (bioethanol and biodiesel) by-products, aquatic plants and marine resources.

????????? 2001