

## Leptospirosis Home Oie

La colección interdisciplinaria Estudios de la Orinoquia y la Amazonia busca generar conocimiento, fomentar la discusión académica y asumir alternativas de solución a problemas regionales en la Orinoquia y la Amazonia. Si la Orinoquia y la Amazonia son territorios especiales por su abandono histórico y ellos constituyen una región única, deben tener un tratamiento especial que facilite su desarrollo y promueva el acceso al conocimiento científico y a los bienes producidos en el mundo desarrollado con el respeto a las poblaciones ancestrales y a las culturas regionales. En este primer volumen se encuentran trabajos relacionados con la medicina veterinaria y la investigación en salud en esta región. Las temáticas son variadas y deben ser asumidas desde una apertura teórica, metodológica y procedimental para alcanzar la comprensión del fenómeno en sus dimensiones y en sus contextos.

Encyclopedia of Agriculture and Food Systems, Second Edition addresses important issues by examining topics of global agriculture and food systems that are key to understanding the challenges we face. Questions it addresses include: Will we be able to produce enough food to meet the increasing dietary needs and wants of the additional two billion people expected to inhabit our planet by 2050? Will we be able to meet the need for so much more food while simultaneously reducing adverse environmental effects of today's agriculture practices? Will we be able to produce the additional food using less land and water than we use now? These are among the most important challenges that face our planet in the coming decades. The broad themes of food systems and people, agriculture and the environment, the science of agriculture, agricultural products, and agricultural

production systems are covered in more than 200 separate chapters of this work. The book provides information that serves as the foundation for discussion of the food and environment challenges of the world. An international group of highly respected authors addresses these issues from a global perspective and provides the background, references, and linkages for further exploration of each of topics of this comprehensive work. Addresses important challenges of sustainability and efficiency from a global perspective. Takes a detailed look at the important issues affecting the agricultural and food industries today. Full colour throughout. The twentieth century witnessed an era of unprecedented, large-scale, anthropogenic changes to the natural environment. Understanding how environmental factors directly and indirectly affect the emergence and spread of infectious disease has assumed global importance for life on this planet. While the causal links between environmental change and disease emergence are complex, progress in understanding these links, as well as how their impacts may vary across space and time, will require transdisciplinary, transnational, collaborative research. This research may draw upon the expertise, tools, and approaches from a variety of disciplines. Such research may inform improvements in global readiness and capacity for surveillance, detection, and response to emerging microbial threats to plant, animal, and human health. The Influence of Global Environmental Change on Infectious Disease Dynamics is the summary of a workshop hosted by the Institute of Medicine Forum on Microbial Threats in September 2013 to explore the scientific and policy implications of the impacts of global environmental change on infectious disease emergence, establishment, and spread. This report examines the observed and potential influence of environmental factors, acting both individually and in synergy, on infectious disease dynamics. The report

considers a range of approaches to improve global readiness and capacity for surveillance, detection, and response to emerging microbial threats to plant, animal, and human health in the face of ongoing global environmental change.

Pathology of Wildlife and Zoo Animals is a comprehensive resource that covers the pathology of wildlife and zoo species, including a wide scope of animals, disease types and geographic regions. It is the definitive book for students, biologists, scientists, physicians, veterinary clinicians and pathologists working with non-domestic species in a variety of settings. General chapters include information on performing necropsies, proper techniques to meet the specialized needs of forensic cases, laboratory diagnostics, and an introduction into basic principles of comparative clinical pathology. The taxon-based chapters provide information about disease in related groups of animals and include descriptions of gross and histologic lesions, pathogenesis and diagnostics. For each group of animals, notable, unique gross and microscopic anatomical features are provided to further assist the reader in deciding whether differences from the domestic animal paradigm are "normal." Additional online content, which includes text, images, and whole scanned glass slides of selected conditions, expands the published material resulting in a comprehensive approach to the topic. Presents a single resource for performing necropsies on a variety of taxa, including terrestrial and aquatic vertebrates and invertebrates Describes notable, unique gross and microscopic anatomical variations among species/taxa to assist in understanding normal features, in particular those that can be mistaken as being abnormal Provides consistent organization of chapters with descriptions of unique anatomic features, common non-infectious and infectious diseases following brief overviews of the taxonomic group Contains full-color, high quality illustrations of diseases Links to a large

online library of scanned slides related to topics in the book that illustrate important histologic findings

This volume looks at all aspects of manipulation of *Leptospira* spp. from strain isolation to the latest techniques used to study the pathogenesis of leptospirosis. The chapters in this book cover topics such as the procedure to cultivate and isolate leptospire from both clinical and environmental samples; using methods like whole genome sequencing and Matrix Assisted Laser Desorption/Ionization Time of Flight Mass Spectrometry to identify bacterial species; tools for gene inactivation and in vitro and in vivo assays to study the pathogenesis of leptospirosis; and the use of hamsters to evaluate leptospiral virulence and vaccine candidates. Written in the highly successful *Methods in Molecular Biology* series format, chapters include introductions to their respective topics, lists of the necessary materials and reagents, step-by-step, readily reproducible laboratory protocols, and tips on troubleshooting and avoiding known pitfalls. Cutting-edge and comprehensive, *Leptospira* spp.: *Methods and Protocols* is a valuable resource for researchers interested in learning more about this developing field and these fascinating organisms. *Companion Animal Zoonoses* is a comprehensive resource on diseases transmissible between animals and humans. Presenting detailed prevention and control strategies for zoonotic diseases, the book is an in-depth guide to practical information on the spread of disease between pet animals and humans. *Companion Animal Zoonoses* provides up-to-date information on emerging issues, disease incidence and risk, and management measures. Covering the complete range of companion animal zoonoses, each topic begins with information on etiology, geographic distribution, epidemiology, and pathophysiology and moves into clinical presentation, diagnosis, management, and prevention information for both animals and humans. *Companion Animal Zoonoses* is

an essential reference for practicing veterinarians, public health veterinarians, and veterinary students, and will also appeal to physicians wishing to better understand zoonotic diseases. Key features

- Comprehensive resource on diseases transmitted between companion animals and humans
- Emphasizes prevention and control strategies for zoonotic diseases
- Provides practical information on preventing the spread of disease between pets and owners or veterinary staff
- Offers an in-depth, current guide with coverage of emerging issues, disease incidence and risk, and management measures

While the focus of the first edition was on sub-Saharan Africa, this second edition has significantly expanded contents that include the majority of the infectious diseases of livestock that occur world-wide. Each of the infectious diseases is dealt with in terms of its introduction and history, epidemiology, pathogenesis, clinical signs, pathology, diagnosis, differential diagnosis, and control. A comprehensive list of references is provided for each disease. To facilitate readability, references are numbered in the text.

The 2018 FAO-OIE-WHO (Tripartite) zoonoses guide, "Taking A Multisectoral, One Health Approach: A Tripartite Guide to Addressing Zoonotic Diseases in Countries" (2018 TZG) is being jointly developed to provide member countries with practical guidance on OH approaches to build national mechanisms for multisectoral coordination, communication, and collaboration to address zoonotic disease threats at the animal-human-environment interface. The 2018 TZG updates and expands on the guidance in the one previous jointly-developed, zoonoses-specific guidance document: the 2008 Tripartite "Zoonotic Diseases: A

Guide to Establishing Collaboration between Animal and Human Health Sectors at the Country Level”, developed in WHO South-East Asia Region and Western Pacific Region. The 2018 TZG supports building by countries of the resilience and capacity to address emerging and endemic zoonotic diseases such as avian influenza, rabies, Ebola, and Rift Valley fever, as well as food-borne diseases and antimicrobial resistance, and to minimize their impacts on health, livelihoods, and economies. It additionally supports country efforts to implement WHO International Health Regulations (2005) and OIE international standards, to address gaps identified through external and internal health system evaluations, and to achieve targets of the Sustainable Development Goals. The 2018 TZG provides relevant country ministries and agencies with lessons learned and good practices identified from country-level experiences in taking OH approaches for preparedness, prevention, detection and response to zoonotic disease threats, and provides guidance on multisectoral communication, coordination, and collaboration. It informs on regional and country-level OH activities and relevant unisectoral and multisectoral tools available for countries to use. Prepared under the auspices of the American College of Laboratory Animal Medicine, this second edition has been thoroughly updated and revised to improve utility and readability. The book is now organized by vertebrate host species, with parasites presented phylogenetically within chapters. Additional highlights of this edition include introductory chapters on modern diagnostic techniques and parasite biology, and a new appendix

features a complete drug formulary. The well-presented and extensively illustrated volume addresses all aspects of laboratory animal parasites. Regarded as the most comprehensive and authoritative work available on the topic, this book is an essential reference for veterinary parasitologists, clinicians, students and laboratory animal scientists.

This book provides readers with information on the factors underlying the emergence of infectious diseases originating in animals and spreading to people. The One Health concept recognizes the important links between human, animal, and environmental health and provides an important strategy in epidemic mitigation and prevention. The essential premise of the One Health concept is to break down the silos among the different health professions and promote transdisciplinary collaborations. These concepts are illustrated with in-depth analyses of specific zoonotic agents and with examples of the successes and challenges associated with implementing One Health. The book also highlights some of the challenges societies face in confronting several specific zoonotic diseases. A chapter is included on comparative medicine to demonstrate the broad scope of the One Health concept. Edited by a team including the One Health Initiative pro bono members, the book is dedicated to those studying zoonotic diseases and comparative medicine in both human and veterinary medicine, to those involved in the prevention and control of zoonotic infections and to those in the general public interested in the visionary field of One Health.

Treat the diseases affecting large animals! *Veterinary Medicine, 11th Edition* provides up-to-date information on the diseases of horses, cattle, sheep, goats, and pigs. Comprehensive coverage includes the principles of clinical examination and making a diagnosis, along with specific therapy recommendations. For easier use, this edition has been divided into two volumes and restructured into a logical, anatomically based approach to disease. From internationally known veterinary experts Peter Constable, Kenneth Hinchcliff, Stanley Done, and Walter Grünberg, this book is the definitive, one-stop reference for farm animal and equine care.

Comprehensive coverage includes information essential to any large-animal veterinarian, especially those working with horses, cattle, sheep, goats, or pigs.

Coverage of diseases addresses major large-animal diseases of all countries, including foreign animal and emerging diseases. User-friendly format makes it easier to quickly absorb key information. Quick review/synopsis sections make important information on complex diseases easy to find. NEW! Convenient, easy-access format is organized by organ systems, and divides the content into two compact volumes with the same authoritative coverage. Nearly 200 new color photographs and line drawings are included in this edition. NEW full-color design improves navigation, clarifies subject headings, and includes more boxes, tables, and charts for faster reference. New Diseases Primarily Affecting the Reproductive System chapter is added. Updated and expanded chapter on pharmacotherapy lists therapeutic interventions and

offers treatment boxes and principles of antibiotic use. Expanded sections on herd health include biosecurity and infection control, and valuable Strength of Evidence boxes. NEW or extensively revised sections include topics such as the Schmallenberg and Bluetongue viral epidemics of ruminants in Europe, Wesselbron disease in cattle, hypokalemia in adult cattle, equine multinodular pulmonary fibrosis, Hendra virus infection, porcine reproductive and respiratory syndrome, torque teno virus, and numerous recently identified congenital and inherited disorders of large animals. Additional content is provided on lameness in cattle and the diseases of cervids.

Humans are part of an ecosystem, and understanding our relationship with the environment and with other organisms is a prerequisite to living together sustainably. Zoonotic diseases, which are spread between animals and humans, are an important issue as they reflect our relationship with other animals in a common environment. Zoonoses are still presented with high occurrence rates, especially in rural communities, with direct and indirect consequences for people. In several cases, zoonosis could cause severe clinical manifestations and is difficult to control and treat.

Moreover, the persistent use of drugs for infection control enhances the potential of drug resistance and impacts on ecosystem balance and food production. This book demonstrates the importance of understanding zoonosis in terms of how it allows ecosystems to transform, adapt, and evolve. Ecohealth/One Health approaches recognize the interconnections among people, other organisms,

and their shared developing environment. Moreover, these holistic approaches encourage stakeholders of various disciplines to collaborate in order to solve problems related to zoonosis. The reality of climate change necessitates considering new variables in studying diseases, particularly to predict how these changes in the ecosystems can affect human health and how to recognize the boundaries between medicine, veterinary care, and environmental and social changes towards healthy and sustainable development.

This book is contemporary, topical and global in its approach, and provides an essential, comprehensive treatise on bovine tuberculosis and the bacterium that causes it, *Mycobacterium bovis*. Bovine tuberculosis remains a major cause of economic loss in cattle industries worldwide, exacerbated in some countries by the presence of a substantial wildlife reservoir. It is a major zoonosis, causing human infection through consumption of unpasteurised milk or by close contact with infected animals. Following a systematic approach, expert international authors cover epidemiology and the global situation; microbial virulence and pathogenesis; host responses to the pathogen; and diagnosis and control of the disease. Aimed at researchers and practising veterinarians, this book is essential for those needing comprehensive information on the pathogen and disease, and offers a summary of key information learned from human tuberculosis research. It will be useful to those studying the infection and for those responsible for controlling the disease.

"Although there is debate about the estimated health

burden of rabies, the estimates of direct mortality and the DALYs due to rabies are among the highest of the neglected tropical diseases. Poor surveillance, underreporting in many developing countries, frequent misdiagnosis of rabies, and an absence of coordination among all the sectors involved are likely to lead to underestimation of the scale of the disease. It is clear, however, that rabies disproportionately affects poor rural communities, and particularly children. Most of the expenditure for post-exposure prophylaxis is borne by those who can least afford it. As a result of growing dog and human populations, the burden of human deaths from rabies and the economic costs will continue to escalate in the absence of concerted efforts and investment for control. Since the first WHO Expert Consultation on Rabies in 2004, WHO and its network of collaborating centres on rabies, specialized national institutions, members of the WHO Expert Advisory Panel on Rabies and partners such as the Gates Foundation, the Global Alliance for Rabies Control and the Partnership for Rabies Prevention, have been advocating the feasibility of rabies elimination regionally and globally and promoting research into sustainable cost-effective strategies. Those joint efforts have begun to break the cycle of rabies neglect, and rabies is becoming recognized as a priority for investment. This Consultation concluded that human dog-transmitted rabies is readily amenable to control, regional elimination in the medium term and even global elimination in the long term. A resolution on major neglected tropical diseases, including rabies, prepared for submission to

the World Health Assembly in May 2013 aims at securing Member States' commitment to the control, elimination or eradication of these diseases.

Endorsement of the resolution would open the door for exciting advances in rabies prevention and control."--Publisher's description.

An easy-to-read, comprehensive manual to help agronomists and community members protect local cattle, poultry, and crops from incidental or deliberate infestations.

Tackling One Health from a multi-disciplinary perspective, this book offers in-depth insight into how our health and the health of every living creature and our ecosystem are all inextricably connected. Presents critical population health topics, written by an international group of experts

Addresses the technical aspects of the subject  
Offers potential policy solutions to help mitigate current threats and prevent additional threats from occurring

Leptospirosis is a potentially serious but treatable zoonotic disease representing a worldwide public health hazard. Its symptoms may mimic those of a number of other unrelated infections such as influenza meningitis hepatitis dengue or viral haemorrhagic fevers. It is important to distinguish leptospirosis from these diseases. For this reason new diagnostic methods have been developed in recent years. In humid tropical and subtropical areas

where most developing countries are located leptospirosis poses a greater health problem than in areas with a temperate climate. Because leptospirosis is easily overlooked and consequently underreported in many parts of the world it is necessary to increase awareness and knowledge of the disease as a public health threat. The aim of these guidelines is to assist in this process. The target groups to which these guidelines are directed consist of health workers clinicians laboratory technicians microbiologists public health workers veterinarians and biologists with an interest in zoonoses having no specialized knowledge of leptospirosis but who wish to be generally informed about the microorganism concerned and the disease that it may cause. This is not a handbook and avoids technical details but the interested reader can find further information in the annexes and the general bibliography. These guidelines are concerned essentially with human leptospirosis.

Provides a fully revised Eleventh Edition of the definitive reference to swine health and disease Diseases of Swine has been the definitive reference on swine health and disease for over 60 years. This new edition has been completely revised to include the latest information, developments, and research in the field. Now with full color images throughout, this comprehensive and authoritative resource has been redesigned for improved consistency and

readability, with a reorganized format for more intuitive access to information. Diseases of Swine covers a wide range of essential topics on swine production, health, and management, with contributions from more than 100 of the foremost international experts in the field. This revised edition makes the information easy to find and includes expanded information on welfare and behavior. A key reference for anyone involved in the swine industry, Diseases of Swine, Eleventh Edition: Presents a thorough revision to the gold-standard reference on pig health and disease Features full color images throughout the book Includes information on the most current advances in the field Provides comprehensive information on swine welfare and behavior Offers a reorganized format to make the information more accessible Written for veterinarians, academicians, students, and individuals and agencies responsible for swine health and public health, Diseases of Swine, Eleventh Edition is an essential guide to swine health.

Taking a Multisectoral One Health Approach : A Tripartite Guide to Addressing Zoonotic Diseases in Countries Food & Agriculture Org.

Zoonoses are infectious diseases that can be transmitted from animals (both wild and domestic) to humans. A significant number of emerging and re-emerging waterborne zoonotic pathogens have been

recognised over recent decades, such as SARS, E. coli, campylobacter and cryptosporidium. This publication assesses current knowledge about waterborne zoonoses and identifies strategies and research needs for anticipating and controlling future emerging water-related diseases, in order to better protect the health of both humans and animals. It is based on the discussions of a workshop held in the United States in September 2003, which included 29 experts from 14 countries and diverse disciplines including microbiology, water epidemiology, medicine, sanitary engineering, food safety and regulatory policy.

Zoonoses are currently considered as one of the most important threats for public health worldwide. Zoonoses can be defined as any disease or infection that is naturally transmissible from vertebrate or invertebrate animals to humans and vice-versa. Approximately 75% of recently emerging infectious diseases affecting humans are diseases of animal origin; approximately 60% of all human pathogens are zoonotic. All types of potential pathogenic agents, including viruses, parasites, bacteria and fungi, can cause these zoonotic infections. From the wide range of potential vectors of zoonoses, insects are probably those of major significance due to their abundance, high plasticity and adaptability to different kinds of pathogens, high degrees of synanthropism in several groups and difficulties to

apply effective programs of population control. Although ticks, flies, cockroaches, bugs and fleas are excellent insects capable to transmit viruses, parasites and bacteria, undoubtedly mosquitoes are the most important disease vectors. Mosquito borne diseases like malaria, dengue, equine encephalitis, West Nile, Mayaro or Chikungunya are zoonoses with increasing incidence in last years in tropical and temperate countries. Vertebrates can also transmit serious zoonoses, highlighting the role of some carnivorous animals in rabies dissemination or the spread of rodent borne diseases in several rural and urban areas. Moreover, the significance of other food borne zoonoses such as taeniasis, trichinellosis or toxoplasmosis may not been underestimated. According to WHO, FAO and OIE guidelines an emerging zoonotic disease can be defined as a zoonosis that is newly recognized or newly evolved, or that has occurred previously but shows an increase of incidence or expansion in geographical, host or vector range. There are many factors that can provoke or accelerate the emergence of zoonoses, such as environmental changes, habitat modifications, variations of human and animal demography, pathogens and vectors anomalous mobilization related with human practices and globalization, deterioration of the strategies of vector control or changes in pathogen genetics. To reduce public health risks from zoonoses is absolutely

necessary to acquire an integrative perspective that includes the study of the complexity of interactions among humans, animals and environment in order to be able to fight against these issues of primary interest for human health. In any case, although zoonoses represent significant public health threats, many of them still remain as neglected diseases and consequently are not prioritized by some health international organisms.

Understanding animal andrology is fundamental to optimising genetic breeding traits in domestic and wild animals. This book provides extensive coverage of male reproductive biology, discussing the essentials of sperm production, harvest and preservation before covering the applications to a range of animals including cattle, horses, pigs, small ruminants, camelids, cats and dogs, poultry and exotic species. It also examines the laboratory procedures that provide the basis of general fertility research.

Modern transportation allows people, animals, and plants--and the pathogens they carry--to travel more easily than ever before. The ease and speed of travel, tourism, and international trade connect once-remote areas with one another, eliminating many of the geographic and cultural barriers that once limited the spread of disease. Because of our global interconnectedness through transportation, tourism and trade, infectious diseases emerge more frequently; spread greater distances; pass more easily between humans and animals; and evolve into new and more virulent strains. The IOM's Forum on Microbial Threats hosted the workshop "Globalization, Movement of Pathogens (and Their Hosts) and the Revised International Health Regulations" December 16-17, 2008 in order to explore issues related to infectious

disease spread in a "borderless" world. Participants discussed the global emergence, establishment, and surveillance of infectious diseases; the complex relationship between travel, trade, tourism, and the spread of infectious diseases; national and international policies for mitigating disease movement locally and globally; and obstacles and opportunities for detecting and containing these potentially wide-reaching and devastating diseases. This document summarizes the workshop.

Bovine Reproduction is a comprehensive, current reference providing information on all aspects of reproduction in the bull and cow. Offering fundamental knowledge on evaluating and restoring fertility in the bovine patient, the book also places information in the context of herd health where appropriate for a truly global view of bovine theriogenology. Printed in full color throughout, the book includes 83 chapters and more than 550 images, making it the most exhaustive reference available on this topic. Each section covers anatomy and physiology, breeding management, and reproductive surgery, as well as obstetrics and pregnancy wastage in the cow. Bovine Reproduction is a welcome resource for bovine practitioners, theriogenologists, and animal scientists, as well as veterinary students and residents with an interest in the cow.

The emergence of HIV disease and AIDS, the reemergence of tuberculosis, and the increased opportunity for disease spread through international travel demonstrate the critical importance of global vigilance for infectious diseases. This volume highlights risk factors for the emergence of microbial threats to health, warns against complacency in public health, and promotes early prevention as a cost-effective and crucial strategy for maintaining public health in the United States and worldwide. The volume identifies infectious disease threats posed by bacteria and viruses, as well as protozoans,

helminths, and fungi. Rich in information, it includes a historical perspective on infectious disease, with focuses on Lyme disease, peptic ulcer, malaria, dengue, and recent increases in tuberculosis. The panel discusses how "new" diseases arise and how "old" ones resurge and considers the roles of human demographics and behavior, technology and industry, economic development and land use, international travel and commerce, microbial adaptation and change, and breakdown of public health measures in changing patterns of infectious disease. Also included are discussions and recommendations on disease surveillance; vaccine, drug, and pesticide development; vector control; public education and behavioral change; research and training; and strengthening of the U.S. public health system. This volume will be of immediate interest to scientists specializing in all areas of infectious diseases and microbiology, healthy policy specialists, public health officials, physicians, and medical faculty and students, as well as anyone interested in how their health can be threatened by infectious diseases.

The book will cover the most important zoonoses with a public health impact and debate actual developments in this field from a One Health perspective. The outline of the book follows a "setting" approach, i.e. special settings of zoonoses with a public health aspect, rather than presenting a simple textbook of an encyclopedic character. Main chapters will deal with zoonoses in the food chain including a special focus on the emerging issue of antibiotic resistance, with zoonoses in domestic and pet animals, in wildlife animal species (including bats as an important infectious agent multiplier), influenza and tuberculosis as most prominent zoonoses, and zoonotic pathogens as bioterroristic agents. Special interest chapters debate non-resolved and currently hotly debated zoonoses (e.g. M. Crohn/paratuberculosis, chronic botulism) as well as the economic and ecological aspects of zoonoses.

One Health is an emerging concept that aims to bring together human, animal, and environmental health. Achieving harmonized approaches for disease detection and prevention is difficult because traditional boundaries of medical and veterinary practice must be crossed. In the 19th and early 20th centuries this was not the case—then researchers like Louis Pasteur and Robert Koch and physicians like William Osler and Rudolph Virchow crossed the boundaries between animal and human health. More recently Calvin Schwabe revised the concept of One Medicine. This was critical for the advancement of the field of epidemiology, especially as applied to zoonotic diseases. The future of One Health is at a crossroads with a need to more clearly define its boundaries and demonstrate its benefits. Interestingly the greatest acceptance of One Health is seen in the developing world where it is having significant impacts on control of infectious diseases.

This volume covers all aspects of infection by pathogenic *Leptospira* species, the causative agents of the world's most widespread zoonosis. Topics include aspects of human and animal leptospirosis as well as detailed analyses of our current knowledge of leptospiral structure and physiology, epidemiology, pathogenesis, genomics, immunity and vaccines. Updates are presented on leptospiral systematics, identification and diagnostics, as well as practical information on culture of *Leptospira*. Contact information is also provided for *Leptospira* reference centers. All chapters were written by experts in the field, providing an invaluable reference source for scientists, veterinarians, clinicians and all others with an interest in leptospirosis.

Leptospirosis is a worldwide-distributed, re-emerging zoonosis due to the large variety of wild and domestic animal species that can play the role of natural or accidental host. Currently, specific animal species play an important role as

reservoirs for particular *Leptospira* serovars, although recent investigations have highlighted new host-pathogen interactions involved in *Leptospira* epidemiology. Furthermore, the constant modification of ecosystems and wildlife habitats and the constantly increasing number of animal species moving towards urban or peri-urban areas are increasing the possibility of direct or indirect contact between wildlife and domestic animals; furthermore, the constant modification of animal leptospirosis also causes problems for human health. The studies published in this book have evidenced and confirmed the hidden role of a large variety of animal species, domestic and wild, in leptospirosis epidemiology. They highlighted the necessity for continuous monitoring and large-scale surveillance studies to better understand this neglected and re-emerging zoonosis.

A Seminar in the CEC Programme of Coordination of Research on Animal Pathology, held at the Veterinary Research Laboratories, Belfast, Northern Ireland, Oct. 10-11, 1984. Sponsored by the CEC, Directorate-General for Agriculture, Coordination of Agricultural Research.

More than 99% of all human rabies deaths occur in the developing world and although effective and economical control measures are available the disease has not been brought under control throughout most of the affected countries. Given that a major factor in the low level of commitment to rabies control is a lack of accurate data on the true public health impact of the disease this report of a WHO Expert Consultation begins by providing new data on the estimated burden of the disease and its distribution in the world. It also reviews recent progress in the classification of rabies viruses rabies pathogenesis and diagnosis rabies pre- and post-exposure prophylaxis the management of rabies patients and canine as well as wildlife rabies prevention and control.

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