



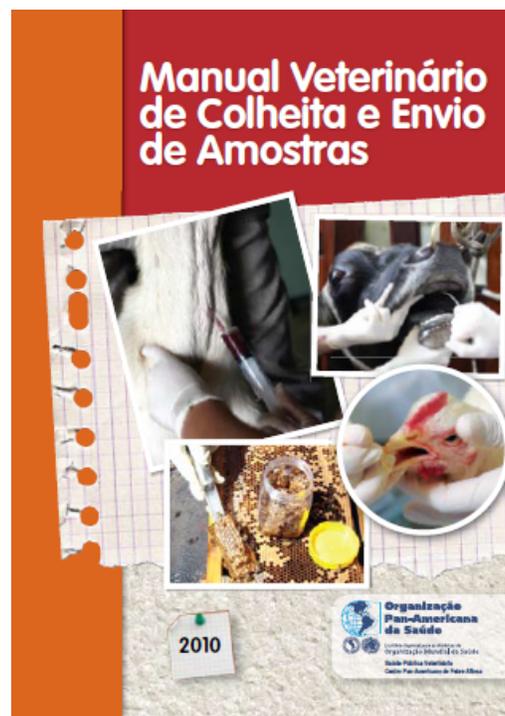
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Objetivos/ Objectives

Identificar y atender las necesidades de información, adquisición, organización, almacenamiento, generación, uso y difusión de la información en salud pública veterinaria y proveer recursos bibliográficos técnicos-científicos al equipo de profesionales de la unidad y a los usuarios externos.

Identify and take care of the needs of information, acquisition, organization, storage, generation, use and diffusion of the information in veterinary public health and provide technical scientific bibliographical resources to the professional staff of the unit and to the users external.

Temas de interés general / Subjects of general interest



O **Manual Veterinário de Colheita e Envio de Amostras** foi elaborado de forma simples, prática e com uma visão atualizada dos aspectos mais importantes da colheita de amostra para o diagnóstico das principais doenças dos animais. Os autores deram especial ênfase àqueles pontos que, como base em sua experiência, consideraram de maior interesse, particularmente para os Programas de Saúde Animal do Brasil.

Em seus capítulos, divididos de acordo com os aspectos de biossegurança e com a colheita de amostras para o diagnóstico de doenças de ruminantes, equídeos, suídeos, aves e abelhas *Apis mellifera*, o manual pretende fornecer um apoio ao médico veterinário de campo quanto à correta colheita de

material da espécie afetada e ao sistema comprometido, para que as amostras colhidas de eleição não levem em consideração apenas a doença suspeita quando da realização do exame clínico, o que impossibilitaria os diagnósticos diferenciais.

Sua proposta é servir de guia para consulta rápida e objetiva por veterinários de campo do serviço oficial ou autônomos. Visa assim, aprimorar a qualidade da amostra colhida e assegurar sua correta conservação e envio, facilitando à rede laboratorial a realização de diagnósticos rápidos e conclusivos, no âmbito dos Programas Nacionais de Sanidade Animal.

Este Manual foi realizado no âmbito do Termo de Cooperação Técnica (TCT) com o Ministério de Agricultura, Pecuária e Abastecimento (MAPA) e o Centro Pan-Americano de Febre Aftosa (PANAFTOSA) da Organização Pan-Americana da Saúde (OPAS)/ Organização Mundial da Saúde (OMS).

Informaciones disponibles en formato electrónico / Information available in electronic format

Enfermedad de Chagas / Chagas Disease



Chagas disease

Rassi A Jr, Rassi A, Marin-Neto JA

Lancet 2010 Apr; 375 (9723): 1388-402

Chagas disease is a chronic, systemic, parasitic infection caused by the protozoan *Trypanosoma cruzi*, and was discovered in 1909. The disease affects about 8 million people in Latin America, of whom 30-40% either have or will develop cardiomyopathy, digestive megasyndromes, or both. In the past three decades, the control and management of Chagas disease has undergone several improvements. Large-scale vector control programmes and screening of blood donors have reduced disease incidence and prevalence. Although more effective trypanocidal drugs are needed, treatment with benznidazole (or nifurtimox) is reasonably safe and effective, and is now recommended for a widened range of patients. Improved models for risk stratification are available, and certain guided treatments could halt or reverse disease progression. By contrast, some challenges remain: Chagas disease is becoming an emerging health problem in non-endemic areas because of growing population movements; early detection and treatment of asymptomatic individuals are underused; and the potential benefits of novel therapies (eg, implantable cardioverter defibrillators) need assessment in prospective randomised trials.

Text in English

[http://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(10\)60061-X/fulltext](http://www.thelancet.com/journals/lancet/article/PIIS0140-6736(10)60061-X/fulltext)



New drugs for neglected infectious diseases: Chagas' disease

Machado FS, Tanowitz HB, Teixeira MM

Br J Pharmacol. 2010 May; 160 (2): 258-9

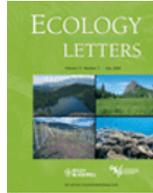
Chagas' disease (CD) is caused by the protozoan *Trypanosoma cruzi* (Tc) and remains an important cause of morbidity and mortality. Most researchers in the field now agree that chronic low grade parasite persistence in tissue drives tissue damage and the autoimmune component of CD. Current therapy relies on two compounds: benznidazole and nifurtimox. Despite their long history in the treatment of CD, both compounds induce significant side-effects. In the current issue of the BJP, two contributions demonstrate that NO-donors are active, especially in combination with benznidazole, against Tc in vitro and in experimental models in vivo. The basic concept used by the authors to develop novel anti-Tc compounds relied on the demonstrated ability of nitric oxide to kill the parasite. There are several issues still to be resolved but the reported studies are a clear advance to the field and should be

considered for further pre-clinical development.

Text in English

<http://www3.interscience.wiley.com/cgi-bin/fulltext/123389006/PDFSTART>

Ecología de las Enfermedades / Disease Ecology



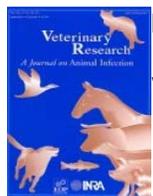
Seeking a second opinion: uncertainty in disease ecology

McClintock BT, Nichols JD, Bailey LL, Mackenzie DI, Kendall WL, Franklin AB
Ecol Lett. 2010 Apr

Analytical methods accounting for imperfect detection are often used to facilitate reliable inference in population and community ecology. We contend that similar approaches are needed in disease ecology because these complicated systems are inherently difficult to observe without error. For example, wildlife disease studies often designate individuals, populations, or spatial units to states (e.g., susceptible, infected, post-infected), but the uncertainty associated with these state assignments remains largely ignored or unaccounted for. We demonstrate how recent developments incorporating observation error through repeated sampling extend quite naturally to hierarchical spatial models of disease effects, prevalence, and dynamics in natural systems. A highly pathogenic strain of avian influenza virus in migratory waterfowl and a pathogenic fungus recently implicated in the global loss of amphibian biodiversity are used as motivating examples. Both show that relatively simple modifications to study designs can greatly improve our understanding of complex spatio-temporal disease dynamics by rigorously accounting for uncertainty at each level of the hierarchy.

Text in English (article in press)

Enfermedades Virales Emergentes / Viral Disease Emergence



Mechanisms of viral emergence

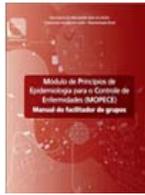
Esteban D
Vet Res. 2010; 41: 38

A number of virologic and environmental factors are involved in the emergence and re-emergence of viral disease. Viruses do not conservatively occupy a single and permanent ecological niche. Rather, due to their intrinsic capacity for genetic change, and to the evolvability of fitness levels, viruses display a potential to parasitize alternative host species. Mutation, recombination and genome segment reassortment, and combination of these molecular events, produce complex and phenotypically diverse populations of viruses, which constitute the raw material on which selection acts. The majority of emerging viral diseases of humans have a zoonotic origin. Sociologic and ecologic factors produce diverse and changing environments in which viral subpopulations have ample opportunities to be selected from intrinsically heterogeneous viral populations, particularly in the case of RNA viruses. In this manner, new human, animal and plant viruses have emerged periodically and, from all evidence, will continue to emerge. This article reviews some of the mechanisms that have been identified in viral emergence, with a focus on the importance of genetic variation of viruses, and on the general concept of biological complexity.

Text in English

<http://www.vetres.org/articles/vetres/pdf/2010/06/v09583.pdf>

Epidemiologia / Epidemiology



Módulos de Princípios de Epidemiologia para o Controle de Enfermidades (MOPECE) OPAS, 2010

O MOPECE é um instrumento de capacitação em epidemiologia básica, voltado para profissionais de saúde, especialmente aqueles que atuam nos serviços de saúde locais, que tem por finalidade promover o conhecimento e a aplicação prática dos conteúdos epidemiológicos no enfrentamento dos problemas de saúde local, assim como no apoio ao planejamento e gestão em saúde.

Esta versão traduzida para o português é um trabalho resultante da cooperação técnica entre a OPAS/OMS e a Secretaria de Vigilância em Saúde (SVS) do Ministério da Saúde do Brasil.

MODULOS:

Manual do Facilitador de Grupos

http://new.paho.org/bra/index.php?option=com_docman&task=doc_download&gid=948&Itemid=423

Módulo 1 - Apresentação e marco conceitual

http://new.paho.org/bra/index.php?option=com_docman&task=doc_download&gid=949&Itemid=423

Módulo 2 - Saúde na população

http://new.paho.org/bra/index.php?option=com_docman&task=doc_download&gid=950&Itemid=423

Módulo 3 - Medição das condições de saúde e doença na população

http://new.paho.org/bra/index.php?option=com_docman&task=doc_download&gid=951&Itemid=423

Módulo 4 - Vigilância em saúde pública

http://new.paho.org/bra/index.php?option=com_docman&task=doc_download&gid=952&Itemid=423

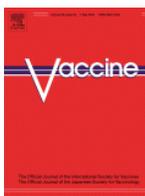
Módulo 5 - Investigação epidemiológica de campo: aplicação ao estudo de surtos

http://new.paho.org/bra/index.php?option=com_docman&task=doc_download&gid=953&Itemid=423

Módulo 6 - Controle de doenças na população

http://new.paho.org/bra/index.php?option=com_docman&task=doc_download&gid=954&Itemid=423

Fiebre Aftosa / Foot-and-Mouth Disease



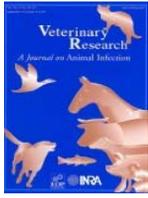
No between-pen transmission of foot-and-mouth disease virus in vaccinated pigs

van Roermund HJ, Eblé PL, de Jong MC, Dekker A
Vaccine 2010 Apr

Many studies have shown transmission of foot-and-mouth disease virus (FMDV) within groups of pigs, even when vaccinated, but only limited information is available on transmission between-pens. Three new experiments were carried out in two replicates, which consisted of infectious pigs housed in a central pen surrounded by four separate pens. First, all pigs were non-vaccinated and pens were separated by a walkway of 40-70cm. Second, all pigs were non-vaccinated again but pens were adjacent. Third, this was repeated with all pigs vaccinated. From the experiments it is concluded that a single pen wall of solid wood between adjacent pens reduces the FMDV transmission 10-20-fold compared to within-pen transmission, for both non-vaccinated and for vaccinated pigs. Vaccination of pigs reduces the pen-to-adjacent pen R to values significantly below 1, whereas previous studies showed that it does not reduce the within-pen R(0) to values below 1.

Text in English (article in press)

Influenza Aviar / Avian Influenza



Evaluation of effectiveness and efficiency of wild bird surveillance for avian influenza

Knight-Jones TJ, Hauser R, Matthes D, Stärk KD
Vet Res. 2010 Apr; 41 (4): 50

This study aimed to assess which method of wild waterbird surveillance had the greatest probability of detecting highly pathogenic avian influenza (HPAI) H5N1 during a period of surveillance activity, the cost of each method was also considered. Lake Constance is a major wintering centre for migratory waterbirds and in 2006 it was the site of an HPAI H5N1 epidemic in wild birds. Avian influenza surveillance was conducted using harmonised approaches in the three countries around the lake, Austria, Germany and Switzerland, from 2006-2009. The surveillance consisted of testing birds sampled by the following methods: live birds caught in traps, birds killed by hunters, birds caught in fishing nets, dead birds found by the public and catching live Mute Swans (*Cygnus olor*); sentinel flocks of Mallards (*Anas platyrhynchos*) were also used. Scenario tree analysis was performed including sensitivity analysis, followed by assessment of cost-effectiveness. Results indicated that if HPAI H5N1 was present at 1% prevalence and assuming HPAI resulted in bird mortality, sampling dead birds found by the public and sentinel surveillance were the most sensitive approaches despite residual uncertainty over some parameters. The uncertainty over the mortality of infected birds was an influential factor. Sampling birds found dead was most cost-effective, but strongly dependent on mortality and awareness of the public. Trapping live birds was least cost-effective. Based on our results, we recommend that future HPAI H5N1 surveillance around Lake Constance should prioritise sentinel surveillance and, if high mortality is expected, the testing of birds found dead.

Text in English

<http://www.vetres.org/index.php?option=article&access=standard&Itemid=129&url=/articles/vetres/pdf/2010/04/v09603.pdf>

Inocuidad de los Alimentos / Food Safety



Burden of Acute Gastrointestinal Illness in Gálvez, Argentina, 2007

Thomas MK, Pérez Gutiérrez E, Majowicz SE, Reid-Smith R, Albil S, Monteverde M, McEwen SA
J Health Popul Nut 2010; 28 (2): 149-158

This study evaluated the magnitude and distribution of acute gastrointestinal illness (GI) in Gálvez, Argentina, and assessed the outcome of a seven-day versus 30-day recall period in survey methodology. A cross-sectional population survey, with either a seven-day or a 30-day retrospective recall period, was conducted through door-to-door visits to randomly-selected residents during the 'high' and the 'low' seasons of GI in the community. Comparisons were made between the annual incidence rates obtained using the seven-day and the 30-day recall period. Using the 30-day recall period, the mean annual incidence rates was 0.43 (low season of GI) and 0.49 (high season of GI) episodes per person-year. Using the seven-day recall period, the mean annual incidence rate was 0.76 (low season of GI) and 2.66 (high season of GI) episodes per person-year. This study highlights the significant burden of GI in a South American community and confirms the importance of seasonality when investigating GI in the population. The findings suggest that a longer recall period may underestimate the burden of GI in retrospective population surveys of GI.

Text in English

<http://www.icddrb.org/uploads/originaluploads/JHPN282-Burden%20of%20Acute%20Gastrointestinal%20Illness.pdf>

Leishmaniasis



Study of sand fly fauna in an endemic area of American cutaneous leishmaniasis and canine visceral leishmaniasis in the municipality of Espírito Santo do Pinhal, São Paulo, Brazil

Colla-Jacques FE, Casanova C, Prado AP
Mem Inst Oswaldo Cruz 2010; 105 (2): 208-15

Canine American visceral leishmaniasis and American cutaneous leishmaniasis (ACL) cases have been recorded in Espírito Santo do Pinhal. The aim of this study was to gather knowledge of the sand fly community and its population ecology within the municipality. Captures were made weekly over a period of 15 months in the urban, periurban and rural areas of the municipality, using automatic light traps. A total of 5,562 sand flies were collected, comprising 17 species. The most abundant species were *Nyssomyia whitmani* and *Pintomyia pessoai* in the rural area, *Lutzomyia longipalpis* and *Ny. whitmani* in the periurban area and *Lu. longipalpis* in the urban area. The highest species richness and greatest index species diversity were found in the rural area. The similarity index showed that urban and periurban areas were most alike. *Lu. longipalpis* was found in great numbers during both dry and humid periods. The presence of dogs infected with *Leishmania infantum chagasi* in the urban area indicates a high risk for the establishment of the disease in the region. A high abundance of *Ny. whitmani* and *Pi. pessoai* in the rural and periurban areas indicates the possibility of new cases of ACL occurring in and spreading to the periurban area of Espírito Santo do Pinhal.

Text in English

<http://www.scielo.br/pdf/mioc/v105n2/17.pdf>

Rabia / Rabies



Gato doméstico: futuro desafio para controle da raiva em áreas urbanas?

Genaro G
Pesq Vet Bras. 2010; 30 (2) 186-9

O objetivo deste artigo foi introduzir debate a respeito da presente e, possivelmente, da futura relevância crescente do gato doméstico, no que se refere à saúde pública, com ênfase para a raiva (animal/urbana). A literatura científica que trata do papel específico do gato em relação às zoonoses ainda é reduzida. Essa espécie está se tornando o mais popular animal de companhia no mundo ocidental urbano, particularmente devido ao estilo de vida adotado pelas pessoas, com reduzido espaço residencial e pouco tempo disponível para se dedicarem aos animais de companhia, o que prejudica especialmente o cão, animal, até então, preferencial. A predominância do gato ainda não é observada no Brasil, contudo, se, em breve, ela for aqui reproduzida ter-se-á que rever as estratégias adotadas, particularmente nas campanhas de vacinação antirrábica. E as características etológicas do felino doméstico deverão ser consideradas para se estabelecer estratégias mais adequadas para que se vacine o número de animais recomendado.

Texto in Portuguese

<http://www.scielo.br/pdf/pvb/v30n2/v30n2a15.pdf>



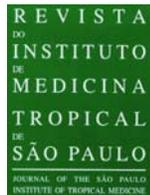
Genetic characterization of rabies virus isolated from bovines and equines between 2007 and 2008, in the States of São Paulo and Minas Gerais

Macedo CI, Carnieli Junior P, Fahl WO, Lima JYO, Oliveira RN, Achkar SM, Castilho JG, Carrieri ML, Kotait I
Rev Soc Bras Med Trop. 2010; 43 (2): 116-20

Introduction: Rabies is an acute disease of the central nervous system and is responsible for the deaths of thousands of humans, wild animals and livestock, particularly cattle, as well as causing major economic losses. This study describes the genetic characterization of rabies virus variants that circulate in *Desmodus rotundus* populations and are transmitted to herbivores. **Methods:** Fifty rabies virus isolates from bovines and equines in the States of São Paulo and Minas Gerais, Brazil, were genetically characterized and compared with sequences retrieved from GenBank. **Results:** Two clusters (I and II) with mean nucleotide identities of 99.1 and 97.6% were found. The first of these contained nearly all the samples analyzed. Lineages from other Brazilian states grouped in cluster II. **Conclusions:** Analysis of the amino acid sequences of the N proteins revealed the existence of genetic markers that may indicate possible variations between geographic regions, although the biologically active regions are conserved within the species over space and time.

Text in English

<http://www.scielo.br/pdf/rsbmt/v43n2/02.pdf>



Updated list of bat species positive for rabies in Brazil

Sodré MM, Gama AR, Almeida MF

Rev Inst Med Trop S. Paulo 2010; 52 (2): 75-81

This paper presents an updated list of bat species positive for rabies in Brazil. It was developed based on database research via the internet, of international and national literature and annals of the most important technical and scientific meetings related to rabies and chiroptera in Brazil from 1996 to 2009. The new list of rabies positive bats consists of 41 species, belonging to 25 genera and three families: Phyllostomidae 43.9%, Vespertilionidae 29.3% and Molossidae 26.8%. In addition, questions were raised regarding the lack of data, including sex, age, circumstances and location of bat capture and incomplete and outdated species identification. Results of genetic and antigenic studies performed on Brazilian rabies positive bats were shown.

Text in English

<http://www.scielo.br/pdf/rimtsp/v52n2/03.pdf>

Eventos / Events

XV Congreso Internacional de Medicina Bovina

9-11 **Junio** 2010

Granada, España

<http://www.anembe.com/congresos/congreso2010/index.htm>

V National Veterinary Pathology Congress

14-18 **September** 2010

Bursa, Turkey

<http://vetpat2010.org/eng/index.htm>



Salud Pública Veterinaria
Centro Panamericano de Fiebre Aftosa



Veterinary Public Health
Pan American Foot and Mouth Disease Center

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