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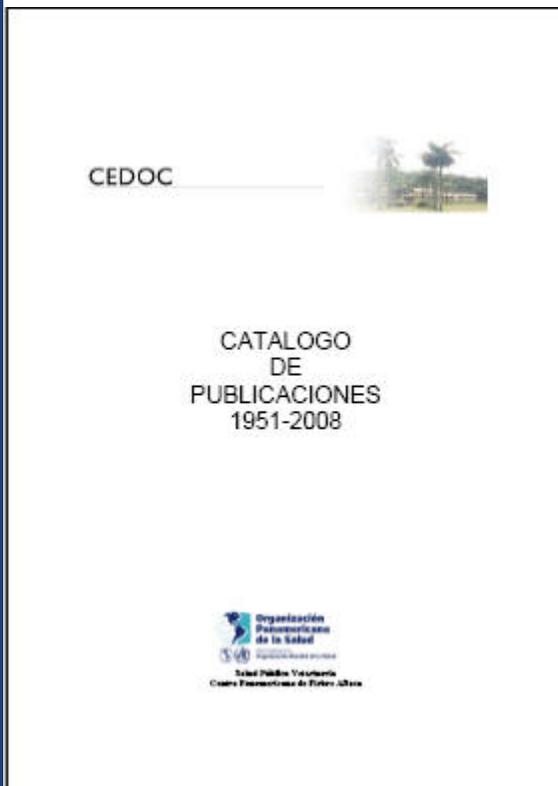
Objetivos/ Objectives

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

CATALOGO DE PUBLICACIONES 1951-2008



El presente catalogo reúne referencias bibliográficas relacionadas a los trabajos publicados por los profesionales del Centro Panamericano de Fiebre Aftosa – VP/OPS/OMS (PANAFTOSA - VP/OPS/OMS) durante el período de 1951-2008 y tiene como finalidad ser mas una herramienta de apoyo a los profesionales que buscan información en el área de salud pública veterinaria.

Al elaborar esta colección, el Centro de Documentación (CEDOC) de PANAFTOSA seleccionó documentos publicados principalmente en revistas científicas, siendo que algunos posibilitan *download* y están disponibles en texto completo.

<http://www.panaftosa.org.br/Comp/Documentacao/doc/Catalogo-1951-2008.pdf>

Informaciones disponibles en formato electrónico / Information available in electronic format

Encefalopatía Espongiforme Bovina (BSE) / Bovine Spongiform Encephalopathy (BSE)



Resistance of bovine spongiform encephalopathy (BSE) prions to inactivation

Giles K, Glidden DV, Beckwith R, Seoanes R, Peretz D, DeArmond SJ, Prusiner SB
PLoS Pathog. 2008 Nov; 4 (11): e1000206

Distinct prion strains often exhibit different incubation periods and patterns of neuropathological lesions. Strain characteristics are generally retained upon intraspecies transmission, but may change on transmission to another species. We investigated the inactivation of two related prions strains: BSE prions from cattle and mouse-passaged BSE prions, termed 301V. Inactivation was manipulated by exposure to sodium dodecyl sulfate (SDS), variations in pH, and different temperatures. Infectivity was measured using transgenic mouse lines that are highly susceptible to either BSE or 301V prions. Bioassays demonstrated that BSE prions are up to 1,000-fold more resistant to inactivation than 301V prions while Western immunoblotting showed that short acidic SDS treatments reduced protease-resistant PrP(Sc) from BSE prions and 301V prions at similar rates. Our findings argue that despite being derived from BSE prions, mouse 301V prions are not necessarily a reliable model for cattle BSE prions. Extending these comparisons to human sporadic Creutzfeldt-Jakob disease and hamster Sc237 prions, we found that BSE prions were 10- and 10(6)-fold more resistant to inactivation, respectively. Our studies contend that any prion inactivation procedures must be validated by bioassay against the prion strain for which they are intended to be used.

Text in English

<http://www.pubmedcentral.nih.gov/picrender.fcgi?artid=2576443&blobtype=pdf>

Fiebre Aftosa / Foot-and-Mouth Disease



Foot-and-mouth disease virus persists in the light zone of germinal centres

Juleff N, Windsor M, Reid E, Seago J, Zhang Z, Monaghan P, Morrison IW, Charleston B
PLOS ONE. 2008; 3 (10): e3434

Foot-and-mouth disease virus (FMDV) is one of the most contagious viruses of animals and is recognised as the most important constraint to international trade in animals and animal products. Two fundamental problems remain to be understood before more effective control measures can be put in place. These problems are the FMDV "carrier state" and the short duration of immunity after vaccination which contrasts with prolonged immunity after natural infection. Here we show by laser capture microdissection in combination with quantitative real-time reverse transcription polymerase chain reaction, immunohistochemical analysis and corroborate by in situ hybridization that FMDV localises rapidly to, and is maintained in, the light zone of germinal centres following primary infection of naive cattle. We propose that maintenance of non-replicating FMDV in these sites represents a source of persisting infectious virus and also contributes to the generation of long-lasting antibody responses against neutralising epitopes of the virus.

Text in English

<http://www.pubmedcentral.nih.gov/picrender.fcgi?artid=2563691&blobtype=pdf>

Influenza Aviar / Avian Influenza



Avian influenza: a global threat needing a global solution

Koh GC, Teck Yee W, Seng Kwing C, Koh D
Asia Pac Fam Med. 2008 Nov; 7 (1): 5

ABSTRACT: There have been three influenza pandemics since the 1900s, of which the 1919-1919 flu pandemic had the highest mortality rates. The influenza virus infects both humans and birds, and mutates using two mechanisms: antigenic drift and antigenic shift. Currently, the H5N1 avian flu virus is limited to outbreaks among poultry and persons in direct contact to infected poultry, but the mortality rate among infected humans is high. Avian influenza (AI) is endemic in Asia as a result of unregulated poultry rearing in rural areas. Such birds often live in close proximity to humans and this increases the chance of genetic reassortment between avian and human influenza viruses which may produce a mutant strain that is easily transmitted between humans. Once this happens, a global pandemic is likely. Unlike SARS, a person with influenza infection is contagious before the onset of case-defining symptoms which limits the effectiveness of case isolation as a control strategy. Researchers have shown that carefully orchestrated of public health

measures could potentially limit the spread of an AI pandemic if implemented soon after the first cases appear. To successfully contain and control an AI pandemic, both national and global strategies are needed. National strategies include source surveillance and control, adequate stockpiles of anti-viral agents, timely production of flu vaccines and healthcare system readiness. Global strategies such as early integrated response, curbing the disease outbreak at source, utilization of global resources, continuing research and open communication are also critical.

Text in English

<http://www.apfmj.com/content/pdf/1447-056x-7-5.pdf>

Leishmaniasis Visceral / Visceral Leishmaniasis



Veterinary Research

Transmission potential, skin inflammatory response, and parasitism of symptomatic and asymptomatic dogs with visceral leishmaniasis

Vercosa BB, Melo CC, Mendonça II, Silva SS, Carvalho SS, Goto HH, Costa FF

BMC Vet Res. 2008 Nov; 4 (1): 45

ABSTRACT: **BACKGROUND:** Visceral leishmaniasis in Brazil is caused by the protozoan *Leishmania* (*Leishmania*) *chagasi* and it is transmitted by sandfly of the genus *Lutzomyia*. Dogs are an important domestic reservoir, and control of the transmission of visceral leishmaniasis (VL) to humans includes the elimination of infected dogs. However, though dogs are considered to be an important element in the transmission cycle of *Leishmania*, the identification of infected dogs representing an immediate risk for transmission has not been properly evaluated. Since it is not possible to treat infected dogs, they are sacrificed when a diagnosis of VL is established, a measure that is difficult to accomplish in highly endemic areas. In such areas, parameters that allow for easy identification of reservoirs that represents an immediate risk for transmission is of great importance for the control of VL transmission. In this study we aimed to identify clinical parameters, reinforced by pathological parameters that characterize dogs with potential to transmit the parasite to the vector. **RESULTS:** The major clinical manifestations of visceral leishmaniasis in dogs from an endemic area were onychogriphosis, skin lesions, conjunctivitis, lymphadenopathy, and weight loss. The transmission potential of these dogs was assessed by xenodiagnosis using *Lutzomyia longipalpis*. Six of nine symptomatic dogs were infective to *Lutzomyia longipalpis* while none of the five asymptomatic dogs were infective to the sandfly. *Leishmania* amastigotes were present in the skin of all clinically symptomatic dogs, but absent in asymptomatic dogs. Higher parasite loads were observed in the ear and ungueal region, and lower in abdomen. The inflammatory infiltrate was more intense in the ears and ungueal regions of both symptomatic and asymptomatic dogs. In clinically affected dogs in which few or none *Leishmania* amastigotes were observed, the inflammatory infiltrate was constituted mainly of lymphocytes and macrophages. When many parasites were present, the infiltrate was also comprised of lymphocytes and macrophages, as well as a larger quantity of polymorphonuclear neutrophils (PMNs). **CONCLUSION:** Dogs that represent an immediate risk for transmission of *Leishmania* in endemic areas present clinical manifestations that include onychogriphosis, skin lesions, conjunctivitis, lymphadenopathy, and weight loss. Lymphadenopathy in particular was a positive clinical hallmark since it was closely related to the positive xenodiagnosis.

Text in English

<http://www.biomedcentral.com/content/pdf/1746-6148-4-45.pdf>

Rabia / Rabies



Veterinary Research

Molecular and geographic analyses of vampire bat-transmitted cattle rabies in central Brazil

Kobayashi Y, Sato G, Mochizuki N, Hirano S, Itou T, Carvalho AA, Albas A, Santos HP, Ito FH, Sakai T

BMC Vet Res. 2008 Nov; 4 (1): 44

ABSTRACT: **BACKGROUND:** Vampire bats are important rabies virus vectors, causing critical problems in both the livestock industry and public health sector in Latin America. In order to assess the epidemiological

characteristics of vampire bat-transmitted rabies, the authors conducted phylogenetic and geographical analyses using sequence data of a large number of cattle rabies isolates collected from a wide geographical area in Brazil. METHODS: Partial nucleoprotein genes of rabies viruses isolated from 666 cattle and 18 vampire bats between 1987 and 2006 were sequenced and used for phylogenetic analysis. The genetic variants were plotted on topographical maps of Brazil. RESULTS: In this study, 593 samples consisting of 24 genetic variants were analyzed. Regional localization of variants was observed, with the distribution of several variants found to be delimited by mountain ranges which served as geographic boundaries. The geographical distributions of vampire-bat and cattle isolates that were classified as the identical phylogenetic group were found to overlap with high certainty. Most of the samples analyzed in this study were isolated from adjacent areas linked by rivers. CONCLUSIONS: This study revealed the existence of several dozen regional variants associated with vampire bats in Brazil, with the distribution patterns of these variants found to be affected by mountain ranges and rivers. These results suggest that epidemiological characteristics of vampire bat-related rabies appear to be associated with the topographical and geographical characteristics of areas where cattle are maintained, and the factors affecting vampire bat ecology.

Text in English

<http://www.biomedcentral.com/content/pdf/1746-6148-4-44.pdf>



Use of geographic information systems in rabies vaccination campaigns

Grisi-Filho, JH, Amaku M, Dias RA, Montenegro Netto H, Paranhos NT, Mendes MC, Ferreira Neto JS, Ferreira F

Rev Saude Publica. 2008 Dec; 42 (6): 1005-11

OBJECTIVE: To develop a method to assist in the design and assessment of animal rabies control campaigns. METHODS: A methodology was developed based on geographic information systems to estimate the animal (canine and feline) population and density per census tract and per subregion (known as "Subprefeituras") in the city of São Paulo (Southeastern Brazil) in 2002. The number of vaccination units in a given region was estimated to achieve a certain proportion of vaccination coverage. Census database was used for the human population, as well as estimates ratios of dog:inhabitant and cat:inhabitant. RESULTS: Estimated figures were 1,490,500 dogs and 226,954 cats in the city, i.e. an animal population density of 1138.14 owned animals per km². In the 2002 campaign, 926,462 were vaccinated, resulting in a vaccination coverage of 54%. The estimated number of vaccination units to be able to reach a 70%-vaccination coverage, by vaccinating 700 animals per unit on average, was 1,729. These estimates are presented as maps of animal density according to census tracts and "Subprefeituras". CONCLUSIONS: The methodology used in the study may be applied in a systematic way to the design and evaluation of rabies vaccination campaigns, enabling the identification of areas of critical vaccination coverage.

Text in English

http://www.scielosp.org/pdf/rsp/v42n6/en_6878.pdf

Text in Portuguese

<http://www.scielosp.org/pdf/rsp/v42n6/6878.pdf>

Zoonosis / Zoonoses



Zoonosis con reservorios silvestres: Amenazas a la salud pública y a la economía

Cabello C C, Cabello C F.

Rev Med Chil. 2008; 136 (3): 385-93

The world is experiencing an increase in emergent infections as a result of anthropogenic changes of the biosphere and globalization. Global warming unrestricted exploitation of natural resources such as forests and fisheries, urbanization, human migration, and industrialization of animal husbandry cause environmental destruction and fragmentation. These changes of the biosphere favor local emergence of zoonoses from their natural biotopes and their interaction with domestic animals and human populations. Subsequently,

international commerce, human and animal migration and travel, favor the dissemination of these zoonotic pathogens worldwide. Chile is undergoing an important degradation of many wild-life biotopes, affecting their diversity and contributing to the dissemination of zoonoses such as Chagas disease, Hantavirus, rabies, fish tapeworms, and marine vibriosis. Moreover, agents of many other zoonoses such as inverted exclamation markeptospirosis, hydatidosis, salmonellosis, rabies, brucellosis and anthrax have been detected in different wild-life environments in the country. The intensification and accelerations of the anthropogenic deterioration of the biosphere in Chile, as results of the unrestricted utilization of natural resources and global climate change, suggests that emergence of new zoonoses in the near future will lead to important public health and economic problems. Forestalling of these problems will require active epidemiológica! surveillance of wild and domestic animals with a wide range of modern molecular and ancillary epidemiológica! tools. This also demands government and private sector (i.e., animal husbandry) intervention, funding and the collaboration of professionals in human and veterinary medicine with those in the environmental sciences including ecology, climatology and oceanography.

Text in Spanish

<http://www.scielo.cl/pdf/rmc/v136n3/art16.pdf>



Unidad de Salud Pública Veterinaria
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Veterinary Public Health Unit
Pan American Foot and Mouth Disease Center

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