



CEDOC **INFORMATIVO / NEWSLETTER**

N. 1-2 Agosto / August 2007

Centro de Documentación / Documentation Center

Objetivos

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.

Objectives

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.



Unidad de Salud Pública Veterinaria
Centro Panamericano de Fiebre Aftosa



Veterinary Public Health Unit
Pan American Foot and Mouth Disease Center

Temas de interés general / Subjects of general interest



Sitio Web de la Organización Panamericana de la Salud Enfocado en la Comunicación de Riesgo y Brotes
http://www.paho.org/spanish/AD/SMC_Homepage_Sp.htm



Website of the Pan American Health Organization Focusing on Risk and Outbreak Communication
http://www.paho.org/english/ad/SMC_Homepage_Eng.htm

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Brucelosis Bovina / Bovine Brucellosis



Epidemiological study in a bovine herd with intermediate prevalence of brucellosis, vaccinated with RB51 and *frbK* rough mutant strains of *Brucella abortus*

Cantú A, Díaz Aparicio E, Hernández Andrade L, Adams GL, Suárez Güemes F
Vét Méx. 2007; 38 (2): 197-206.

With the objective of analyzing the behavior of two *Brucella abortus* rough vaccines, a brucellosis infected

herd in which the prevalence of the disease was 8,7% was worked with. The animals were randomly distributed in three groups: Group vaccinated with RB51 had 392 cows; Group vaccinated with *frbK* had 237 cows, and non-vaccinated Group had 35 cows. Bacteriological and serological studies were performed in those animals for a period of one year and an experimental longitudinal comparative and prospective epidemiological study was carried out. There were abortions and stillborn calves in the three groups, and *Brucella abortus* biotype 1 was isolated from the milk of two cows in the control group. Using the criteria that animals vaccinated with rough strains, positive to card

test were infected, the rate of monthly incidence for the vaccinated cows with RB51 was 1.65 per each 100. For the cows that were immunized with *rfbK* this value was of 2.7, with a significant difference between groups ($P < 0.001$). If the results are analyzed using the criterion by which, animals that present equal or higher titers to 1:100 remain as reactors, and those that titers of 1:50 or less present a transitory answer becoming negatives, the rate of monthly incidence for the cows vaccinated with RB51 was of 0.21 per each 100 immunized cows. For the cows that were immunized with *rfbK* this value was of 0.35, not showing a significant difference between groups ($P > 0.01$). It is concluded that in vaccinated herds with intermediate prevalence of brucellosis, the presence of post-vaccinated reactors is due to a secondary type response to contact with *B. abortus* field strains, which does not necessarily indicate infection and can be discerned by using the test of Rinavol: under this criterion, both vaccines confer good protection.

Text in Spanish / English

http://www.ejournal.unam.mx/vet_mex/vol38-02/RVM003800206.pdf



Population dynamic in herds participating of the bovine brucellosis eradication program in the X Region of Chile

Rosenfeld C, Blas I, Ernst S, Ramírez C, Rivera A, Silva E, Rojas H
Arch Med Vet. 2007; 39 (1): 27-34.

The aim of this study was to determine the population risk factors affecting bovine herds in the X Region of Chile in order to obtain a brucellosis free status. A matched case-control study was designed according to the size of the herd and univariate and multivariate statistical tests were applied as well as epidemiological tests. The best results obtained from the control and eradication program were achieved by herds presenting less than 17% of the initial prevalence levels and in which positive animals were immediately eliminated from the herd.

Text in Portuguese

<http://www.scielo.cl/pdf/amv/v39n1/Art04.pdf>

Diarrhea Viral Bovina / Bovine Viral Diarrhoea



Bovine viral diarrhoea virus (BVDV) diversity and vaccination. A review

Kalaycioglu AT

Vet Q. 2007 Jun; 29 (2): 60-7

BVDV is associated with a range of economically important clinical diseases including reproductive disorders and acute fatal hemorrhagic disease in cattle industry. Vaccination is still the most important control strategy for controlling BVDV infections in many countries of the world. The existence of great genetic and antigenic diversity of BVDV isolates is very important concern for BVDV vaccine development and protective efficacy of current vaccines. In this review, the protective efficacies of the selected examples of BVDV vaccines with regard to BVDV diversity and the

novel marker vaccine development studies are discussed.

Text in English

<http://www.vetline.nl/sites/files/000001327/625200761454PMkala.pdf>

Fiebre Aftosa / Foot-and-Mouth Disease



Analysis of foot-and-mouth disease virus replication using strand-specific quantitative RT-PCR

Horsington J, Zhang Z

J Virol Methods 2007 Sep; 144 (1-2): 149-55

Foot-and-mouth disease virus (FMDV) is a positive-sense, single stranded RNA virus and its replication involves the synthesis of a negative strand intermediate. In the present study, a strand-specific quantitative RT-PCR assay was developed for analysis of FMDV replication. Strand-specific detection of viral positive and negative strand RNA was achieved using a high reverse transcription (RT) temperature (62 degrees C) and a tagged RT primer. In both the positive and negative strand assays, the lowest reliably detectable concentration was 1×10^2 copies/mul. The assays developed were successfully used to analyze viral replication in tissues collected from experimentally infected sheep during both acute and persistent infection. The results showed that while replication was observed in all tissues examined during acute infection, active viral replication during persistent infection was only detected in the tonsil. These results are consistent with the current opinion that the tonsil in sheep is the main predilection site for virus persistence. This assay will be used in the future to look further at replication in experimentally infected animals, including the study of individual cell types, and will improve our understanding of FMDV pathogenesis.

Text in English

The Use of Non-structural Proteins of Foot and Mouth Disease Virus (FMDV) to Differentiate Between Vaccinated and Infected Animals



IAEA TECDOC Series No. 1546

2007

Foot and mouth disease (FMD) remains a tremendous problem in developing countries and is a constant threat to developed countries. Tests to determine the immune status of animals form the basis of understanding the control of the disease.

There have been many developments in this field and the IAEA sought to try and validate methods in this coordinated research project (CRP). Validation *per se* is always addressed by the IAEA and they have been instrumental in improving guidelines for test certification through the OIE. Although FMD tests had been devised they were not fully examined in a large geographical spread, nor were they compared directly. During the CRP many variations of tests were produced and this complicated the validation process.

The resulting TECDOC reflects the relative instability of developments but value adds to the latest opinions on the use of non-structural proteins (NSP) tests in the control of FMD.

The IAEA has been a prominent supporter of the use of NSP in tests at an international level and the results will be of great interest to a wide arena of developed and developing country scientists. Such tests are now in routine use in many laboratories around the world.

Text in English

http://www-pub.iaea.org/MTCD/publications/PDF/te_1546_web.pdf

Influenza Aviar / Avian Influenza

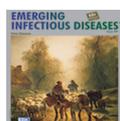


¿Como llegó esta enfermedad a mi granja?

Rivera Garcia O.
REDEVET 2007; VIII (2)

Text in Spanish

<http://www.veterinaria.org/revistas/redvet/n020207/020704.pdf>



Ecologic Immunology of Avian Influenza (H5N1) in Migratory Birds

Weber TP, Stilianakis NI
Emerg Infect Dis. 2007 Aug; 13 (8): 1139-43.

The claim that migratory birds are responsible for the long-distance spread of highly pathogenic avian influenza viruses of subtype H5N1 rests on the assumption that infected wild birds can remain asymptomatic and migrate long distances unhampered. We critically assess this claim from the perspective of ecologic immunology, a research field that analyzes immune function in an ecologic, physiologic, and evolutionary context. Long-distance migration is one of the most demanding activities in the animal world. We show that several studies demonstrate that such prolonged, intense exercise leads to immunosuppression and that migratory performance is negatively affected by infections. These findings make it unlikely that wild birds can spread the virus along established long-distance migration pathways. However, infected, symptomatic wild birds may act as vectors over shorter distances, as appears to have occurred in Europe in early 2006.

Text in English

<http://www.cdc.gov/eid/content/13/8/pdfs/1139.pdf>



A real-time PCR assay for the monitoring of influenza A virus in wild birds

Karlsson M, Wallensten A, Lundkvist A, Olsen B, Brytting M

J Virol Methods 2007 Sep; 144 (1-2): 27-31

A screening system including a new real-time PCR assay for the monitoring of influenza A virus in wild birds was developed. The real-time PCR assay uses SYBR green chemistry and the primers are targeting the matrix gene of influenza A virus. The performance of the assay was compared with two other assays, one assay also using SYBR green chemistry and one assay

using TaqMan chemistry, i.e. a specific probe. A total of 45 fecal bird samples were analyzed for influenza A virus in three different PCR reactions. Overall, 26 samples were positive in at least one of the three real-time PCR assays. Of the 26 samples, 18 were positive by all three reactions. Eight samples were found positive exclusively by the two SYBR green reactions, six of which were detected by both SYBR green reactions. Of the 26 positive samples, 15 samples were verified as positive either by virus isolation or influenza A M2-gene PCR. The results showed that the two SYBR green systems had a higher performance regarding the detection of influenza A as compared to the PCR reaction using a specific probe.

Text in English

Inocuidad de los Alimentos / Food Safety



The identification, assessment and management of food safety events under the International Health Regulations (2005)

INFOSAN No. 4/2007

The scope of the International Health Regulations (2005) (IHR (2005)), which enter into force on 15 June 2007, includes food contamination and foodborne disease events.

The National IHR Focal Point and de INFOSAN Emergency Contact Point have critical roles in the identification, assessment and management of food safety-related public health events that may have international implications. It is therefore critical that the two parties work in close collaboration.

Certain animal health events with potential public health implications are also included in the scope of the IHR (2005). Therefore collaboration between the National Veterinary Authority and the National IHR Focal Point is also important.

World Health Organization (WHO) will manage food safety events in support of countries under IHR (2005), utilizing INFOSAN, as appropriate. This process includes collaboration with many different parties, which varies depending on the event.

Minimizing the effect of food safety-related public health events requires a multi sectoral approach.

Text in Spanish

http://www.who.int/foodsafety/fs_management/No_04_IHR_May07_sp.pdf

Text in English

http://www.who.int/foodsafety/fs_management/No_04_IHR_May07_en.pdf



Pathogenic *Vibrios* in oysters (*Crassostrea rhizophorae*) served at restaurants in Rio de Janeiro: a public health warning

Pereira CS, Viana CM, Rodrigues DP

Rev Soc Bras Med Trop. 2007; 40 (3): 300-3.

Forty oyster samples (*Crassostrea rhizophorae*) served raw in 15 restaurants in the city of Rio de Janeiro were evaluated in order to investigate the presence of *Vibrio* spp. The oyster samples were analyzed and subjected to enrichment in alkaline peptone water with the addition

of 1 and 3% NaCl and incubated at 37 degrees C for 24 hours. Following this, the cultures were seeded onto thiosulfate citrate bile sucrose agar (TCBS) and the suspected colonies were subjected to biochemical characterization. *Vibrio parahaemolyticus*, *Vibrio carchariae*, *Vibrio alginolyticus* and *Vibrio vulnificus* were the main species (> 60%) isolated from raw oysters.

Text in Portuguese

<http://www.scielo.br/pdf/rsbmt/v40n3/10.pdf>

Leishmaniasis Canina / Canine Leishmaniasis



Description of a canine leishmaniasis clinical case in the North of Mexico

Zárate Ramos JJ, Rodríguez Tovar LE, Ávalos Ramírez R, Salinas Meléndez JA, Flores-Pérez FI

Vét Méx. 2007; 38 (2): 197-206.

Leishmaniasis is an endemic disease in the south of Mexico with great zoonotic potential. Recently, there have been cases reported in the south of USA with zymodemes frequently isolated in endemic zones in Europe. This work describes a case of canine visceral leishmaniasis in a dog that was brought from Spain to Mexico three years ago.

Text in Spanish / English

http://www.ejournal.unam.mx/vet_mex/vol38-02/RVM003800209.pdf

Rabia / Rabies



Current status of human rabies transmitted by dogs in Latin America

Schneider MC, Belotto A, Adé MP, Hendrickx S, Leanes LF, Rodrigues

MJF, Medina G, Correa E

Cad. Saúde Pública, 2007 Sep; 23 9): 2049-63.

Latin American countries made the political decision to eliminate human rabies transmitted by dogs by the year 2005. The purpose of the current study is to evaluate to what extent this goal has been reached. The epidemiological situation and control measures were analyzed and broken down within the countries by georeferencing. The 27 human cases reported in 2003 occurred in some 0.2% of the second-level geopolitical units (municipalities or counties) in the region, suggesting that the disease is a local problem. Several areas within the countries reported no more transmission of rabies in dogs. Nearly 1 million people potentially exposed to rabies received treatment. On average, 34,383 inhabitants per health post receive anti-rabies treatment (range: 4,300-148,043). Nearly 42 million dogs are vaccinated annually. Surveillance is considered fair according to the epidemiological criteria adopted by the study. Samples sent for rabies testing represent 0.05% of the estimated canine population

(range: 0.001 to 0.2%). The countries are quite close to achieving the goal.

Text in English

<http://www.scielo.br/pdf/csp/v23n9/06.pdf>



Phylogenetic characterization of rabies virus isolates from Carnivora in Brazil

Kobayashi Y, Inoue N, Sato G, Itou

T, Santos HP, Brito CJ, Gomes AA, Santos MF, Silva

MV, Mota CS, Ito FH, Sakai T

J Vet Med Sci. 2007 Jul; 69 (7): 691-6.

The incidence of canine rabies has been widely reported in Brazil, and new rabies virus (RV) variants, genetically similar to canine RV, have recently been isolated from foxes. In order to derive the epidemiological characteristics of Brazilian Carnivora RV, Brazilian RVs isolated from dogs, cats, and foxes were genetically analyzed. Brazilian Carnivora RV isolates were divided into 2 main lineages. The predominant lineage was found in dogs and cats, which included the Argentinean and Bolivian Carnivora RV isolates, and was extensively distributed throughout Brazil and surrounding countries. The other lineage consisted of three sublineages containing Brazilian dog and fox RV isolates, with the dog sublineages located on an internal branch of 2 fox sublineages, suggesting that RV transmission events might have occurred between foxes and dogs in the past. These results suggest that contact between dogs and wildlife has the potential to generate new rabies variants and that it is important to control RV infection cycles in both dogs and wildlife to prevent spread of rabies infection.

Text in English

http://www.jstage.jst.go.jp/article/jvms/69/7/691/_pdf

Seminarios / Congresos / Eventos

Seminars / Congress / Events

International Technical Conference on Animal Genetic Resources

1-7 Sep 2007

Interlaken, Switzerland

<http://www.fao.org/AG/againfo/programmes/en/genetics/angrvent2007.html>

Codex ad hoc Intergovernmental Task Force on Foods Derived From Biotechnology - 7th Session

24-28 Sep 2007

Chiba, Japan

Email: codex@fao.org

<http://www.codexalimentarius.net/web/current.jsp?lang=en>

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