



## Centro de Documentación / Documentation Center

### 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 site **Perspectiva sobre a Análise de Risco na Segurança dos Alimentos: Curso de Sensibilização**, é uma iniciativa realizada em parceria com a Organização Pan-Americana da Saúde (OPAS) e a Agência Nacional de Vigilância Sanitária (ANVISA), aborda as temas sobre análise de risco, gerenciamento de risco, avaliação de risco, comunicação de risco entre outros, representando uma valiosa fonte de informação e apoio para a área de vigilância sanitária, prevenção e controle de doenças.

<http://www.panalimentos.org/analiserisco/>

### Informaciones disponibles en formato electrónico / Information available in electronic format

#### **Enfermedad de Chagas / Chagas Disease**



**Doença de Chagas: guia para vigilância, prevenção, controle e manejo clínico da doença de Chagas aguda transmitida por alimentos**

OPAS  
2009

A transmissão do *Trypanosoma cruzi* por via oral tem carácter habitual no ciclo endêmico primitivo deste parasito, a través da ingestão – por mamíferos suscetíveis – de vetores e reservatórios infectados. No caso do homem, esta transmissão ocorre a través de alimentos contaminados com o parasito. As peculiaridades da epidemiologia da Doença de Chagas nas áreas de ocorrência de casos por esta modalidade de transmissão trazem novos

O presente **Guia para Vigilância, Prevenção, Controle e Manejo Clínico da Doença de Chagas**

**Aguda Transmitida por Alimentos** destina-se em particular àqueles gestores e trabalhadores da saúde que exercem suas atividades em regiões onde o acesso à informação é difícil, reduzindo a possibilidade de trocar experiências com outros parceiros, particularmente com a população, e que vem enfrentado uma demanda de crescente casos suspeitos deste agravo, em particularna região amazônica.

**Text in Portuguese**

[http://bvs.panalimentos.org/local/File/Guia\\_Doenca\\_Chagas\\_2009.pdf](http://bvs.panalimentos.org/local/File/Guia_Doenca_Chagas_2009.pdf)

**Enfermedades Desatendidas / Neglected Diseases**



**A Human rights approach to neglected tropical diseases**

WHO  
2009

Neglected tropical diseases (NTDs) affect one billion people in the world, often the most vulnerable populations living in poor rural areas in low-income countries. NTDs can result in lifelong disabilities and even death. They constitute a source of social stigma, discrimination and poverty. Affected populations often do not have access to treatment and preventive measures, and research and development has been insufficient. In recent years, there is growing attention to NTDs as both a public health, and human rights issue. This WHO Information sheet on a human rights-based approach to neglected tropical diseases aims to raise understanding and knowledge among health planners, human rights groups, development partners and civil society organisations.

**Text in Spanish**

<http://www.who.int/hhr/activities/NTD%20information%20sheet%20-%20Spanish.pdf>

**Text in English**

<http://www.who.int/hhr/activities/NTD%20information%20sheet%20-%20English.pdf>



**Neglected disease research and development: how much are we really spending?**

Moran M, Guzman J, Ropars AL, McDonald A, Jameson N, Omune B, Ryan S, Wu L  
PLoS Med. 2009 Feb; 6 (2): e30

The need for new pharmaceutical tools to prevent and treat neglected diseases is widely accepted. The creation of a vaccine for HIV/AIDS, more effective diagnostics for tuberculosis (TB), and better treatments for leishmaniasis and sleeping sickness would greatly improve health in the developing world in line with the United Nations Millennium Development Goals. However, funders wishing to invest in this vitally important area currently face an information gap.

There is little consensus on what constitutes a neglected disease or what new products are required. Health research funding figures have been published by the Council on Health Research for Development and the Global Forum for Health Research, but these do not disaggregate product-related research and development (R&D) or neglected disease investments.

Specific R&D investment data are available for some neglected diseases—including annual surveys of HIV/AIDS and TB funding since 2000 and 2005, respectively, and a one-off survey of malaria R&D funding published in 2005 but these cannot readily be compared since each survey uses different methodologies and covers different diseases, products, donors, and countries. For most neglected diseases, there is simply no information.

In order to address these information deficits, the Bill & Melinda Gates Foundation commissioned the George Institute for International Health to conduct five sequential annual surveys of global investment into R&D of new pharmaceutical products to prevent, manage, or cure diseases of the developing world.

This article summarises key data from the first G-FINDER report (<http://www.thegeorgeinstitute.org/prppubs>).

**Text in English**

<http://www.pubmedcentral.nih.gov/picrender.fcgi?artid=2634791&blobtype=pdf>

## Equinococosis/Echinococcosis – Hidatidosis/Hydatidoses



### Echinococcosis: diagnosis and diagnostic interpretation in population studies

Torgerson PR, Deplazes P

Trends Parasitol. 2009 Apr; 25 (4): 164-170

Diagnosis is a basic component of population studies on echinococcosis. Other than careful necropsy in animals, there is no perfect gold standard. In the definitive host, techniques for direct parasite identification include copro-antigen and copro-DNA detection. In intermediate hosts, necropsy is typically used. In humans, diagnostic imaging and serology are both widely employed. The use of multiple parallel testing or an additional confirmatory test (or tests) in a diagnostic strategy can overcome the lack of a perfect gold standard. This will yield valuable information at population and individual levels, providing the study is well designed and any shortcomings of the tests are incorporated into the analysis. Here, we discuss analytical approaches to population studies of echinococcosis.

#### Text in English



### Hidatidosis en Argentina: carga de la enfermedad

Guarnera EA

OPS

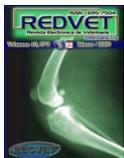
2009

Atender el control de la Hidatidosis o Echinococcosis dentro del sistema de salud, significa reconocerla como enfermedad prioritaria. La aplicación de herramientas de administración sanitaria como la estimación de la carga de la enfermedad y los costos de atención médica, son necesarios para fundamentar la decisión política de financiar los componentes programáticos. El análisis que se hace en este documento es un estudio parcial, dado que solo contempla los aspectos relacionados con el impacto sobre las personas y deja sin evaluar los otros componentes que son parte de las zoonosis, tales como el impacto de la enfermedad sobre los animales, sobre la economía pecuaria y sobre el medio ambiente.

#### Text in Spanish

<http://publicaciones.ops.org.ar/publicaciones/otras%20pub/pubhidatidosis.pdf>

## Estadística / Statistics



### Project R: Programa estadístico gratuito de aplicación en medicina veterinaria

Fondevila N

REDVET 2009; 10 (3)

**R** es un conjunto integrado de **programas para manipulación de datos, cálculos y gráficos.**

<http://www.veterinaria.org/revistas/redvet/n030309/030917N.pdf>

## Estudios Epidemiológicos / Epidemiologic Studies



### Population inferences from targeted sampling with uncertain epidemiologic information

Williams MS, Ebel ED, Wells SJ

Prev Vet Med. 2009 May; 89 (1-2): 25-33

Targeted sampling is an increasingly popular method of data collection in animal-based epidemiologic studies. This sampling approach allows the user to exclusively choose samples from subpopulations that have a higher likelihood of the disease of interest. This is achieved by selecting animals from a subpopulation that exhibits some characteristic that indicates a higher probability of the presence of the disease. Inferences drawn from a targeted sample require information regarding the epidemiology of the disease under surveillance, which is generally not known with certainty. This study describes estimators for both the detection of disease and the estimation of prevalence when targeted sampling is employed. Modifications of these estimators are provided that account for the uncertainty in the parameters that describe the epidemiology of the disease. Results of a simulation study are provided to illustrate the effect of the uncertainty in these parameters.

**Text in English**



### **Use of epidemiologic information in targeted surveillance for population inference**

Wells SJ, Ebel ED, Williams MS, Scott AE, Wagner BA, Marshall KL

Prev Vet Med. 2009 May; 89 (1-2): 43-50

Epidemiologic information, including animal characteristics (e.g., observable risk factors or clinical signs) predisposing to animal disease, is frequently used for design of targeted surveillance systems, but this information is infrequently used for population inference. In this study, we report the evaluation of use of epidemiologic information for population inference in targeted surveillance in three animal disease scenarios. We adapted sampling theory using Monte Carlo methods to determine target population sample size to detect disease with 95% confidence, using information from the epidemiologic parameters risk ratio and fraction of the population with the characteristic. These parameters and their uncertainties were derived from a reference population. The next step was to use a second (sampled) population to evaluate effects of sampling the targeted population. The focus of the study was on estimation of prevalence. Our results showed that if one is less certain of the epidemiologic parameters, a rational decision is to model the input parameter distributions reflecting this uncertainty, thereby increasing the sample size above the minimum needed for the detection of the disease with a known confidence. Targeted surveillance is appropriate for prevalence estimation when one has representative and justifiable estimates of key epidemiologic parameters.

**Text in English**

### **Fiebre aftosa / Foot and Mouth Disease**



### **The effect of vaccination on undetected persistence of foot-and-mouth disease virus in cattle herds and sheep flocks**

Schley D, Paton DJ, Cox SJ, Parida S, Gubbins S

Epidemiol Infect. 2009 Mar; 17:1-11

The importance of carrier animals (those in whom virus persists after recovery from disease or acute infection) and their potential role in the spread of disease remain open questions within foot-and-mouth disease epidemiology. Using simple probabilistic models we attempt to quantify the effect of emergency vaccination - and especially the time of application - on the likely number of such animals, using data from challenge experiments on both cattle and sheep to determine the probability of persistence in diseased and subclinically infected animals. We show that the number of persistently infected animals in a group is predominantly determined by the number of animals initially infected on premises - the high variability of which ultimately limits the accuracy of any predictions of carrier numbers based upon transmission models. Furthermore, results suggest that, within a cattle herd, carrier numbers may be increased if challenge occurs shortly after vaccination. We show that the quality of inspection is the principal factor influencing whether or not carrier herds occur and that, by reducing clinical signs, the application of vaccination in regularly checked stock also results in an increase in undetected persistently infected animals. Where clinical detection would be poor regardless of the use of vaccination (i.e.

particularly in sheep), vaccination will result in a reduction in the probability of a group containing undetected carriers; otherwise there is a benefit only if vaccination is applied sufficiently far in advance of any challenge. The implications of the results for serosurveillance are discussed, including the requisite test sensitivity and practices for successful implementation.

#### **Text in English**



#### **Modelling foot and mouth disease**

Thornley JH, France J.  
Prev Vet Med. 2009 Mar

A simple generic model of foot and mouth disease (FMD) is presented. The dynamics of FMD at the index site (the farm where the initial infection occurs) is represented. Spread of disease from the index site is simulated with a three-term radial function, the terms corresponding to natural processes, short- and long-range movements. Parameterization includes the processes of threshold for clinical disease reporting, time delay before action is initiated, removal (slaughter) rate at the index farm; movement restrictions, culling of farms out to a given radius (from the index site), rate of culling, and vaccination (timing; rate of build-up of immunity). Between-farm basic reproductive ratio,  $R(0)(bf)$ , the number of primary (direct) infected farms arising from the initially infected (index) farm during the lifetime of the infection at the index farm, is calculated numerically. A "predictor-corrector" method is developed to estimate an upper limit to the number of secondary infections which could arise during this time. The model is easily programmed and is quick to execute. Simulation results are discussed in relation to the processes assumed in the model. They suggest that, given current UK farm practice, early disease detection, combined with immediate rapid slaughtering at the index site and restriction of short-range and long-range movements are relatively effective strategies of disease control. However, farm practice changes continually, and any control strategies need re-assessment in the light of current farm practice when and where an FMD outbreak occurs. A transparent and "simple" model can facilitate this process. The uncorrected model, without tuning, is compared with the cattle data from the 2001 UK FMD epidemic.

#### **Text in English (article in press)**

### **Influenza Aviar / Avian Influenza**



#### **The role of environmental transmission in recurrent avian influenza epidemics**

Breban R, Drake JM, Stallknecht DE, Rohani P  
PLoS Comput Biol. 2009 Apr; 5 (4): e1000346

Avian influenza virus (AIV) persists in North American wild waterfowl, exhibiting major outbreaks every 2-4 years. Attempts to explain the patterns of periodicity and persistence using simple direct transmission models are unsuccessful. Motivated by empirical evidence, we examine the contribution of an overlooked AIV transmission mode: environmental transmission. It is known that infectious birds shed large concentrations of virions in the environment, where virions may persist for a long time. We thus propose that, in addition to direct fecal/oral transmission, birds may become infected by ingesting virions that have long persisted in the environment. We design a new host-pathogen model that combines within-season transmission dynamics, between-season migration and reproduction, and environmental variation. Analysis of the model yields three major results. First, environmental transmission provides a persistence mechanism within small communities where epidemics cannot be sustained by direct transmission only (i.e., communities smaller than the critical community size). Second, environmental transmission offers a parsimonious explanation of the 2-4 year periodicity of avian influenza epidemics. Third, very low levels of environmental transmission (i.e., few cases per year) are sufficient for avian influenza to persist in populations where it would otherwise vanish.

#### **Text in English**

## Inocuidad de los Alimentos / Food Safety



### **Analysis of foodborne outbreak data reported internationally for source attribution**

Greig JD, Ravel A

Int J Food Microbiol. 2009 Mar; 130 (2): 77-87

Analysis of foodborne outbreak data is one approach to estimate the proportion of human cases of specific enteric diseases attributable to a specific food item (food attribution). Although we recognize that for a variety of reasons reported outbreaks represent only a small portion of all actual outbreaks, using outbreak data for food attribution is the only methodological approach where, theoretically, there is an actual direct link between the pathogen, its source and each infected person. The purpose of this study was to explore the usefulness of foodborne outbreak data extracted from publicly available international electronic reports and publications to provide estimates of food attribution, to derive and compare these estimates between regions, while improving the understanding of the pathogen/food vehicle combination. Electronic reports and publications of foodborne outbreaks that occurred globally since the 1980s were systematically scanned and their data were extracted and compiled in a database. A system of food categorization was developed and food vehicles assigned accordingly. The association between the aetiology and the food source was statistically described for outbreaks with both reported aetiology and incriminated food vehicle. Differences in associations between Australia and New Zealand, Canada, the European Union (EU) and the United States (US) were explored using multiple correspondence analysis and were formally tested between the EU and the US for selected pathogens and food sources. As a result, the food and aetiology cross tabulation of 4093 foodborne outbreaks that occurred globally between 1988 and 2007 is presented and discussed. For a few aetiologies and some foods the association is very specific. The lack of a specific association between the other foods and aetiologies highlights the potential roles of cross-contamination, environmental contamination and the role of the infected foodhandler along the food chain from farm to fork. Detailed analysis of the four regions highlighted some specific associations: Salmonella Enteritidis outbreaks occurred relatively often in the EU states with eggs as the most common source; Campylobacter associated outbreaks were mainly related to poultry products in the EU and to dairy products in the US; there was an association between Escherichia coli outbreaks and beef in Canada; and while Salmonella Typhimurium outbreaks were relatively common in Australia and New Zealand, across all regions, Salmonella was associated with a variety of food groups. The value and limitations of the study are discussed, as well as the extrapolation of the food attribution estimates beyond their outbreak context.

#### **Text in English**



### **The efficacy of preservation methods to inactivate foodborne viruses**

Baert L, Debevere J, Uyttendaele M

Int J Food Microbiol. 2009 Mar

During the last decade an increased incidence of infections and outbreaks attributed to foodborne viruses, in particular noroviruses (NoV), was observed world wide. The awareness of the presence of viruses on food emphasized the need to acquire knowledge regarding the effect of preservation methods upon viruses. Most foodborne viruses cannot be cultured in the laboratory, which hinders studies of their stability in food. Cultivable surrogate viruses, genetically related to the human infecting strains, are taken as a substitute to define inactivation rates. The last years, the number of survival and inactivation studies using various surrogate viruses increased. In this review, state-of-the-art information regarding the efficacy of preservation methods to reduce the level of viruses on food is compiled. In the first place, the effect of preservation methods establishing microbial growth inhibition (chilling, freezing, acidification, reduced water activity and modified atmosphere packaging) upon foodborne viruses is

described. Secondly, the use of preservation methods establishing microbial inactivation such as heat treatment, high hydrostatic pressure processing and irradiation to eliminate viruses is discussed. In the third place, the efficacy of decontamination methods on fresh produce and purification procedures applied on live bivalve shellfish to reduce the viral load is included. These studies indicate that viruses persist well on chilled, acidified, frozen foods and foods packed under modified atmosphere or in dried conditions. Intervention strategies inducing microbial inactivation are required to achieve a 3 log reduction of the level of viruses. Decontamination of fresh produce reduces viruses with a maximum of 1 to 2 log while purification of live bivalves is not adequate to prevent viral outbreaks. It was noted that the effect of a particular food preservation method is dependent upon the virus tested and type of food.

**Text in English (article in press)**



**The growing burden of foodborne outbreaks due to contaminated fresh produce: risks and opportunities**

Lynch MF, Tauxe RV, Hedberg CW

Epidemiol Infect. 2009 Mar; 137 (3): 307-315

Foodborne outbreaks from contaminated fresh produce have been increasingly recognized in many parts of the world. This reflects a convergence of increasing consumption of fresh produce, changes in production and distribution, and a growing awareness of the problem on the part of public health officials. The complex biology of pathogen contamination and survival on plant materials is beginning to be explained. Adhesion of pathogens to surfaces and internalization of pathogens limits the usefulness of conventional processing and chemical sanitizing methods in preventing transmission from contaminated produce. Better methods of preventing contamination on the farm, or during packing or processing, or use of a terminal control such as irradiation could reduce the burden of disease transmission from fresh produce. Outbreak investigations represent important opportunities to evaluate contamination at the farm level and along the farm-to-fork continuum. More complete and timely environmental assessments of these events and more research into the biology and ecology of pathogen-produce interactions are needed to identify better prevention strategies.

**Text in English**



**Preliminary FoodNet Data on the Incidence of Infection with Pathogens Transmitted Commonly Through Food --- 10 States, 2008**

Centers for Disease Control and Prevention (CDC)

MMWR Morb Mortal Wkly Rep. 2009 Apr; 58 (13): 333-337

Foodborne diseases remain an important public health problem in the United States. The Foodborne Diseases Active Surveillance Network (FoodNet) of CDC's Emerging Infections Program collects data from 10 U.S. states\* on diseases caused by enteric pathogens transmitted commonly through food. FoodNet is an active, population-based surveillance system for these laboratory-confirmed infections (1). This report describes preliminary surveillance data for 2008 and trends since 1996. In 2008, the estimated incidence of infections caused by *Campylobacter*, *Cryptosporidium*, *Cyclospora*, *Listeria*, Shiga toxin-producing *Escherichia coli* (STEC) O157, *Salmonella*, *Shigella*, *Vibrio*, and *Yersinia* did not change significantly when compared with the preceding 3 years. For most infections, incidence was highest among children aged <4 years, whereas the percentage of persons hospitalized and the case fatality rate were highest among persons aged ≥50 years. None of the *Healthy People 2010* targets for reduction of foodborne pathogens (objective 10-1) (2) were reached in 2008. The lack of recent progress points to gaps in the current food safety system and the need to continue to develop and evaluate food safety practices as food moves from the farm to the table.

**Text in English**

<http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5813a2.htm>

**Leishmaniasis Visceral / Visceral Leishmaniasis**



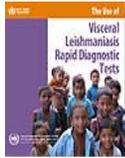
## **Canine visceral leishmaniasis in Maricá, State of Rio de Janeiro: first report of an autochthonous case**

Paula CC, Figueiredo FB, Menezes RC, Mouta-Confort E, Bogio A, Madeira Mde F  
Rev Soc Bras Med Trop. 2009; 42 (1): 77-78

Visceral leishmaniasis is a zoonosis of public health importance, and dogs represent one of the main problems. This paper describes the first autochthonous case of canine visceral leishmaniasis in the municipality of Maricá. It provides new facts regarding the geographical distribution of *Leishmania (Leishmania) chagasi* in the State of Rio de Janeiro.

### **Text in Portuguese**

<http://www.scielo.br/pdf/rsbmt/v42n1/v42n1a16.pdf>



## **The use of visceral leishmaniasis rapid diagnostic tests**

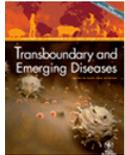
WHO  
2008

Rapid diagnostic tests for visceral leishmaniasis (VL) are amongst the most important innovations in the control of VL, where early case detection/treatment can improve patient prognosis and reduce transmission. This user guide provides general information to facilitate proper use of rapid diagnostics tests for visceral leishmaniasis and improve the quality of VL care. Developed with the Indian subcontinent in mind, this guide can, with some minor local adaptations, be useful in other endemic countries.

### **Text in English**

<http://www.who.int/tdr/publications/tdr-research-publications/vl-rdts/pdf/VL-RDTs.pdf>

## **Medicina Veterinaria Preventiva / Preventive Veterinary Medicine**



## **Social network analysis. Review of general concepts and use in preventive veterinary medicine**

Martínez-López B, Perez AM, Sánchez-Vizcaíno JM  
Transbound Emerg Dis. 2009 May; 56 (4): 109-20

Social network analysis (SNA) and graph theory have been used widely in sociology, psychology, anthropology, biology and medicine. Social network analysis and graph theory provide a conceptual framework to study contact patterns and to identify units of analysis that are frequently or intensely connected within the network. Social network analysis has been used in human epidemiology as a tool to explore the potential transmission of infectious agents such as HIV, tuberculosis, hepatitis B and syphilis. In preventive veterinary medicine, SNA is an approach that offers benefits for exploring the nature and extent of the contacts between animals or farms, which ultimately leads to a better understanding of the potential risk for disease spread in a susceptible population. Social network analysis, however, has been applied only recently in preventive veterinary medicine, therefore the characteristics of the technique and the potential benefits of its use remain unknown for an important section of the international veterinary medicine community. The objectives of this paper were to review the concepts and theoretical aspects underlying the use of SNA and graph theory, with particular emphasis on their application to the study of infectious diseases of animals. The paper includes a review of recent applications of SNA in preventive veterinary medicine and a discussion of the potential uses and limitations of this methodology for the study of animal diseases.

### **Text in English**

## **Peste / Plague**



### **Manual de vigilância e controle da peste**

Brasil. Ministério da Saúde. Secretaria de Vigilância em Saúde. Departamento de Vigilância Epidemiológica  
2008

A peste é uma doença infecciosa primordialmente de roedores, transmitida por picadas de pulgas infectadas. O homem é infectado acidentalmente quando, em atividades de caça, agricultura, comércio ou lazer, penetra no ecossistema dos roedores reservatórios das doenças.

A doença foi responsável por grande morbimortalidade em diferentes épocas e continua sendo uma ameaça em grandes áreas do mundo.

Assim sendo, a Secretaria de Vigilância em Saúde, cumprindo uma de suas atribuições, produziu este manual, revisando os conhecimentos e padronizando os procedimentos de vigilância e controle da peste.

#### **Text in Portuguese**

[http://portal.saude.gov.br/portal/arquivos/pdf/manual\\_pestes.pdf](http://portal.saude.gov.br/portal/arquivos/pdf/manual_pestes.pdf)

### **Rabia / Rabies**



#### **Transmission dynamics and prospects for the elimination of canine rabies**

Hampson K, Dushoff J, Cleaveland S, Haydon DT, Kaare M, Packer C, Dobson A  
PLoS Biol. 2009 Mar; 7 (3): e53

Rabies has been eliminated from domestic dog populations in Western Europe and North America, but continues to kill many thousands of people throughout Africa and Asia every year. A quantitative understanding of transmission dynamics in domestic dog populations provides critical information to assess whether global elimination of canine rabies is possible. We report extensive observations of individual rabid animals in Tanzania and generate a uniquely detailed analysis of transmission biology, which explains important epidemiological features, including the level of variation in epidemic trajectories. We found that the basic reproductive number for rabies,  $R_0$ , is very low in our study area in rural Africa (approximately 1.2) and throughout its historic global range ( $<2$ ). This finding provides strong support for the feasibility of controlling endemic canine rabies by vaccination, even near wildlife areas with large wild carnivore populations. However, we show that rapid turnover of domestic dog populations has been a major obstacle to successful control in developing countries, thus regular pulse vaccinations will be required to maintain population-level immunity between campaigns. Nonetheless our analyses suggest that with sustained, international commitment, global elimination of rabies from domestic dog populations, the most dangerous vector to humans, is a realistic goal.

#### **Text in English**

<http://www.pubmedcentral.nih.gov/picrender.fcgi?artid=2653555&blobtype=pdf>

### **Eventos / Events**

#### **I ENLAVISA – Encontro Latino-Americano de Vigilância Sanitária**

27-29 **Mai**o 2009

Natal, RN, Brasil

<http://www.ideiaseventos.com.br/enlavisanatal2009/>

#### **Conferencia Mundial sobre Fiebre Aftosa: el camino hacia el control mundial**

24-26 **Jun**io 2009

Asunción, Paraguay

[http://www.oie.int/esp/E\\_FMD2009/WELCOME-FMD.html](http://www.oie.int/esp/E_FMD2009/WELCOME-FMD.html)

### **Curso de Treinamento em Métodos de Diagnóstico e Controle da Brucelose e Tubérculos**

## **Animal**

6-10 **Julho** 2009

Botucatu, SP, Brasil

[http://www.fmvz.unesp.br/Eventos/BruceLOSE\\_Tuberculose/int\\_evento\\_pncebt.php](http://www.fmvz.unesp.br/Eventos/BruceLOSE_Tuberculose/int_evento_pncebt.php)

## **ISVEE XII - 12<sup>th</sup> International Symposium on Veterinary Epidemiology and Economic**

10-14 **August** 2009

Durban, South Africa

<http://www.isvee12.co.za/>

## **Congreso Internacional sobre la Rabia en las Américas (RITA)**

19-23 **Octubre** 2009

Québec, Canada

<http://www.rita2009.org/>

## **36° Congresso Brasileiro de Medicina Veterinária (36° CONBRAVET)**

8-11 **Novembro** 2009

Porto Seguro, BA, Brasil

<http://www.conbravet.com.br/>



Salud Pública Veterinaria

Centro Panamericano de Fiebre Aftosa



Veterinary Public Health

Pan American Foot and Mouth Disease Center

### **Centro de Documentación / Documentation Center (CEDOC)**

**Teléfono / Phone:** 55 21 3661-9045 - <http://www.panaftosa.org.br/>

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It's possible to have access to publications in the mentioned link under the summaries or to ask our Documentation Center for them via e-mail.

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