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**De** "LLAMA INTERNACIONAL -COMPUTAD&"  
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**A:** "cofemer" <cofemer@cofemer.gob.mx>  
**Fecha** 11/11/2006 12:03:54 p.m.  
**Tema:** Comentarios al Anteproyecto MOD NOM-030

LIC. CARLOS GARCIA FERNANDEZ  
DIRECTOR GENERAL  
COMISION FEDERAL DE MEJORA REGULATORIA  
cofemer@cofemer.gob.mx

Estimado Lic. García Fernández,

Me permito enviarle mis comentarios sobre el anteproyecto arriba mencionado por medio del documento adjunto de Word, suplicándole sea aceptado y recibido en tiempo y forma.

Le agradeceré se sirva acusarme recibo.

Muy atentamente,

Enrique M. Maldonado  
microchipstrovan@prodigy.net.mx

**CC:** "microchipstrovan" <microchipstrovan@prodigy.net.mx>



## **Enrique M. Maldonado**

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Ref: Proyecto de Modificación a la Norma Oficial Mexicana  
NOM- 030-ZOO-1995  
"Especificaciones y procedimientos para la verificación  
de carne, canales, vísceras y despojos de importación  
en puntos de verificación zoosanitaria"

Estimado Lic. García Fernández:

Por este conducto y de la manera más atenta, me permito someter a su distinguida consideración mis cometarios sobre el proyecto arriba mencionado.

A la luz de recientes estudios y descubrimientos científicos, obliga a reconsiderar y a ampliar algunas de las disposiciones y/o restricciones plasmadas en el presente proyecto de modificación, en el pleno interés de salvaguardar la Salud Pública, la Pecuaria y la Económica de nuestro País.

Circunscribiéndome al grave riesgo que representan las Encefalopatías Espongiformes Transmisibles, comento lo siguiente:

El 17 de Marzo del 2005 en la Cd. De México, se reunieron los dirigentes de los Departamentos de Salud Animal de Estados Unidos de América, Canadá y México para *"concluir las discusiones sobre el establecimiento de los estándares mínimos comunes para manejar de forma efectiva el riesgo de la EEB en América del Norte"*, suscribiendo un documento intitulado,

### **REPORTE DE LA REUNIÓN DE LOS DIRECTORES VETERINARIOS OFICIALES DE AMÉRICA DEL NORTE PARA ARMONIZAR LA ESTRATEGIA SOBRE EEB**

Firmado por los señores:

#### **México**

MVZ José Ángel del Valle Molina.  
Director General de Salud Animal  
SAGARPA-SENASICA

#### **Estados Unidos de América**

W. Ron DeHaven, DVM  
Administrador  
USDA, APHIS

#### **Canadá**

Dr. Brian R. Evans  
Chief Veterinary Officer  
Canada. CFIA.

En el cual se plasma el siguiente objetivo:

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*"Estas reuniones fueron realizadas para permitir que los Directores Veterinarios Oficiales DVOs desarrollaran un marco **basado en la ciencia**, con el objetivo de normalizar el comercio de rumiantes y productos de rumiante dentro de la región y promover una estrategia internacional de EEB consistente con el capítulo de OIE referente a EEB. Es la visión de los DVOs que el establecimiento y la implementación de medidas equivalentes de EEB en cada país protegerá la salud pública y animal y permitirá el restablecimiento de un intercambio comercial seguro."*

<http://www.sagarpa.gob.mx>

Dicha declaración conjunta "basada en la ciencia" no toma en cuenta y en algunos casos contraviene un sinnúmero de serios descubrimientos científicos, de los cuales sobresalen los siguientes:

➤ *Infección de Riñones, Páncreas e Hígado*

### **Chronic Lymphocytic Inflammation Specifies the Organ Tropism of Prions**

Mathias Heikenwalder,<sup>1\*</sup> Nicolas Zeller,<sup>1\*</sup> Harald Seeger,<sup>1\*</sup> Marco Prinz,<sup>1\*†</sup> Peter-Christian Klöhn,<sup>2</sup> Petra Schwarz,<sup>1</sup> Nancy H. Ruddle,<sup>3</sup> Charles Weissmann,<sup>2</sup> Adriano Aguzzi<sup>1</sup>

*"Prions typically accumulate in nervous and lymphoid tissues. Because proinflammatory cytokines and immune cells are required for lymphoid prion replication, we tested whether inflammatory conditions affect prion pathogenesis. We administered prions to mice with five inflammatory diseases of kidney, pancreas or liver. In all cases, chronic lymphocytic inflammation enabled prion accumulation in otherwise prion-free organs".*

[www.sciencexpress.org](http://www.sciencexpress.org) / 20 January 2005 / Page 1 / 10.1126/science.1106460

➤ *Expulsión de Priones por vías urinarias.*

### **Coincident Scrapie Infection and Nephritis Lead to Urinary Prion Excretion**

Harald Seeger, Mathias Heikenwalder, Nicolas Zeller, Jan Kranich,  
Petra Schwarz, Ariana Gaspert, Burkhardt Seifert, Gino Miele, Adriano Aguzzi

Published 14 October 2005, *Science* **310**, 324 (2005) DOI: 10.1126/science.1118829

### **A Protease Resistant PrP Isoform Is Present In Urine of Animals and Humans Affected with Prion Diseases**

Gideon M. Shaked, Yuval Shaked, Zehavit Kariv-Inbal, Michele Halimi, Inbal Avraham and Ruth Gabizon

*"We now show that a protease resistant PrP isoform can also be detected in the urine of hamsters, cattle and humans suffering from TSEs. Most important, this PrP isoform (UPrPSc)*

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*was also found in the urine of hamsters inoculated with prions long before the appearance of clinical signs".*

JBC Papers in Press. Published on June 21, 2001 as Manuscript C100278200  
<http://www.jbc.org/>

➤ Priones en riñones de Venado Cola Blanca – Asintomático, caso Subclínico.

**Abnormal Prion Protein in Ectopic Lymphoid Tissue in a Kidney of an Asymptomatic White-tailed Deer Experimentally Inoculated with the Agent of Chronic Wasting Disease**

A. N. Hamir, R. A. Kunkle, J. M. Miller and S. M. Hall

*"This report documents the presence of PrP<sup>res</sup> within ectopic lymphoid follicles in a kidney of a white-tailed deer that had been experimentally inoculated by the intracerebral route with CWD 10 months previously. The deer was nonclinical, but spongiform lesions characteristic of TSE were detected in tissues of the central nervous system (CNS) and PrP<sup>res</sup> was seen in CNS and in lymphoid tissues by immunohistochemistry".*

Vet Pathol **43**:367-369 (2006) - <http://www.vetpathology.org/cgi/content/abstract/43/3/367>

➤ Priones en el Recto

**Detection of PrPSc in Rectal Biopsy and Necropsy Samples from Sheep with Experimental Scrapie**

A. Espenes<sup>a</sup>, C. McL. Press<sup>a</sup>, T. Landsverk<sup>a</sup>, M.A. Tranulis<sup>a</sup>, M. Aleksandersen<sup>a</sup>, G. Gunnes<sup>a</sup>, S.L. Benestad<sup>b</sup>, R. Fuglestad<sup>a</sup> and M.J. Ulvund<sup>a</sup>

*"By Western blotting, PrPSc was detected in rectal biopsy samples of sheep with the PrP genotype VRQ/VRQ, after electrophoresis of material equivalent to 8 mg of tissue. This study indicated that rectal biopsy samples should prove useful for the diagnosis of scrapie in sheep".*

<http://www.sciencedirect.com> - doi:10.1016/j.jcpa.2005.08.001

➤ Priones en la Lengua

**Pathological Prion Protein in the Tongues of Sheep Infected with Naturally Occurring Scrapie**

Cristina Casalone, Cristiano Corona, Maria Ines Crescio, Francesca Martucci, Maria Mazza, Giuseppe Ru, Elena Bozzetta, Pier Luigi Acutis, and Maria Caramelli\*

*"A recent European Food Safety Authority opinion recommended research into PrPsc accumulation in the tongues of ruminants. We report on the detection of PrPsc in the tongues of seven scrapie-infected sheep by immunohistochemistry and Western blotting".*

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Journal of Virology, May 2005, p. 5847-5849, Vol. 79, No. 9

doi:10.1128/JVI.79.9.5847-5849.2005 - <http://jvi.asm.org/cgi/content/abstract/79/9/5847?ct>

### **Rapid Prion Neuroinvasion following Tongue Infection**

Jason C. Bartz,<sup>1</sup> Anthony E. Kincaid,<sup>2</sup> and Richard A. Bessen<sup>1\*</sup>

*"Therefore, abrasions of the tongue in livestock and humans may predispose a host to oral prion infection of the tongue-associated cranial nerves. In a related study, PrPSc was detected in tongues following the intracerebral inoculation of six hamster-adapted prion strains, which demonstrates that prions can also travel from the brain to the tongue in the anterograde direction along the tongue-associated cranial nerves. These findings suggest that food products containing ruminant or cervid tongue may be a potential source of prion infection for humans".*

Journal of Virology, January 2003, p. 583-591, Vol. 77, No. 1

DOI: 10.1128/JVI.77.1.583-591.2003

#### ➤ Priones en los Músculos

### **Preclinical deposition of pathological prion protein PrPSc in muscles of hamsters orally exposed to scrapie**

Achim Thomzig,<sup>1</sup> Walter Schulz-Schaeffer,<sup>2</sup> Christine Kratzel,<sup>1</sup> Jessica Mai,<sup>1</sup> and Michael Beekes<sup>1</sup>

*"Here we show that PrPSc in muscles of hamsters fed with scrapie can be detected prior to the onset of clinical symptoms, but that the bulk of PrPSc was deposited late in clinical disease"*

American Society for Clinical Investigation - J Clin Invest. 2004 May 15; 113 (10): 1465–1472

DOI: 10.1172/JCI200421083

<http://www.pubmedcentral.nih.gov/articlerender.fcgi?artid=406533&rendertype=abstract>

### **Prions in Skeletal Muscles of Deer with Chronic Wasting Disease**

Rachel C. Angers,<sup>1\*</sup> Shawn R. Browning,<sup>1\*†</sup> Tanya S. Seward,<sup>2</sup> Christina J. Sigurdson,<sup>4‡</sup> Michael W. Miller,<sup>5</sup> Edward A. Hoover,<sup>4</sup> Glenn C. Telling<sup>1,2,3</sup>

*"While the risk of exposure to CWD infectivity following consumption of prions in muscle is mitigated by relatively inefficient prion transmission via the oral route (8), these results show that semitendinosus/semimembranosus muscle, which is likely to be consumed by humans, is a significant source of prion infectivity. Humans consuming or handling meat from CWD-infected deer are therefore at risk to prion exposure".*

Journal reference: Science (DOI: 10.1126/science.1122864)

### **Prion Infection of Skeletal Muscle Cells and Papillae in the Tongue**

Ellyn R. Mulcahy,<sup>1,†</sup> Jason C. Bartz,<sup>1</sup> Anthony E. Kincaid,<sup>2</sup> and Richard A. Bessen<sup>3\*</sup>

*"These findings indicate that prion infection of skeletal muscle cells and the epithelial layer in the tongue can be established following the spread of the prion agent from nerve terminals and/or*

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*axons that innervate the tongue. Our data suggest that ingestion of meat products containing prion-infected tongue could result in human exposure to the prion agent, while sloughing of prion-infected epithelial cells at the mucosal surface of the tongue could be a mechanism for prion agent shedding and subsequent prion transmission in animals”.*

Journal of Virology, July 2004, p. 6792-6798, Vol. 78, No. 13  
DOI: 10.1128/JVI.78.13.6792-6798.2004

### **Prion protein in cardiac muscle of elk (*Cervus elaphus nelsoni*) and white-tailed deer (*Odocoileus virginianus*) infected with chronic wasting disease**

Jean E. Jewell<sup>1</sup>, Jeremy Brown<sup>1</sup>, Terry Kreeger<sup>2</sup> and Elizabeth S. Williams<sup>1,†</sup>

*“PrPd was detected in samples of heart muscle from seven of 16 CWD-infected white-tailed deer, including one free-ranging deer, and in 12 of 17 CWD-infected elk, but not in any of 13 mule deer samples, nor in the single CWD-infected moose..... This is the first report of PrPd in cardiac tissue from transmissible spongiform encephalopathy-infected ruminants in the human food chain and the first demonstration by immunological assays of PrPd in any striated muscle of CWD-infected cervids”.*

<http://vir.sgmjournals.org/cgi/content/abstract/87/11/3443?ct>

### **Distribution of Bovine Spongiform Encephalopathy in Greater Kudu (*Tragelaphus strepsiceros*)**

Andrew A. Cunningham,\* James K. Kirkwood,\*<sup>1</sup> Michael Dawson,<sup>†2</sup> Yvonne I. Spencer,<sup>†</sup> Robert B. Green,<sup>†</sup> and Gerald A.H. Wells<sup>†</sup>

*“We present the results of mouse bioassay studies to show that, contrary to findings in cattle with BSE in which the tissue distribution of infectivity is the most limited recorded for any of the transmissible spongiform encephalopathies (TSE), infectivity in greater kudu with BSE is distributed in as wide a range of tissues as occurs in any TSE. BSE agent was also detected in skin, conjunctiva, and salivary gland, tissues in which infectivity has not previously been reported in any naturally occurring TSE”.*

Emerging Infectious Diseases • [www.cdc.gov/eid](http://www.cdc.gov/eid) • Vol. 10, No. 6, June 2004

➤ *Priones Infecciosos*

### **Risk of oral infection with bovine spongiform encephalopathy agent in primates**

Corinne Ida Lasmézas, Emmanuel Comoy, Stephen Hawkins, Christian Herzog, Franck Mouthon, Timm Konold, Frédéric Auvré, Evelyne Correia, Nathalie Lescoutra-Etchegaray, Nicole Salès, Gerald Wells, Paul Brown, Jean-Philippe Deslys

*“Since the brain of a cow weighs 500 g and a spinal cord 200 g, CNS tissues from a cow with clinical signs of BSE could contain enough infective agent to transmit disease orally to 490–1400 cows (70% of 700 g if 1g is needed, or 20% of 700 g if 100 mg is sufficient), or to 70 primates (50% of 700 g if 5 g represents the oral ID<sub>50</sub>)”*

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[www.thelancet.com](http://www.thelancet.com) Published online January 27, 2005

<http://image.thelancet.com/extras/05let1056web.pdf>

### **Detection of Prions in Blood**

Joaquín Castilla<sup>1</sup>, Paula Saá<sup>1,2</sup> & Claudio Soto<sup>1</sup>

*"By Western blotting, PrP<sup>Sc</sup> was detected in rectal biopsy samples of sheep with the PrP genotype VRQ/VRQ, after electrophoresis of material equivalent to 8 mg of tissue. This study indicated that rectal biopsy samples should prove useful for the diagnosis of scrapie in sheep".*

Doi:10.1038/nm1286 – <http://www.nature.com/naturemedicine>

### **Infectious Prions in the Saliva and Blood of Deer with CWD**

Candace K. Mathiason,<sup>1</sup> Jenny G. Powers,<sup>3</sup> Sallie J. Dahmes,<sup>4</sup> David A. Osborn,<sup>5</sup> Karl V. Miller,<sup>5</sup> Robert J. Warren,<sup>5</sup> Gary L. Mason,<sup>1</sup> Sheila A. Hays,<sup>1</sup> Jeanette Hayes-Klug,<sup>1</sup> Davis M. Seelig,<sup>1</sup> Margaret A. Wild,<sup>3</sup> Lisa L. Wolfe,<sup>6</sup> Terry R. Spraker,<sup>1,2</sup> Michael W. Miller,<sup>6</sup> Christina J. Sigurdson,<sup>1</sup> Glenn C. Telling,<sup>7</sup> Edward A. Hoover<sup>1\*</sup>

*"We found infectious prions capable of transmitting CWD in saliva (by the oral route) and in blood (by transfusion). The results help to explain the facile transmission of CWD among cervids and prompt caution concerning contact with body fluids in prion infections".*

6 OCTOBER 2006 VOL 314 SCIENCE [www.sciencemag.org](http://www.sciencemag.org)

### **Natural and experimental oral infection of nonhuman primates by bovine spongiform encephalopathy agents**

Nöelle Bons\*,†, Nadine Mestre-Frances\*, Patrick Belli†, Françoise Cathala§, D. Carleton Gajdusek¶, and Paul Brown||

Contributed by D. Carleton Gajdusek, December 21, 1998

*"The similarity of neuropathology and PrP immunostaining patterns in experimentally infected animals to those observed in both symptomatic and asymptomatic animals in primate centers suggests that BSE contamination of zoo animals may have been more widespread than is generally appreciated".*

Vol. 96, Issue 7, 4046-4051, March 30, 1999

<http://www.pnas.org/cgi/content/full/96/7/4046>

### **PrP<sup>Sc</sup> accumulation in fetal cotyledons of scrapie-resistant lambs is influenced by fetus location in the uterus**

Janet Alverson<sup>1,2</sup>, Katherine I. O'Rourke<sup>1,2</sup> and Timothy V. Baszler<sup>2,3</sup>

J Gen Virol **87** (2006), 1035-1041; DOI 10.1099/vir.0.81418-0

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### ➤ Casos Atípicos y Subclínicos

#### **Preclinical deposition of pathological prion protein PrP<sup>Sc</sup> in muscles of hamsters orally exposed to scrapie**

Achim Thomzig,<sup>1</sup> Walter Schulz-Schaeffer,<sup>2</sup> Christine Kratzel,<sup>1</sup> Jessica Mai,<sup>1</sup> and Michael Beekes<sup>1</sup>

*"Here we show that PrP<sup>Sc</sup> in muscles of hamsters fed with scrapie can be detected prior to the onset of clinical symptoms, but that the bulk of PrP<sup>Sc</sup> was deposited late in clinical disease. Additionally, regarding the question of how muscles become invaded, we report on the intramuscular location of PrP<sup>Sc</sup> and substantial indications for centrifugal spread of infection from spinal motor neurons to myofibers".*

*J. Clin. Invest.* **113**:1465–1472 (2004) doi:10.1172/JCI200421083 - <http://www.jci.org>  
Volume 113 Number 10 May 2004

#### **BSE inoculation to prion diseases-resistant sheep reveals tricky silent carriers**

Frédéric Ronzona,<sup>1</sup> Anna Bencsik,<sup>1</sup> Stéphane Lezmia,<sup>1</sup> Johann Vulina,<sup>1</sup> Angeli Kodjob and Thierry Baron<sup>2</sup>

*"Importantly, the absence of any clinical symptoms up to 6 years following experimental challenge suggests that silent carriers of the BSE agent may exist among ARR homozygous sheep".*

doi:10.1016/j.bbrc.2006.09.13 – <http://www.sciencedirect.com>

#### **Distinct molecular phenotypes in bovine prion diseases**

Anne-Gae<sup>1</sup>lle Biacabe<sup>1</sup>, Jean-Louis Laplanche<sup>2</sup>, Stephen Ryder<sup>3</sup> & Thierry Baron<sup>1</sup>+  
<sup>1</sup>AFSSA-Lyon, Unité 'Virologie-ATNC', Lyon, France, <sup>2</sup>UPRES EA 3621, Faculté des Sciences Pharmaceutiques et Biologiques, Université Paris, Paris, France, and <sup>3</sup>Neuropathology Unit, Department of Pathology, Veterinary Laboratories Agency, Weybridge, UK

EMBO reports (2004) 5, 110–114. doi:10.1038/sj.embor.7400054

#### **Isolation from Cattle of a Prion Strain Distinct from That Causing Bovine Spongiform Encephalopathy**

Vincent Be<sup>1</sup>ringue<sup>1</sup>, Anna Bencsik<sup>2</sup>, Annick Le Dur<sup>1</sup>, Fabienne Reine<sup>1</sup>, Thanh Lan Lai<sup>1</sup>, Nathalie Chenais<sup>3</sup>, Gae<sup>1</sup>lle Tilly<sup>3</sup>, Anne-Gae<sup>1</sup>lle Biacabe<sup>2</sup>, Thierry Baron<sup>2</sup>, Jean-Luc Vilotte<sup>3</sup>, Hubert Laude<sup>1</sup>\*

*"...we inoculated French cattle isolates characterised by a PrP<sup>Sc</sup> of higher apparent molecular mass—called H-type—into transgenic mice expressing bovine or ovine PrP. All mice developed neurological symptoms and succumbed to these isolates, showing that these represent a novel strain of infectious prions. Importantly, this agent exhibited strain-specific features clearly distinct from that of BSE agent inoculated to the same mice, which were retained on further passage. Moreover, it also differed from all sheep scrapie isolates passaged so far in ovine PrP-expressing mice. Our findings therefore raise the possibility that either various prion strains may exist in cattle, or that the BSE agent has undergone divergent evolution in some animals".*

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PLoS Pathog 2(10): e112. DOI: 10.1371/journal.ppat.0020112  
[www.plospathogens.org](http://www.plospathogens.org) October 2006 | Volume 2 | Issue 10 | e112

### **New Evidence of Sub-Clinical Prion Infection: Important Research Findings Relevant to CJD and BSE**

Professor John Collinge at the Medical  
Research Council Prion Unit

*"Professor John Collinge said: "These results have a number of important implications. They suggest that we should re-think how we measure species barriers in the laboratory, and that we should not assume that just because one species appears resistant to a strain of prions they have been exposed to, that they do not silently carry the infection. This research raises the possibility, which has been mentioned before, that apparently healthy cattle could harbour, but never show signs of, BSE."*

[http://www.mrc.ac.uk/index/public\\_interest/public-press\\_office/public-press\\_releases\\_2000/public-mrc-43-00.htm](http://www.mrc.ac.uk/index/public_interest/public-press_office/public-press_releases_2000/public-mrc-43-00.htm)

### **Atypical proteinase K-resistant prion protein (PrP<sup>res</sup>) observed in an apparently healthy 23-month-old Holstein steer.**

Jpn J Infect Dis. 2003;56:221–2.

### **Preguntas y respuestas sobre las EET en cabras**

**MEMO/05/29**

Bruselas, 28 de enero de 2005

[http://www.efsa.eu.int/science/biohaz/biohaz\\_documents/787\\_en.html](http://www.efsa.eu.int/science/biohaz/biohaz_documents/787_en.html)

### **Presymptomatic Detection of Prions in Blood**

Paula Saá<sup>1,2</sup> Joaquín Castilla,<sup>1</sup> Claudio Soto<sup>1\*</sup>

*"We detected PrP<sup>Sc</sup> biochemically in the blood of hamsters infected with scrapie during most of the presymptomatic phase of the disease. At early stages of the incubation period, PrP<sup>Sc</sup> detected in blood was likely to be from the peripheral replication of prions, whereas at the symptomatic phase, PrP<sup>Sc</sup> in blood was more likely to have leaked from the brain".*

7 JULY 2006 VOL 313 SCIENCE [www.sciencemag.org](http://www.sciencemag.org)

➤ Correlación de los Priones en Animales y el Ser Humano.

### **Subclinical prion infection in humans and animals**

Andrew F Hill and John Collinge

MRC Prion Unit, Department of Neurodegenerative Disease, Institute of Neurology, London, UK

*"Recently, several lines of evidence have suggested that subclinical forms of prion disease exist, in which high levels of infectivity and PrP<sup>Sc</sup> are found in animals that do not develop clinically apparent disease during a normal life-span".*

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British Medical Bulletin 66:161-170 (2003)

<http://bmb.oxfordjournals.org/cgi/content/abstract/66/1/161>

### Identification of a second bovine amyloidotic spongiform encephalopathy: Molecular similarities with sporadic Creutzfeldt-Jakob disease

Cristina Casalone \*†, Gianluigi Zanusso †‡, Pierluigi Acutis \*, Sergio Ferrari ‡, Lorenzo Capucci §, Fabrizio Tagliavini ¶, Salvatore Monaco ‡||, and Maria Caramelli \*

*"Here we provide evidence of a second cattle TSE. The disorder was pathologically characterized by the presence of PrP-immunopositive amyloid plaques, as opposed to the lack of amyloid deposition in typical BSE cases, and by a different pattern of regional distribution and topology of brain PrPSc accumulation. In addition, Western blot analysis showed a PrPSc type with predominance of the low molecular mass glycoform and a protease-resistant fragment of lower molecular mass than BSE-PrPSc. Strikingly, the molecular signature of this previously undescribed bovine PrPSc was similar to that encountered in a distinct subtype of sporadic Creutzfeldt-Jakob disease".*

Edited by Stanley B. Prusiner, University of California, San Francisco, CA, and approved December 23, 2003 (received for review September 9, 2003)  
[www.pnas.org/cgi/doi/10.1073/pnas.0305777101](http://www.pnas.org/cgi/doi/10.1073/pnas.0305777101)

### Evolution of a Strain of CJD That Induces BSE-Like Plaques

Laura Manuelidis,\* William Fritch, You-Gen Xi

SCIENCE - VOL. 277 - 4 JULY 1997 - [www.sciencemag.org](http://www.sciencemag.org)

➤ Preservación de los Priones en la tierra.

### Prions Adhere to Soil Minerals and Remain Infectious

Christopher J. Johnson<sup>1,2</sup>, Kristen E. Phillips<sup>3</sup>, Peter T. Schramm<sup>3</sup>, Debbie McKenzie<sup>2</sup>, Judd M. Aiken<sup>1,2</sup>, Joel A. Pedersen<sup>3,4\*</sup>

*"Results from our study suggest that PrPSc released into soil environments may be preserved in a bioavailable form, perpetuating prion disease epizootics and exposing other species to the infectious agent".*

[www.plospathogens.org](http://www.plospathogens.org) April 2006 | Volume 2 | Issue 4 | e32  
DOI: 10.1371/journal.ppat.0020032

➤ Serías Fallas en los sistemas y estructuras del APHIS y FDA tendientes a contener las EETs y proteger la cadena alimenticia del hombre en los Estados Unidos de América.

### Audit Report

Animal and Plant Health Inspection Service and Food Safety and Inspection Service  
Bovine Spongiform Encephalopathy (BSE) Surveillance Program – Phase I

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**Report No. 50601-9-KC - Draft  
U.S. Department of Agriculture  
Office of Inspector General  
Great Plains Region**

<http://oig.hhs.gov/>

**Audit Report  
Animal and Plant Health Inspection Service  
Bovine Spongiform Encephalopathy (BSE) Surveillance Program – Phase II  
and  
Food Safety and Inspection Service  
Controls Over BSE Sampling, Specified Risk Materials, and Advanced Meat Recovery  
Products - Phase III**

**Report No. 50601-10-KC January 2006  
U.S. Department of Agriculture  
Office of Inspector General  
Great Plains Region**

<http://oig.hhs.gov/>

### **Alert in Latest Mad-Cow Case Was Delayed by a Misdiagnosis**

<http://online.wsj.com/article/0,,SB111963867150169044,00.html?mod=djemHL>

### **`Downer Cows' Entering Meat Supply, USDA Inspector General Says**

*Feb. 2, 2006 (Bloomberg) -- U.S. government inspectors sometimes allow cattle that can't walk to be slaughtered, contrary to rules aimed at preventing mad-cow disease, the Agriculture Department's Inspector General said in a report.*

<http://www.bloomberg.com/apps/news?pid=10000103&sid=ah00EIDBTlj4&refer=us>

### **GAO faults FDA handling of BSE-linked feed ban**

*"Some feed businesses have never been inspected, while others have not been inspected in more than 5 years, according to the GAO report, issued in March. In addition, the FDA does not usually test cattle feed for banned material, and the agency has not always alerted other federal agencies and the states when it learned that cattle might have been given feed containing such material.*

*"We believe that the problems described in this report are serious and that, given the fact that BSE has been discovered in North American cattle, breaches in FDA's oversight of the feed-ban rule place US cattle at risk for BSE," the report states. But the FDA said the problems are not significant enough to pose a serious risk".*

<http://www.cidrap.umn.edu/cidrap/content/other/bse/news/april2605bse.html>

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### Experts doubt USDA's mad cow results

By Steve Mitchell - Medical Correspondent

Published 11/24/2004 4:34 PM

*"The testing process does indeed make experts scratch their heads," said Markus Moser, a molecular biologist and chief executive officer of the Swiss firm Prionics, which manufactures tests for detecting mad cow disease, also known as bovine spongiform encephalopathy. "I think some, but not all, BSE people internationally have some degree of cynical de facto doubt about everything the United States does or doesn't do, mostly as a result of seeing so many similar situations where countries at risk deny and deny and deny and then end up having big problems," said Elizabeth Mumford, a veterinarian and BSE expert at Safe Food Solutions in Bern, Switzerland, a company that provides advice on reducing mad cow risk to industry and governments.*

<http://www.upi.com/>

### Material Específico de Riesgo (MER o SRM)

Desde los años 90s, se determinó en base a investigaciones científicas que la acumulación de Priones se encontraba primordialmente en los tejidos nerviosos, por lo que se elaboró y se estableció una lista de tejidos que debían ser removidos y evitar su entrada a la cadena alimenticia del hombre, así como su prohibición para la elaboración de alimentos para rumiantes.

Dichos materiales son:

- Cráneo
- Cerebro
- Columna Vertebral,
- Médula espinal,
- Parte de los Intestinos, ileum distal,
- Sistema linfático
- Ojos (incluyendo el trigémino)
- Tonsilas

Además de prohibir:

- La comercialización de la carne de animales "caídos" para consumo humano,
- el sacrificio de los animales por medio de pistolas de impacto e inyección de gas,
- el deshuese mecanizado y
- el comercio de cortes con hueso de animales mayores reses de 30 meses y de ovinos/caprinos de seis meses.

Siempre se pensó que otros tejidos u órganos pusiesen ser áreas de concentración de Priones, mas sin embargo, inexplicablemente las investigaciones correspondientes no se llevaban a cabo, se pospusieron o no se publicaron los resultados. BSE Inquiry – U.K.

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El pasado día 20 de Enero del 2005, se publicaron los resultados de las investigaciones llevadas a cabo por el Dr. Adriano Aguzzi – experto investigador en Priones - del Zurich University Hospital, Switzerland, informando al mundo de haber encontrado grandes cantidades de priones almacenados en Hígado, Páncreas y Riñones de animales infectados, por lo que la lista de MER debía de ser revisada y ampliada.

La lengua y la mucosa nasal han sido por muchos años objeto de discusión, ya que los reportes publicados indican y muestran que se tratan de músculos facilitadores para la recolección de priones y vías de rápida concentración antes de que éstos migren, invadan e infecten los sistemas nerviosos.

Si a lo anterior aunamos otros descubrimientos en cuyas publicaciones (EFSA y USDA) demuestran y comprueban que los Priones se encuentran en los músculos, recto, lengua y tejidos periféricos, sangre y orina, así como su transmisión horizontal y vertical en diversas especies, no se explica el porqué de que la lista de MERs no ha sido ampliada y no se restringe su comercio.

Hasta hoy en día, México sigue importando miles de toneladas de dichos órganos y músculos para consumo entre su población.

### **El Mito de la Edad de 30 Meses y los casos Subclínicos**

La regla norteamericana de remover los MER sólo de animales mayores de 30 meses ya que según “su ciencia” a partir de dicha edad es cuando se corre el riesgo de infección es un mito, una falacia.

Como lo expusiera el Profesor John Collinge, Científico-Investigador del Medical Research Council Prion Unit, “es como si se dijese que la res *está un poquito preñada*”.

Las estadísticas del Reino Unido nos dan una muestra de lo anterior  
<http://www.defra.gov.uk/animalh/bse/statistics/bse/young-old.html>, en Japón el animal más joven afectado por el EEB, fue registrado de 21 meses de edad.

El que los síntomas de la enfermedad no se hayan manifestado, no implica que el animal no esté infectado.

Un vistazo a los reportes de muestreos en la Comunidad Europea, nos indican de una gran cantidad de casos Subclínicos y Asintomáticos han dado positivo a los reactivos.

Europa – Food Safety – Biological Safety of Food – BSE – Annual Report  
[http://www.ec.europa.eu/food/food/biosafety/bse/annual\\_reps\\_en.htm](http://www.ec.europa.eu/food/food/biosafety/bse/annual_reps_en.htm)

Es por ello que una de las condiciones del Japón para reactivar el comercio de la carne con Estados Unidos, éste se basa en productos de animales menores de 20 meses de edad, mientras en su política interna, TODO bovino sacrificado en ese país, debe ser muestreado por EEB, sin importar de su edad.

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### **La administración Bush vs. La Comunidad Científica**

La “ciencia” de la administración del Presidente Bush ha sido y sigue siendo seriamente cuestionada ya que los mismos Científicos le señalan y le acusan de distorsionar los resultados de sus investigaciones y torcer el sentido de sus pronunciamientos con fines políticos y comerciales.

La administración se ha basado en “estudios y conclusiones” de científicos e instituciones de investigación (Harvard, Risk Analysis) que por diversas razones se han prestado a presentar estudios hipotéticos, distorsionando así los estudios e investigaciones serias, además de que dependen económicamente del sector gobierno y/o asociaciones ganaderas, lo cual ha resultado sobre todo para la administración del Presidente Bush y el Secretario Johanns en un total descrédito del USDA, APHIS, FSIS y de Harvard mismo, por la burda manipulación de su “ciencia”.

En el mes de febrero del 2004, un grupo de 62 Científicos Líderes, incluyendo 20 Premios Nóbel y 19 Galardonados con la Medalla Nacional de Ciencias – la más alta condecoración al mérito científico en la Unión Americana -, emitieron un comunicado donde acusan a la administración del Presidente Bush de distorsionar y malinterpretar repetidamente los aportes científicos para fines políticos. Dicho reporte fue publicado por la Union of Concerned Scientist (UCS), organización civil sin fines de lucro que agrupa a más de 100,000 científicos, en el cual expresan su consternación al mencionar que: *“Existe un patrón bien definido para la supresión y distorsión de los aportes científicos utilizado por altos funcionarios y emisarios políticos en numerosas dependencias gubernamentales de la administración del Presidente Bush”*, a la vez de instar al Congreso a iniciar una investigación sobre los hechos manifestados.

La administración Bush no es dueña, ni portadora de la verdad absoluta.

Como lo describiera Don Miguel de Cervantes: *“Ninguna ciencia, en cuanto a ciencia, engaña; el engaño está en quien no sabe.”*

### **Comentario Final,**

El riesgo de la internación de las “vacas locas” y/o de la importación de productos y subproductos contaminado por los “Priones” está latente en todo momento ya que una simple inspección ocular no lo detecta, tienen que llevarse a cabo los muestreos en laboratorio, no podemos depender de un solo papel que nos indique que un embarque esta libre de EEB.

En E.U.A. encontramos todo tipo de Encefalopatías Espongiformes Transmisibles en los animales como lo son, Vacas Locas, Borregos Locos, Venados Locos, Alces Locos, Renos Locos, Gatos Locos, Ardillas Locas, Visones Locos, Mapaches Locos, etc., por lo que pensar que allá se tiene un control absoluto de dichas enfermedades, es muy ingenuo de nuestra parte.

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Lo más preocupante es que dichas enfermedades se transmiten al Hombre por medio de la ingesta de sus productos **Creutzfeldt-Jakob Disease – CJD**.

Estas enfermedades, tanto en el Hombre como en los Animales, son MORTALES, a la fecha no existen vacunas para su prevención, ni cura alguna.

Agradezco de antemano su atención a mis comentarios, esperando que los reportes mencionados sean consultados y analizados para el enriquecimiento de nuestras políticas, normas y procedimientos, teniendo en mente que los estragos de dichas enfermedades son de largo período de “incubación” de 2 a 45 años en el hombre, pero invariablemente mortal.

Le suplico acusar recibo del presente comunicado al correo electrónico [microchipstrovan@prodigy.net.mx](mailto:microchipstrovan@prodigy.net.mx)

Tijuana, Baja California, Noviembre 11 del 2006.

Muy Atentamente,

ENRIQUE M. MALDONADO