Program

May 10 (Tue.)

Animal Prion Diseases Workshop
“Updated Diagnosis and Epidemiology of Animal Prion Diseases for Food Safety and Security”
(Sponsored by the OECD Co-operative Research Programme)

9:00-9:05 Opening Remarks

9:05-9:15 OECD programme
Rafael Blasco
INIA-Ministerio de Ciencia e Innovacion

9:15-10:50 Workshop 01-04
Chairs: Motohiro Horiuchi (Hokkaido University)
Corinne Lasmezas (The Scripps Research Institute)

WS-01 Prion diseases in animals and zoonotic potential
Juan Maria Torres
Centro de Investigacion en Sanidad Animal (CISA-INIA), Valdeolmos, Madrid, Spain

WS-02 Scrapie in swine: A diagnostic challenge
Justin J Greenlee
National Animal Disease Center, US Dept. of Agriculture, Agricultural Research Service, United States

WS-03 Epidemiology of Chronic wasting disease in Korea
Hyun-Joo Sohn
Foreign Animal Disease Division (FADD), Animal and Plant Quarantine Agency (QIA), Korea

WS-04 Ultra-sensitive detection of PrP^Sc of classical and atypical BSEs
Yuichi Murayama
Influenza/Prion Disease Research Center, National Institute of Animal Health, Japan

10:50-12:45 Workshop 05-08
Chairs: Yoshifumi Iwamaru (National Institute of Animal Health)
Jean Manson (The Roslin Institute, University of Edinburgh)

WS-05 RT-QuIC Assays in Humans and Animals
Steven J Collins
The University of Melbourne, Australia

WS-06 Pathology of TSEs
John Spiropoulos
Animal and Plant Health Agency, Pathology Department, United Kingdom

WS-07 Diagnosis of Atypical BSE and Isolation of the Agent
Sandor Dudas
Canadian National and OIE BSE Reference Laboratory, Canadian Food Inspection Agency, National Center for Animal Disease, Lethbridge, Canada
**WS-08** Intra- and interspecies transmission of atypical BSE - What can we learn from it?
Anne Balkema-Buschmann
Friedrich-Loeffler-Institut, Institute for Novel and Emerging Infectious Diseases, Germany

12:45-13:30 **Luncheon Seminar 1**
"Prion treatment by MC Water and other chemicals"
*Co-sponsored by Santa Mineral Co., Ltd.

Chair: Koriki Jojima (Former Minister of Finance)
Speakers: Takashi Onodera (Professor of University of Tokyo)
Kouichi Furusaki (General incorporated association Mineral Activation Technical Research Center)

**13:30-15:00 Workshop 09-11**
Chairs: Hiroyuki Okada (National Institute of Animal Health)
John Spiropoulos (Animal and Plant Health Agency)

**WS-09** Pathogenesis and transmission of classical and atypical BSEs in cattle
Cristina Casalone
Istituto Zooprofilattico Sperimentale del Piemonte, Liguria e Valle d’Aosta, Italy

**WS-10** Neuronal death and prion diseases
Corinne Lasmezas
Department of Immunology and Microbial Science, Department of Neuroscience, The Scripps Research Institute, United States

**WS-11** Evaluating the species barriers of TSEs with transgenic mouse models
Jean C Manson
The Roslin Institute, University of Edinburgh, United Kingdom

15:00-15:30 **Closing Discussion**
Chairs: Toshiro Kawashima (Ministry of Agriculture, Forestry and Fisheries, Japan)
Takashi Yokoyama (National Institute of Animal Health, NARO)

15:45-16:15 **Opening Lecture**
Chair: Motomasa Tanaka (RIKEN Brain Science Institute, Lab for Protein Conformation Diseases)

**OL-01** Implications of the folded in-register parallel beta-sheet structure of infectious prion amyloids
Reed B. Wickner
National Institutes of Health: National Institutes of Diabetes and Digestive and Kidney Diseases; Laboratory of Biochemistry and Genetics, United States

16:15-16:45 **Opening Lecture**
Chair: Naomi Hachiya (Tokyo Medical University)

**OL-02** PrP function and prion toxicity
Adriano Aguzzi
Institute of Neuropathology, University Hospital of Zürich, Schmelzbergstrasse, Zürich, Switzerland
May 11 (Wed.)

9:00-11:00  **Invited Lectures "Conversion and Propagation"**

**Chairs:** Noriyuki Nishida (Molecular Microbiology and Immunology, Nagasaki University)
Glenn Telling (Colorado University)

**IL-01** Molecular Determinants of Prions Infectivity
Giuseppe Legname
Laboratory of Prion Biology, Department of Neuroscience, Scuola Internazionale Superiore di Studi Avanzati (SISSA), Trieste, Italy

**IL-02** Potential role of the environment on prion transmission: Plants, environmental surfaces and earthworms as carriers of infectious prions
Claudio Soto
Mitchell Center for Alzheimer’s Diseases and Related Brain Disorders, Department of Neurology, University of Texas Medical School at Houston, United States

**IL-03** How does recombinant prion protein become infectious? Progress in understanding the molecular basis of prion infectivity
Jiyan Ma
Van Andel Institute, United States

**IL-04** Sorting of prion protein and PrPSc accumulation
Keiji Uchiyama
Institute for Enzyme Research, Tokushima University, Japan

11:15-12:00  **Oral Session**

**O-01** Folding and misfolding pathways of prion protein
Ryo P. Honda
Department of Molecular Pathobiochemistry, Gifu University Graduate School of Medicine, Japan

**O-02** HET-2s, an engineered, four-rung beta-solenoid protein as a model for the structure of PrPSc
Holger Wille
Centre for Prions & Protein Folding Diseases, Canada

**O-03** Prion protein deficiency causes diverse proteome shifts in cell models that escape detection in brain tissue
Mohadeseh Mehrabian
Tanz Centre for Research in Neurodegenerative Diseases; Laboratory Medicine & Pathobiology, University of Toronto, Toronto, ON, Canada

12:10-13:00  **Luncheon Seminar 2**
"From prion diseases to Alzheimer's disease"
*Co-sponsored by Daiichi Sankyo Co., Ltd.*

**Chair:** Hidehiro Mizusawa (President / National Center of Neurology and Psychiatry)
**Speaker:** Masahito Yamada (Professor and Chairman / Department of Neurology & Neurobiology of Aging, Kanazawa University Graduate School of Medical Sciences)
13:00-14:30  **Invited Lectures "Pathogenesis I"**

Chairs: Byron Caughey (LPVD, Rocky Mountain Labs, NIAID, NIH)
Shigeo Murayama (Tokyo Metropolitan Institute of Gerontology)

**IL-05**  Prion structures, PIRIBS architectures, and real-time quaking-induced conversion (RT-QuIC)
Byron Caughey
LPVD, Rocky Mountain Labs, NIAID, NIH, United States

**IL-06**  Neuropathology of prion disease
James W Ironside
National CJD Research & Surveillance Unit, University of Edinburgh, UK

**IL-07**  Iatrogenic transmission of Creutzfeldt-Jakob disease
Atsushi Kobayashi
Laboratory of Comparative Pathology, Graduate School of Veterinary Medicine, Hokkaido University, Sapporo, Japan

14:45-16:15  **Invited Lectures "Expansion of prion concept"**

Chairs: Hidehiro Mizusawa (NCNP)
Joaquin Castilla (Proteomic, CiCbioGUNE, Spain)

**IL-08**  Revisiting supersaturation as a factor determining amyloid fibrillation
Yuji Goto
Institute for Protein Research, Osaka University, Japan

**IL-09**  Mechanisms of prion protein (mis) folding and aggregation explored by ultrafast kinetics
Heinrich Roder
Fox Chase Cancer Center, United States

**IL-10**  Tau / TDP-43 prions
Masato Hasegawa
Department of Dementia and Higher Brain Function, Tokyo Metropolitan Institute of Medical Science, Setagaya-ku, Tokyo, Japan

16:15-17:00  **Oral Session**

**O-04**  Protein Folding Activity of the Ribosome: Key Player in Yeast Prion Propagation
Cecile P Voisset
Inserm UMR 1078, University of Medecine of Brest, Etablissement Français du Sang (EFS) Bretagne, France; CHRU Brest, Morvan Hospital, Molecular Genetic Laboratory, Brest, France

**O-05**  A local conformation of natively disordered yeast prion monomer determines interspecies prion transmissibility
Toshinobu Shida
Department of Biological Information, Graduate School of Bioscience and Biotechnology, Tokyo Institute of Technology, Yokohama, Japan; Laboratory for Protein Conformation Diseases, RIKEN Brain Science Institute, Wako, Japan

**O-06**  Prion nucleation and propagation by amyloid beta in the yeast model
Yury O. Chernoff
School of Biology, Georgia Institute of Technology, Atlanta, GA, USA; St. Petersburg State University, Russia
May 12 (Thu.)

9:00-10:30  **Invited Lectures "Pathogenesis II"**

Chairs: Shirou Mohri (Department of Neurological Science, Tohoku University Graduate School of Medicine)
Jean Manson (Neurobiology, The Roslin Institute, University of Edinburgh)

**IL-11** Design of novel anti-prion compounds  
Steven H. Olson  
UCSF

**IL-12** Activation state of glial cells in prion diseases  
Motohiro Horiuchi  
Laboratory of Veterinary Hygiene, Graduate School of Veterinary Medicine, Hokkaido University, Japan

**IL-13** Transmission of prions to non human-primates: Implications for human populations  
Jean-Philippe Deslys  
CEA, Institute of Emerging Diseases and Innovative Therapies (iMETI), Division of Prions and Related Diseases (SEPAA), Fontenay-aux-Roses, France

10:45-12:00  **Oral Session**

**O-07** Oral prion pathogenesis is reduced in the absence of CXCR5-expressing mononuclear phagocytes  
Neil A. Mabbott  
The Roslin Institute & R(D)SVS, University of Edinburgh, UK

**O-08** Tau pathology in Creutzfeldt-Jakob disease: Novel insights  
Gabor G. Kovacs  
Medical University of Vienna, Institute of Neurology, Austria

**O-09** Creutzfeldt-Jakob disease prion propagation in human iPS cells-derived astrocytes  
Zuzana Krejciova  
Institute for Neurodegenerative Diseases, University of California, San Francisco, United States; National CJD Research & Surveillance Unit, University of Edinburgh, United Kingdom

**O-10** Role of Tunneling Nanotubes (TNTs) in intercellular spreading of prions and other protein  
Chiara Zurzolo  
Pasteur Institute, Department of Cell Biology and Infection, France

**O-11** Structural role of the middle region in the prion protein in conformational conversion to the infectious form  
Witold K Surewicz  
Department of Physiology and Biophysics, Case Western Reserve University, Cleveland, OH, USA

12:10-13:00  **Luncheon Seminar 3**  
"Clinicopathological Feature of Genetic Prion Diseases in Japan"  
*Co-sponsored by Novartis Pharma K.K.*

Chair: Yoshio Tsuboi (Professor of Department of Neurology, Fukuoka University)  
Speaker: Nobuo Sanjo (Associate Professor of Department of Neurology and Neurological Science, Tokyo Medical and Dental University)
13:00-14:30  **Invited Lectures "Human Prion Diseases: Diagnosis"**

**Chairs:** Michael D. Geschwind (*Neurology, University of California, San Francisco*)
Ichirou Takumi (*Nippon Medical School*)

**IL-14**  Variant CJD  
Robert G Will  
*National CJD Research and Surveillance Unit, United Kingdom*

**IL-15**  Genetic prion diseases  
Inga Zerr  
*National CJD Surveillance Center, Dept. of Neurology, Georg August University Göttingen, Germany*

**IL-16**  Biomarkers for prion disease  
Piero Parchi  
*Dipartimento di Scienze Biomediche e Neuromotorie, Università di Bologna, Italy; IRCCS, Istituto delle Scienze Neurologiche di Bologna, Bologna, Italy*

14:45-15:30  **Oral Session**

**O-12**  PrPSc in the skin of CJD patients  
Wenquan Zou  
*Case Western Reserve University, United States*

**O-13**  Autopsy validation of second generation RT QuIC for diagnosis and differentiation of human prion diseases: Results from the US National Prion Disease Pathology Surveillance Center  
Jiri G. Safar  
*National Prion Disease Pathology Surveillance Center, Case Western Reserve University, United States*

**O-14**  Highly sensitive and specific detection of prions in blood of vCJD patients by PMCA  
Luis M Concha-Marambio  
*University of Texas Health Science Center, United States; Universidad de Los Andes, Facultad de Medicina, Chile*

15:30-16:30  **Invited Lectures "Animal Prion Diseases"**

**Chairs:** Motohiro Horiuchi (*Graduate School of Veterinary Medicine, Hokkaido University*)
Candace Mathiason (*Microbiology, Immunology and Pathology, Colorado State University*)

**IL-17**  Emergence of a novel bovine spongiform encephalopathy (BSE) prion from an atypical H-type BSE: An artificial laboratory strain or possible risk?  
Takashi Yokoyama  
*National Institute of Animal Health, NARO, Japan*

**IL-18**  Rapid analysis of prion seeding activity in clinically accessible biological samples using magnetic particle extraction and realtime conversion  
Edward A Hoover  
*Microbiology, Immunology, Pathology, Colorado State University, United States*

16:30-17:00  **Oral Session**

**O-15**  Zoonotic Potential of CWD Prions: An Update  
Qingzhong Kong  
*Department of Pathology, Case Western Reserve University, Cleveland, Ohio, USA*

**O-16**  Puzzling out the BSE-human transmission barrier  
Natalia Fernandez-Borges  
*CISA-INIA, Valdeolmos, Madrid, Spain*
May 13 (Fri.)

**Invited Lectures-APPS 2016 "Human Prion Diseases: Surveillance"**

**Chairs:** Steve John Collins *(Medicine, University of Melbourne, Australia)*
Yoshikazu Nakamura *(Department of Public Health, Jichi Medical University)*

- **IL-19**  
  **Epidemiological and clinical features of human prion diseases in Japan: Prospective 17-year surveillance**  
  **Masahito Yamada**  
  *Department of Neurology and Neurobiology of Aging, Kanazawa University Graduate School of Medical Sciences, Japan*

- **IL-20**  
  **Chinese surveillance program for prion diseases**  
  **Xiao-Ping Dong**  
  *State Key Laboratory for Infectious Disease Prevention and Control, National Institute for Viral Disease Control and Prevention, Chinese Center for Disease Control and Prevention, Beijing, China*

- **IL-21**  
  **Surveillance of prion diseases in Taiwan**  
  **Shun-Sheng Chen**  
  *Department of Neurology, Kaohsiung Chang Gung Memorial Hospital, Taiwan*

- **IL-22**  
  **Real-time quaking-induced conversion analysis for the diagnosis of sporadic Creutzfeldt-Jakob disease in Korea**  
  **Yong-Sun Kim**  
  *Ilsong Institute of Life Science, Hallym University, Department of Neurodegenerative Diseases, Korea CJD Diagnostic Center, Korea*

**Oral Session "APPS Cutting-edge young researcher"**

- **O-17**  
  **Acceleration of Abeta brain amyloidosis by peripheral administration of disease associated aggregates**  
  **Rodrigo Morales**  
  *The University of Texas Health Science Center at Houston, United States*

- **O-18**  
  **Amyloid beta pathology in iatrogenic Creutzfeldt-Jakob disease: A multi-center study**  
  **Ignazio Cali**  
  *Department of Pathology, Case Western Reserve University, School of Medicine, Cleveland, OH, USA*

- **O-19**  
  **Prion acute synaptotoxicity at the CA1 region of the stratum radiatum**  
  **Simote T Foliaki**  
  *Department of Medicine, The University of Melbourne, Australia*

- **O-20**  
  **Neuron and glial cell type-specific detection of PrPSc in prion-infected mouse brain by flow cytometry**  
  **Takeshi Yamasaki**  
  *Laboratory of Veterinary Hygiene, Graduate School of Veterinary Medicine, Hokkaido University, Japan*

**Luncheon Seminar 4 "α-Synuclein prions"**

*Co-sponsored by GlaxoSmithKline K.K.

**Chair:** TBD
**Speaker:** Masato Hasegawa *(Department Head, Department of Dementia and Higher Brain Function Tokyo Metropolitan Institute of Medical Science)*
13:00-15:00  **Invited Lectures "Human Prion Diseases: Treatment"**

Chairs: Neil Roy Cashman *(Medicine (Neurology), University of British Columbia)*
        Yoshio Tsuboi *(Fukuoka University)*

**IL-23**  Therapeutic approaches to prion infection and disease
John Collinge  
MRC Prion Unit and Department of Neurodegenerative Disease, UCL Institute of Neurology and National Prion Clinic, National Hospital for Neurology and Neurosurgery, Queen Square, London, United Kingdom

**IL-24**  Lessons from recent outcomes of clinical trials and therapeutic studies
Katsumi Doh-ura  
Department of Neurochemistry, Tohoku University Graduate School of Medicine, Japan

**IL-25**  Prevention Trial in Fatal Familial Insomnia
Fabrizio Tagliavini  
IRCCS Foundation Carlo Besta Neurological Institute, Milan, Italy

**IL-26**  Logical design of a therapeutic agent for prion diseases
Kazuo Kuwata  
United Graduate School of Drug Discovery and Medical Information Sciences, Gifu University, Japan

15:15-16:00  **Oral Session**

**O-21**  Towards prophylactic treatments for carriers of pathogenic PrP mutations
Ruth Gabizon  
Department of Neurology, Hadassah University Hospital, Israel; Granalix

**O-22**  Eradication of PrPSc by poly-L-arginine in cells infected with prions
Muhammad Waqas  
Hanyang University, Korea

**O-23**  Pre-implantation exclusion of embryos at risk for prion diseases
Vardiella Meiner  
Hadassah Hebrew University Hospital, Israel
### Poster Session

**May 11 (Wed.)-May 12 (Thu.)  17:15-19:15**

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<thead>
<tr>
<th>Poster ID</th>
<th>Title</th>
<th>Authors</th>
<th>Affiliations</th>
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<tr>
<td>P-001</td>
<td>Employing Dynamic Mass Redistribution to Identify Pharmacological Chaperones for The Cellular Prion Protein</td>
<td>Saioa R. Elezgarai</td>
<td>Department of Molecular Biochemistry and Pharmacology, IRCCS-Istituto di Ricerche Farmacologiche Mario Negri, Spain; Dulebcco Telethon Institute, Centre for Integrative Biology (CIBIO), University of Trento, Trento, Italy</td>
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<tr>
<td>P-002</td>
<td>Using small molecule reagents to help distinguish among prion structural models</td>
<td>Christopher J. Silva</td>
<td>United States Department of Agriculture, ARS, WRRC, United States</td>
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<tr>
<td>P-003</td>
<td>PrP in conjunction with CD21/35, bolsters B lymphocyte antibody responses, yet infectious prions utilize this system for lymphoid replication</td>
<td>Sarah J Kane</td>
<td>Colorado State University, United States</td>
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<tr>
<td>P-004</td>
<td>Structural characterisation of ex vivo mammalian prions isolated from multiple strains</td>
<td>Cassandra I.J Terry</td>
<td>MRC Prion Unit and Department of Neurodegenerative Disease, UCL Institute of Neurology, United Kingdom</td>
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<td>P-005</td>
<td>Lack of stress protection by the cellular prion protein: An alternative role in regulating growth factor signalling</td>
<td>Andrew R Castle</td>
<td>Roslin Institute, University of Edinburgh, Edinburgh, UK</td>
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<td>P-006</td>
<td>Structural and folding studies of the protective V127 variant of human prion protein</td>
<td>Laszlo LP Hosszu</td>
<td>MRC Prion Unit, United Kingdom</td>
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<tr>
<td>P-007</td>
<td>Non-equivalent binding sites for Abeta1-40 on PrP determine the oligomerisation pathway</td>
<td>Katarina Grznarova</td>
<td>Brain and Spine Institute Paris, France; INRAI National Institute of Agronomic Research, Molecular Virology and Immunology (VIM), Protein Macromolecular and prion diseases (MAP2), Domaine de Vilvert, Jouy-en-Josas, France; CEA/French Alternative Energies and Atomic Energy Commission, Institute of Emerging Diseases, Innovative Therapies (SEPIA), Fontenay-aux-Roses, France</td>
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<td>P-008</td>
<td>Proteolytic shedding of PrP: Giving a little to gain a lot?</td>
<td>Hermann C Altmeppen</td>
<td>Institute of Neuropathology, University Medical Center Hamburg-Eppendorf, Hamburg, Germany</td>
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<td>P-009</td>
<td>Calibration of ultrasonic power and conformational analysis of MoPrP amyloid fibrils</td>
<td>Kei-ichi Yamaguchi</td>
<td>United Graduate School of Drug Discovery and Medical Information Sciences, Gifu University, Japan; Center for Emerging Infectious Diseases, Gifu University</td>
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<tr>
<td>P-010</td>
<td>Polymorphism Analysis of Prion Protein Gene in Eleven Pakistani Goat Breeds</td>
<td>Mohammad Farooque Hassan</td>
<td>China Agricultural University, Beijing, China; SBBUVAS, Sakrand Sindh Pakistan</td>
</tr>
<tr>
<td>P-011</td>
<td>Matrix metalloprotease processing of the prion protein</td>
<td>Victoria Lewis</td>
<td>Department of Medicine, RMH, The University of Melbourne, Australia</td>
</tr>
</tbody>
</table>
P-012 A ZIP6-ZIP10 heteromer interacts with NCAM1, controlling its phosphorylation and integration into focal adhesion complexes during epithelial-to-mesenchymal transition  
Dylan Brethour  
Tanz Centre for Research in Neurodegenerative Diseases; Department of Laboratory Medicine & Pathobiology, University of Toronto, Toronto, ON, Canada

P-013 Dimer-sized PrPSc formation detected by western blotting  
Kenta Teruya  
Department of Neurochemistry Tohoku University Graduate School of Medicine, Japan

P-014 The Prion Protein and genotoxic stress  
Malin R. Reiten  
Norwegian University of Life Sciences, Norway

P-015 Effects of cell growth suppression treatments on PrPSc accumulation in prion-infected cells; Paradoxical phenomena observed in butyric acid treatment  
Takako Hiyoshi  
Department of Neurochemistry, Tohoku University Graduate School of Medicine, Japan

EP-001 A novel system for massively parallel, quantitative analysis of PrP interactions and binding interfaces  
Stefanie M. Berges  
University of Delaware, United States

EP-002 The influence of Prnpb polymorphisms and the conserved 4-threonine stretch of Alpha-helix 2 on prion protein conversion  
Romany Abskharon  
Van Andel Research Institute, United States; National Institute of Oceanography and Fisheries (NIOF), Cairo, Egypt

EP-003 Solubilization of the aggregated-prion protein with the robust protein-unfolding activity of an oligomeric form of YDL178wp/ Unfoldin  
Naomi Hachiya  
Tokyo Medical University, Pathophysiology, Japan

P-016 Manipulation of Autophagic machinery Controls Exosomal Release of Prions and Lateral Prion Infection  
Basant A Abdulrahman  
Department of Camparative Biology and Experimental Medicine, Canada

P-017 Semisynthesis of lipidated prion protein variants  
Stefanie Hackl  
Institute of Biological Chemistry, Department of Chemistry, University of Vienna, Waehringer Str., Vienna, Austria

P-018 In vitro seeding of amyloid plaques  
Kirsty A Ireland  
The Roslin Institute, United Kingdom

P-019 Discovery of anti-prion agents using a PyMOL plugin-based logical drug design platform NAGARA  
Biao Ma  
United Graduate School of Drug Discovery and Medical Information Sciences, Gifu University, Gifu, Japan

P-020 Zinnia elegans combined PrP<sup>SE</sup> complex increases the survival time of VM mice  
Hyo Jin Kim  
Foreign Animal Disease Division, Animal and Plant Quarantine Agency, Korea

P-021 Gene expression profiling analysis of Rubus coreanus Miquel-cured prion-infected MDBK cell line  
Hyo Jin Kim  
Foreign Animal Disease Division, Animal and Plant Quarantine Agency, Korea
The effects of PrPC glycosylation and cofactor molecules on species-specific prion strain susceptibility in the bank vole
Cassandra M Burke
Department of Biochemistry, Geisel School of Medicine at Dartmouth, Hanover, New Hampshire, United States

Autophagy is needed in opposing roles in the life cycle of prions and also impacts exosomal release of prions
Hermann M Schatzl
University of Calgary, Comp. Biol. & Exp. Med., Canada

Polymorphism of PrP amyloid-like fibrils can be defined by the concentration of seeds
Vytautas Smirnovas
Vilnius University Institute of Biotechnology, Dept. Biothermodynamics and Drug Design, Lithuania

Restricted propagation of sheep scrapie in hamsters
Ronald A Shikiya
Creighton University, Medical Microbiology and Immunology, United States

Comparison of the in vitro seeding activity of UK iatrogenic and sporadic Creutzfeldt-Jakob disease subtypes by real time quaking induced conversion
Alexander H Peden
National CJD Research & Surveillance Unit, Centre for Clinical Brain Sciences, University of Edinburgh, United Kingdom

PrP glycosylation-independent amplification of prions using highly efficient cell-based protein misfolded cyclic amplification
Mohammed Moudjou
INRA, UR892, Virologie Immunologie Moleculaires, Jouy-en-Josas, France

Validating human stem cell derived neural cultures as a flexible model system in which to investigate neurodegenerative mechanisms
James D Alibhai
The National CJD Research and Surveillance Unit, Centre for Clinical Brain Sciences, The University of Edinburgh, United Kingdom

sCJD prion seeding activity in human urine by RT-QuIC
Gabriele Piconi
National CJD Research and Surveillance Unit, Centre for Clinical Brain Sciences, University of Edinburgh, Edinburgh, UK

Comparison of the in vitro amplification efficiency of UK iatrogenic and sporadic Creutzfeldt-Jakob disease subtypes by protein misfolding cyclic amplification
Marcelo Barria Matus
National CJD Research & Surveillance Unit, Centre for Clinical Brain Sciences, The University of Edinburgh, United Kingdom

Determination of the amino terminal domains of the cellular prion protein that are required for highly efficient prion propagation
Parineeta Arora
MRC, United Kingdom

Prion-type dependent deposition of PRNP allelic products: Study in scrapie and BSE infected heterozygous ARR/VRQ sheep
Jan PM Langeveld
Central Veterinary Institute part of WageningenUR, Netherlands

PrP quaternary structure and prion capacity to cross the species barrier
Angelique Igel
INRA UR892 VIM, France

Influence of a polymorphism in the highly conserved hydrophobic core region on chronic wasting disease prion propagation and pathogenesis
Samia Hannaoui
University of Calgary, Faculty of Veterinary-Medicine, Dept. of Ecosystem and Public Health, Canada
<table>
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<tr>
<th>P-035</th>
<th>From misfolding to aggregation: Sequence effects on conformational properties of amyloidogenic peptides implicated in neurodegeneration</th>
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<tbody>
<tr>
<td>Nikolay Blinov</td>
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<td>National Institute for Nanotechnology, Canada; Department of Mechanical Engineering, University of Alberta, Alberta, Canada</td>
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<tr>
<th>P-036</th>
<th>Modulation of protein quality control pathways as a novel intervention strategy in prion diseases</th>
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<tr>
<td>Simrika Thapa</td>
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<td>Department of Comparative Biology and Experimental Medicine, Faculty of Veterinary Medicine, University of Calgary, Canada</td>
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<th>P-037</th>
<th>Effect of substitutions equivalent to bank vole 109I polymorphism in the spontaneous misfolding ability of PrPs from several mammalian species</th>
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<tr>
<td>Hasier Erana</td>
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<td>CIC bioGUNE, Parque Tecnologico de Bizkaia, Derio, Spain</td>
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<th>P-038</th>
<th>Differences in the denatured state of wild-type and E211K bovine PrP</th>
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<tr>
<td>Eric M Nicholson</td>
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<td>USDA / Agricultural Research Service / National Animal Disease Center, United States</td>
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<th>P-040</th>
<th>Cellular phenotypes of prion disease in skin-derived fibroblasts of asymptomatic PrP mutation carriers and sporadic CJD patients</th>
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<tr>
<td>Wenquan Zou</td>
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<td>Case Western Reserve University, Pathology, United States</td>
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<tr>
<th>P-041</th>
<th>Gerstmann-Sträussler-Scheinker diseases with P102L, A117V and F198S mutations transmit efficiently and produce distinct pathological phenotypes in bank voles</th>
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<tr>
<td>Laura Pirisinu</td>
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<tr>
<td>Istituto Superiore di Sanità, Dept. of Veterinary Public Health and Food Safety, Italy</td>
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<th>P-042</th>
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<td>Atsuko Takeuchi</td>
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<td>Department of Neurological Science, Tohoku University Graduate School of Medicine, Japan</td>
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<td>David Cullis-Hill</td>
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<td>Sylvan Scientific Pty Ltd., Australia</td>
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<td>MRC Prion Unit, Department of Neurodegenerative Disease, United Kingdom</td>
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<td>Peter C. Kloehn</td>
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<td>UCL Institute of Neurology, MRC Prion Unit, United Kingdom</td>
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Life Science Research Center, Gifu University, Japan

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Yuji Sakasegawa
Department of Neurochemistry, Tohoku University Graduate School of Medicine, Japan

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Chieh Sang
Department of Chemistry, University of Cambridge, United Kingdom

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Jeong Ho Park
Illsang Institute of Life Science, Hallym University, Korea; Korea CJD Diagnostic Center, Hallym University

Kenji Sakai
Department of Neurology and Neurobiology of Aging, Kanazawa University Graduate School of Medical Science, Japan

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Christina Sigurdson
Pathology, University of California, United States

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National Institute of Animal Health, Japan

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Camilo Duque
Center for Prions and Protein Folding Diseases, Canada

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Marija Iljina
Chemistry Department, University of Cambridge, United Kingdom

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Anton A. Nizhnikov
Dept. of Genetics and Biotechnology, St. Petersburg State University; St. Petersburg Branch, Vavilov Institute of General Genetics, Russian Academy of Sciences, Universitetskaya nab, St. Petersburg, Russia

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Kirill S. Antonets
Dept. of Genetics and Biotechnology, St. Petersburg State University, Russian Federation; St. Petersburg Branch, Vavilov Institute of General Genetics, Russian Academy of Sciences

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Neurology, University of British Columbia, Canada
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Nina V. Romanova
St Petersburg State University, St Petersburg, Russia

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Aleksandr A. Rubel
St Petersburg State University, St Petersburg, Russia

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Tatiana A. Chernova
Department of Biochemistry, Emory University School of Medicine, Atlanta, USA

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McGill University, Dept. of Biology, Canada

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RIKEN Brain Science Institute, Japan

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Galina A. Zhouravleva
Dept. of Genetics and Biotechnology, St Petersburg State University, Russian Federation; Laboratory of Amyloid Biology, St Petersburg State University

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Chang-I Yu
Institute of Molecular Biology, Academia Sinica, Taipei, Taiwan, R.O.C.; Department of Life Sciences and Institute of Genomic Sciences, National Yang-Ming University, Taipei, Taiwan, R.O.C.

Prophylactic efficacy of orally administered compounds on the progression of scrapie induced motor coordination deficits
Damani N Bryant
Veterinary Clinical Sciences, College of Veterinary Medicine, University of Minnesota, United States

We shall overcome prion diseases only by using both scientific and empiric findings or why honoring discovery and development of avermectins with 2015 Nobel Prize for physiology or medicine does not decrease their chronic toxicity especially neural degeneration increasing the susceptibility for prion diseases
Andreas Becker
Independent Institute for Holistic Prion Research, Germany

Low activity of complement in the cerebrospinal fluids of the patients with various prion diseases
Cao Chen
State Key Laboratory for Infectious Disease Prevention and Control, National Institute for Viral Disease Control and Prevention, Chinese Center for Disease Control and Prevention, China; Collaborative Innovation Center for Diagnosis and Treatment of Infectious Diseases, Zhejiang University

Myelin basic protein citrullination as predictive marker of demyelination contributes to the pathogenesis of prion diseases
Byungki Jang
Ilson Institute of Life Science, Hallym University, Anyang, Korea

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INRA, France
The density of M cells in the epithelium overlying the Peyer's patches influences susceptibility to oral prion disease

Neil A. Mabbott
The Roslin Institute & R(D)SVS, University of Edinburgh, UK

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James D Alibhai
The Roslin Institute, The University of Edinburgh, United Kingdom

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Minori Kuroda
Laboratory of Veterinary Hygiene, Graduate School of Veterinary Medicine, Hokkaido University, Japan

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Emmanuel A Asante
MRC Prion Unit and Department of Neurodegenerative Disease, UCL Institute of Neurology, National Hospital for Neurology and Neurosurgery, Queen Square, London, United Kingdom

Impairment of protease activated receptors calcium signaling in prion infected cell lines

Tibor Mosko
Institute of Immunology and Microbiology, First Faculty of Medicine, Charles University in Prague, Czech Rep.

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Jean C Manson
University of Edinburgh, United Kingdom

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Jerome T Whitfield
MRC Prion Unit, United Kingdom

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Emmanuel E Comoy
CEA DRF/IMET/SEP1A, Fontenay-aux-Roses, France

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Bizat M. Nicolas
INSERM, INSERM UMR 1127, CNRS UMR 7225, UPMC, Institut du Cerveau et de la Moelle Epiniere, G.H. Pitie-Salpetriere, Paris, France; Universite Paris Rene Descartes, Paris, France

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Alexianne Gougerot
Université Pierre et Marie Curie-Paris 6, Centre de Recherche de l’Institut du Cerveau et de la Moelle Épinière (CRICM), UMR 975, Equipe Maladie d'Alzheimer - Maladies à Prions, Paris, France; Centre National de Reference des Agents Transmissibles Non Conventionnels (InVS), France

Is sporadic CJD an acquired disease? A review of the UK CJD cases

Patrick JM Urwin
National CJD Research & Surveillance Unit, United Kingdom

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Burim Ametaj
University of Alberta, Dept. of Agricultural, Food and Nutritional Science, Canada
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Fiona Houston
The Roslin Institute, United Kingdom

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University of Alberta, Department of Agricultural, Food and Nutritional Science, Canada

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Colorado State University, United States

Infectious CWD prions detected at the feto: Maternal interface of experimental and free-range naturally-exposed cervids
Candace K Mathiason
Microbiology, Immunology and Pathology, United States

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Department of Molecular Microbiology and Immunology, Nagasaki University Graduate School of Biomedical Sciences, Japan

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Department of Pathology, The University of Melbourne, Australia

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Department of Neurology and Neurobiology of Aging, Kanazawa University Graduate School of Medical Sciences, Japan

HDAC6 alleviates prion peptide-mediated neuronal death via modulating PI3K-Akt-mTOR pathway
Lifeng Yang
National Animal Transmissible Spongiform Encephalopathy Laboratory, China Agricultural University, Beijing, China

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Influenza and Prion Disease Research Center, National Institute of Animal Health, NARO, Japan

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Hallym University, Ilsong Institute of Life Science, Korea

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Ilsong Institute of Life Science, Hallym University, Korea
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    Ilsong Institute of Life Science, Hallym University, Korea

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    Laboratory of Veterinary Hygiene, Graduate School of Veterinary Medicine, Hokkaido University, Japan

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    Eirini Kanata
    Prion Diseases Research Group, School of Health Sciences, Department of Pharmacy, Aristotle University of Thessaloniki, Greece

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    Department of Biochemistry and Cell Biology, National Institute of Infectious Diseases, Japan

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    Franc Llorens
    German Center for Neurodegenerative Diseases, Germany; Department of Neurology, Clinical Dementia Center, University Medical Center Gottingen, Germany

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    Thüne Katrin
    Department of Neurology, Medical University Göttingen, Germany; German Center for Neurodegenerative Diseases (DZNE)

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    Abigail B Diack
    The Roslin Institute, University of Edinburgh, United Kingdom

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    University of Barcelona; Institute of Neuropathology, Bellvitge University Hospital, Hospitalet de Llobregat, Spain; CIBERNED, Institute Carlos III, Spain

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    Department of Neuropathology, Institute for Medical Science of Aging, Aichi Medical University, Japan

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    Dooeung Kim
    Neurology, Veterans Hospital, Seoul Medical Center, Korea

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    National Institute of Health (Korea CDC), Korea

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    Prion Department, National Institute for Viral Disease Control and Prevention, China CDC, China
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   Dong-A University, Korea

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   Division of Zoonoses, Center for Immunology & Pathology, National Institute of Health, Korea Centers for Disease Control & Prevention, Korea

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   Institut für Physikalische Biologie, Heinrich-Heine-Universität Düsseldorf, Germany

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   Department of Neurology and Neurological Science, Tokyo Medical and Dental University, Tokyo, Japan

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   Brian S Appleby
   Case Western Reserve University, National Prion Disease Pathology Surveillance Center, United States

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   University of Santiago de Compostela, Spain

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   University of Calgary, Comp. Biol. & Exp. Med., Canada

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   Biomedical Sciences, Iowa State University College of Veterinary Medicine, United States

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   Katsuya Satoh
   Department of Locomotive Rehabilitation Science, Unit of Rehabilitation Sciences, Nagasaki University Graduate School of Biomedical Sciences, Japan

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   Department of Neurology, Okayama University Graduate School of Medicine, Dentistry and Pharmaceutical Sciences, Japan
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MRC Prion Unit, United Kingdom

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Mark W Head
National CJD Research & Surveillance Unit, Centre for Clinical Brain Sciences, University of Edinburgh, United Kingdom

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The Roslin Institute, United Kingdom

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University of Edinburgh, National CJD Research and Surveillance Unit, Western General Hospital, Edinburgh, United Kingdom

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National CJD Research & Surveillance Unit, Centre for Clinical Brain Sciences, University of Edinburgh, UK

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University of Verona, Department of Neurosciences, Biomedical and Motor Sciences, Italy

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CEA DRF/iMET/SEPIA, Fontenay-aux-Roses, France

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Laurene Peckeu
Team Alzheimer's and Prion Diseases, Inserm UMR-1127/CNRS UMR 7225, Université Pierre & Marie Curie - Paris 6, France

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Neurological Tissue Bank of the Biobanc-Hospital Clinic-IDIBAPS, Spain

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Clinical Dementia Center, Department of Neurology and Psychiatry, University Medical Center Goettingen, Germany

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IRCCS Foundation Carlo Besta Neurological Institute, Department of Neuropathology and Neurology, Italy
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National Center for Emerging and Zoonotic Infectious Diseases, Centers for Disease Control and Prevention (CDC), USA

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Public Health Agency of Canada, Canada; Department of Medical Microbiology, University of Manitoba

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US Food and Drug Administration, Center for Biologics Evaluation and Research, United States

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National Institute for Nanotechnology, Canada; Department of Mechanical Engineering, University of Alberta, Alberta, Canada

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Department of Clinical Neurosciences, Cumming School of Medicine, University of Calgary, Calgary, Canada

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US Food and Drug Administration, United States

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Shizuoka Institute of Epilepsy and Neurological Disorders, Department of Neurology, Japan

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Ryusuke Ae
Division of Public Health, Center for Community Medicine, Jichi Medical University, Japan

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Teikyo University Mizonokuchi Hospital, Japan

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Junji Komatsu
Department of Neurology and Neurobiology of Aging, Kanazawa University Graduate School of Medical Sciences, Japan

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Erika Abe
Neurology, National Hospital Organization Akita Hospital, Japan

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Ermias D Belay
Centers for Disease Control and Prevention, Atlanta, Georgia, United States
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<td>FMC Tokyo Clinic, Japan; Genetic Counseling Clinic, Juntendo University Hospital</td>
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   U.S. Geological Survey National Wildlife Health Center, United States

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   Istituto Zooprofilattico Sperimentale del Piemonte Liguria e Valle d’Aosta, Italy

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   National & OIE Reference Laboratory for Scrapie and CWD, Canadian Food Inspection Agency, Ottawa, Ontario, Canada

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   S Jo Moore
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   Canadian and OIE BSE Reference Laboratory, Canadian Food Inspection Agency, National Center for Animal Disease Lethbridge, Canada

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   Colorado State University, United States

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   University of Texas Health Science Center at Houston, Germany; Mitchell Center for Alzheimer’s Disease and Related Brain Disorders

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   Dept. Resource Economics & Env. Sociology, Faculty of Agricultural, life and Environmental Sciences, University of Alberta, Canada
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Nathaniel D Denkers  
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Corinne I Lasmezas  
Department of Immunology and Microbial Science, Department of Neuroscience, The Scripps Research Institute, United States

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