



### TSE: SURVEILLANCE AND DIAGNOSIS OF ANIMAL PRION DISEASES AND RISK IN FOOD CHAIN

**Transmissible Spongiform Encephalopathies (TSEs) are neuro-degenerative diseases that affect the central nervous system in humans and animals.** They are progressive diseases always fatal and are caused by a transmissible agent called prion, which is an abnormal form of protein.

TSEs exhibit common characteristics, such as long incubation period, neurological disorders, with degenerative lesions in the CNS, but absence of inflammatory lesions or immune reaction. TSEs comprise several diseases, including classical and atypical bovine spongiform encephalopathy (BSE) in cattle, scrapie in sheep and goats, chronic wasting disease (CWD) in cervids, transmissible mink encephalopathy (TME) in mink, feline spongiform encephalopathy (FSE) in cats, prion disease in dromedary camels and variant Creutzfeldt-Jakob disease (vCJD) in human.

**This TSE webinar aim to provide participants from REMESA countries with updated notes concerning zoonotic prion diseases, as well as the knowledge and methodologies necessary for implementation of surveillance programs. Additionally, this event has the purpose to deepen topics related to this disease and to share technical-scientific updates on surveillance and biosafety.**

**22<sup>th</sup> May 2024 | 10.00 - 13.00 (CET)**

Language: English and French

Scientific Responsible: Guido Ruggero Loria, Scientific Director-STOR office, Palermo

### PROGRAMME

10.00 – 10.20

#### WELCOME

Rachid Bouguedour (WOAH SRR-NA)

Mohammed Bengoumi (FAO SRR-NA)

Guido Ruggero Loria (STOR-REMESA)

#### **CHAIRPERSONS**

Crsitina Casalone  
IZSPLV, Italy



Noursaid Tligui  
IAV, Maroc



10.20 – 10.40

**OVERVIEW ON PRION DISEASES AND BSE AND SCRAPIE CONFIRMATORY TESTS BY HISTOPATHOLOGY AND IMMUNOHISTOCHEMISTRY**

Cristina Casalone  
IZSPLV, Italy



10.40 – 11.00

**BIOSAFETY OF PRION DISEASES AND DIAGNOSIS BY RAPID TEST AND WESTERN BLOT CONFIRMATORY METHOD**

Maria Mazza  
IZSPLV, Italy



11.00 – 11.20

**EPIDEMIOLOGY AND SURVEILLANCE OF ANIMAL PRION DISEASES IN EUROPE**

Giuseppe Ru  
IZSPLV, Italy



11.20 – 12.00 COFFEE BREAK

12.00 – 12.20

**THE USE OF BREEDING PROGRAM FOR MANAGEMENT OF SCRAPIE. A SUCCESSFUL STRATEGY ON PRION ANIMAL DISEASE**

Gabriele Vaccari  
ISS, Italy



12.20 – 12.40

**THE EXPERIENCE OF TUNISIA ON THE DIAGNOSIS OF ANIMAL PRION DISEASES**

Abdelkader Amara  
ENMV, Tunisia



12.40 – 13.00

**CLINICAL ASPECTS OF CPrD AND DIFFERENTIAL DIAGNOSIS; THE EXPERIENCE IN ALGERIA**

Baaisa Babelhadj  
ENS Ouargla, Algeria



13.00 - CLOSURE OF THE WEBINAR



### **Cristina Casalone**

She is a veterinary neuropathologist and chief of the neuropathology lab of the IZS of Piemonte Liguria e Valle d'Aosta. Head of the WOAH collaboration center in consortium with Prof. A. Fernandez of the University of Las Palmas for marine mammal health (2019-present), Head of the Italian reference center for diagnostic activities on stranded cetaceans (C.Re.Di.Ma, 2014-present) Head of the WOAH laboratory for BSE and Scrapie, Paris, France (2016-present) From December 2021 to January 2024 she was the Scientific Director of the "STOR - Scientific & Technical Office REMESA.

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### **Maria Mazza**

Since 2000, She has been working at the IZS of Piemonte, Liguria e Valle d'Aosta with headquarters in Turin. Since 2021, she has been in charge of the Laboratory of "Proteomics and TSE Diagnostics." Her expertise covers the field of proteomic techniques applied in different areas but in particular the diagnostic activity of TSEs both as screening and official confirmatory activity by Immunoblotting of suspected cases identified both within the Italian Reference Laboratory and the TSE EURL. She has also collaborated with different groups of Italian and foreign researchers in the characterization studies of TSE strains and for some years has been carrying out studies in order to reach an *ante-mortem* diagnosis of TSE cases in small ruminants through application of highly sensitive analytical techniques.

### **Giuseppe Ru**

He is a veterinarian with a PhD and a master's degree in epidemiology. Since December 1996, Giuseppe has worked as an epidemiologist at the Experimental Zooprophyllactic Institute of Turin and in particular for the Italian National Reference Laboratory for Transmissible Spongiform Encephalopathies (TSEs). Since 2019 he has been appointed Director of the European Reference Laboratory for TSEs. He carries out scientific research in various national and international projects and provides training on topics related to epidemiological methodology. He also works on environmental contamination, food safety, and animal health. Since 2012 he has been a member of the Panel on Biological Hazards of the European Food Safety Authority (EFSA) in Parma.

### **Gabriele Vaccari**

He is a researcher with a degree in Biological Sciences from the University of Rome La Sapienza, Italy. He is affiliated with the Istituto Superiore di Sanità, Italy, where he has held various research positions since 1997. Notably, from 2021 to 2023, he served as a Coordinating Researcher, from 2001 to 2021 as a Principal Investigator, and from 1997 to 2000 as a Researcher. He has also been involved in projects such as the European Partnership for Animal Health and Welfare and the EU Reference Laboratory for TSEs. Additionally, he has participated in grants like the EU Horizon BIOPIGEE and ONE Health EJP COVRIN. Gabriele Vaccari has demonstrated extensive expertise and contribution to research in the field of science, with a portfolio of over 100 publications to his credit.

### **Abdelkader Amara**

Abdelkader Amara, Hospital-University Professor in Histology and Veterinary Pathological Anatomy, has extensive experience and leadership roles in Tunisian veterinary medicine. He directed research on diagnosing spongiform encephalopathies and neosporosis in ruminants from 2007 to 2017. Serving as President of the Tunisian Veterinary Doctors Association since 2004, he also contributes to governmental scientific committees on BSE and prion diseases. Since 2007, he oversees Tunisia's only accredited laboratory for diagnosing animal TSEs. Furthermore, he coordinates African efforts on TSEs within ERFAN since 2022. Amara's expertise and dedication make him a significant figure in veterinary medicine.

### **Baaisa Babelhadj**

Baaisa Babelhadj, a Professor at Ecole Normale Supérieure de Ouargla, Algeria, is renowned for discovering the crazy dromedary disease in Ouargla. With a Doctor of Veterinary Medicine and advanced degrees in Agronomic Sciences, he heads the Department of Natural Sciences and contributes to the institution's Scientific Council and Board of Directors. Prof. Babelhadj's research focuses on camel pathology, leading projects such as the University Research Training initiative. His international collaborations with ERFAN and IZSAM demonstrate his commitment to advancing veterinary science globally. Prof. Babelhadj's work significantly impacts veterinary science, particularly in camel health and pathology, establishing him as a respected figure in the field both nationally and internationally.