Istituto Zooprofilattico Sperimentale della Sicilia

BRUCELLOSIS "MEDITERRANEAN FEVER" EPIDEMIOLOGY, DIAGNOSIS, CONTROL AND ERADICATION STRATEGIES

Brucellosis "Undulant Fever; Malta Fever; Mediterranean Fever" is a contagious, zoonotic disease with severe impact on livestock health, animal welfare and economic status. The disease occurs worldwide but historically the Mediterranean region is an endemic area mainly due to its traditional husbandry (more often pastoralism) and extensive management of herds The disease is known since many decades and, it is caused by Gram negative bacteria belonging the family Brucella. Majority of Brucella species normally infect a target mammal bus are able to spread also in other species, including wild animals, often facilitating the maintenance of the disease in the area.

Today in Europe Brucellosis infection (*Infection with B.abortus, B.melitensis and B. suis*) is a listed disease, classified as category B, with application of strict veterinary rules for eradication. The disease affects cattle, swine, sheep, goats, camels, horses, and dogs. It also infects other wild species of ruminants, marine mammals and often humans. Brucellosis is a zoonotic pathogen often reported as occupational disease affecting, veterinarians, hunters, farmers, livestock producers, and microbiology laboratory technicians. In animal, the disease is characterized by abortions and/or reproductive failure which occurs for several months sometimes years and, if eradication management is not applied, it will continue to affect the restocking groups of the farm indefinitely. Following the abortion, more often infected animals recover, and they will be able to deliver live offspring even if they may continue to shed the bacteria. Human can be infected by contact or ingesting contaminated food (such as unpasteurized milk products), direct contact with an infected animal, or inhalation of aerosols. In humans disease clinical symptoms are characterised by acute febrile illness with few or no localized signs and may progress to a chronic stage with relapses of fever, weakness, sweats, and vague aches and pains. Onset may be sudden, with chills and fever, severe headache, joint and low back pain, malaise, and occasionally diarrhoea. Typically, intermittent fever persists for 1 to 5 weeks.

This webinar aims to provide an update on the current epidemiological situation in Mediterranean basin, host range and clinical manifestations, the current most accurate and sensitive diagnostics, as well as control and eradication strategies. Participants will stand upon the news and innovations regarding recent diagnostic methods and procedures of prevention and control of this disease. **This webinar aims to increase the awareness of participants to fulfil the One Health strategy.**

23rd November 2023 | 09.30 - 13.00 (CET)

Language: English and French
Scientific Responsible: Cristina Casalone Scientific Director – STOR office, Palermo

PROGRAMME

09.30 – 09.50
WELCOME
Rachid Bouguedour (WOAH SRR-NA)
Mohammed Bengoumi (FAO SRR-NA)
Cristina Casalone (STOR-REMESA)

CHAIRPERSONS

Guido Ruggero Loria
Vet pathologist – WOAH Reference Laboratory for Contagious agalactia, IZS Sicilia

Manuel Duràn Ferrer
Head of the Division of Animal and Plant Health Laboratories. Ministry of Agriculture, Fisheries and Food, Spain

10.00 – 10.20
EPIDEMIOLOGICAL SITUATION OF BRUCELLOSIS IN EUROPE
Jose Luis Saez Llorente
Head of Unit of Veterinary Control Programmes and Zoonoses Ministry of Agriculture, Fisheries and Food, Spain

10.20 – 10.40
EPIDEMIOLOGICAL SITUATION OF BRUCELLOSIS IN NORTH AFRICA
Gamal Wareth
Head of Laboratory of Bacterial Biological Agents and Multidrug Resistant Bacteria, Institute for Bacterial Infections and Zoonoses (IBIZ) of Friedrich-Loeffler-Institut (FLI), Germany

10.40 – 11.00
ANIMAL BRUCELLOSIS: HOST RANGE AND SYMPTOMS
Claire Ponsart
Head of the Bacterial Zoonoses Unit at ANSES's Animal Health Laboratory, France

11.00 – 11.30 COFFEE BREAK

11.30 – 11.50
ANIMAL BRUCELLOSIS: HOST RANGE AND SYMPTOMS
DIAGNOSIS OF BRUCELLOSIS IN DIFFERENT ANIMAL SPECIES "THE MOST SPECIFIC AND SENSITIVE TEST"
Mahmoud Essam Rashad Hamdy
WOAH international Expert for Brucellosis, Egypt

11.50 – 12.10
ZOONOTIC IMPORTANCE OF BRUCELLA: PREVENTIVE MEASURES, TRANSMISSION, SYMPTOMS
Georgios Pappas
Physician, Institute of Continuing Medical Education of Ioannina, Greece

12.10 – 12.40
CONTROL AND ERADICATION STRATEGIES OF BRUCELLOSIS
Fabrizio De Massis
WOAH Reference Laboratory for Brucellosis (Brucella abortus, Brucella melitensis, Brucella suis); Reference Laboratory for Ovine Epidydimitis, IZS Abbruzzo e Molise, Italy

13.00 - **CLOSURE**

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For further informations please write to:
stor-info@remesa.org

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Guido Ruggero Loria

Veterinary expert on the field of infectious diseases and veterinary pathology, his long career has been dedicated to diagnosis and control of diseases affecting livestock and consultancies for farmers and colleagues. He was involved in several international projects with European, African and Asian countries. Recently has been nominated as expert belonging the Italian working group for the issuing of the new European Animal Health Law. His scientific activity concerns above 200 published papers and among these, more than 150 peer review articles.

Manuel Duran Ferrer

Head of Serology Department at the National Reference Laboratory for Animal Brucellosis, Santa Fe-Granada (1992-2013). Expert in the subgroups of Bovine, Ovine and Caprine Brucellosis, EU Commission, DG SANCO/DG SANTE (as from 2000) and External Expert for the assessment of programmes for the monitoring, control and eradication of animal diseases and zoonosis (Bovine, Ovine and Caprine Brucellosis). FAO international consultant for Brucellosis Prevention, Control and Surveillance, Georgia. Current position: Head of the Division of Animal and Plant Health Laboratories. Ministry of Agriculture, Fisheries and Food, Spain. Leading manager of the national reference laboratories of animal and plant health in Spain, and the European Reference Laboratory for African horse sickness and Bluetongue.

Jose Luis Saez Llorente

He graduated in Veterinary at the Complutense University, Madrid, 1992. In 2004 he joined the Spanish Ministry of Agriculture and is currently Head of the Unit of Veterinary Programmes and Zoonoses. He is a member of the Scientific Zoonoses Surveillance Network of the European Food Safety Agency (EFSA) and of the bovine tuberculosis subgroup of the Task Force of the European Commission and coordinator of the national programs and working groups in Spain on bovine tuberculosis and bovine, ovine and caprine brucellosis. He is responsible for the preparation of the EU report on zoonoses and antimicrobial resistance, national coordinator of the National Programs for the control of Salmonella in poultry farming, national coordinator of the National Programs for TSEs, responsible for national contingency programs (rabies) and control of various zoonoses (anthrax, campylobacteriosis, VTEC, Q fever...).

Gamal Wareth

He is currently working as Head of the Laboratory for Bacterial Biological Pathogens and Multidrug-Resistant Bacteria at the Institute for Bacterial Infections and Zoonoses of the Friedrich-Loeffler-Institute (FLI), Jena, Germany. He received his PhD in Epidemiology and Molecular Microbiology of Brucellosis from the Faculty of Veterinary Medicine at the Free University of Berlin and completed his habilitation on AMR from the One-Health perspective in human medicine at the Institute for Infectious Diseases and Infection Control, at the Faculty of Medicine, Friedrich Schiller University Jena, Germany. He published more than 77 articles on brucellosis and AMR in international journals. In addition to his published articles and book chapters, he has led several multinational projects on brucellosis in the Mediterranean region. Nowadays, his research is focused on the study of virulence, pathogenicity and host-pathogen interaction and antimicrobial resistance (AMR) of zoonotic bacterial pathogens.

Claire Ponsart

She graduated as a veterinarian and joined the French Union of Artificial Insemination Cooperatives (UNCEIA, now ELIANCE). In 2008, she joined the National Laboratory for Health Controls in Breeding Stock (Laboratoire National de Contrôle des Reproducteurs, LNCR) to investigate pathogens related to the genital tract. She was appointed Director of LNCR in 2012. In 2014, she became head of the Bacterial Zoonoses Unit at ANSES's Animal Health Laboratory located at Maisons-Alfort. Since then, she is in charge of national (NRL) and international mandates for Brucellosis (EU / WOAH) and contagious epididymitis. Together with other NRLs, she coordinated the IDEMBRU project (One Health European Joint Project) focused on emerging *Brucella* species and reservoirs. Since 2023, she became Head of the NRL for Anthrax.

Mahmoud Hamdy

In May 1983, he graduated from the Faculty of Veterinary Medicine at Cairo University, from the same institution he achieved in 1992 a Ph.D. in Veterinary Science. From 1994 to 2001, he worked as a Veterinary Lab Expert in Jeddah, Kingdom of Saudi Arabia, and then took on the role of an Animal Health Expert from 2002 to 2015 in the State of Qatar. He became Head of the Brucellosis Department and Technical Manager at the Animal Health Research Institute (AHRI) in Egypt from 2016 to 2020. Today, he is the Head of the WOAH (OIE) Reference Laboratory within the Department of Brucellosis Research at the Animal Health Research Institute (AHRI) in Egypt. Furthermore, he is a member of the One Health Team in Egypt.

Georgios Pappas

He is a physician specializing in zoonotic infections, particularly brucellosis, in social aspects of infectious diseases, and in epidemic/ pandemic/ biological weapon use preparedness and response.

Fabrizio De Massis

Degree in Veterinary Medicine and a Specialization in Animal Health, Breeding and Hygiene of Animal Productions, he works as epidemiologist in the National Reference Centre for Epidemiology and Risk Analysis and the National Reference Centre for Brucellosis, IZS-Teramo. Expert in animal health, zoonosis epidemiology and veterinary information systems in international projects and Twinning projects (EU and WOAH). Chairman of the European Commission Task Force on Monitoring Disease Eradication Programmes in Member States, Brucellosis subgroup. Designated member by the Italian Government in the Animal Health and Welfare (AHAW) Network of the European Food Safety Authority (EFSA), and alternate member in the EFSA Task Force on Zoonoses. WOAH Expert at the WOAH Reference Laboratories for Brucellosis and for Ovine epididymitis and Head of Veterinary Laboratory, Branch Unit of Pescara, both in IZS-Teramo.