Diagnostics are an essential tool to ensure the health of domestic and wild animals for both endemic and emerging diseases. They allow animal health professionals to understand and manage the general health status of domestic animals. They are also important tools to support public health initiatives in the case of zoonotic disease control. The meeting will provide an overview of existing systems and approaches / strategies for the use of diagnostics and to discuss the currently available diagnostics. The advantages / benefits and disadvantages / gaps of the current methods and methodologies will be identified and discussed. Proposals on how to increase the quality, efficacy, and utility of the existing strategies and methods and those under development will be made.

**Scientific Committee**

<table>
<thead>
<tr>
<th>Name</th>
<th>Institution</th>
<th>Name</th>
<th>Institution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dr. Carmen Jungbäck, Chair</td>
<td>IABS</td>
<td>Dr. Serge Leterme</td>
<td>IDEXX</td>
</tr>
<tr>
<td>Dr. Sandra Blome</td>
<td>Friedrich Loeffler Institut</td>
<td>Dr. David Mackay</td>
<td>EMA</td>
</tr>
<tr>
<td>Dr. Attila Farsang</td>
<td>CEVA</td>
<td>Dr. Egbert Mundt</td>
<td>Boehringer-Ingelheim</td>
</tr>
<tr>
<td>Dr. Cyril Gay</td>
<td>USDA</td>
<td>Prof. Dr. Amir H. Noormohammadi</td>
<td>University of Melbourne</td>
</tr>
<tr>
<td>Dr. Richard Hill</td>
<td>IABS</td>
<td>Dr. Suelee Robbe Austerman</td>
<td>APHIS-USDA</td>
</tr>
<tr>
<td>Dr. Vaughn Kubiak</td>
<td>Zoetis</td>
<td>Dr. Sjaak de Wit</td>
<td>GD Animal Health</td>
</tr>
</tbody>
</table>
Day 1 – Wednesday, May 15, 2019

13:00 Registration
14:00 Opening
14:10 Introductory remarks: Expectations of all stakeholders (authorities, farmers, veterinarians etc) on Diagnostics and their use in outbreak investigations of Transboundary Animal Diseases
Prof. Dr. Hans-Joachim Bätza, Federal Ministry of Food & Agriculture, Germany

Session 1 – Diagnostics: Current and new methods

Chairpersons: Dr. Vaughn Kubiak, Zoetis Belgium SA, Belgium
Dr. Sjaak de Wit, GD Animal Health, The Netherlands

14:40 Classical serological test in the modern age: are we moving in the right direction?
Dr. Gleeson Murphy, National Veterinary Services Laboratories, U.S.A.

15:00 Multiparameter-testing for pathogens and antibodies in a Point of Care approach
Dr. Heinz Schoeder, Boehringer Ingelheim VRC GmbH & Co KG, Germany

15:20 Carry your lab in-your-pocket – qPCR results whenever needed
Dr. Carsten Schroeder, Indical Bioscience, Germany

15:40 Coffee break

16:10 Biotechnology-based diagnosis of infectious diseases in veterinary medicine
Dr. Fredric Granberg, Swedish University of Agricultural Sciences, Sweden

16:30 Rapid genome sequencing of animal pathogens from clinical or environmental samples
Dr. Marc Marenda, Faculty of Veterinary and Agricultural Sciences, The University of Melbourne, Australia

16:50 Long Read DNA sequencing technology for diagnostic of poultry pathogens
Dr. Claudio Afonso, National Poultry Research Center, Southeast Poultry Research Laboratory, U.S.A.

17:10 A bead-based multiplex immunoassay for simultaneous measurement of antibody responses to multiple antigens; an example from Atlantic salmon
Dr. Hege Lund, Norwegian University of Life Sciences (NMBU), Faculty of Veterinary Medicine, Norway

17:30 Modern antimicrobial sensitivity testing: current state of affairs and future development
Dr. Alex van Belkum, bioMerieux, France

17:50 Discussion
Day 2 – Thursday, May 16, 2019

Session 2 – Diagnostics in epidemiological in clinical surveillance: practical applications

Chairpersons: Dr. Sandra Blome, Friedrich Loeffler Institut  
Dr. Serge Leterme, IDEXX 
Prof. Dr. Amir H. Noormohammadi, University of Melbourne

09:00  Diagnostic strategies for endemic diseases: surveillance and control  
Dr. Margaret Good, previously Veterinary Head of the Ruminant Animal Identification and Traceability, Disease Eradication, Division, of the Irish Department of Agriculture, Food and the Marine, Ireland

09:20  Survival of viral pathogens in animal feed ingredients under transboundary shipping models  
Dr. Scott Dee, Pipestone Veterinary Services, U.S.A.

09:40  A novel modified-indirect ELISA based on spherical body protein 4 for detecting antibody during acute and long-term infections with diverse Babesia bovis strains  
Dr. Carlos Suarez, Animal Disease Research Unit, Agricultural Research Service, USDA, U.S.A.

10:00  Surveillance of TSE in Italy: a success story  
Dr. Elena Maria Bozzetta, Istituto zooprofilattico sperimentale del piemonte liguria e Valle d’Aosta, Italy

10:20  Genome sequencing and evolutionary analyses of Newcastle disease viruses from formalin fixed paraffin-embedded chicken tissues collected during disease outbreaks  
Dr. James B. Stanton, Department of Pathology, University of Georgia, U.S.A.

10:40  Serology vs. real-time quantitative PCR (qPCR) screening for viral infections; experiences from the control of salmon pancreas disease in Ireland and Norway  
Dr. Marian McLoughlin, Fish Vet Group, United Kingdom

11:00  Coffee

11:30  Point-of-care rapid diagnostic tests and their clinical use: diagnosis and prevention of calves diarrhea  
Dr. Estelle Hess, Bio-X Diagnostics, Belgium

11:50  Emerging diseases: Lumpy Skin Disease: history, lessons and perspectives on diagnostics and control  
Dr. David Wallace, Onderstepoort Veterinary Institute, Agricultural Research Council, South Africa

12:10  Emerging diseases: African Swine Fever  
Dr. Carmina Gallardo, Centro de investigación en sanidad animal (CISA-INIA), Spain

12:30  Lunch

14:00  ICT (Information and Communication Technology) and Big Data applied to veterinary diagnostics: the today various approaches of the subject  
Dr. Belen Barreiro, Ingenasa, Spain
Session 3 – Acceptance of data, qualification tools for laboratories and methods

Chairpersons: Dr. Egbert Mundt; Boehringer-Ingelheim
Dr. Suelee Robbe-Austerman,
National Veterinary Services Laboratory, Animal and Plant Inspection Service, USDA., U.S.A.

16:20 Role of OIE and FAO networks to maintain laboratory quality assurance systems for transboundary livestock diseases
Dr. Donald King, The Pirbright Institute, United Kingdom

16:40 Network: AAVLD the role of veterinary diagnostics in health surveillance and disease, including new technologies, standardization and quality assurance
Dr. Keith Bailey, American Association of Veterinary Laboratory Diagnosticians (AAVLD), U.S.A.

17:00 OMCL: quality assurance of labs and methods - the need for physical standards to assure the quality and comparability of diagnostic testing
Dr. Neil Almond, National Institute for Biological Standards and Control (NIBSC), United Kingdom

17:20 General guidance for test kits intended for diagnosis of animal diseases
Dr. Larry Ludemann, USDA, Center for Veterinary Biologics, U.S.A.

17:40 Licensing EU
Dr. Sandra Blome, Friedrich Loeffler Institut, Germany

Day 3 – Friday, May 17, 2019

08:30 Technical and regulatory challenges of developing veterinary diagnostic tests
Dr. Serge Leterme, IDEXX, U.S.A.

08:50 Experience from a manufacturer: Qualification / validation of methods challenges of developing quality control tests
Marianna Ivok, CEVA, Hungary
Experience from inter-laboratory proficiency tests among European national reference laboratories for detection of viral infections in fish
Dr. Niels Jorgen Olesen, Technical University of Denmark, National Institute of Aquatic Resources, Denmark

ISO 17043 for organisers of proficiency testing schemes: experiences with ring tests/collaborative studies
Dr. Sjaak de Wit, GD Animal Health, The Netherlands

Discussion

Coffee

Session 4 – Summary of the sessions, discussion, conclusions and recommendations

Chairpersons: Dr. Attila Farsang, CEVA, Hungary
Dr. Richard Hill; IABS-North America (IABS-NA)

Summary of the sessions and the discussions

Conclusions and recommendations

Plenary /Panel discussion

Closing remarks

Farewell lunch