

Foreword

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Dear colleague,

In this 10th issue of EAVLD Newsletter you find a short report on the 3rd EAVLD Congress 12-15 October 2014 in Pisa, Italy, including a map of participants by country. We are pleased to present the new members of the governing board whom were elected at the general meeting at the congress in Pisa. In this issue we also continue our series of presentations of EU reference laboratories. The readers are invited to contribute to the EAVLD Newsletter by submitting e.g. short scientific presentations and texts on other matters relevant to the members.

EAVLD 2014 Congress

The third congress of the European Association of Veterinary Laboratory Diagnosticians (EAVLD) was held 12-15 October, 2014 at the Palazzo Dei Congressi in Pisa, Italy, subsequent to the annual meeting of the Italian Association of Veterinary Laboratory Diagnosticians (S.I.Di.L.V). The organizing committee was composed of representatives from the national network of Italian public veterinary institutes, Istituto Zooprofilattico Sperimentale, and the National Institute of Health, Istituto Superiore di Sanità. The congress was organized and held in collaboration with MV Congressi S.p.A as organizing secretariat.

In total, 396 participants from 32 countries joined the congress including 165 members of the EAVLD (86) and S.I.Di.L.V. (79), 175 non-members and 46 representatives from exhibitors and sponsors. A total of 24 sponsors and media partners supported the congress and had the opportunity to display their products and services at the venue.



Congress logo



Part of the sponsors exhibition

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On day one, the scientific programme focused on infectious animal diseases in three sessions with oral presentations. Oral sessions on day two were on 'Diagnostic tools in food safety and zoonosis', 'Quality assurance and automation' and 'Molecular diagnostics and epidemiology'. The third and final day of the scientific programme had oral presentations under the headline 'Novel technologies in diagnostics'.

Five keynote lectures were given during the congress by the following renowned speakers:

Dr. John McGiven, Senior Research Officer, Brucellosis Reference Laboratory, Animal Health Veterinary Laboratories Agency, United Kingdom.

Dr. Nicola Decaro, Associate Professor, Department of Veterinary Medicine, University of Bari, Italy.

Dr. Stefano Morabito, Senior Scientist, Unit for Food-borne Zoonoses, Department of Veterinary Public Health and Food Safety, National Institute of Health, Rome, Italy

Dr. Paul In't Veld, Netherlands Food and Consumer Product Safety Authority (NVWA), Utrecht, The Netherlands.

Dr. Marc Eloit, Professor, Laboratory for Pathogen Discovery, Institut Pasteur, Paris, France.

Altogether, 45 oral presentations were given (including the 5 keynote lectures) and 176 posters were displayed for viewing and discussions during the congress. A prize for best oral presentation was awarded to C. Gallardo for the presentation "Genetic variation among African swine fever genotype II viruses, eastern and central Europe", and the poster entitled "Are *Dermatocentor reticulatus* and *Ixodes ricinus* the real reservoir for *Francisella tularensis*?" by M. Genchi *et al.* was rewarded as best poster at the closing ceremony of the congress. The social programme of the congress included a welcome reception at the congress venue and a delightful 'Tuscan night' buffet dinner with typical local products.



Lecture hall, EAVLD Congress 2014

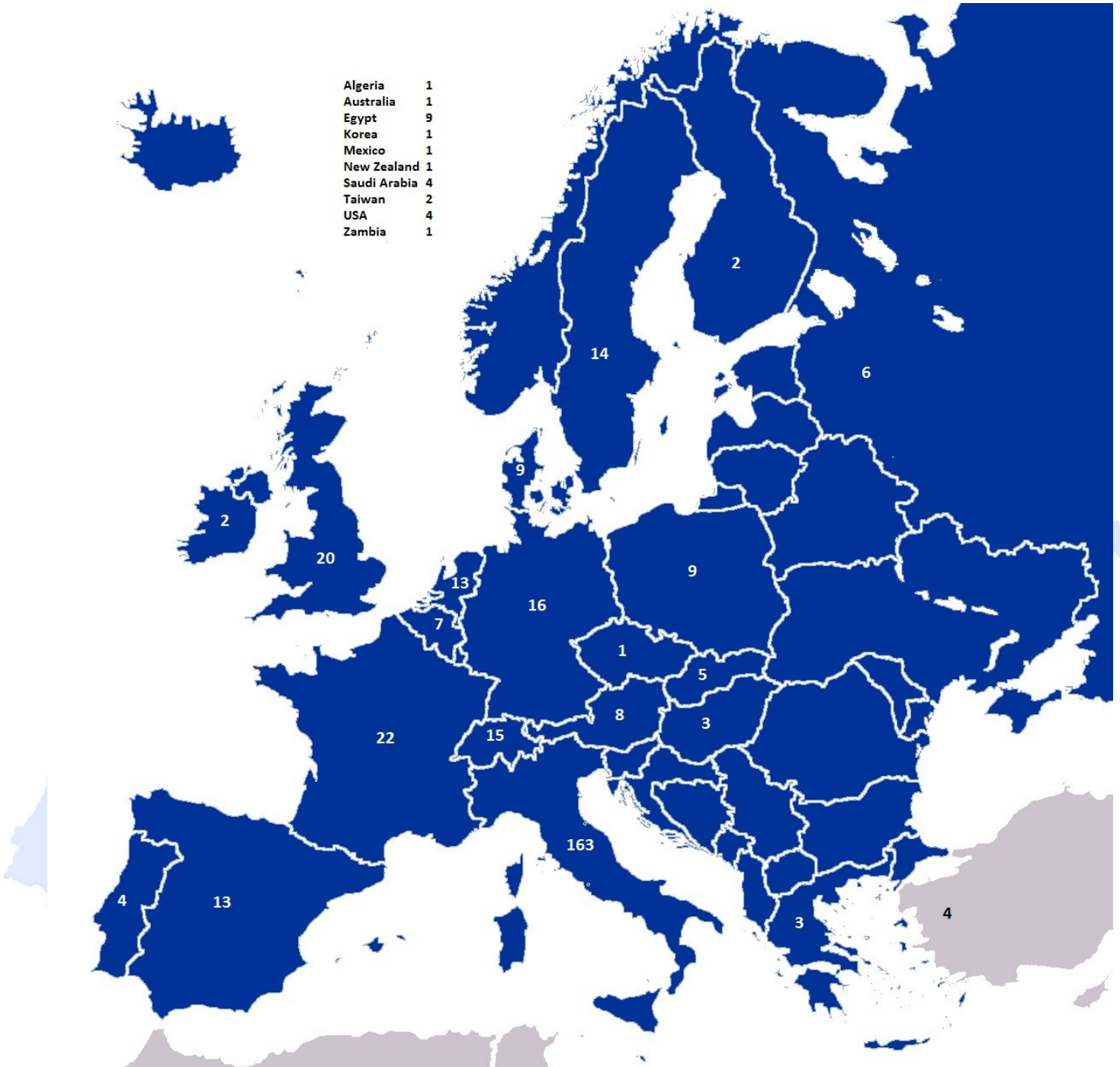


'Tuscan night', EAVLD Congress 2014

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Map of participants

Algeria	1
Australia	1
Egypt	9
Korea	1
Mexico	1
New Zealand	1
Saudi Arabia	4
Taiwan	2
USA	4
Zambia	1



Distribution by country of the participants at the EAVLD 2014 Congress in Pisa, Italy.

The number of both participants and represented countries have gone up compared to the two previous congresses. Also the number of sponsors has increased. Hopefully these trends will continue.

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The new board of EAVLD

At the 2014 general assembly of the EAVLD a new board was elected. Since 2012, the board temporarily has consisted of 11 members. However, at the congress in 2014 the board returned to its original size of 8 members.

Six board members stepped down: Andrew Soldan, Frederik Widén, Sven Erik Jorsal, Jose Antonio Garcia, Martin Beer and Gerard Wellenberg. They were thanked for their work in the board of EAVLD and their contributions to the organization.

In accordance with the constitution of the EAVLD, Miroslaw Polak became the president of EAVLD as he had served as vice-president from 2012 to 2014. Willie Loeffen, who was president from 2012 to 2014, will continue in the board as past-president. Kirsty Line, Gian Luca Autorino and Lars Ole Andresen were re-elected as board members and new board members were Elena Maria Bozzetta, Claire Ponsart and Viveca Båverud.

Below you will find short presentations of the three new EAVLD board members.



Elena Maria Bozzetta was born on October 14, 1966. She studied Veterinary Medicine in Turin and graduated in April 1991 and she obtained a PhD in Veterinary biotechnology at University of Turin. Since 1991 Elena worked at the Istituto Zooprofilattico Sperimentale of Piemonte, Liguria and Valle D'Aosta.

In 2010 she obtained a Master degree in Sanitary Management at Bocconi University in Milan and in 2013 a Master in European Studies - Policy Advisor and Project Consultant, at Belgian-Italian Chamber of Commerce and the Institute of European Studies of the Catholic University of Louvain in Bruxelles.

As Head of the Department of Histopathology and Rapid Tests, she coordinates since 2001 the net of national official laboratories for the active surveillance of Transmissible spongiform encephalopathies (TSE). Since 2008 she is Responsible for the Histological National Residues Plan, through the set up and validation of analytical methods, organization of ring trials, training of in-field operators, preparation of risk based sampling plans.

In 2013 she was appointed Head of the National Reference Centre for Biological methods applied to Anabolic treatments in food producing Animals, (CIBA).

She is the scientific coordinator of national researches based on experimental studies for evaluation of lesions related to growth promoter molecules and for the development of innovative techniques (nanotechnologies, proteomics, biosensors) for the diagnosis of illegal treatments.

Her field of research has recently widened to the set up and validation of rapid multi-screening methods for the detection of food frauds.

Since July 24, 2014 she plays the role of Contact Person Responsible for the activities of International Cooperation of Istituto Zooprofilattico Sperimentale of Piemonte, Liguria and Valle D'Aosta.

Elena was elected vice-president of EAVLD in 2014.

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Viveca Båverud was born in 1958 in Nyköping, Sweden and graduated as Master of Science in Veterinary Medicine, DVM, 1985 at Swedish University of Agricultural Sciences (SLU), Uppsala, Sweden. After graduation she was veterinarian in general practise and also in small animals practise at animal hospitals and at the Faculty of Veterinary Medicine and Animal Science, SLU.

Since 1991 Viveca has been employed as a bacteriologist at the National Veterinary Institute (SVA), Department of Bacteriology in Uppsala, Sweden and worked as Laboratory Veterinary Officer in routine diagnostics between 1991 and 2007.

Viveca completed her Ph. D. in Veterinary Medicine, Bacteriology, 2002 at SLU and she received competence as associate professor in clinical bacteriology, 2007 at Dept of Biomedical Sciences and Veterinary Public Health, SLU.

Viveca holds a permanent position as Head of the Dept. of Bacteriology at the National Veterinary Institute (SVA), Uppsala since 2007. Activities include e.g. bio-preparedness and routine diagnostics (detection and typing of bacteria) by both traditional and molecular methods of many agents/diseases e.g. EHEC, STEC, Campylobacter, Salmonella, Staphylococcus, Streptococcus, Clostridium, Yersinia, Listeria, Erysipelothrix, mastitis, paratuberculosis, BSL 3 (B. anthracis, F. tularensis, Brucella, tuberculosis), and antimicrobial susceptibility testing. Viveca has much experience from general clinical bacteriology including antimicrobial susceptibility testing. Her research has comprised e.g. diarrhea in horses treated with antibiotics, strangles and botulism and connected to molecular biology. Viveca finds EAVLD very important and she would like to help EAVLD especially within the bacteriology field.



Claire Ponsart was born in the North of France on April 22, 1970. She studied Veterinary Medicine in Maisons-Alfort and graduated in 2004. After being qualified as a veterinarian, her PhD thesis was dedicated to the use of flushing as a means to improve cyclicity resumption in beef cattle. She joined France's UNCEIA Research and Development department in 1998 with the responsibility of leading projects related to embryo production in

cattle. In 2002, she was chosen to implement new practical tools in French breeding companies, aiming to improve fertility within the UNCEIA Research and Development project called "Fertility at First".

Her area of research concerns animal health and reproductive biotechnologies. Since 2008, Claire was working at the National Laboratory for Health Controls in Breeding Stock (Laboratoire National de Contrôle des Reproducteurs, LNCR) to investigate pathogens related to the genital tract and management of sanitary status in AI centers and ET stations. She was appointed Director of LNCR in 2012. She was largely involved in recent emergencies such as Blue Tongue and Schmallenberg viruses and participated to research projects aiming to assess impact of both viruses on reproduction.

Claire became head of the Bacterial Zoonoses Unit at ANSES's Animal Health Laboratory located at Maisons-Alfort in June 2014. This laboratory carries out critical missions for France and Europe in the field of animal health and public health and is characterized by its strength as a reference laboratory (Anthrax, Brucellosis, Chlamydia, Glanders, Melioidosis, Tuberculosis). Since then, Claire took over the EU Reference Laboratory for Brucellosis.

	<h2>European Union Reference Laboratory for Brucellosis</h2> <p><i>French Agency for Food, Environmental and Occupational Health & Safety</i> <i>Animal Health Laboratory, Maisons-Alfort, France</i></p>	
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The coordinator and supervisor of the European Union Brucellosis National Reference Laboratories

The European Union Reference Laboratory (EURL) for Brucellosis was established at the Maisons-Alfort Animal Health Laboratory (Anses) in France in 2006. The laboratory ensures the quality of diagnosis, surveillance, control and eradication of this serious zoonosis in the EU through counselling, coordination, research and control. The Brucellosis team consists of 3 scientists and 4 highly skilled technicians in bacteriology, serology and molecular biology techniques, as well as a secretary and a team devoted to maintenance and media preparation (Figure 1).

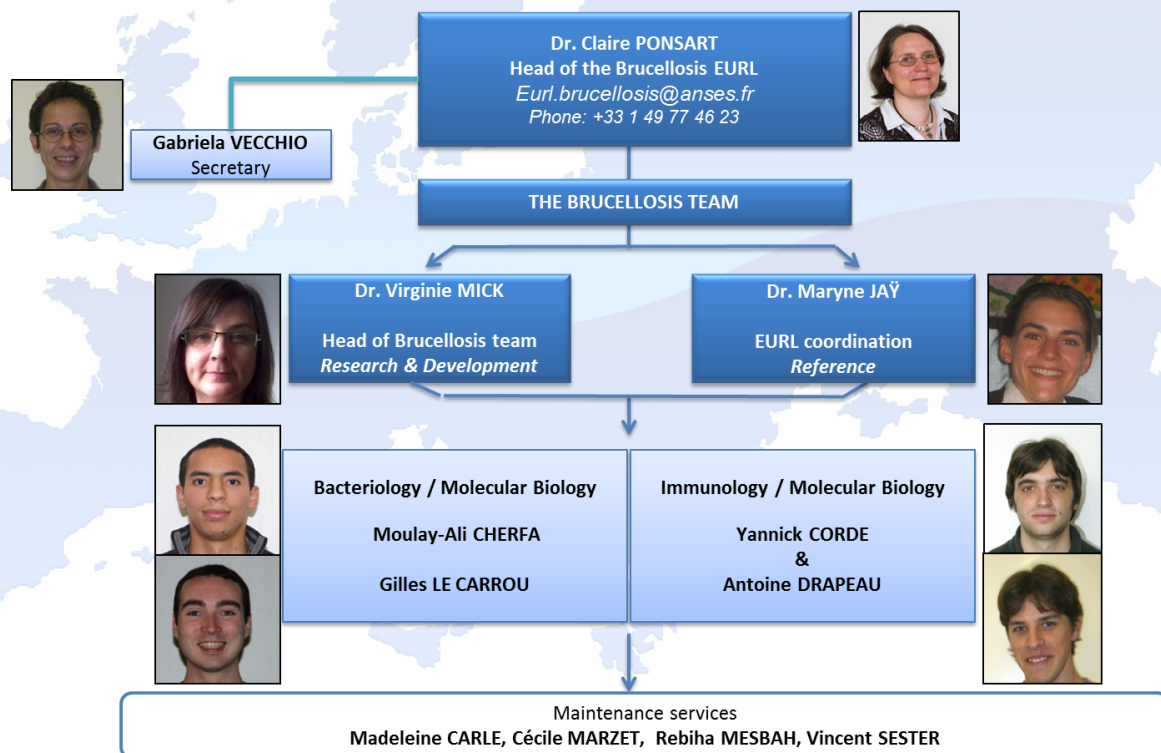


Figure 1 : Description of the current EURL Brucellosis team at Maisons-Alfort Animal Health Laboratory (Anses)

Brucellosis is the generic name used for the animal and human infections caused by several species of the *Brucella* genus, mainly *Brucella abortus*, *B. melitensis* and *B. suis*, which infect primarily cattle, sheep and goats and pigs respectively. Brucellosis is widespread globally. Most EU Member States (MS) are free of bovine and sheep-and-goat brucellosis, but the infection is still present in Greece, Spain, Portugal and Southern Italy (Figure 2). Over the last ten years, the infection has re-emerged, with high prevalence, mainly in sheep and goats in other neighbouring countries and, in particular, in Eastern Europe, the Balkans, and Eurasia,

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and it remains endemic in the southern bank of the Mediterranean Sea. Porcine brucellosis has been eradicated from Europe with the development of industrial pig production, but the disease is endemic in European wild boar and hare populations, both sources of infection for the developing outdoor free-range pig farming sector.

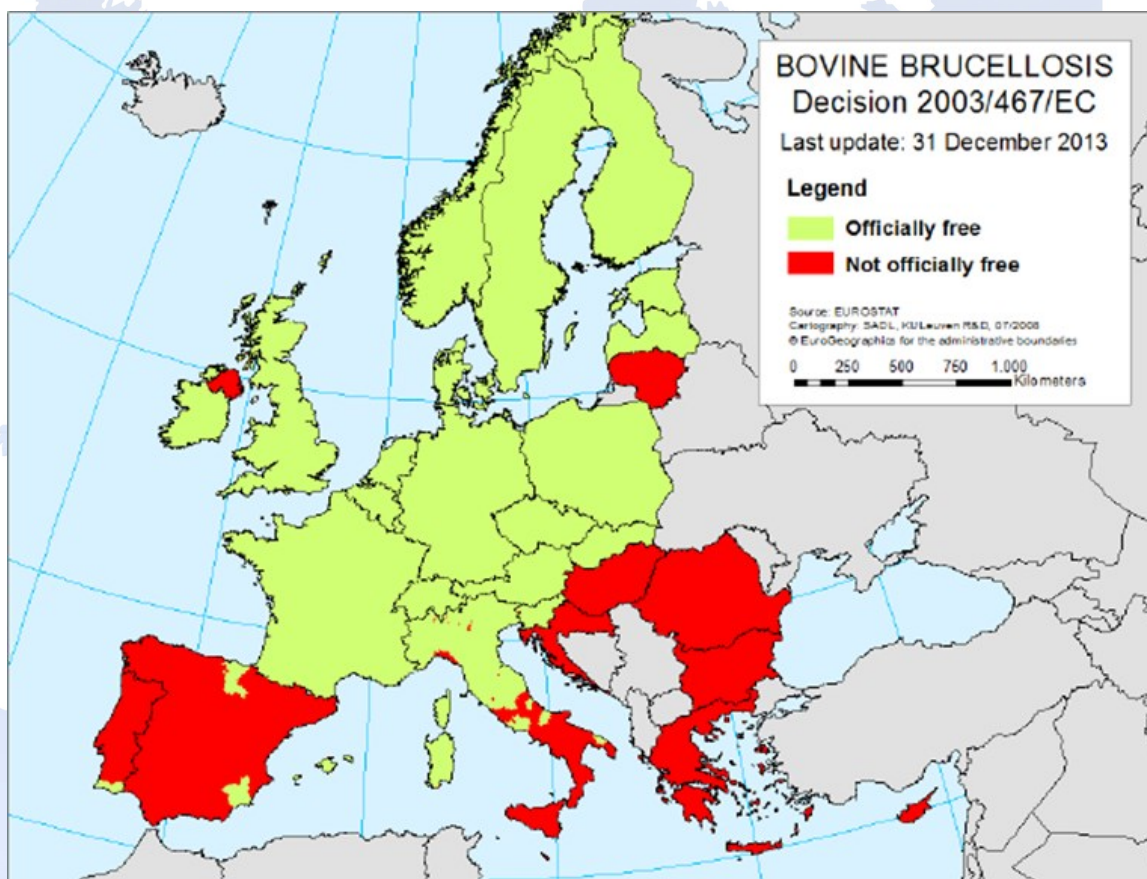


Figure 2 : Map of EU member states with an officially free status or not (according to Commission Decision 2003/467/EC as last amended by Commission Implementing Decision 2013/177/EU : source : Bovine and Swine diseases – 2013 Annual report ; http://ec.europa.eu/food/animal/liveanimals/bovine/docs/final_report_2013_en.pdf)

The disease is recognized as a significant public health challenge, with a major economic and financial burden in countries where the disease remains endemic. Humans generally acquire the disease through direct contact with infected animals, by eating or drinking contaminated animal products, particularly milk products. The signs and symptoms of brucellosis are extensive and they can be similar to many other febrile illnesses, thus misdiagnosed. Some individuals may develop long-term chronic symptoms, and may evolve to a chronic illness that may induce serious complications, mainly osteoarticular, in particular when antibiotic treatment is not implemented in time or appropriately. According to WHO, 500.000 new human cases are reported globally each year. In animals, mainly cattle, sheep and goats and pigs, the infection may cause abortions in females, orchitis-epididymitis in males and, less frequently, arthritis or bursitis in both.

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Economic loss may be direct (abortion) or indirect (milk loss and sterility). However, the major economic issue is that European or International regulations state that only animals from officially free herds may be used for trade and even for the import/export of semen, ova and embryos.

"While almost eradicated in Europe and, in general, in the developed world, Brucellosis is still widespread all over the world and is also re-emerging due to globalisation" says Dr Bruno Garin-Bastuji, who has been the director of the Brucellosis EURL at the Animal Health Laboratory of Anses up to March 2014.

The Brucellosis EURL missions and activities

One of the main tasks of the EURL is to coordinate the methods employed in the EU Member States (MS) for diagnosing brucellosis. Its action is based on the network of the 28 Brucellosis National Reference Laboratories (NRLs) specifically designated in each MS. The EURL gives support to these NRLs through analyses, advice, training, information, as well as through the organization of Inter-Laboratory Proficiency Tests (ILPT), audits and through the transfer of methods. The EURL performs reference diagnosis in serology, PCR detection, *Brucella* isolation and conventional and molecular typing. It holds an important collection of strains, both field and reference strains, reagents and samples. It performs official control of *in vitro* (serology) and *in vivo* (Brucellin) diagnostic reagents, as well as of *Brucella* vaccines (final and seed lots) according to OIE and EU standards.

Serological testing is the basic tool for the surveillance of brucellosis-free animal populations as well as for the eradication programmes. Since its designation, the EURL has focused its action on improving the standardization of serological testing in the EU through the organization of appropriate Inter-Laboratory ring Trials, in particular:

- 3 Inter-Laboratory Proficiency Trials (ILPT) for all EU approved blood serological tests (2007, 2012, 2014), one ILPT targeting the Complement Fixation Test, one of the most important tests for brucellosis confirmation for which standardization was clearly missing in the EU (2009-2010), and 3 ILPT for the bulk-milk ELISA (the basis of brucellosis surveillance in dairy cattle) (2008-2009; 2011;2013);
- 3 Inter-laboratory ring-trials for the validation of EU standard serums for pig, sheep and goat brucellosis as well as for ovine epididymitis (*Brucella ovis*), that the EURL had previously produced and standardized against the corresponding OIE standard sera.
- 1 ILPT for *Brucella* bacteriological and molecular identification and typing (2012).

At the end of 2014, 1 ILPT concerning the performance of reagent batch control (RBT) is foreseen.

In parallel, and as recommended by EFSA, the EURL has focused its research activities on parallel evaluation of brucellosis serological tests in cattle as well as in sheep and goats, and in pigs in order to assist the Commission in harmonising the strategies implemented in the

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EU for the surveillance and the control of animal brucellosis.

In free or almost-free countries, the lack of specificity of the serological tests make the direct diagnosis of the infection the sole unequivocal diagnosis of the disease in animals as in humans. Moreover, it is essential to differentiate autochthonous from imported infections when outbreaks or human cases occur. This is why the EURL has also focused its work on the standardisation of conventional as well as of recently developed molecular methods for the detection, isolation, identification and typing of *Brucella* strains. A real-time PCR method has been developed and validated. The EURL focuses its research activities on molecular tools that provide the epidemiological information needed to investigate animal and human outbreaks and will work more deeply on genomic approaches to ensure development of updated diagnostic tools. In parallel, the EURL produces, standardises, and provides MS NRLs with the necessary reagents for the conventional bacteriological typing of *Brucella* strains (phage and sero-typing in particular).

In order to ensure the quality of the biologicals approved on the EU market for the diagnosis or the prevention of brucellosis in animals, the EURL has implemented an official control of diagnostic reagents (diagnostic antigens and ELISA kits) as well as of *Brucella* vaccines authorised in the EU.

"While pre-existing to the designation of the EURL, the Brucellosis EU NRL network has clearly been enlarged and strengthened since, and this clearly facilitated the standardisation of diagnostic methods as well as a common understanding on how to use and interpret the tests for an optimised surveillance and eradication strategy throughout the EU" says Dr Maryne Jaÿ, coordinator of the EURL.



The 2014 Annual Workshop for Brucellosis NRLs was held at the Federal Institute for risk assessment (BfR), Germany, Berlin in September 2014

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Three hands-on training courses on brucellosis diagnostic methods were held in Anses in 2013 and 2014



From the 2014 Annual Workshop for Brucellosis NRLs



The EURL also organises hands-on training courses on serological and bacteriological techniques. Each year, the EURL also holds a workshop, either in Maisons-Alfort or in a Member State (Lisbon in 2009, Malta in 2011, Zagreb in 2013, Berlin in 2014) in order to reinforce the links amongst the NRLs. These two-day workshops gather NRL delegates not only from all the EU and EFTA, but also from candidate countries and Balkans. This contributes to the harmonisation and standardisation of diagnostic methods throughout the EU and in EU neighbouring countries, where the disease is still endemic. Finally, the EURL provides regular technical assistance to the Commission concerning the standardisation of analytical methods and their implementation, in particular by participating actively to the Brucellosis expert subgroup of the EU Task Force on the eradication of animal diseases (http://ec.europa.eu/food/animal/diseases/index_en.htm).

Note: a Brucellosis EURL website is being developed to facilitate access to information and exchanges between NRLs and the EURL. It is planned to be available in early 2015.

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