



European Association of Veterinary Laboratory Diagnosticians

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Foreword

Dear Colleague,

We start this issue with the announcement of the next EALVD congresses. The governing Board update is an occasion for interviewing past president, Elena Bozzetta, presenting new members and national associations. Get a look to the winners of last EALVD prizes.

In occasion of the Antimicrobial awareness week, we present a review on antimicrobial resistance. This number contains other topics regarding biosafety and OIE campaign to stop rabies by 2030. With this newsletter, we start to tell stories about young researchers and their career across Europe.

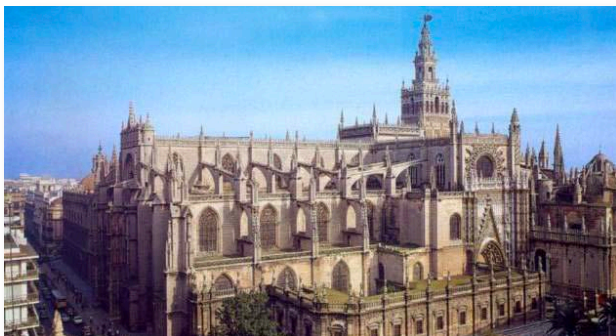
Next EALVD announcements: flamenco and bagpipes

We are proud to announce the next locations for the EALVD Congresses!

- The city of Seville, in the South of Spain, crossroad of ancient and different cultures will be a charmant location for the 6th EALVD, that will be held in 2020.
- On 2022, we will move to Edinburgh (UK) to feel the scottish spirit and appreciate a wonderful city.

In the next newsletters, more details about the organisation will be provided .

STAY TUNED!





European Association of Veterinary Laboratory Diagnosticians

EALVD news

A new governing board has been elected in Brussels, during the 5th EALVD Congress

Congratulations to Eefke Weesendorp (The Netherlands), new President in charge!



Past president: Elena Maria Bozzetta (Italy)

Vice President: Brigitte Cay (Belgium)

Treasurer: Frederik Widén (Sweden)

Secretary: Gudrun Overesch (Switzerland)

Secretary: Angus Wear (United Kingdom)

Board members

Pavel Bartak (Czech Republic)

Nick Coldham (United Kingdom)

Marialaura Corrente (Italy)

Juan Ángel Díaz de Tuesta García (Spain)

National Societies of Veterinary Laboratory Diagnosticians

Country	Name (Acronym)	website	language
Switzerland	Schweizer Vereinigung für Veterinär-Labordiagnostik (SVVLD)	www.svvld.ch	German
Spain	Asociación de Veterinarios Especialistas en Diagnóstico de Laboratorio (AVEDILA)	www.avedila.com	Spanish
Italy	Italian Society of Veterinary Laboratory Diagnosticians (SIDiLV)	www.sidilv.org	Italian

***For further information visit our website!
www.eavld.org***



European Association of Veterinary Laboratory Diagnosticians

EALVD: “A young society in the view of One health Approach”

Interview with Elena Bozzetta, past president of EALVD

Dear Elena, your charge as president of EALVD association is ended, after two years. Would you tell to EALVD colleagues a summa of your experience?

I think it was an exciting experience to work together with other colleagues from all over Europe with different background and experience. And to see the society growing and scientific programs being more and more interesting. The Organizing countries were so seriously engaged to ensure that the event could fulfil the attendance of participants...and so it was.

Let me talk about EALVD in numbers: have you any data about the number of participants of the association and to the congresses, involvement of young people etc. ?

To date, last meeting saw the participation of more than 300 people. Numbers are growing every year! And as you know the registration fees include also the fee for registration to the society, so to date we have the same number of associated! Unfortunately, we don't know the age of attendees, however having a look to the audience it seems that we can involve quiet a large number of young people. Our policy is to keep low inscription fees as far as possible and to be sure that cheap accommodations are available for young attendants. Also the social dinner is always included in the the registration fee, we think that this is a very important moment for networking and exchange of experience.

What EALVD did represent for European laboratory veterinarians and what it should be in the future?

EALVD is quiet a young society, born just in 2008, so ten years old, so more then what it represented we can say that now it represents the chance to share experience and exchange ideas to afford the emerging animal and public health challenges. I think that the one health approach will represent more and more the core of the society program and that we will try to put together more and more experts from different fields.

Have you been able to balance this charge with your job? I mean, did you manage well?

I think that doing a good job as a President requires to be proactive, to stimulate the board and to find out new ideas for the society. It implies some work, but it is an amusement too an it is completely repaid from the success of every new Congress.

Would you recommend something to the next President and to new board members?

Upon what I could see about the new board, it looks quiet promising, enthusiastic and with new ideas. So what I recommend is just to keep this spirit, this is what you need to do a good job!

Thank you Elena, all the best to you!





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EALVD 2018: the winner is..

Best posters and oral presentations during the EAVLD 2018 conference in Brussels

From 14-17 October 2018 the EAVLD conference was held in Brussels. During this conference there were sessions about “Enzootic diseases”, “Standardization, validation and surveillance”, “Epizootic, emerging and vector borne diseases of livestock”, “One Health: foodborne pathogens, zoonosis and antibiotic resistance” and “Advances in diagnostics”. **About 50 scientists** presented their research by **oral presentations** and keynote lectures. Awards were given to **Mieke Steensels** for her presentations on Velogenic avian paramyxovirus in Belgium and highly pathogenic avian influenza in racing pigeons and to **Britta Wood** for her presentation on inactivation efficacy of lysis buffers against different Foot and Mouth disease virus serotypes. **About 100 scientists** presented their work in **posters**. The posters of **L. Di Galleonardo**, **S. Blaise-Boisseau** and **H. Hill**, were awarded by poster prizes.



From the left to the right: dr. Britta Wood and dr. Mieke Steensels, who won 2018 EALVD prizes.



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Monitoring of antimicrobial resistance in a One Health approach

G. Overesch, University of Bern, Vetsuisse Faculty, Institute of Veterinary Bacteriology
Centre for Zoonoses, Bacterial Animal Diseases and Antimicrobial Resistance (ZOBA), Switzerland

One Health is recognized globally as a pivotal approach to overcome healthcare-related problems, especially antimicrobial resistance. Since many years, in the European Union and EFTA* countries such as Norway and Switzerland, a monitoring of antimicrobial resistance in bacteria isolated from livestock and meat is implemented. The EU decision 2013/652 ensures comparability of the data within the participating countries. Results are published annually in the “European Union summary report on antimicrobial resistance in zoonotic and indicator bacteria from humans, animals and food”.

In contrast, data on antimicrobial resistance in relevant veterinary pathogens isolated from diseased animals are lacking in many European countries. These data are important for veterinarians, enabling them to make appropriate therapeutic antibiotic choices. Moreover, these data fill another important gap regarding the monitoring of antimicrobial resistance from the One-Health perspective. International organizations have recently focused on these topics.

The establishment of a European Veterinarian Committee on Antimicrobial Susceptibility Testing (VetCAST) in 2015 proves the importance of these measures.

In 2015 the Swiss Federal Food Safety and Veterinary Office together with the national reference laboratory for antimicrobial resistance (ZOBA) launched a pilot project on antimicrobial resistance monitoring in veterinary pathogens from livestock and companion animals.

This project focused on targeted bacteria and clinical cases from several animal species.



Isolates should ideally derive from all veterinary diagnostic laboratories in Switzerland. For the comparison of results it was mandatory that only isolates from animals, which did not get antimicrobial treatment prior to sampling were included. Susceptibility testing was performed at the ZOBA with the broth micro dilution method. In contrast to the European monitoring in healthy livestock, only antimicrobials approved for veterinary use were tested. Moreover, isolates were classified as susceptible or resistant according to clinical breakpoints published by the Clinical and Laboratory Standards Institute, or, if not available by clinical breakpoints according to the European Committee on Antimicrobial Susceptibility Testing (EUCAST) guidelines. An excerpt of data derived from this pilot project are presented in the “Swiss antibiotic resistance report 2018”. A regular monitoring program in veterinary pathogens started from 2019 on.

* European Free Trade Association

To read more:

www.efsa.europa.eu www.zoba.unibe.ch



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Biosafety in laboratories

N. García Benzaquén, I. Martínez Alares, M. Mazariegos Martínez-Peñalver, S. González Domínguez
 VISAVET Health Surveillance Centre. Universidad Complutense Madrid. España

In animal and human health biological laboratories it is essential to comply with biosafety requirements in order to assure the safety of the staff and the community.

Biosafety can be defined as 'a set of preventive measures and good management practices that reduce, control and eliminate risks caused by biological agents, protecting the health and safety of animals, plants and humans against such risks'. The first step to do this is to know the agents we are dealing with (bacteria, viruses, toxins, etc.) and which biosafety level is required for working with each one of them. Thus, pathogens are classified into **four risk groups**, according to the *European DIRECTIVE 2000/54/EC on the protection of workers against the risks related to exposure to biological agents during work* (Figure 1).

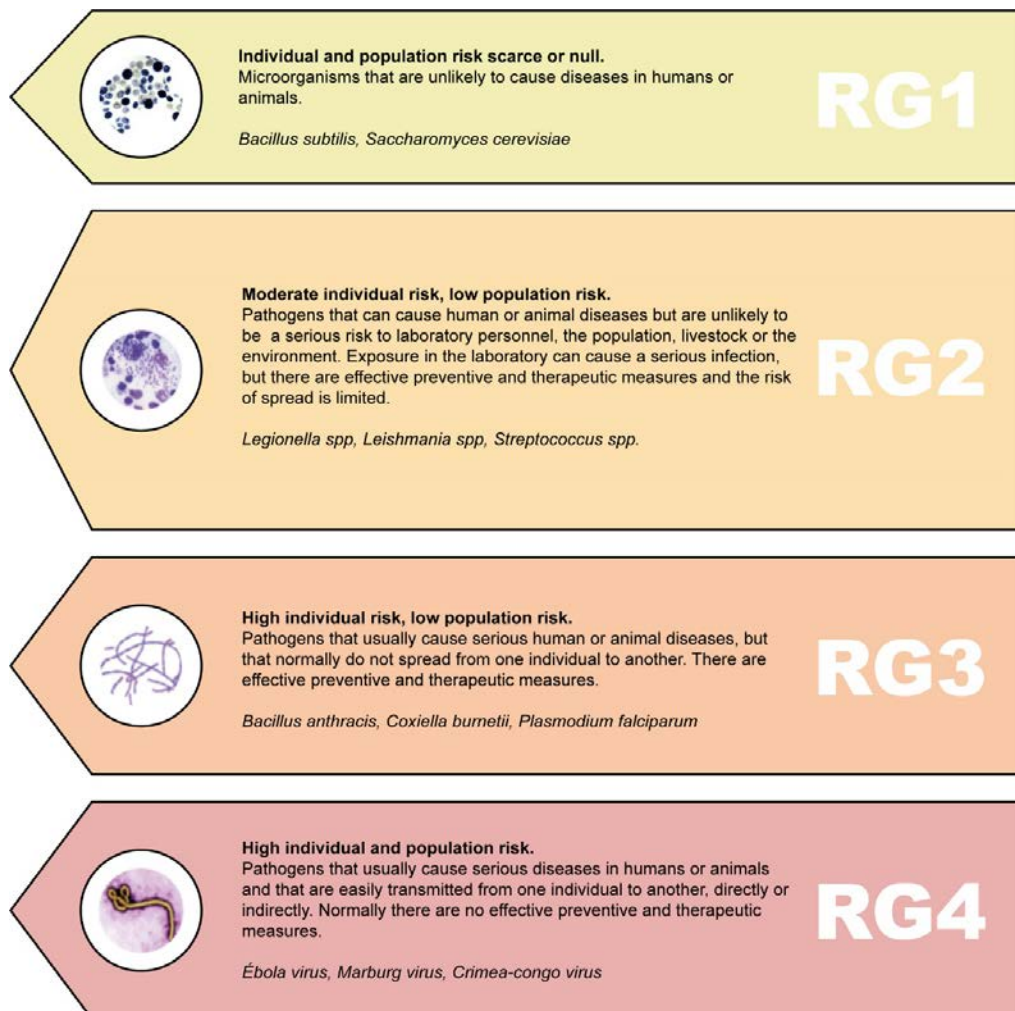


Figure 1: Risk groups of biological agents



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Biosafety in laboratories

In relation to these risk groups, **four levels of biosafety (1 to 4)** have been defined (Biosafety Level, BSL), in relation to certain established conditions under which biological agents can usually be handled safely. The assignment of an agent to a certain biosecurity level for laboratory work must be based on a **risk assessment**, taking into account not only the risk group but also additional factors, for example, the production of aerosols or working with high pathogen concentrations.

Only the right combination of facilities, equipment and laboratory practices can guarantee the level of biosecurity required.

Each facility should design a **unique laboratory biosecurity program**, according to its specific requirements, to the type of work carried out, and to local and geographical conditions. This program must contemplate the following aspects:

- Microbiological risk assessment
- Laboratory design and facilities (surface finishes, air handling, biosafety cabins, etc.)
- Entry and exit of personnel, animals and material
- Basic laboratory practices (Good Laboratory Practice "GPL")
- Personal protective equipment
- Laboratory material
- Medical and health surveillance
- Personnel Training
- Decontamination and waste handling
- Chemical, electrical and radiological safety, fire protection and other safety material
- Emergency plans

In summary, biosafety can be achieved by having a good laboratory design and by the application of control measures such as restriction of access to the facilities, training to ensure availability of experienced personnel, use of safety equipment and safe handling methods for infectious materials.

To read more:

Laboratory biosafety manual, 3rd edition, WHO, 2004. www.who.int/csr/resources/publications/biosafety/Biosafety7.pdf

DIRECTIVE 2000/54/EC

<https://eur-lex.europa.eu/legalcontent/EN/TXT/?qid=1375443992555&uri=CELEX:32000L0054>





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ZERO BY 30: A plan to end human deaths from dog-mediated rabies by 2030

M. Corrente, *Department of Veterinary Medicine, University of Bari, Italy*

In 2015 The Office International of Epizooties launched the campaign **ZERO BY 30**, with the aim of **preventing human rabies deaths** by:

- increasing awareness
- vaccinating dogs to prevent the disease at its source
- administering life-saving treatment after people have been bitten.

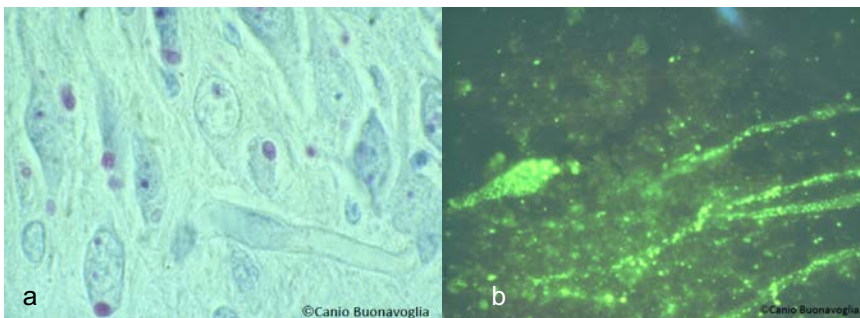
1. WHY

An estimated 59 000 people die from rabies each year. That's one person every nine minutes of every day, 40% of whom are children living in Asia and Africa. Dog bites are the main of human cases. Surprisingly, there is no awareness about this disease. Tourists traveling in endemic areas, such as North Africa or India, are not well informed about the risks of approaching dogs and cats. Last cases of canine rabies in France and Spain were caused by dogs illegally imported from Maroc. Conveniently, an integrated effort for fighting rabies is required. Investing in rabies elimination saves lives and strengthens both human and veterinary health systems.

2. HOW

Four organizations – the World Health Organization (WHO), the World Organisation for Animal Health (OIE), the Food and Agriculture Organization of the United Nations (FAO) and the Global Alliance for Rabies Control (GARC) – have joined forces, and are determined to reach this goal. The vaccines, medicines, tools and technologies to prevent people from dying from dog-mediated rabies are available.

Vaccines against rabies are inactivated but extremely immunogenic. In dogs, a single vaccination is enough to elicit a strong humoral response. The average cost of each dose is 4 dollars. For those reasons, vaccinating dogs is a cost-effective and sustainable way to save lives. Furthermore, **rabies is prevented through increased awareness and improved education.** People need to know about rabies to vaccinate dogs and seek care if they are exposed. Engaging communities to improve rabies education and awareness is essential to prevent human deaths.



Dog brain smears

- a.Negri Bodies of Rabies (Mann Stain)
b.Immunofluorescence

(Courtesy of Prof. Canio Buonavoglia,
Department of Veterinary Medicine,
University of Bari, italy)



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3.WHEN

ZERO BY 30

A three-phase approach is proposed to achieve the goal



Image from "Zero by 30" www.oie.int

Phase 1: START UP.

During the first two years, Countries already active in rabies control or with projects in progress will be engaged, developing national and regional rabies elimination plans.

Phase 2: SCALE UP

In the mid-term phase most countries will be involved, expanding the efforts on the basis of the experience established in Phase 1.

Phase 3: MOP UP

This is the last mile. The Remaining 19 countries will be engaged. All the achievements and efforts from the first two phases will converge to the common goal of making "Zero by 30" a reality.

"In the past, the global response has been fragmented and uncoordinated. We need to break the status quo and come together with a combined will, an achievable goal and a common plan.

Rabies elimination is feasible: the time to act is now".

To read more:

Zero by30- FINAL on line version. (201

[http://www.oie.int/fileadmin/Home/eng/Media_Center/docs/Zero by 30 FINAL online version.pdf](http://www.oie.int/fileadmin/Home/eng/Media_Center/docs/Zero_by_30_FINAL_online_version.pdf)

Parize et al, (2018). [The shift in rabies epidemiology in France: time to adjust rabies post-exposure risk assessment](#). Eurosurveillance 23(39) 1700548 (27/09/2018)



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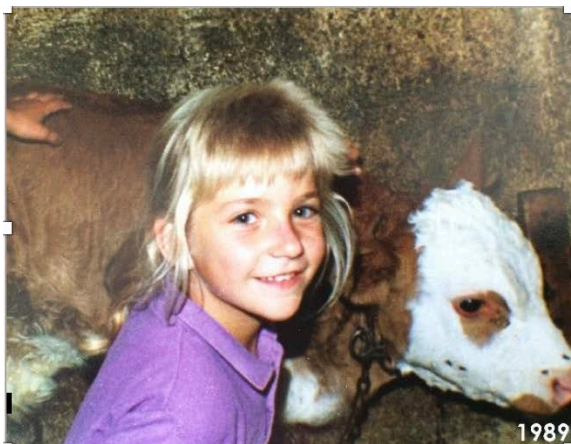
From this number, we start to tell young researchers' tales across Europe.

Where to next? A veterinary bacteriologist's journey through Europe

The story of Sabrina Rodriguez Campos



Sabrina Rodriguez Campos was born in 1981 and raised in Southern Germany. In 2006 she graduated in Veterinary Medicine at the Justus-Liebig-Universität Giessen, **Germany**. Her Spanish roots made her take part in the Erasmus programme 2002/03 in her father's hometown, Madrid, **Spain**, at the Complutense University. After completing her DVM degree, Sabrina moved back to Spain to start research in bacteriology on the topic of molecular epidemiology of animal tuberculosis at the Animal Health Department and the VISAVET Health Surveillance Centre of the Complutense University Madrid, **Spain**. The VISAVET Centre was appointed to European Reference Laboratory for Bovine Tuberculosis in 2008, which gave Sabrina the opportunity to participate in R&D actions, quality management and research at the same time. She received a predoctoral grant FPU from the Spanish Ministry of Education and was awarded travel grants in to collaborate with the University College Dublin, **Ireland**, and the Animal and Plant Health Agency Weybridge, **United Kingdom**. In 2012, Sabrina finished her PhD, which was distinguished with the Extraordinary PhD Award of the Veterinary Faculty of the Complutense University Madrid.





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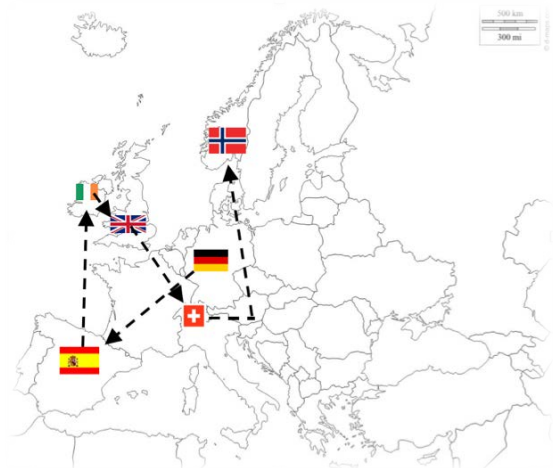


Where to next?

A veterinary bacteriologist's journey through Europe

The same year she moved to Bern, **Switzerland**, where she started a position as group leader of Development & Validation at the Centre for Zoonoses, Animal Bacterial Diseases and Antimicrobial Resistance (ZOBA) at the Institute of Veterinary Bacteriology of the Vetsuisse Faculty, University of Bern. Her tasks involved the set-up, improvement, validation and accreditation of molecular diagnostic assays for bacterial and fungal diseases. In 2013, Sabrina obtained the Swiss Diploma as Veterinary Specialist (FVH) in Laboratory Medicine - Bacteriology and is recognized as Educator for this field by the Swiss Association of Veterinary Laboratory Diagnosticians (SVVLD). During the time at the ZOBA, Sabrina also started her own research group that made use of amplicon sequencing as a novel technique to study abortion in ruminants, for which she obtained funding from the Swiss Federal Veterinary Office. On this topic, two Master theses, one doctoral thesis (Dr. med. vet.) and one PhD thesis were successfully conducted under her supervision. In January 2018, Sabrina became a Research Group Leader at the Institute to focus on research and teaching. Until today, Sabrina co-authored 39 articles in peer-reviewed journals, 14 thereof as first or last author. Her research was presented at more than 20 international conferences including the International Symposia of the World Association of Veterinary Laboratory Diagnosticians in 2013, 2015 and 2017 and the EAVLD Congresses in 2014 and 2016.

Sabrina has a strong interest in applied microbiology and her main research focuses on host-microbiome interactions in neglected zoonotic diseases of ruminants, such as pathogenic *Leptospira* spp. She will relocate to Oslo, **Norway**, in March 2019 to start her new position as Associate Professor at the Faculty of Veterinary Medicine of the Norwegian University of Life Sciences.



Sabrina's journey



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MERRY CHRISTMAS AND HAPPY NEW YEAR!



Newsletter by Marialaura Corrente

Thank you to Francesca Caringella, Margie Cirilli and Adriana Trotta, Phd students of the DVM of University of Bari (Italy), for the collaboration!