European Association of Veterinary Laboratory Diagnosticians

25TH NEWSLETTER

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European Association of Veterinary Laboratory Diagnosticians

CONTENT

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Since the beginning of its term, the current EAVLD Board has been committed to publishing a Newsletter that consolidates relevant and up-to-date information for professionals in veterinary diagnostics. We are pleased to present the first issue of the EAVLD Newsletter (June 2025), a collaborative effort that brings together contributions from many colleagues.

This edition features sections on emerging scientific topics, recent publications, ongoing research, technical tips, grant opportunities, upcoming events and congresses, job offers, and human resources. In addition, industry partners have been invited to participate as sponsors, showcasing their brands, innovations, and product launches.

We sincerely thank all contributors and invite both members and non-members to support future editions by submitting content and new ideas for the December 2025 issue and beyond.

With kind regards,
Antonio Martinez-Murcia

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Orihuela, Alicante, Spain

EAVLD Board

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News and Updates

First Global Animal Health Report – WOAH 2025

The World Organisation for Animal Health (WOAH) has just released its first-ever Global Animal Health Report, a landmark document offering a comprehensive overview of current trends, risks, and challenges related to animal diseases worldwide. It highlights the spread of infectious diseases to new areas and species, with nearly half posing zoonotic risks, and emphasizes the growing threat of antimicrobial resistance.
For those working in diagnostic laboratories, the report has direct implications for disease surveillance, preparedness, and response, and underlines the critical role of diagnostics in controlling major diseases like African swine fever, brucellosis, tuberculosis, peste des petits ruminants, foot and mouth disease and avian influenza.

Access the full report here:
https://www.woah.org/en/document/the-state-of-the-worlds-animal-health-2025/

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Interview to Dr. Isabella Monne

It is a great pleasure to welcome **Dr. Isabella Monne** (IM), veterinarian and researcher at the Istituto Zooprofilattico Sperimentale delle Venezie, where she leads the activities of the WOAH/EU and National Reference Laboratory for Avian Influenza and Newcastle Disease.

Dr. Monne also coordinates the WOAH Collaborating Centre for Diseases at the Human-Animal Interface and the FAO Reference Centre for Animal Influenza.

In light of the current situation concerning the spread of highly pathogenic avian influenza, we considered it essential to invite an update from the WOAH Reference Centre, directly from its coordinator.

1-Dr. Monne, could you briefly describe the recent trends of high-pathogenicity avian influenza infections in the last few years, particularly regarding the increasing frequency of spillover to mammals?

IM: In the last few years, highly pathogenic avian influenza (HPAI) viruses belonging to clade 2.3.4.4b of H5Nx have shown an unprecedented geographic spread and seasonal persistence across multiple continents, including Europe. Since 2022, the scale and extent of the HPAI epizootic have reached such proportions that it is now considered a true panzootic. This evolving global scenario is characterized not only by the vast scale of outbreaks in poultry but also by an extraordinary expansion in host range and viral genetic diversification. To date, HPAI H5Nx viruses have infected over 500 avian species and more than 80 mammalian species, with documented cases of sustained mammal-to-mammal transmission in specific settings such as fur farms, marine mammal colonies, and, most recently, among dairy cattle. The virus has also caused sporadic human infections, and in 2024, the number of reported human cases increased, primarily as a consequence of its spread within the dairy cattle population in the United States.

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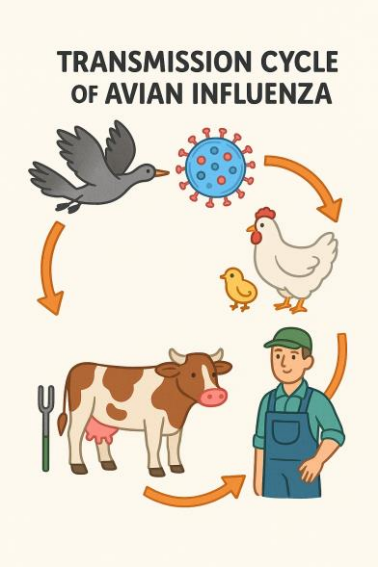
The transmission of the virus from a mammal like cattle to humans represents a significant epidemiological shift. Mammals are no longer just dead-end hosts; in certain situations, they may become a vehicle for onward transmission to other mammals.



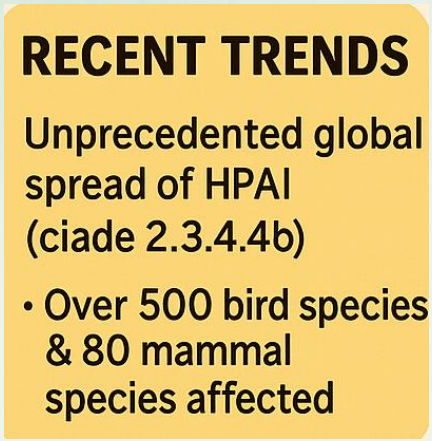
Some of these mammalian infections have been linked to mutations known to enhance replication efficiency in mammals, particularly in the polymerase genes. However, fortunately, the virus has not yet acquired the key mutations needed to adapt to the human respiratory tract, mutations that would be essential for sustained human-to-human transmission.

2. What activities does your reference laboratory undertake in this context?

IM: As an international and national reference laboratory for avian influenza, recognized by FAO, WOAH, the European Union and the Italian Ministry of Health, we are involved in a broad range of activities that go well beyond standard diagnostic testing. One of our core responsibilities is to provide guidance and expertise to national and international health authorities and diagnostic support to veterinary services, performing confirmatory testing and contributing to outbreak investigations during the most critical phases.

In parallel, we conduct extensive genomic surveillance. We sequence entire viral genomes to monitor how the virus is evolving, to identify markers of adaptation to new hosts, especially mammals, and to detect reassortment events that could alter the virus behaviour. We are also deeply engaged in risk assessment, working closely with health authorities and international organizations to help evaluate the zoonotic and pandemic potential of emerging variants. In addition, we offer scientific and technical support for the design and implementation of disease control measures, ensuring they are effective and tailored to the specific context.

A key aspect of our work is the continuous evaluation of existing diagnostic techniques. We regularly assess their performance and, when needed, update them or develop new ones, based on the epidemiological situation or characteristics of the emerging strains.



Another important area is capacity building. We provide training, distribute reagents and protocols, and actively support countries with limited resources to strengthen their diagnostic capabilities. We are often invited to assist in remote regions of the world, where logistical and infrastructure challenges are significant. In such settings, we also contribute to field surveillance and technical assessments, always aiming to adapt solutions to the real needs on the ground.

3. What are the main diagnostic tests currently in use for detecting avian influenza?

IM: The most widely used approach for avian influenza detection today is molecular diagnostics, particularly real-time RT-PCR (rRT-PCR). This technique has become the global standard, and it is now routinely applied even in many low-resource laboratories thanks to international support and capacity-building efforts. Initially, real-time PCR assays were mainly used to confirm the presence of influenza A viruses and to determine the HA subtype, especially H5 and H7. However, in recent years these methods have significantly evolved. In the current context, rRT-PCR-based tools are no longer limited to generic detection and subtyping: they can now also determine the pathotype that is, whether a strain is highly or low pathogenic, and in many cases, even identify the specific lineage or clade. This level of resolution is critical to understand virus evolution in real time and put in place a prompt outbreak response. Clearly, alongside molecular techniques, we continue to perform classical virology techniques that allow us to isolate emerging viruses and study their biological characteristics.

In parallel, genomic surveillance has become an integral part of the diagnostic workflow. The implementation of next-generation sequencing (NGS) approaches, especially third-generation platforms, has dramatically shortened the time required to genetically characterize avian influenza viruses. It is now possible to obtain the complete genome sequence of a virus in less than 24 hours, which represents a transformational shift in our ability to respond to emerging threats. At our Reference Centre, these advances are supported by the development of in-house bioinformatics tools such as FLUMUT and GenIn2, which allow us to rapidly interpret genomic data and assess the potential risk posed by newly detected strains, including from a zoonotic perspective. These tools are instrumental in identifying mutations of concern, tracing viral evolution, and guiding decisions related to outbreak management and risk communication.

4. Are there any new techniques or tests you plan to implement in the near future, and why?

IM: Regarding the identification and typing of avian influenza viruses, there are currently no novel diagnostic methods or technologies that we consider mature enough to be integrated into the routine workflow of our Reference Laboratory. That said, we are actively monitoring and evaluating a number of emerging approaches, and we remain hopeful that more accessible and robust solutions, especially those suitable for low-resource settings, will become available in the near future. As a Reference Centre, we believe it is our responsibility not only to assess new tools early, but also to advocate for the adoption of innovations that are fit for purpose and adapted to the diverse realities of the regions affected by this panzootic.

Rather than implementing entirely new technologies at this stage in our routine, our current focus is on refining and adapting existing workflows to better reflect the evolving ecology of the virus. The emergence of new host species, particularly among mammals, has prompted us to re-evaluate how we approach

sample processing and diagnostic interpretation, especially when dealing with non-traditional matrices such as milk from infected cattle or environmental samples like wastewater. These developments are highly relevant from a preparedness standpoint, as they help us extend detection beyond conventional avian surveillance systems. At the same time, we are re-assessing the sensitivity and specificity of our existing assays in this new context, where interference from other pathogens and matrix-related challenges are more likely to arise.

In parallel, to support large-scale serosurveys aimed at identifying animals exposed to clade 2.3.4.4b H5Nx viruses, our Reference Centre has launched an intensive effort in research, development, and validation of more sensitive and specific serological tools. This work has already led to the integration of new assay formats into our diagnostic pipeline, including high-throughput microneutralisation assays and improved ELISA platforms. These advances are critical to better capture the true extent of virus exposure across both avian and mammalian populations, especially in light of the ongoing expansion of the virus's host range.

5. What are the primary goals of your current research and collaborations related to avian influenza?

IM: Our current research and collaborative efforts on avian influenza aim to support an integrated, science-based response to the challenges posed by the ongoing panzootic. At the core of our work is the goal to better understand the evolution, spread and zoonotic potential of HPAI viruses — especially those belonging to clade 2.3.4.4b.

To achieve this, we are actively developing, testing, and validating new approaches for the detection, phenotypic characterization and genetic analysis of influenza viruses. Our aim is to provide the international community with crucial information in increasingly shorter timeframes, to support timely and evidence-based decision-making.

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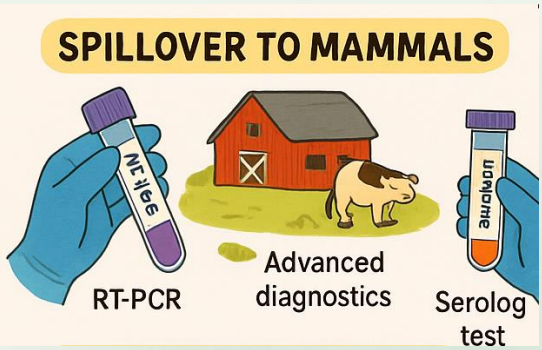
At the same time, we are also exploring alternative methods to reduce and ultimately replace the use of animal experimentation, promoting more ethical and sustainable solutions in line with the evolving scientific landscape.

Another important line of research is the evaluation of new vaccines for poultry against circulating H5 HPAI viruses.

6. In your opinion, what are the potential future scenarios for the progression of this infection?

IM: This is a very complex question, and to be honest, there is no single clear path forward, especially given how dynamic and unpredictable influenza viruses are. What we do know is that, considering the current global spread and the virus strong ecological foothold in wild bird populations, including in remote and hard-to-reach areas, eradication in the short term is very unlikely.

We are dealing with a virus that has remarkable evolutionary capabilities. Every time it spills over into a new host, particularly mammals, it is given another opportunity to adapt, and potentially to acquire the right mutations that could enable it to infect and transmit among new mammalian species, including humans. That is why we need to constantly scan the horizon, not just react to what is immediately visible.



Today's surveillance still largely focuses on the tip of the iceberg, mainly farmed poultry, but we must broaden our scope. We need real-time understanding of the genetic and phenotypic features of circulating viruses in order not to miss key evolutionary steps that could have significant implications for animal or even human health.

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All of this must go hand in hand with timely information sharing, both within the scientific community and with the public. There is an urgent need to improve public awareness around the risks associated with this virus, especially when it comes to behaviors involving wildlife. Sometimes, love for nature can lead to well-intentioned but risky actions, for both animals and people.

At a global scale, we also need to strengthen biosecurity in farms, not only from a structural standpoint but also through continuous training and awareness among those working in the field. Finally, we should seriously consider vaccination as a valuable tool to protect animal health and support food security. This includes investing in improved formulations, more cost-effective, easier to administer, and capable of inducing long-lasting immunity.

In short, the future of this infection will depend on how proactive we are in surveillance, prevention, and communication, and on our ability to adapt our strategies as fast as the virus adapts itself.

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Ongoing Projects

"Novel ASFV Vaccines and DIVA Diagnostics: Breakthroughs from the EU Project VACDIVA"

African swine fever (ASF) remains one of the most devastating diseases for both domestic pigs and wild boar populations, with serious economic and biosanitary consequences.

In Europe, stringent biosecurity measures and effective surveillance play critical roles in disease management. This urgency has led to significant strides in vaccine development.

The VACDIVA EU project, focusing on ASFV vaccine candidates, has led to the development of promising solutions.

The Final World Technology Transfer Workshop of the VACDIVA project took place on December 12th, 2024, in Brussels at the European Economic and Social Committee (EESC). The event brought together leading scientists, policymakers, international organizations, and representatives of the livestock sector to discuss and showcase the groundbreaking advancements achieved in the fight against ASF.

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Read the **KEY HIGHLIGHTS FROM THE WORKSHOP, KEY OUTPUTS and CONCLUSIONS here:**

https://vacdiva.eu/

As some of the key outputs of this project, **safe and effective ASF vaccines**, offering **≥80% protection** in domestic pigs and wild boar after one vaccination have been developed.

In parallel to this, the validation of **companion DIVA diagnostic tools** that differentiate between infected and vaccinated animals was performed, to ensure effective disease control while maintaining trade opportunities. **Four patents** secure the project's innovative breakthroughs, covering **three pilot vaccines** and **DIVA diagnostic tools**.

These prototypes represent a significant step forward but still require further testing, regulatory approvals, and pilot studies to pave the way for commercialization and large-scale production.

- **The study of the development and validation studies of DIVA diagnostic tools was published:**

A Novel Prototype African Swine Fever Virus DIVA (Differentiation Between Infected and Vaccinated Animals) Serological Assay Based on the Detection of Antibodies Against the pEP153R, eGFP, and p72 Proteins.

González-García, G.; Gallardo, C.; Montón, M.; Barroso-Arévalo, S.; Casado, N.; Barasona, J.Á.; Sánchez-Vizcaíno, J.M.; Venteo, Á.; Sastre, P.; Rueda, P. *Vaccines* **2025**, *13*, 211. https://doi.org/10.3390/vaccines13030211

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This study investigates key antigens, including the pEP153R and eGFP proteins, demonstrating their antigenicity and DIVA (Differentiating Infected from Vaccinated Animals) capabilities through ELISA technique.

A prototype DIVA diagnostic test was designed to detect antibodies against both DIVA antigens and the widely recognized immunogenic p72 protein. This diagnostic approach is pivotal for ASFV surveillance and complements vaccine candidates like Lv17/WB/Rie1-ΔCD.

The proposed DIVA diagnostic test promises to significantly enhance surveillance efforts during potential ASFV vaccination campaigns, ensuring that monitoring measures are met and effectively implemented.

- The combination of antigen and antibody testing is known to provide the widest detection window to monitor ASFV presence in acute cases and past exposure or carrier identification. **The development and validation of a novel rapid assay for combined antibody and antigen detection (combo assay) showed the advantage of the combined detection:**

Simultaneous Detection of Antigen and Antibodies of African Swine Fever in a Novel Combo Lateral Flow Assay.

Aira, C.; González-García, G.; Martínez-Cano, J.; de la Roja, N.; Giammarioli, M.; Feliziani, F.; Šteingolde, Ž.; Buitkuviene, J.; Václavek, P.; Glišić, D.; et al. *Vaccines* **2024**, *12*, 307. https://doi.org/10.3390/vaccines12030307

Continued investment in these technologies and additional field studies are essential to prevent ASF from causing further devastation and to turn this scientific success into a practical, global solution.

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Ongoing Projects

Improving the diagnosis of tuberculosis in domestic ruminants through the use of new antigens and test platforms. The imdiTBap project

Carlos Velasco[1,2], Javier Ortega[1], Álvaro Roy[1], Inmaculada Moreno[3], Mercedes Domínguez[3], Gareth Jones[4], Eamonn Gormley[5], Kevina McGill[5], Maria Beatrice Boniotti[6], Douwe Bakker[1], Erman Or[7], Piera Mazzone[8], Alessandra Martuciello[9] and Javier Bezos[1,2]

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The impact of zoonotic tuberculosis (TB) has been known for a long time, leading to the implementation of milk pasteurization as a key preventive measure. Livestock TB control programs were originally designed to reduce the risk posed by zoonotic transmission to humans. Diagnosis of TB in livestock is based primarily on cell-mediated immunity (CMI) diagnostic tests (intradermal test/IT and interferon-gamma release assay/IGRA) using PPDs (purified protein derivatives from *Mycobacterium bovis* and *M. avium*) that are sub-optimal in terms of sensitivity (Se) and specificity (Sp). Therefore, there is a need to continue working on the development and improvement of diagnostic techniques based on CMI and humoral response.

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Bovine PPD (bPPD) is poorly characterized and standardized and contains immune-reactive antigens present in non-tuberculous mycobacteria, limiting the specificity of TB diagnostic techniques. To face this drawback, research efforts have resulted in the identification of the most immunogenic antigens of the *M. tuberculosis* complex (MTBC) like ESAT-6, CFP-10, and Rv3615c that can be produced as a recombinant fusion protein (DST-F) or obtained through immune-purification from bPPD (P22 protein complex).

The aim of the imdiTBap project (2023-2026) is to close knowledge gaps in field performance of prototype antigen formulations (DST-F, P22) and develop novel diagnostic platforms. This will contribute to TB eradication in domestic ruminants and represent an important step towards reaching the global goal of reducing the zoonotic TB incidence.

This project, headed by renowned research groups across Europe and coordinated by VISAVET-UCM (**Figure 1**), is divided in four work-packages with different objectives/activities that can be summarized in: (1) Validation of DST-F and P22 antigens in cattle, goats and buffalo under different epidemiological situations using the IT, IGRA and a multicytokine detection platform (MCP); (2) Supply of the DST-F and development of a MCP; (3) Production of the P22 protein complex, validation of the P22 ELISA and development of a novel antigen capture ELISA for TB diagnosis in domestic ruminants; and (4) Critical assessment of the performance of IT and IGRA using DST-F and P22 and the novel diagnostic platforms.

To date, field studies have been conducted in cattle, goats and buffalo under different epidemiological situations within the context of WP1 (more than 10,000 analyses), which have yielded preliminary results regarding the Se/Sp of the DST-F and P22. Their use, compared to PPDs, appears to be related to lower Se and higher Sp of the IT in the evaluated animal species.

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However, the IGRA has shown a more similar performance regardless of the antigen used. The Se/Sp attributed to these antigens still needs to be evaluated more in depth but depends on the animal species, the epidemiological context, and the interpretation criteria used. The novel diagnostic techniques under development, mainly MCP and antigen detection techniques, are still in development and validation stages.

Also, the antibody detection technique based on P22 is already being used in cattle, goats, and buffalo (over 3,000 analyses), though the optimal cut-off is expected to be established in the coming months. In summary, the results of the imdiTBap project will provide data about the usefulness of these new tools in contributing to the eradication of TB in domestic ruminants.

Figure 1. Overview of institutions involved in the imdiTBap project.

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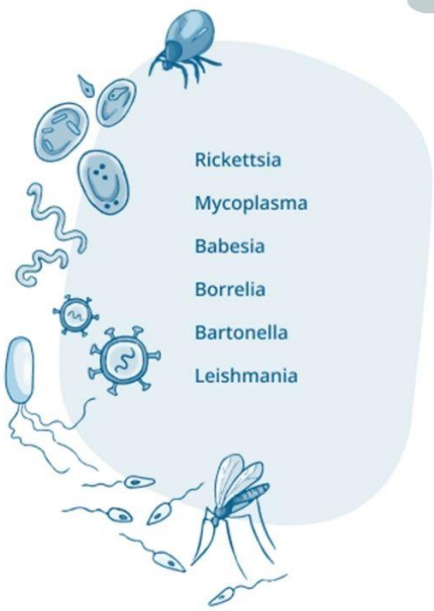

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Comments on recent scientific publications

DIVA qPCR Assay for Salmonella Typhimurium Vaccine Differentiation in Poultry

The control of *Salmonella enterica* subsp. *enterica* serovar Typhimurium remains a major concern in veterinary public health, particularly as it is a leading cause of foodborne illness linked to poultry products. Vaccination with live attenuated strains, such as the Primun Salmonella T vaccine, is a widely accepted method of reducing its prevalence in poultry flocks. However, the inability to differentiate between vaccine strains and wild-type field isolates poses a critical limitation to effective epidemiological surveillance.

In this context, the study by Martínez-Murcia et al. (2025) introduces and validates a duplex qPCR assay (SalTypm&PriSal-T qPCR Duplex kit), which is specifically designed to distinguish between wild *S*. Typhimurium strains and the Primun Salmonella T vaccine strain. This DIVA (Differentiating Infected from Vaccinated Animals) molecular assay addresses a key diagnostic challenge by offering a rapid, sensitive, and highly specific alternative to conventional antibiogram-based differentiation methods. Validation followed ISO/IEC 17025:2017 standards and demonstrated excellent analytical and diagnostic performance. Analytical specificity was confirmed using a panel of *Salmonella* subspecies and serovars, and analytical sensitivity achieved optimal results. Diagnostic performance was evaluated using 51 field isolates (41 wild-type and 10 vaccine strains), achieving 100% sensitivity and specificity compared to the reference method.

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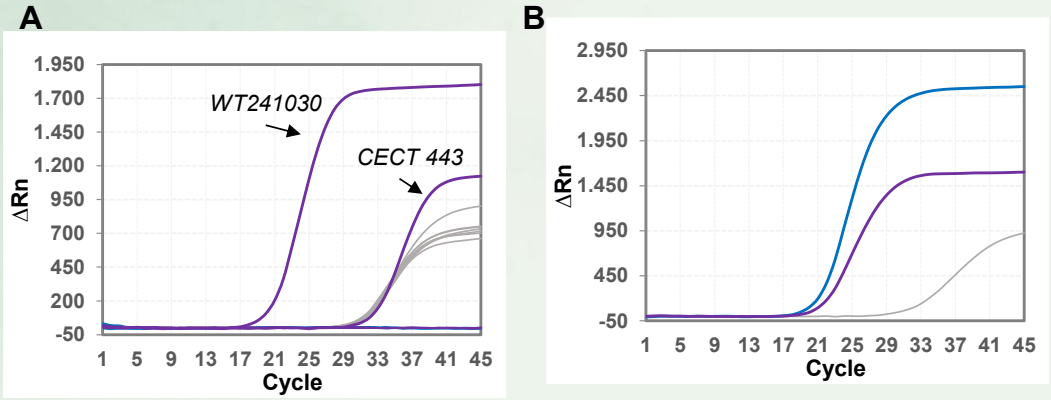

Figure 1. Amplification plots of A) S. enterica subsp. enterica sv. Typhimurium strains WT241030 and CECT 443, S. Typhi CECT 409T, S. Paratyphi A CECT 825, S. Enteritidis CECT 4155, S. enterica subsp. arizonae CECT 4395 and S. enterica subsp. salamae CECT 4000T and B) Primun Salmonella T vaccine (ST0116-MSB). The figure shows the amplification with the SalTypm assay in purple (Cy5), PriSal-T assay in blue (FAM) and the Internal Control in grey (HEX).

Notably, the turnaround time for obtaining results was reduced to under 40 minutes including the rapid DNA extraction protocol, a substantial improvement over antibiogram workflows. This efficiency could significantly improve decision-making in field interventions and biosecurity responses. The duplex design targets both *S.* Typhimurium strains (SalTypm) and the vaccine strain (PriSal-T), enabling the simultaneous detection and differentiation in a single assay, minimizing labour and the potential for error. Furthermore, its specificity ensures minimal risk of cross-reactivity with other *Salmonella* serovars. The implementation of this assay in routine diagnostic workflows can support the safe application of Primun Salmonella T vaccine without compromising the integrity of surveillance programmes. It also mitigates the risk of misclassification, which could otherwise lead to unnecessary culling or undetected transmission events.

Reference: Martínez-Murcia, et al. Validation of a DIVA qPCR Duplex Assay to Differentiate Primun Salmonella T Vaccine from *Salmonella enterica* subsp. *enterica* Serovar Typhimurium Wild Strains. *Appl. Sci.* **2025**, *15*, 2737. https://doi.org/10.3390/app15052737

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Comments on recent scientific publications

Sponge-based Environmental DNA Monitoring for Tuberculosis Surveillance in European Bison

Tuberculosis (TB) remains a significant threat to wildlife conservation and livestock health, particularly in multi-host ecosystems where spillover events may jeopardize disease control efforts. European bison (*Bison bonasus*), a near-threatened species, exemplifies the challenges of TB surveillance in free-ranging and captive populations. The study by Didkowska et al. (2025) presents an innovative, non-invasive approach for *Mycobacterium tuberculosis* complex (MTC) detection using sponge-based environmental DNA (eDNA) sampling, offering a valuable addition to the diagnostic toolbox for TB monitoring in wildlife.

The authors demonstrate that eDNA sampling from animal surfaces, feeders, and soil using GPSponge® (GPS™, Orihuela, Spain) can effectively detect MTC markers (IS*6110* and IS*1081*) in European bison environments. The method, applied across diverse herds in Poland, revealed a strong association between prior TB outbreaks and the presence of MTC DNA, with the highest detection rates in Bieszczady herds, a region historically affected by TB. The correlation with serological data (P22 antibody detection) further supports the epidemiological relevance of the findings.

This study underscores the importance of integrating non-invasive environmental surveillance into TB monitoring programs, especially in endangered species where direct sampling poses ethical, logistical, and conservation challenges. The use of multicopy genetic targets (IS*6110* and IS*1081*) in the qPCR assays provides a sensitive detection strategy, although the authors appropriately acknowledge limitations such as the inability to confirm pathogen viability from eDNA samples and the need for cautious interpretation when assessing infection risk.

Importantly, the authors highlight that eDNA detection reflects environmental contamination rather than active infection, suggesting its utility as an early warning system to guide targeted interventions, enhance biosecurity, and prioritize resource allocation for high-risk areas. While this approach does not replace traditional diagnostic methods, it complements existing strategies by enabling broader spatial and temporal coverage, particularly in challenging or remote settings.

In conclusion, the study by Didkowska et al. offers a promising perspective on the use of environmental molecular tools for TB surveillance in wildlife conservation programs. By enabling early detection of MTC DNA in the environment, sponge-based eDNA monitoring represents a pragmatic, non-invasive strategy for the surveillance of TB and other diseases in wildlife species.

Reference

Didkowska, A.; Pérez-Sancho, M.; Herranz, C.; Klich, D.; Anusz, K.; Witkowski, L.; Domínguez, L.; Gortázar, C. Sponge-Based Environmental DNA Detection as a Useful Tool in Monitoring Mycobacterium Tuberculosis Complex Markers in European Bison (Bison Bonasus). *Sci Rep* **2025**, *15*, 18503. https://doi:10.1038/s41598-025-01966-4

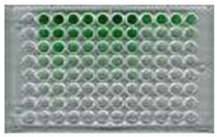
Animal & Plant Health Agency

Introducing APHA

APHA (Animal and Plant Health Agency) is in executive agency of the UK government DEFRA (Department of Food and Rural Affairs)

We also work on behalf of the Scottish Government and Welsh Government.

HIGH CONTAINMENT LABS AND ANIMAL FACILITIES FOR DISEASE TESTING & RESEARCH



Our purpose

We are responsible for identifying, managing and eradicating incidents and outbreaks of endemic and exotic diseases and pests in animals, plants and bees.

This requires expertise in the areas of:

- inspection
- testing and diagnosis
- epidemiology
- surveillance
- disease and pest identification, containment and eradication
- post-outbreak recovery
- customer support and advice

APHA is over a hundred years old and has previously known as CVL, VLA, AHVLA and also Weybridge!

National statistics

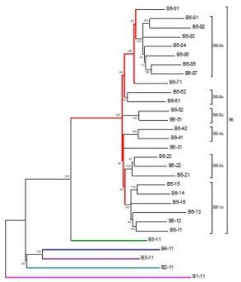
Quarterly TB in cattle in Great Britain statistics notice: September 2021

Key points

Our people

We employ around 3,500 people including:

- Veterinary Inspectors
- Veterinary Investigation Officers
- Plant Health and Seed Inspectors
- Bee Inspectors
- GM Inspectors
- Scientists (Research and Diagnostics)
- Laboratory & Animal Technicians
- Veterinary Pathologists
- Epidemiologists
- Animal Health Officers
- Wildlife Officers
- Administrators – e.g. Customer Service, Business Support, Project Managers, Safety advisors etc.



Our emergency response

During recent years we have provided an emergency response to the following:

- Avian influenza (bird flu)
- Bluetongue virus in livestock
- Oak processionary moth caterpillars
- Asian hornet
- Colorado potato beetle
- Import of pets from Ukraine
- Our response involves teams from across APHA working with our delivery partners on diagnosis, testing, epidemiology, surveillance and disease containment.

Our locations across England, Scotland and Wales

- Executive office at Weybridge
- Large research and laboratory facility at Weybridge
- Veterinary investigation centres and laboratories
- Customer service centres
- Centres for international trade
- Port and airport border inspection posts
- Field service offices
- We also work alongside policy teams in London, Cardiff and Edinburgh

APHAGov @APHAGovUK company/aphagovuk www.gov.uk/apha

European Association of Veterinary Laboratory Diagnosticians

Lab Tips and Best Practices

Biosafety and Biosecurity: A Veterinary Laboratory Priority

Biosafety and **biosecurity** are two complementary pillars of risk management in veterinary laboratories.

- **Biosafety** refers to the containment principles, technologies, and practices implemented to prevent unintentional exposure to or release of biological agents.
- **Biosecurity** involves the protection, control, and accountability of valuable biological materials to prevent their loss, theft, misuse, or intentional release.

Together, they ensure that laboratory activities involving pathogens are conducted safely, responsibly, and without threat to animal or public health.

In the current global context, these principles are more important than ever. Europe is once again facing **foot-and-mouth disease (FMD)** after five decades, while **African swine fever (ASF)**, **highly pathogenic avian influenza (HPAI)**, and other emerging and re-emerging diseases continue to spread across borders, challenging diagnostic systems and exposing laboratory personnel to increased biological risk.

European Association of Veterinary Laboratory Diagnosticians

Veterinary laboratories must operate under strict and internationally harmonized biosafety and biosecurity measures to:

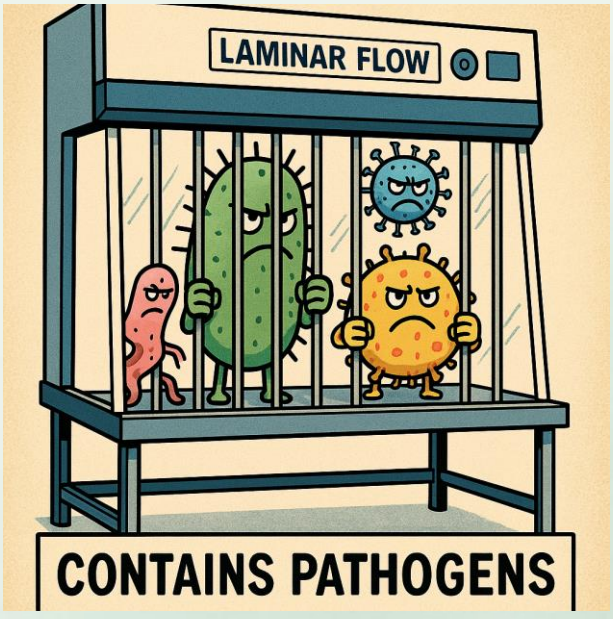
•Safeguard the health of staff and the wider community;
•Avoid environmental contamination and cross-border pathogen escape;
•Maintain the integrity and reliability of disease detection, surveillance, and research systems.

Two key international references provide practical and strategic guidance:

WOAH Terrestrial Manual – Chapter 1.1.4: Biosafety and Biosecurity in the Veterinary Laboratory and Animal Facilities
https://www.woah.org/fileadmin/Home/fr/Health_standards/tahm/1.01.04_BIOSAFETY_BIOSECURITY.pdf

FAO Biosecurity Toolkit – A user-friendly guide to implementing biosecurity systems in animal health, food safety, and laboratory settings
https://www.fao.org/4/a1140e/a1140e.pdf

Investing in biosafety and biosecurity is not optional—it is a foundational element of global preparedness and response to veterinary and zoonotic threats.



From ChatGPT

European Association of Veterinary Laboratory Diagnosticians

Lab Tips and Best Practices

Good pipetting is key in the EAVLD!

Is your pipetting as good as it can be? There are loads of guides out there to help you improve your technique

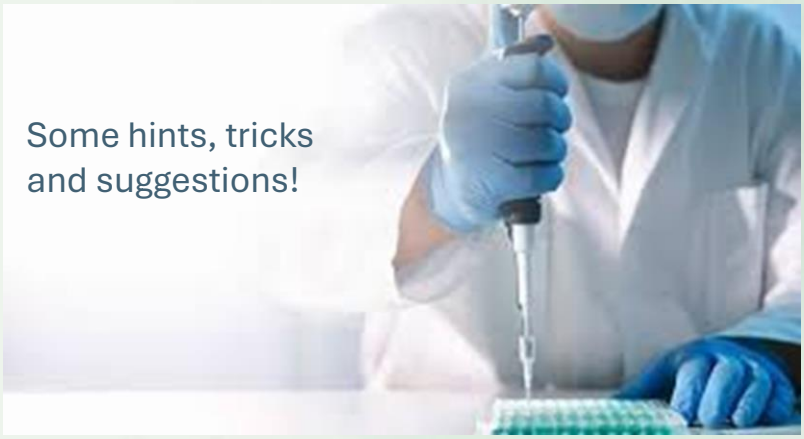
For example:

https://www.labmanager.com/a-guide-to-proper-pipetting-2235

https://www.rapidmmicrobiology.com/news/handheld-pipetting-best-practices-guide

Some initial ideas & suggestions:

- Always check visually that the volume you expect is being dispensed
- The pipette tip you use should always allow sample pick up and dispense without the barrel of the pipette touching the sides of sample and reaction tubes0
- When pipetting small volumes use the side of the tube or liquid already in the tube to help fully aspirate the sample
- Consider electronic pipettes – they can be a gamechanger!
- Always pipette at 90º to the liquid being dispensed – it's more accurate!



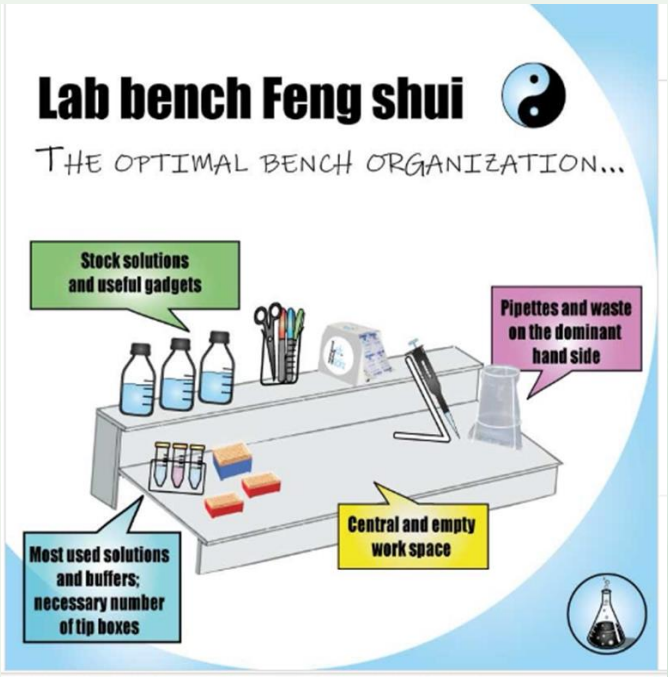
European Association of Veterinary Laboratory Diagnosticians

Sample management on the lab bench is key for consistent and accurate experiments!

Develop your own techniques and methods to keep track of samples and maintain accuracy when pipetting!

Some ideas:

- Make sure you have all the tips, consumables and racks you need from the start
- When loading a 96 well plate use the tips from the tip box in the same order as you are loading samples to keep track of where you are in the plate!
- When using tubes – once a tube has had it's required addition of reagent – move it to another position (or rack) to keep track of what tubes and samples you have already processed
- When using multichannels – always visually check the volume is consistent in each pipette tip before dispensing
- Use a ticklist to assure you've added all the components of a reagent mix



Have you any top tips to help with accurate pipetting and sample management? Let us know and we will publish in future EAVLD newsletters.

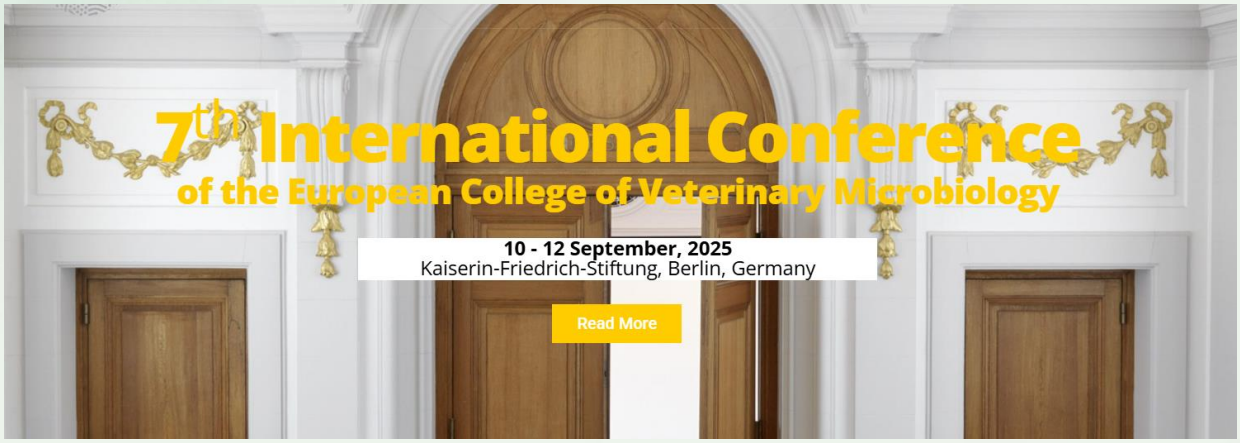
European Association of Veterinary Laboratory Diagnosticians

Upcoming events

21st International Symposium of the World Association of Veterinary Laboratory Diagnosticians (ISWAVLD)
Calgary, Canada | 31 12–14 June 2025
This symposium focuses on newly emerging and re-emerging, trans-boundary, and endemic diseases in all species, with a special emphasis on One Health, antimicrobial resistance, disease detection, and outbreak response and prevention. It aims to foster partnerships in health, from disease detection to prevention, acknowledging the interconnectedness of animal, human, and environmental health.
Early bird registration until 15 April 2025
More info: iswavld2025.com

European Association of Veterinary Laboratory Diagnosticians

Upcoming events



7th International Conference of the European College of Veterinary Microbiology (ECVM)

Berlin, Germany | 31 *10–12 September 2025*

Organized by the European College of Veterinary Microbiology, this conference brings together professionals from clinical, research, diagnostic laboratory, university, and government sectors across Europe to share knowledge on animal health and infectious diseases. Key topics include veterinary bacteriology, mycology, virology, antimicrobial resistance, food microbiology, microbiological diagnostics, and genomics.

Abstract submission deadline: 30 June 2025

More info: https://evis.events/event/524/

European Association of Veterinary Laboratory Diagnosticians

Upcoming events

28th National Symposium of the Spanish Association of Veterinary Laboratory Diagnostics (AVEDILA)
Alcalá de Henares, Spain | 📅 *21–22 October 2025.*
This symposium focuses on molecular techniques for pathogen detection, characterization, and monitoring in animal health, with special emphasis on antimicrobial and antiparasitic resistance. It aims to foster collaboration among laboratories, academia, and industry, and to inspire the next generation of veterinary diagnostics professionals.
Abstract submission deadline: 1 September 2025
More info: avedila.bocemtium.com

European Association of Veterinary Laboratory Diagnosticians

Upcoming events

SIDiLV 2025 National Congress – Italian Society of Veterinary Laboratory Diagnosticians

Trieste, Italy | 31 17–19 September 2025

This congress will bring together professionals in veterinary diagnostics to explore recent advances in animal health, laboratory methods, and emerging technologies. Topics will include microbiology, pathology, molecular diagnostics, and quality systems, with dedicated sessions on training and biosafety. The event promotes scientific exchange and collaboration among laboratories and institutions across Italy and beyond.

Abstract submission open until 15 June 2025

More info: sidilv.org

European Association of Veterinary Laboratory Diagnosticians

How You Can Contribute to next Newsletter

This newsletter is a collaborative platform designed to keep our community connected and informed. The upcoming edition will include the following sections — and we warmly encourage your contributions:

- **News and Updates**
  Key developments from laboratories and institutions across Europe and beyond.

- **Upcoming Events and Congresses**
  Please share announcements of national and international meetings, congresses, or training events.

- **Innovative Scientific Topics**
  Short features on improved diagnostic methods, emerging technologies, or innovative lab practices.

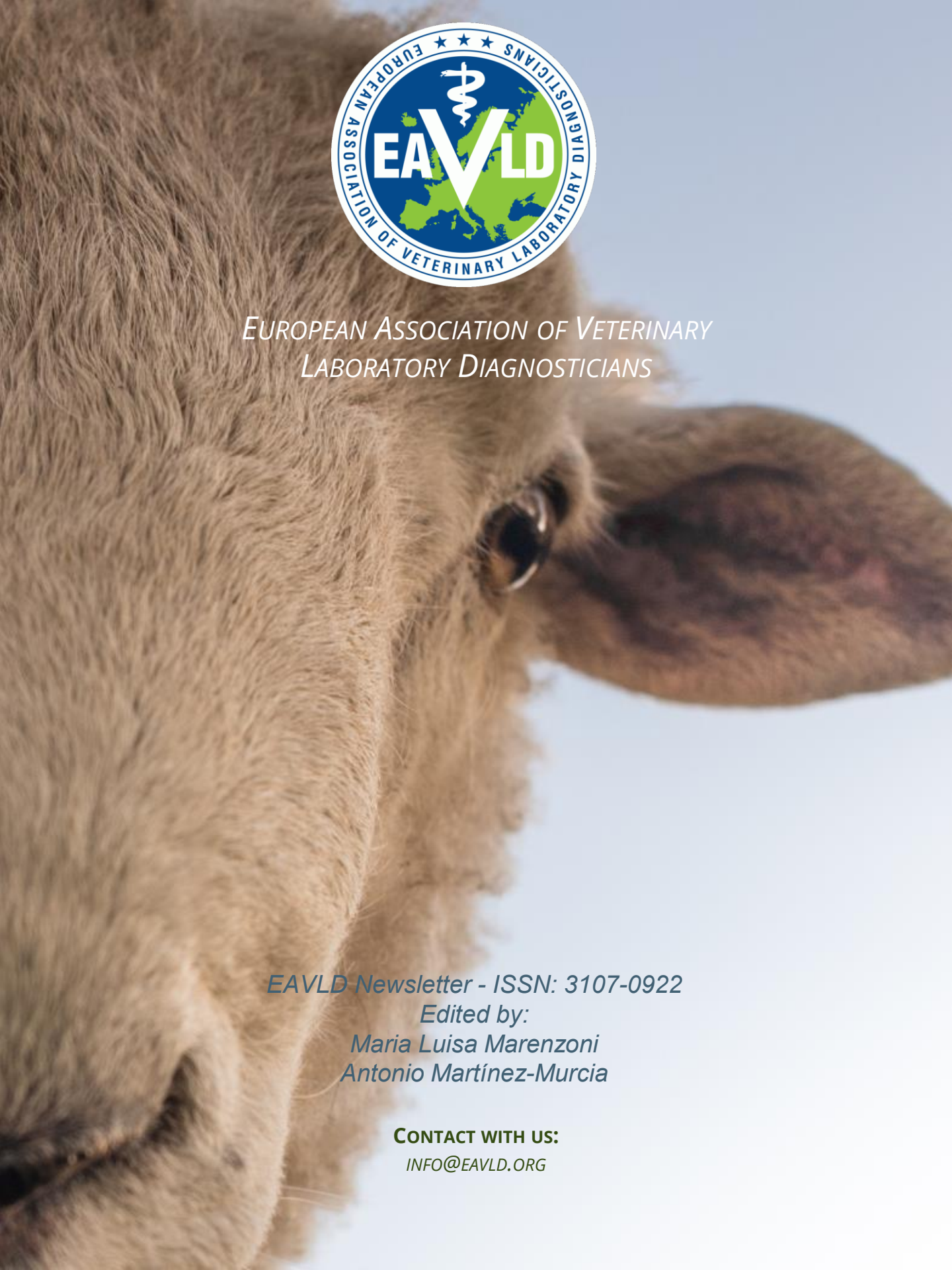
- **Recent Publications and Ongoing Projects**
  We welcome abstracts of your recently published papers (with full references) and summaries of current research programs.

- **Lab Tips and Best Practices**
  Practical advice, methodological insights, and hands-on experience to share with younger colleagues or newly joined technologists.

- **Project Grants, Jobs, and Funding Opportunities**
  Announcements that may help labs identify new funding streams or recruit skilled personnel.

- **Sponsorship and Product News**
  Industry announcements, innovations, and product launches relevant to the diagnostic and research field.

Interested in contributing? Get in touch!
Subscribe to the newsletter on our website



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