

EUROPEAN ASSOCIATION OF VETERINARY
LABORATORY DIAGNOSTICIANS



26TH

NEWSLETTER

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European Association of Veterinary Laboratory Diagnosticians

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European Association of Veterinary Laboratory Diagnosticians

As announced, on behalf of the EAVLD board, I am pleased to introduce the 26th EAVLD Newsletter, December 2025 edition. Again, the high-quality contributions received from enthusiastic colleagues undoubtedly make this document of interest for veterinary laboratory diagnosticians, a merit that we thank all the contributors for.

As the previous edition in June, content included recent publications, ongoing research, technical tips, emerging scientific topics, grant opportunities, upcoming events and congresses, job offers, and human resources. Sponsors were welcome showing innovations and new products. A new section so-called Recent Doctoral Theses, gives the opportunity to disseminate brief summary of recently obtained doctorates.

Allow me to ask you all, EAVLD members or not, for contributions and new ideas to support next edition expected by June 2026, just a few months before the 8th EAVLD Congress in Athens, Greece.

With my best wishes,
Antonio Martínez-Murcia

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News and Updates

Highly Pathogenic Avian Influenza Preparedness scenarios for the EU

In April 2025, the European Commission (DG SANTE) released a working guidance document outlining preparedness options after the unexpected detection of HPAI H5N1 (clade 2.3.4.4b, genotypes B3.13 and others) in dairy cows in the United States. This exceptional event, involving viral RNA in milk and mild human infections, raised concerns about zoonotic and food safety risks linked to emerging influenza strains. The urgency of such preparedness was further reinforced by the report, in March 2025, of an H5N1 infection in a sheep with clinical mastitis in the UK, where viral RNA was detected in milk on a mixed poultry–livestock farm. This case provided an additional reminder of the virus’s capacity to cross species barriers.

The Commission’s document calls for vigilance and readiness, reviewing EU mechanisms under the Animal Health Law and defining potential actions in case of virus introduction. Ongoing activities include:

- continuous surveillance of HPAI in birds and mammals under the Union Surveillance Programme;
- a mandate to EFSA for risk assessment and communication support;
- awareness campaigns to enhance biosecurity preparedness in cooperation with industry stakeholders;
- simulation exercises exploring One Health coordination during zoonotic outbreaks.

These developments highlight the importance for EU laboratories and authorities to remain prepared and rapidly responsive to evolving threats at the animal–human–food interface.

European Commission – DG SANTE (PAFF, April 2025). “Highly Pathogenic Avian Influenza – Scenarios for the EU measures in animals other than birds, and food in the context of detections of HPAIV (H5N1 - B3.13 and others) in US dairy cows.” Commission Working Document.



European Association of Veterinary Laboratory Diagnosticians

News and Updates

European Laboratory Day

A Reminder of the Value of Our Profession

On 5 November, the European Federation of Clinical Chemistry and Laboratory Medicine (EFCLM) marked European Laboratory Day, an initiative designed to celebrate laboratory professionals and highlight the essential—yet often invisible—role they play in protecting public health.

Although the event originates from human diagnostic medicine, its message speaks directly to those of us working in veterinary diagnostics: accurate laboratory testing underpins surveillance, outbreak response, food safety, animal health, zoonotic prevention, and the One Health framework.

Whether validating a PCR assay, interpreting an ELISA cutoff, troubleshooting culture results, or contributing to preparedness plans, our work influences decisions far beyond the lab bench.

Beyond visibility, the event also encourages laboratories to reflect on core professional values, including:

- Quality and reliability as the foundation for decision-making
- Continuous education and innovation,
- Interdisciplinary collaboration,
- Preparedness and early detection, particularly relevant for emerging and re-emerging diseases.

As veterinary diagnosticians, we are part of a wider community whose work protects both animals and people. Even if European Laboratory Day was new to many of us, its message offers an opportunity to recognise the expertise, dedication and impact of those who work behind the scenes — every day — in the lab.

A short official video summarises the spirit of the initiative:
<https://www.efclm.eu/site/tg-european-lab-day/5november>



European Association of Veterinary Laboratory Diagnosticians

News and Updates

Spain reports African Swine Fever cases and strengthens epidemiological surveillance.

On Friday, 28th November, the Ministry of Agriculture, Fisheries and Food (MAPA) confirmed two cases of African Swine Fever Virus (ASFV) from wild boars, in Barcelona, Spain, and the government activated a Contingency Plan. Early detection and rapid diagnostic response were highlighted as essential measures to control the circulation of the virus and limit its spread.

Until the 4th of December, at least 13 positive cases have been reported and the European Commission expanded the infected zone to 91 municipalities in the province of Barcelona. A scientific committee is working on half a dozen hypotheses to clarify the possible origin of the virus, including the consumption of contaminated food or the possibility of an accidental leak from a nearby laboratory. According to some media reports, the isolates have been found to show a relative genetic similarity to genotype group 29, which is also similar to the Georgia 2007 strain, frequently used in laboratories, for example, to evaluate vaccine efficacy. This possibility has not been formally confirmed as of the closing date of this report. In recent years, ASFV has been detected in several European countries, with a higher number of outbreaks currently reported in Poland, Germany and Latvia, and significant impact also observed in Italy, Bulgaria, Hungary, Lithuania and Romania, among others.

Dr. Martínez Murcia, Professor of Microbiology at UMH, Orihuela, Spain stressed “the relevance of responding promptly to this European animal health crisis, although it does not currently affect human health, requires close scientific monitoring due to the potential zoonotic capabilities observed in the microorganisms”.



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Interview to Dr. Thomas Rambaud

We are pleased to present an interview with **Thomas Rambaud (TR)**, *Director of the Departmental Veterinary Diagnostic Laboratories of Savoie, France*. As one of the first regions in France affected by the recent Lumpy Skin Disease (LSD) outbreaks, his laboratory played a pivotal role in the rapid implementation of diagnostic testing, coordination with national authorities, and operational response strategies.

In this conversation, Thomas shares first-hand insights into the evolution of the LSD situation in France, the diagnostic workflow established within the national network, and the challenges encountered while adapting laboratory capacities during an emerging transboundary animal disease event. His experience provides valuable lessons for preparedness, diagnostic readiness, and cross-laboratory collaboration across Europe.

1-Dr. Rambaud, Lumpy Skin Disease has recently re-emerged in Europe, affecting Italy and France almost simultaneously and, more recently, also Spain. Could you briefly describe the current LSD situation in France and its recent evolution?

TR: The first outbreak in France was reported on 29 June 2025 in Savoie. The origin of this outbreak is not yet known, but the viral strain isolated is the same as that isolated shortly before in Sardinia.

Following this first outbreak, the Savoie veterinary service issued a decree defining a restricted zone (ZR1) of 50 km around the outbreak in which biosecurity measures (cleaning/disinsectisation, enhanced clinical surveillance) are imposed, along with a ban on animal movements except in cases of strict exemptions and a ban on gatherings. In addition, all animals in the epidemiological entity must be slaughtered as soon as possible.

The epizootic then spread to Haute-Savoie on 9 July 2025, then to Ain on 23 August 2025, Rhône on 17 September 2025 and Jura on 11 October 2025. Spain detected its first outbreak on 1 October 2025, 20 km from the French border.



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On 13 October 2025, the first outbreak was detected in the Pyrénées-Orientales. As of 19 November 2025, 104 outbreaks had been detected in France, spread across six departments: Savoie (32), Haute-Savoie (44), Ain (3), Rhône (1), Jura (7) and Pyrénées-Orientales (17). These outbreaks affect 69 farms. Five restricted zones had been successively established (ZR1 to ZR5). To date, ZR1 has become a vaccination zone in which cattle movement is possible under certain conditions.

2-How is the diagnostic workflow organized within your laboratory and across the French network?

TR: After the first outbreak in Savoie, on 9 June 2025, the Ministry of Agriculture proposed to the departmental laboratories of Ain and Savoie that they implement PCR testing for LSD to carry out analyses of clinical suspicions instead of the national reference laboratory (CIRAD).

The two laboratories approached CIRAD and successfully completed an inter-laboratory test organised by the European reference laboratory.

They then received temporary approval on 28 July and began analyses on 30 July. With the accreditation, the laboratories have set up a technical on-call service at weekends so that they can carry out tests and deliver the results within 24 hours of receiving the samples.

Neither kit had been evaluated by CIRAD, which is why CIRAD asked approved laboratories to use both kits during the inter-laboratory test in order to compare the results obtained.

During July, daily discussions were held with CIRAD and Ministry of Agriculture to define the analytical strategy in the context of vaccination: validation of available PCR kits, choice of kits and analyses (Capripox or LSD only, differentiation between wild virus and vaccine virus), prioritisation of samples to be analysed (nodules, blood, secretions). The extraction of genetic material is recommended in a P3 laboratory, given the categorisation of the disease in European regulations (ADE).

Then, after the two departmental laboratories began their analyses, CIRAD asked us to store the samples and send them regularly, which required a great deal of preparation work.



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Finally, after the first outbreaks were detected in the Pyrénées-Orientales, the departmental laboratory also obtained temporary approval on 31 October 2025 to limit the duration and cost of transporting samples.

3-Which diagnostic tests are routinely used for LSD confirmation?

TR: The samples analysed depend on the clinical signs: skin nodules, whole blood if hyperthermia, etc.

Laboratories approved by the Ministry of Agriculture use two different PCR kits simultaneously:

- a kit to detect the genetic material of all Capripoxviruses;
- a kit to detect the genetic material of the LSD virus and the genetic material of the vaccine strain (DIVA kit).

The introduction of vaccination has led to post-vaccination reactions that must be differentiated from suspected cases of LSD.

Serological tools are not yet in use because diagnostic sensitivity is poor, and they cannot differentiate between infected and vaccinated cattle.

4-So, has vaccination already started in France?

TR: In the restricted zones, vaccination of all cattle is mandatory.

Vaccination began in ZR1 on 18 July. Within a few weeks, more than 90% of cattle in ZR1 had been vaccinated thanks to the involvement of veterinarians. The introduction of vaccination has led to post-vaccination reactions that must be differentiated from suspected cases of LSD.

That is why we used two PCR kits:

- PCR for all Capripox;
- PCR DIVA to differentiate between the wild virus and the vaccine virus.

5-Do you plan to implement new diagnostic techniques for LSD in the near future?

TR: At present, we only confirm clinical suspicions for veterinary services. Diagnostic tools are not yet capable of accurately detecting infected animals before clinical signs appear. However, experts have proposed serological



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surveillance from spring 2026 onwards on unvaccinated animals in peri-vaccination and vaccination zones.

6- Have you observed any particular logistical or operational challenges linked to the recent outbreak? And, in any case, in your view, what lessons can be learned from this outbreak for other European veterinary laboratories?

TR: The biggest difficulty encountered by laboratories was not implementing PCR analysis, as kits were available. The greatest difficulty was the effort required to obtain relevant information from CIRAD and the Ministry of Agriculture. As this was a new disease that had not previously been seen in France, the implementation of diagnostic and management procedures was hesitant during the first weeks of July.

These uncertainties result in wasted time and energy. At the same time, a high degree of adaptability and understanding of each other's constraints is necessary. These numerous exchanges also allow us to get to know each other better.

We therefore reviewed with CIRAD which samples to keep and under what conditions to send them, as their initial request was far too time-consuming and incompatible with rapid diagnosis.

It is therefore essential to anticipate as much as possible the health crises that may arise in a country so as not to waste energy and time on issues that could have been dealt with in advance, such as the necessary sampling equipment and delivery channels to approved laboratories.

Finally, the time spent on administrative management of files should not be underestimated. The process for sending results must be as simple as possible. This was the case for LSD, where only government departments received the analyses. For bluetongue, however, which affected the Rhône-Alpes region in the summer of 2024, all farmers had to be entered into our business software, which slowed down the analytical process.

We sincerely thank Dr. Thomas Rambaud for his time and for generously sharing his experience and insights with the European veterinary diagnostic community.



Reliability in serology of Epizootic Hemorrhagic Disease

Since 2022, the epizootic hemorrhagic disease (EHD) has spread across Europe, driven by environmental and epidemiological changes, causing mortality and loss of productive performance in cattle.

We present the development of **INgezim® EHDV Compac**, a robust, versatile, and reliable diagnostic tool suitable for epidemiological surveillance and differential diagnosis of epizootic hemorrhagic disease in multispecies settings, facilitating early detection and effective control of the disease in Europe.

The new **INgezim® EHDV Compac** is a competitive ELISA that detects antibodies against the VP7 protein of EHDV virus in various species and biological matrices.

Validated on samples from cow, goat, sheep, deer and mouflon.

- Based on the highly conserved VP7 protein.
- **Sensitivity of 99.9% and specificity of 99.8% (n=2696).**
- Validated for whole blood, serum or plasma.
- Validated for blood dried on **filter paper**, facilitating sample collection and transport (tested with paired samples from 115 animals).
- High exclusivity against related Orbiviruses, no cross-reactivity with antibodies against BTV.
- Does not present cross-reactivity with antibodies against TB, BVD, IBR.
- Simplified protocol, without sample pre-dilution, incubations at room temperature.
- Registered in Spain.
- Two formats available, 2 and 5 plates.

Product	Method	Analyte	Matrix	Format/Number of Tests	Article ref.
INgezim® EHDV Compac	ELISA, Blocking	Antibodies	Blood, serum, plasma, blood on filter paper	2 pl/192 Samples	R.12.EHD.K.3/2
				5 pl/480 Samples	R.12.EHD.K.3/5

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In-Depth Focus

ADILVA

Overview of the French Public Veterinary Laboratory Network

ADILVA (Association française des Directeurs et cadres de Laboratoires Vétérinaires publics d'Analyses) is the national association that brings together the directors and senior staff of France's public veterinary laboratories. Officially founded in 1986—with roots as AVDILA since 1961—it represents a community tied to more than 75 public laboratories distributed across the French territory. These laboratories constitute a multidisciplinary network spanning animal and plant health, food safety, and environmental monitoring, serving as an operational backbone for surveillance and risk management at local and national scales.



Picture represents the roundtable discussion on water-related health issues during the last annual conference in 2025.



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They are institutionally dependent on local departmental authorities and may have different administrative statuses. Institutionally, ADILVA is an association of individuals alongside associated member laboratories, overseen by a Board (18 members including a President, four Vice-Presidents, Treasurer/Assistant, and Secretary/Assistant).

ADILVA's mission is threefold:

- to federate its members around collaborative strategies;
- to act as the privileged interlocutor of national authorities;
- and to promote the territorial network of public laboratories.

Beyond representation, ADILVA provides practical connective tissue for the network: convening regular coordination meetings with partners, organizing webinars and an annual national meeting, and delivering technical support—both through reference expertise and IT solutions for sharing information.

The network's strengths stem from strong local anchoring and scientific independence, the complementarity of laboratory capabilities, continuous service provision, and systematic participation in national surveillance schemes. A defining feature is rapid mobilization in crises—animal disease outbreaks, foodborne events, or environmental incidents—where distributed capacity and shared procedures enable swift, coordinated action.

The activity portfolio of the French Public Veterinary Laboratory Network is broad and integrative. Depending on local specificities, laboratories develop expertise in some or all areas, following a One health approach. In animal health, laboratories support diagnostics and surveillance across livestock, wildlife, and companion animals. Food safety work encompasses official controls and outbreak investigations across production, processing, and collective catering (e.g., school canteens). Environmental health functions include sanitary control of drinking and recreational waters, wastewater, and surface waters.

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Plant health missions include detection and monitoring of regulated pests and diseases with agricultural and ecological impacts. Some laboratories also maintain specialized expertise in radiobiology, medical biology, and quality testing of products such as milk and wine, as well as air quality assessments—together providing a continuum from primary detection to decision support.

Integration of laboratories with national systems is formalized through ministerial approvals: under French regulation: only national reference laboratories and approved laboratories may conduct official analyses in regulated domains of animal health/food safety. This approval framework ensures traceability, comparability, and legal validity of results, while anchoring local capacity within coordinated national reference networks.



In short, ADILVA ensures local coverage linked to national coordination, making France's public laboratories a resilient system for veterinary public health.



The ADILVA laboratory network.



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Innovative scientific topics

Digital PCR and Environmental Surveillance: Emerging Applications for Veterinary Diagnostics

Environmental surveillance using molecular tools is becoming increasingly relevant in veterinary and One Health diagnostics. Among these methods, **digital PCR (dPCR)** represents a powerful advancement due to its **absolute quantification**, **high analytical sensitivity**, and improved tolerance to inhibitory substances when compared with traditional qPCR—making it well suited for **complex matrices** such as wastewater, dust, aerosols, bedding material, soil, slurry and high-organic swabs.

Recent studies demonstrate that environmental detection can serve as an **early warning system**, identifying pathogens before clinical cases emerge or long after shedding events. This approach supports surveillance, outbreak investigation, and biosecurity assessment in both livestock and shared environments.

Several promising applications now relevant to veterinary laboratories include:

-Avian influenza H5N1 (HPAIV) detection in farm environments and wastewater, where dPCR improves analytical sensitivity in low-copy matrices and supports early outbreak detection even when animal testing is negative or uncertain.

-EHV-1 airborne surveillance at equestrian events, demonstrating that viral DNA can be detected in shared airspaces and fomites—including stable air, arena dust and communal surfaces—suggesting that non-invasive monitoring could support surveillance after competition outbreaks and help refine biosecurity protocols.



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-Detection of emerging or low-load zoonotic pathogens (e.g., *Nipah virus*, vector-borne protozoa, AMR genes in livestock wastewater), where dPCR improves detection thresholds and enables **quantification**, not just presence/absence.

For veterinary reference laboratories, environmental dPCR does not replace routine diagnostic workflows, but rather adds value in two strategic contexts:

-early detection and prevention, particularly when clinical samples are unavailable, negative, or late in the infection curve.

-quantitative risk assessment, where pathogen load may influence biosecurity decisions (e.g., carcass disposal, facility closure, sanitation validation).

As surveillance frameworks evolve alongside zoonotic emergence and eradication efforts, dPCR offers a scalable platform for **non-invasive monitoring**, potentially extending laboratory diagnostic capacity beyond the individual animal and into the shared environments where pathogens circulate.

Selected references

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- Baltrušis, P., Höglund, J. *Digital PCR: modern solution to parasite diagnostics and population trait genetics*. **Parasites Vectors** 2023.



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Recent Doctoral Theses

Epidemiology of resistance to aminoglycosides and macrolides in thermotolerant *Campylobacter* in livestock in Spain

Vicente Lopez Chavarrias (vicente.lopez@ucm.es);

Defense: VISAVET 10th September 2025

VISAVET Health Surveillance Centre (Universidad Complutense de Madrid)

PhD Supervisors: Julio Alvarez Sanchez and Maria Ugarte Ruiz

What were we looking for?

Antimicrobial resistance is a major problem in the treatment of diseases caused by zoonotic bacteria such as thermotolerant *Campylobacter* (*C. coli* and *C. jejuni*). This thesis focused on characterizing the distribution, genetic basis and resistance mechanisms involving the drugs of choice to treat campylobacteriosis in humans (aminoglycosides and macrolides).

How was it done?

Using all available data on *C. coli* and *C. jejuni* from the national antimicrobial resistance surveillance program in livestock in Spain we followed a top-down approach to answer three objectives with a specific methodology:

1 – Evaluate the baseline level and spatiotemporal distribution (2002 - 2018) of phenotypic resistance to aminoglycosides (streptomycin, gentamicin) and macrolides (erythromycin) over ~11,000 *Campylobacter* isolates from broilers, turkeys, pigs and cows in Spain. METHODS: thorough statistical/epidemiological analysis of the *Campylobacter* database.

2 – Evaluate the association between the simultaneous occurrence of phenotypic resistance to both classes of antimicrobials. METHODS: genomic and phylogenetic study of the flagellin *flaA* gene in a subset of 176 isolates.



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3 – Identify the genetic mechanisms (resistance determinants, plasmids and mobile genetic elements) involved in the predominant resistance phenotypes observed, that could promote their acquisition, maintenance and dissemination among the isolates carrying them. METHODS: whole genome sequencing of a subset of 194 isolates.

What did we find and what implications follow from it?

- Higher levels of resistance in *C. coli* compared to *C. jejuni*; greater variability detected in gentamicin, streptomycin and erythromycin, compared to tetracycline, ciprofloxacin and nalidixic acid; and strong co-resistance association in all *Campylobacter* and hosts, although *flaA* associated resistant groups more evident in *C. coli* [1]
- Aminoglycoside resistance and macrolide resistance attributed to 10 genes and point mutations/*erm(B)* gene, respectively; resistance genes often linked to transposons, plasmids and insertion sequences, such as *IS1595(ISC_{o2})*; and more resistance determinants in *C. coli* from pigs, harbored in plasmids [2]

The ability of phenotyping methods to infer specific genetic mechanisms associated with observed resistance phenotypes is limited and insufficient to identify differences in the nature and distribution of such mechanisms, necessitating confirmatory whole genome sequencing.

Publications derived from this doctoral Thesis:

[1] Lopez-Chavarrias V, Ugarte-Ruiz M, Barcena C, Olarra A, Garcia M, Saez JL, de Frutos C, Serrano T, Perez I, Moreno MA, Dominguez L, Alvarez J. Monitoring of Antimicrobial Resistance to Aminoglycosides and Macrolides in *Campylobacter coli* and *Campylobacter jejuni* From Healthy Livestock in Spain (2002-2018). *Front Microbiol.* 2021 Jul 2;12:689262. doi: 10.3389/fmicb.2021.689262. PMID: 34276619; PMCID: PMC8283307.

[2] Lopez-Chavarrias V, Torre Fuentes L, Dieguez Roda B, Ugarte-Ruiz M, Saez JL, Moreno MA, Dominguez L, Alvarez J. Genetic characterization of aminoglycoside and macrolide resistance determinants and associated mobile genetic elements in thermophilic *Campylobacter* from livestock in Spain (in preparation).

Forthcoming publication of this Thesis at [TESEO](#) and [DOCTA COMPLUTENSE](#)



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Ongoing Projects

Identification and validation of novel biomarkers to improve the diagnosis of tuberculosis in domestic ruminants. The noTBio project.

Tuberculosis (TB) is a worldwide distributed disease with public and animal health and economic implications. TB control in ruminants in several countries is mainly based on test and cull strategies, along with active slaughterhouse surveillance. However, eradication of the disease in certain areas may be hampered by different factors, such as imperfect test accuracy of the official techniques (intradermal test/IT and interferon gamma release assay/IGRA, both detecting cell-mediated immune responses). In this sense, the complexity of the immune response against TB, as well as latency phenomena, often results in misdiagnosis and highlight the need to identify ancillary immunological and physiological biomarkers to increase diagnostic sensitivity and allow accurate differentiation between infected and non-infected animals.

The development and validation of multi-cytokine detection platforms based on synthetic or immunopurified reagents for lymphocyte stimulation may also contribute to eliminate the inherent variability of techniques based on purified protein derivatives (PPDs) and to increase diagnostic sensitivity and specificity. In addition, TB diagnosis may be compromised in animals exposed to stress factors due to an immunosuppression state. Therefore, it is necessary to investigate the association between psychogenic stress markers and the reactivity to official TB diagnostic techniques. In addition, the study of the oxidative response produced against the mycobacteria is essential to understand how the host's immune system attempts to control and eliminate the infection.



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However, an excessive or unbalanced oxidative response can contribute to tissue damage and disease progression but can serve to provide valuable insights into host–pathogen interaction and to identify biomarkers of infection and disease resistance or susceptibility. Furthermore, in recent years there has been growing interest in the study of the microbiome and its relationship with immunity and disease in human beings, something that has not yet been thoroughly investigated in animal health, especially in domestic ruminants. In this regard, changes in the gut-lung microbiome may be closely related with the development of an effective immune response against TB, as well as with latency or anergic states in animals. Finally, the diagnosis of TB should not be limited to immunological mechanisms but rather from a multidisciplinary approach. In this context, nuclear magnetic resonance (NMR) spectroscopy-based metabolomics, has emerged as an innovative and highly promising approach for TB diagnosis. These methodologies reveal specific metabolite fingerprinting associated with infection or disease progression but can also identify metabolomic patterns associated with animals that do not react properly to TB tests, such as anergic animals or those with a latent infection.

The main objective of the noTBio project (PID2024-159293OB-I00; 2025-2028) is the identification and validation of biomarkers (cytokines and oxidative stress biomarkers) of TB infection as well as host-related factors that could influence immune responses against TB in cattle and goats and, consequently, the reactivity to TB official tests. These factors include psychogenic stress-related variables and the potential immunomodulatory effect of the microbiome composition (Figure 1). This project, headed by renowned research groups from Spain and coordinated by VISAVET-UCM, is divided in four work-packages (Figure 2) that can be summarized in: (1) Validation of a multi-cytokine detection platform (MCP),

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(2) Metabolomic analysis using benchtop nuclear magnetic resonance (b-NMR) spectroscopy, (3) Determination of psychogenic and oxidative stress biomarkers and (4) the study of digestive and respiratory microbiome using 16S rRNA gene sequencing. In this context, it is expected to include over 400 animals in the field studies and to conduct more than one thousand total analyses. Integrating all this information could help to a better understanding of the TB infection through the screening of the expression pattern of several biomarkers and identification of potential causes of increased susceptibility to TB and diagnostic failures, enabling the development of more accurate TB diagnostic tools.

Figure 1: Main research topics of the noTBio project.

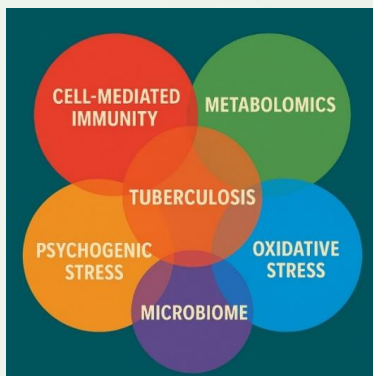
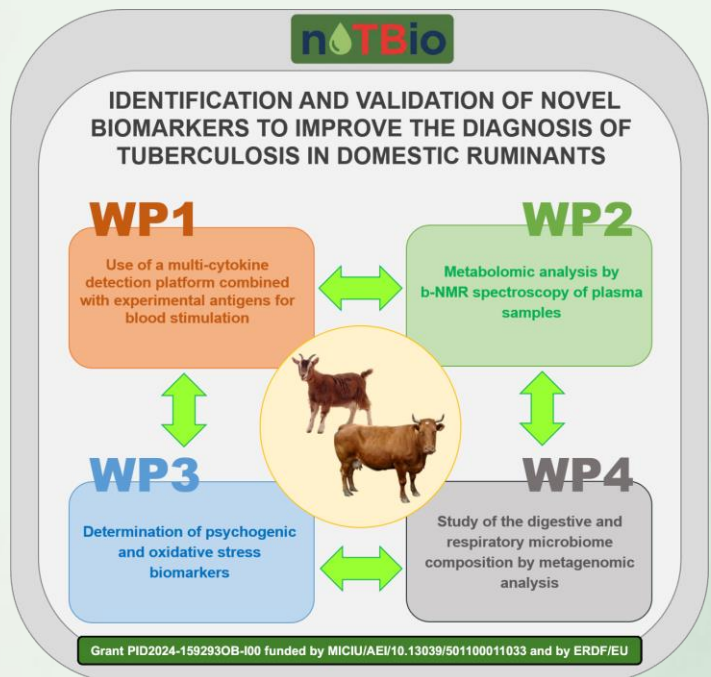


Figure 2: Overview of the four work packages (WP) of the project.



Velasco C.^{1,2}, Izquierdo-Garcia J.L.^{3,4,5}, Perez-Cobas A.E.^{6,7}, de Juan L.^{1,2}, Romero B.^{1,2} and Bezos J.^{1,2}

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GPSponge® simplifies the sampling process**

**The ASFV qPCR kit is registered in the Registry of Entities
and Animal Health Products (11033-RD)**

“Designing PCRs for over three decades”



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Ongoing Projects

Exploring alternative approaches for animal health surveillance: non-invasive samplings, targeted capture sequencing methods and artificial intelligence

The One Health framework emphasizes the interconnectedness of animals, humans, and the environment in global health strategies. While extensive research has focused on animal and public health, the environmental component remains insufficiently explored. The environment serves as a potential source of information on the presence, abundance, and dynamics of pathogens and contaminants such as antimicrobial resistance genes (ARGs). However, conventional environmental biomonitoring methods are often invasive, potentially disturbing ecosystems, and may offer limitations in sensitivity, specificity, and diagnostic performance. These limitations may hinder effective spatiotemporal monitoring, which is essential for understanding ecosystem health.

Recent advances in molecular biology, particularly the use of environmental nucleic acids (eNA), may suppose promising alternatives. eNA encompasses all DNA or RNA extracted from environmental samples, including material from microorganisms and host organisms. This approach has multiple advantages: (i) nucleic acids can remain stable for hours to days, (ii) sampling is non-invasive, (iii) simultaneous monitoring of hosts and pathogens is possible, (iv) sample collection is simple and minimally stressful for animals, (v) few samples can represent large populations, and (vi) data can provide both qualitative and quantitative information. Nevertheless, challenges persist, including the complexity of environmental samples that may contain unknown microorganisms, which can affect the specificity and sensitivity of detection methods.



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Polymerase Chain Reaction (PCR) has been widely used in environmental analysis but offers limited resolution for epidemiological studies or detection of coinfections. In contrast, metagenomic high-throughput sequencing (HTS) allows untargeted detection of genetic material but faces potential challenges such as low pathogen load and high background noise, which reduce its diagnostic value. To overcome this, targeted capture sequencing methods use DNA or RNA probes to enrich specific pathogen sequences before sequencing, improving sensitivity and reducing costs. Combining probes for multiple pathogens into one assay can simplify workflows and generate more relevant, manageable data. Capture sequencing can achieve deep coverage—up to 5000×—facilitating detailed pathogen characterization and the detection of ARGs even in complex environmental or clinical samples.

The implementation of Artificial Intelligence (AI), particularly machine learning (ML), can enhance data interpretation, enabling faster and more accurate results which may be of interest in processing and analyzing vast datasets. AI integration with genomic sequencing can aid pathogen identification, discovery, and detection. However, its application in animal health remains limited, and ethical and legal aspects must be addressed.

In this context, the main goal of the project PID2024-159558OB-I00 (financed by MICIU/AEI /10.13039/501100011033 and FEDER, UE) is to develop an innovative surveillance biotechnological platform that combines environmental sampling, targeted capture sequencing, and Artificial intelligence (AI) to monitor the spread of pathogens and ARGs relevant to both animal and public health. This integrated system aims to improve ecological biomonitoring and health assessment in livestock, wildlife, and feedlot environments, paving the way for more integrative surveillance platforms in the future.

Marta Pérez-Sancho, Teresa García-Seco, Victor Lorente, Alberto Diez-Guerrier, Lucas Domínguez

VISAVET Health Surveillance Centre. Universidad Complutense de Madrid; MAEVA SERVET S.L., Alameda del Valle, Madrid, Spain.

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Comments on recent scientific publications

Global epidemiology and diagnostic insights into canine brucellosis

A new meta-analysis by Dadar et al. (2025, One Health) provides the most comprehensive assessment to date of *Brucella canis* infection in dogs, summarizing data published between **1970 and 2025** from more than **175,000 samples** worldwide. The study integrates data from 134 peer-reviewed articles to estimate a **global pooled prevalence of 7.96%**, while revealing strong geographical heterogeneity ($I^2 = 96.9\%$).

Continental and national patterns varied markedly: the highest prevalence was found in **North America (11.3%)**, followed by **Africa (9.5%)**, whereas **Europe (4.7%)** showed the lowest mean rate. At the country level, Canada (37.8%), the Netherlands (32.5%), and South Korea (26.5%) reported the highest values, while China, Japan, and the UK remained below 2%. Such differences reflect not only distinct epidemiological contexts but also variable surveillance intensity and diagnostic capacity, together with differences in public health management of stray and owned dog populations.

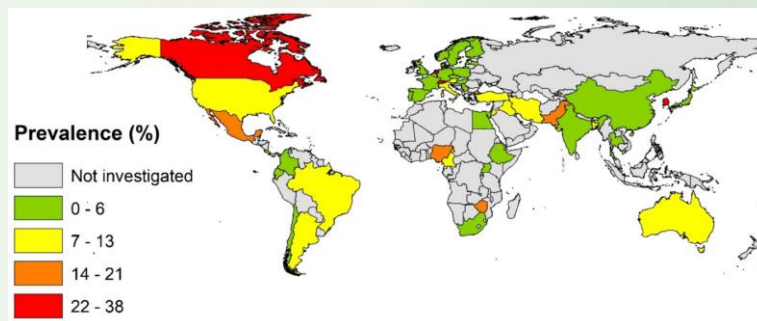


Figure 3. Global distribution of canine brucellosis prevalence (1970–2025). Adapted from Dadar M. et al., One Health (2025), 21:101225, licensed under CC BY-NC-ND 4.0.



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Unexpectedly, random and non-random **sampling approaches** yielded comparable prevalence estimates ((8.6% vs. 8.0%), indicating that sampling design had little impact on the overall results. **Dog category** was a strong determinant of infection: farm and rural dogs showed the highest rates (23.5% and 20.7%), followed by breeding and shelter dogs (~15%), whereas pet dogs displayed the lowest (1.3%). Females were more frequently infected (9.5%) than males (3.8%).

From a diagnostic standpoint, the study highlights substantial variability among **methodologies and antigens**. Direct tests (culture, IHC, MALDI-TOF) showed higher apparent prevalence (10.4%) than indirect serological assays (7.7%). Among techniques, **immunohistochemistry (50.2%)** and **MALDI-TOF (30.6%)** yielded higher detection rates than PCR (3.3%), largely reflecting their application to clinically affected or lesion-positive cases rather than intrinsic differences in sensitivity. Serological studies using **B. canis antigen** estimated an average seroprevalence of **8.6%**, with wide variability linked to test selection (RSAT, ELISA, 2-ME, etc.).

Overall, *B. canis* emerged as the **predominant species** detected in dogs (10.3%), followed by *B. abortus* and *B. suis*. The authors emphasize that heterogeneity in test choice and antigen type remains a key barrier to accurate comparison among studies.

For diagnostic laboratories and reference centers, this meta-analysis reinforces the **need for standardization of assays and reporting criteria**, alongside improved epidemiological surveillance and harmonized data collection on canine brucellosis—an infection with important implications for both animal and public health.

Dadar M., Fakhri Y., Shahali Y., Tittarelli M., Sacchini F., De Massis F. (2025). *Global epidemiology and diagnostic insights into canine brucellosis: A comprehensive meta-analysis and meta-regression*. *One Health*, 21: 101225. <https://doi.org/10.1016/j.onehlt.2025.101225>

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Comments on recent scientific publications

Exploring a fungal metabolite as potential bovine coronavirus inhibitor

The authors demonstrate that eDNA sampling fromThe recent global focus on coronaviruses (CoVs) has accelerated the investigation of new antiviral compounds, especially those derived from natural sources. Among the most promising fungal secondary metabolites (SMs), which have gained attention due to their structural diversity and favorable biocompatibility, α -pyrones have been reported to exhibit protease inhibition activity and have been suggested as potential inhibitors of CoVs. *Bovine coronavirus* (BCoV), a β -coronavirus closely related to severe acute respiratory syndrome (SARS)-CoV-2, serves as an important reference model for human coronavirus research, as it shares high sequence homology in key antigenic regions of the spike and nucleocapsid proteins.

A recent study by Vasinioti et al. (2025) evaluated the *in vitro* antiviral activity of the SM 6-pentyl- α -pyrone (6PP) against BCoV. The research aimed to propose a safe preclinical model for the development of potential compounds for SARS-CoV-2 treatment avoiding the risk associated with using highly pathogenic human coronavirus. The authors also introduced a novel and precise fluorescence-based quantification approach, which showed strong concordance with RT-qPCR results.

In the laboratory trials, MDBK cells were treated with a non-cytotoxic dose of 6PP under different experimental conditions to assess its effects at various stages of BCoV infection. Treatment protocols were designed to evaluate the ability of 6PP to protect cell monolayers both before- and post-infection, as well as its potential to block viral internalization. Results were analyzed using viral titration and quantitative PCR, while data interpretation was performed by statistical software tools.

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Among all the different protocols applied, a statistically significant reduction in viral load was observed when BCoV-infected cells were treated with 6PP for 72h -and when 6PP was administered to inhibit viral internalization (Figures 1 and 2). These findings suggest that 6PP can interfere with BCoV replication cycle and may limit viral entry mechanism.

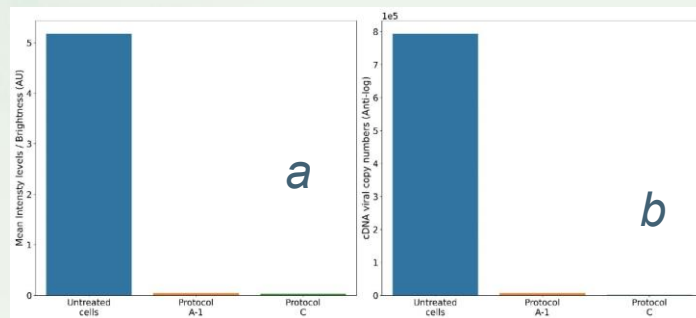


Figure 1: Fluorescence (a) and cDNA viral copies quantification (b) evaluated with two different antiviral protocols. Protocol A-1: Treatment of BCoV infected cells with 6PP for 72h; Protocol C: Viral internalization inhibition assay. AU = Arbitrary intensity Units

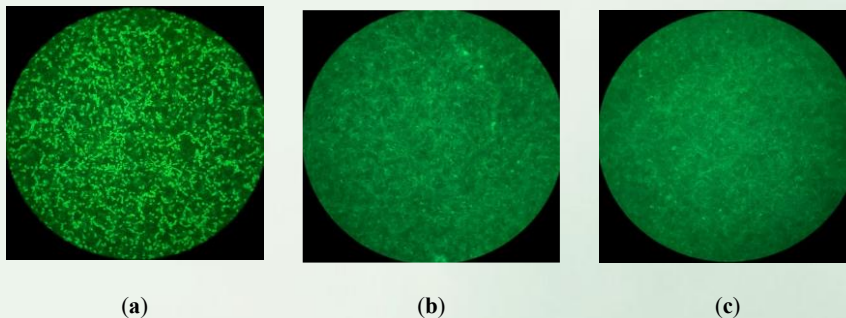


Figure 2: Immunofluorescence assay of BCoV-infected MDBK cells treated and not treated with 6PP. (a) Untreated BCoV-infected cells (b) Protocol A-1: BCoV-infected cells treated with 6PP for 72h (c) Protocol C: Viral internalization inhibition assay of BCoV-infected cells treated with 6PP. Green fluorescence indicates BCoV-infected cells

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Although further research is needed to clarify the specific interaction between 6PP and BCoV proteins and to fully define its antiviral mechanism, this study demonstrated that 6PP could exhibit effective antiviral activity against BCoV. Its efficacy during two different phases of BCoV infection suggests its potential as a lead multi-stage candidate, supporting its prospective use for future translational research targeting SARS-CoV-2.

Vasinioti VI, Odigie AE, Lucente MS, Del Sorbo L, Catella C, Casalino E, Salvatore MM, Staropoli A, Vinale F, Tempesta M, Fiorito F, Andolfi A, Buonavoglia A, Pratelli A, Capozza P. *In Vitro Antiviral Activity of the Fungal Metabolite 6-Pentyl- α -Pyrone Against Bovine Coronavirus: A Translational Study to SARS-CoV-2*. Vet Sci. 2025 Jul; 12(7): 634. <https://doi.org/10.3390/vetsci12070634>

Moving in the Right Direction Together in Veterinary Diagnostics



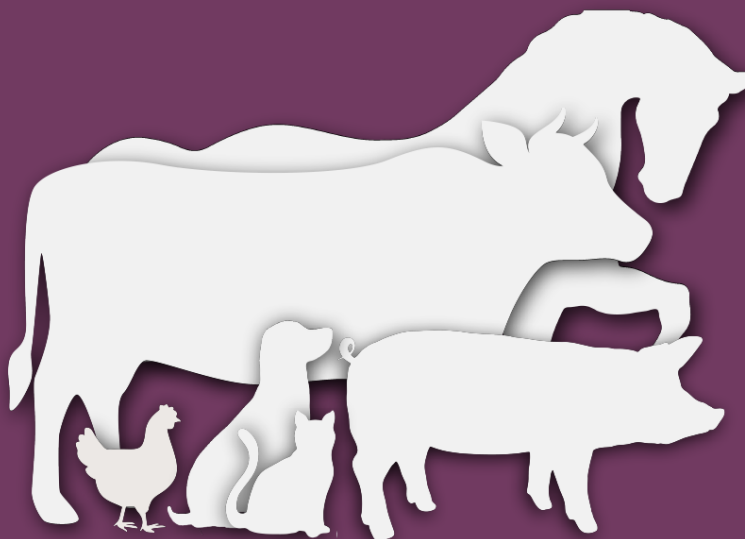
Learn how our tools fit your workflow at: [Promega.com/AnimalHealth](https://www.promega.com/AnimalHealth)

Serology

Simplify your immunoassays with Lumit® mix-and-read technology—no washes, just fast, reliable answers.

Toxicology

Get reproducible insights from complex veterinary samples using trusted mass spec reagents.



Molecular Diagnostics

Scalable genomic tools for precise detection across species and sample types.

New! Viability PCR Reagent System

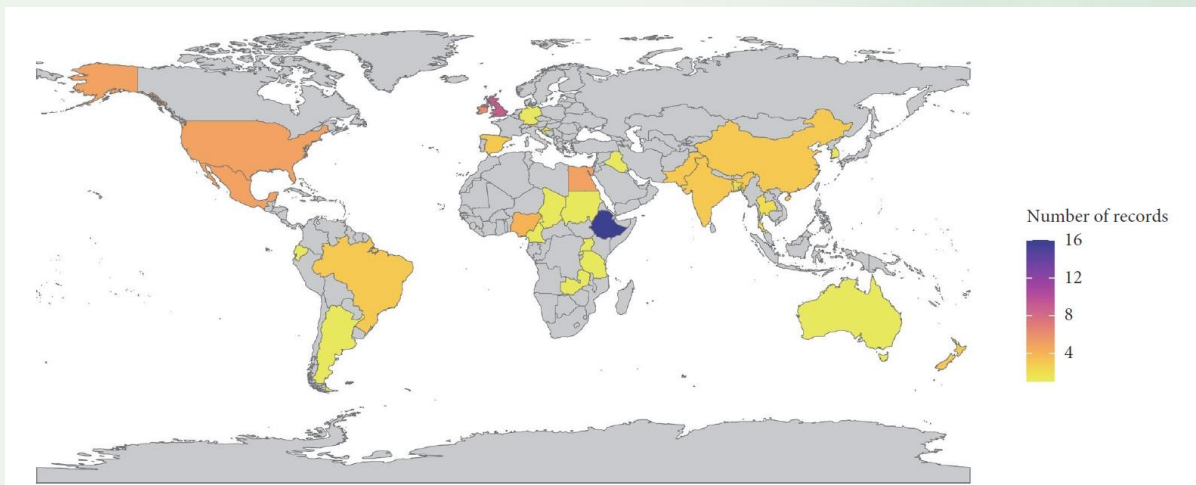
Achieve clinically relevant detection by targeting only viable pathogens.

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Comments on recent scientific publications

Burden of bovine tuberculosis on animal health, welfare and production: a systematic review

Willgert et al. (2025) conducted a comprehensive systematic review to quantify the burden of bovine tuberculosis (bTB), defined as the combined impact of infection on prevalence, mortality, production losses, animal welfare, public health risk, and cost of control measures. Covering studies from 1882 to 2022, the review evaluated over 1.8 million bovines, of which 4.2% tested positive using WOAHA-recommended assays; however, this figure cannot be considered a true prevalence estimate due to the heterogeneity of sampling strategies. The majority of data originated from Ethiopia, the UK, Ireland, and Mexico, reflecting both endemic and controlled contexts. Countries with statutory surveillance and control programs detect infection at early stages, limiting disease progression but increasing testing costs, whereas endemic regions show advanced clinical cases and greater variability in production losses.



The figure reports the number of records by country of the study included in the review of the burden of bovine tuberculosis (by Willgert et al., 2025).



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Among the species of the ***Mycobacterium tuberculosis complex***, *M. bovis* was most frequent, with reports of *M. tuberculosis*, *M. caprae*, and the emerging *M. orygis* in South Asia.

Notably, 87% of 374 positive animals were asymptomatic, emphasizing the key role of laboratory diagnostics (tuberculin testing, culture, and PCR). Visible lesions were detected in 46% of 17603 infected cattle at post-mortem; culture and PCR confirmed infection in 86–94% of 665 cases with no visible lesions. These findings demonstrate that lab confirmation is essential to identify subclinical infections that would otherwise escape detection at slaughter.

Reported production losses were modest (\approx 5–10% milk yield reduction and similar result for meat), though data are inconsistent and often outdated (some from the 1960s). The authors highlight the need for standardized data collection and integration of animal welfare indicators—such as cough, dyspnoea, body condition, and mortality—into surveillance systems.

For laboratories, the study reinforces that bTB surveillance relies on sensitive testing (tuberculin and interferon-gamma assays) and that diagnostic confirmation remains critical for food safety decisions, particularly when lesions are absent but *Mycobacterium* spp. are detected.

Willgert K., Cliff M., Meinke S., Messina D., Broom D.M., Wood J., Conlan A.J.K. *Burden of Bovine Tuberculosis on Animal Health, Welfare and Production: A Systematic Review. Transboundary and Emerging Diseases*. 2025. <https://doi.org/10.1155/tbed/6541298>



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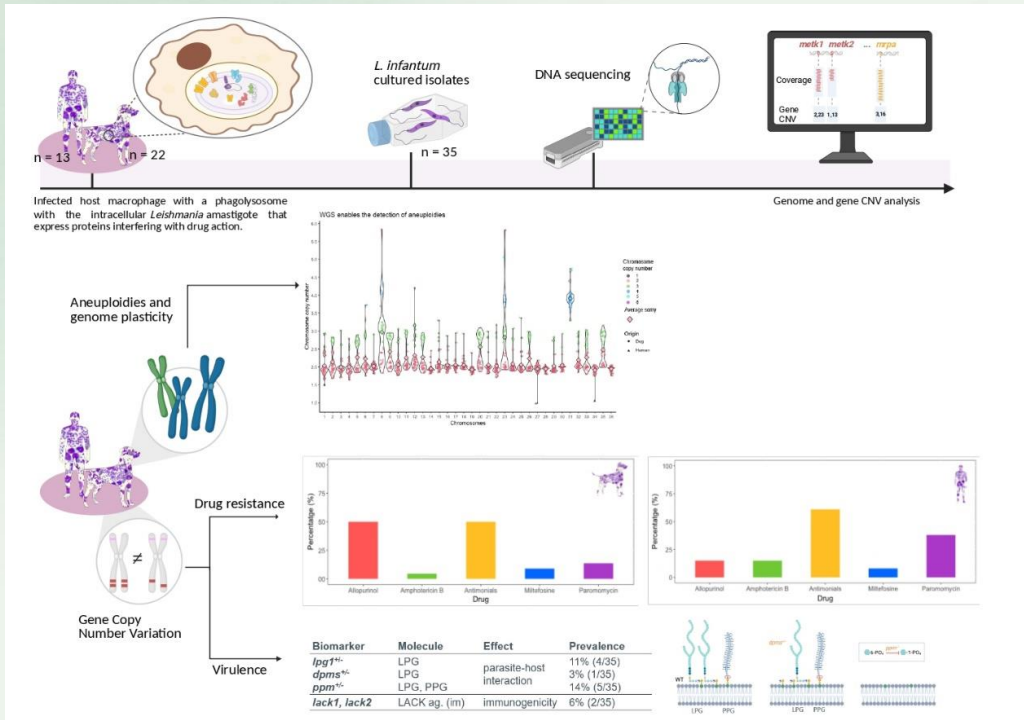
Comments on recent scientific publications

Insights on genomic profiles of drug resistance and virulence in a cohort of *Leishmania infantum* isolates from the Mediterranean area

Drug-resistant strains of *Leishmania infantum* challenge the effectiveness of treatments for clinical leishmaniosis and may lead to more frequent relapses. Copy number variation (CNV) at specific genetic loci is associated with drug resistance and virulence, but information about its prevalence in endemic regions is limited.

We studied drug resistance and virulence in *Leishmania* strains from humans and dogs in the Mediterranean. We sequenced 35 *Leishmania infantum* genomes with nanopore long reads and assembled them de novo. Our analysis examined chromosomal aneuploidies and gene copy number variations in regions linked to drug resistance and virulence. In detail, we assessed copy number variation for 22 biomarkers: 15 genes related to resistance to first-line drugs (METK for allopurinol; LdSMT for amphotericin B; AQP1 and H-locus for antimonials; LdMT, LdRos3, and MSL for miltefosine; PPM for paramomycin), and 7 genes related to virulence (lipophosphoglycan and proteophosphoglycan biosynthesis, and the Lack protein). Additionally, we studied the genomic structure and rearrangements that contribute to these variations.

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Genome analysis reveals significant chromosomal variability. Drug-resistance biomarkers were identified in 80% of the isolates. Canine strains primarily showed resistance to allopurinol and antimonials, while human isolates exhibited a broader resistance spectrum, especially to antimonials and paromomycin. The co-occurrence of resistance biomarkers was common, especially for allopurinol and antimonial resistance. Distinct mechanisms underlie the observed copy number variations. Virulence-associated genes were less variable among isolates.

The prevalence of drug-resistance biomarkers in *Leishmania infantum* strains from the Mediterranean region, as revealed by this study, underscores the critical need for routine resistance surveillance in managing clinical leishmaniasis. These findings not only inform current clinical practice but also pave the way for more effective management strategies in the future.

Carrasco-Martin, M., Martí-Carreras, J., Gómez-Ponce, M. et al. Insights on genomic profiles of drug resistance and virulence in a cohort of *Leishmania infantum* isolates from the Mediterranean area. *Parasites Vectors* (2025). <https://doi.org/10.1186/s13071-025-07105-2>



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Comments on recent scientific publications

Effects of meglumine antimoniate and allopurinol treatment on the fecal microbiome profile in dogs with leishmaniosis

We examine whether standard antileishmanial therapy, consisting of one month of meglumine antimoniate with allopurinol followed by long-term allopurinol, alters the fecal microbiome in dogs naturally infected with *Leishmania infantum*. Both drugs are recommended as first-line treatments but are associated with adverse effects. Meglumine antimoniate may cause injection-site inflammation, gastrointestinal upset, and potential renal stress. Allopurinol can lead to xanthinuria, urolithiasis, and other urinary complications with prolonged use. Since drug-related toxicity has been linked to disruptions in the microbiome, we assess whether this regimen affects gut microbial diversity or composition.

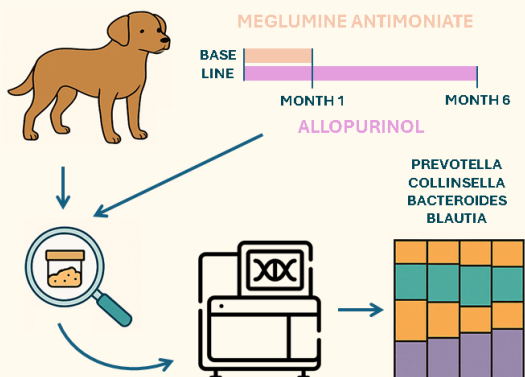
Ten untreated dogs meeting LeishVet diagnostic criteria are recruited across three European veterinary hospitals and sampled at baseline (BL), after 1 month of therapy (M1), and after 6 months of treatment (M6). Fecal DNA is extracted using the ZymoBIOMICS workflow and processed by Illumina HiSeq shotgun metagenomic sequencing. Taxonomic profiling was performed with MetaPhlan3. Analyses included Shannon index, Bray–Curtis dissimilarity, and multivariate models.

At baseline, the gut microbiome comprises 198 species across 82 genera and 10 phyla. Notable members are *Prevotella copri*, *Collinsella intestinalis*, *Bacteroides* spp., and *Blautia* spp., which dominate most profiles. These genera define the shared core community. However, inter-individual variation explains more than half of the total microbiome structure ($\approx 52\%$). This influence surpasses diet, lifestyle, clinical stage, or country of origin.

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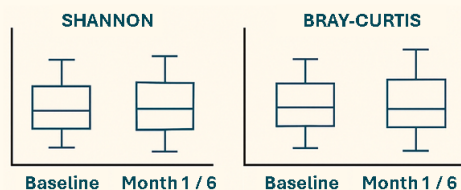
Overall microbial composition stays stable across time points (BL, M1, M6). We detect no significant changes in alpha diversity (Shannon index or gene richness) or beta diversity (Bray–Curtis or UniFrac) after either combined therapy (BL vs. M1) or prolonged allopurinol monotherapy (BL vs. M6). Minor fluctuations—such as small increases in *Bifidobacterium pseudocatenuatum*, *Collinsella tanakaei*, *Prevotella copri*, or *Slackia piriformis*—do not remain significant after multiple-testing correction or multivariable modeling.

STANDARD CANINE LEISHMANIOSIS THERAPY DOES NOT ALTER THE GUT MICROBIOME



Microbial diversity remains stable with meglumine antimoniate and allopurinol therapy

No significant changes in alpha or beta diversity



Martí-Carreras, J., Carrasco, M., Noguera-Julian, M. et al. Effects of meglumine antimoniate and allopurinol treatment on the fecal microbiome profile in dogs with leishmaniosis. *anim microbiome* 7, 78 (2025). <https://doi.org/10.1186/s42523-025-00447-3>

These findings indicate that meglumine antimoniate and allopurinol do not exert measurable disruptive effects on the fecal microbiome of dogs with leishmaniosis. The gut community remains resilient during the six-month treatment period, and functional potential, as estimated by gene richness, is preserved. Although the modest cohort size limits detection of subtle or individualized effects, the study supports the microbiome-sparing nature of standard therapy. It provides reassurance that its known clinical toxicities are unlikely to be mediated by broad gut microbial disturbances. Larger, multicenter longitudinal cohorts will help clarify more finely grained microbiome-immune-parasite interactions during antileishmanial treatment.



Health Surveillance Centre



The **Visavet Health Surveillance Centre** is a research and training centre belonging to the **Complutense University of Madrid** (Spain) and located within the complex shared with the Faculty of Veterinary Medicine and the Veterinary Clinical Hospital.

The general aims of the centre are research and training, combined with technology transfer and the provision of scientific and technical advice in the areas of **Animal Health, Public Health, Food Safety** and the **Environment**, and directed at both the public and private sectors.

To achieve these objectives the Visavet centre participates in and coordinates R&D projects, transfers scientific advances to different stakeholders, provides scientific and technological support and advice to companies and public administrations, organises scientific and technical training courses and placements, for both students and professionals and undertakes outreach activities to bring science closer to society.

Visavet stands out for its research in the diagnosis and control of zoonoses and emerging diseases, as well as those subject to official control and eradication programmes. It also offers a wide range of microbiology and immunology analyses for individuals and companies, including forensic veterinary services, and clinical trials.



Main building of the Visavet centre



BSL-3 Animal facilities



BSL-2 / BSL-3 Areas Necropsy rooms



BSL-2 Area Laboratories



BSL-3 Area Laboratories



Clean Area Vaccine production zone

The Visavet centre has unique facilities designed and built to work safely with infectious agents, and ensuring complete safety both for staff and for the surrounding community. With a total surface area of 2,700 m², it comprises three laboratory zones:

- ▶ **Biosafety level 2 Area (BSL-2):** Contains laboratories, animal facilities and a necropsy room specifically designed for the analysis of Group 2 biological agents.
- ▶ **Biosafety level 3 Area (BSL-3):** Contains BSL-3 biosafety labs and a BSL-3 necropsy room for working with Group 3 biological agents. This area also includes an **ABSL-3 animal facility** with three individually designed boxes with ventilation and independent access, allowing different assays and controls to be carried out simultaneously.
- ▶ **Clean Area:** Contains clean rooms of different classifications up to Class A, with barrier animal facilities, molecular biology and **vaccine production zones**.

The centre also has an experimental farm for carrying out studies with large groups of animals under field conditions.

Visavet's designations and accreditations endorse a robust quality system ensuring the reliability of the analyses performed.



Reference Centre for Mammalian Tuberculosis



Reference Laboratory for Bovine Tuberculosis



Official laboratory for analysis and control



Official laboratory for analysis and control



* Consult technical annex for the accreditation scope



visavet.es





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Lab Tips and Best Practices

Top tips for routine PCR testing!

- Don't try to pipette too small a volume when carrying out PCR – pipetting 1 μ L accurately and consistently is difficult. Adjust dilutions or concentrations to allow pipetting of higher volumes. Aim for 5 μ L being the smallest volume you routinely pipette.
- Test controls are vital! (Positive, negative, extraction controls, internal controls etc). Think carefully about how controls help to improve confidence in the test results you are generating. Track the performance of assay controls over time to spot any drift in assay performance. Don't use too strong a positive control – it's a higher contamination risk and isn't necessarily a good representation of real samples.
- When pipetting – particularly small volumes – always visually check that the volume expected is in the pipette tip prior to dispense (particularly with multichannel pipettes).
- Use the capillary action from liquid already in a tube or the side of the tube to help draw liquid from the pipette tip.
- When making up master mixes always thoroughly mix prior to aliquoting. PCR mixes can be viscous and need thorough, gentle mixing.
- Use a simple spreadsheet to calculate different master mix sizes. Use a checklist to ensure you add all the components of a master mix. Reverse pipetting is often a more accurate way of dispensing multiple aliquots of master mixes – check it out.
- When changing batches of primers – always check results with the new batch versus the old batch to ensure consistency.
- Check the consistency and performance of the PCR machine and service them regularly.

European Association of Veterinary Laboratory Diagnosticians

Lab Tips and Best Practices

Top tips for routine PCR testing!

- Use filter tips for all PCR if possible.
- Make up reagents and controls in small, single use aliquots to reduce the chances of contamination, improve consistency and avoid freeze/thaw cycles.





European Association of Veterinary Laboratory Diagnosticians

Upcoming events

8th Congress of the European Association of Veterinary Laboratory Diagnosticians 19-21 October 2026



Royal Olympic Hotel
Athens, Greece
<https://eavld2026.org/>



European Association of Veterinary Laboratory Diagnosticians

Upcoming events

The XXIV Congress of the Italian Society of Veterinary Laboratory Diagnosticians (SIDiLV) 2026 is coming... stay tuned.



For full program details and registration, visit the official website of the Italian Society of Veterinary Laboratory Diagnosticians (SIDiLV): www.sidilv.it



European Association of Veterinary Laboratory Diagnosticians

Upcoming events

SISVet Congress 2026 – Save the Date

The next **SISVet Congress (Italian Society of Veterinary Sciences)** will take place in **Bologna, Italy, from June 11–13, 2026.**

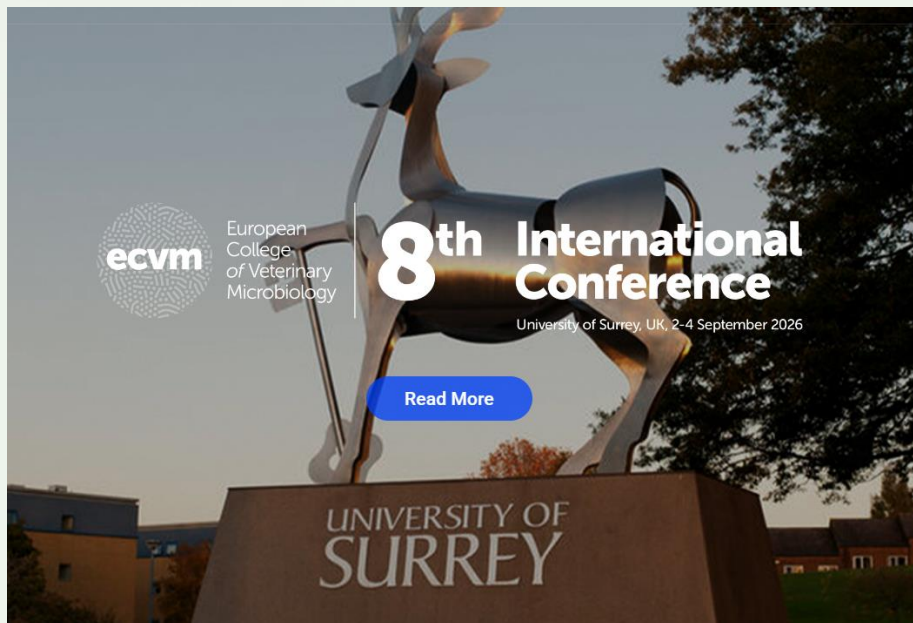


More details and the full programme will be circulated soon.
Visit the website <https://www.sisvet.it/>

European Association of Veterinary Laboratory Diagnosticians

Upcoming events

8th International Conference of the European College of Veterinary Microbiology (ECVM) 2–4 September 2026



**School of Veterinary Medicine, University of
Surrey, Guildford, UK (GU2 7XH)**

<https://www.surrey.ac.uk/events/20260902-8th-international-conference-european-college-veterinary-microbiology>

European Association of Veterinary Laboratory Diagnosticians

Upcoming events

XXIX National Symposium of the Spanish Association of Veterinary Laboratory Diagnostics (AVEDILA) 17–18 November 2026



Rectorate of the Cordoba University (Spain)

<https://www.youtube.com/watch?v=BhIEkB-vPaY>

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.

•In-Depth Focus and From the institutions

A short overview of public veterinary institutions and professional associations.

•Sponsorship and Product News

Industry announcements, innovations, and product launches relevant to the diagnostic and research field.

•**Recent Doctoral Theses** that have been defended in the last 12 months.



*EUROPEAN ASSOCIATION OF VETERINARY
LABORATORY DIAGNOSTICIANS*



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