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8th European
Veterinary Congress
of Behavioural Medicine
and Animal Welfare
1-2 October, 2026
Ljubljana Slovenia



Abstract Book



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**8th European
Veterinary Congress
of Behavioural Medicine
and Animal Welfare**
1-2 October, 2020
Ljubljana Slovenia



Abstract Book

EVCBMAW 2026 – 8th European Veterinary Congress of Behavioural Medicine and Animal Welfare

Ljubljana, Slovenia from October 1 to October 2, 2026

Abstract Book

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Ožbalt Podpečan

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Welcome to Slovenia!

On behalf of the Organising Committee, it is my great pleasure to welcome you to Ljubljana, Slovenia's charming and green capital, for the 8th European Veterinary Congress of Behavioural Medicine and Animal Welfare (EVCBMAW)!

EVCBMAW 2026 will take place on 1–2 October 2026 at the Four Points by Sheraton Ljubljana Mons in Ljubljana, Slovenia.

The congress brings together colleagues from across Europe and beyond to exchange knowledge, share research findings and discuss advances in veterinary behavioural medicine and animal welfare. Following the 2025 congress in Helsinki, we are delighted to continue this exchange in Ljubljana, fostering collaboration between research and clinical practice.

The scientific programme will address animal behaviour, veterinary behavioural medicine, animal welfare, ethics and law. Veterinarians, researchers, academics, policymakers, industry representatives and students are warmly invited to participate, contribute their perspectives and connect with colleagues who share a commitment to improving animals' lives.

Set in green surroundings, the Four Points by Sheraton Ljubljana Mons provides a welcoming setting for scientific discussion and professional exchange. Beyond the congress, Ljubljana invites you to discover its historic city centre, stroll along the Ljubljanica River and enjoy its lively cafés, cultural attractions and green spaces. The city's architecture, shaped by Jože Plečnik, gives it a distinctive character, while its relaxed atmosphere makes it a pleasure to explore. Slovenia's diverse culinary traditions offer further opportunities for discovery, with local ingredients and regional specialities reflecting the meeting of Alpine, Mediterranean and Pannonian influences.

We look forward to welcoming you to Ljubljana for an inspiring congress and a memorable stay in Slovenia!



Ožbalt Podpečan (EVCBMAW 2026 Chair)

on behalf of the EVCBMAW 2026 Scientific and Organizing Committees.

Committees

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Congress Policies and Information

Name Badges

As a registered attendee, you will be issued an EVCBMAW 2026 name badge when you pick up your registration materials. You will be required to display your name badge for admission to all official functions. In the event of a lost badge, please visit the Registration Desk.

Liability

The Congress organizers cannot accept responsibility for personal injuries, or loss or, or damage to private property belonging to you or any accompanying people during or as a consequence of the Congress.

Programme Changes

EVCBMAW 2026 reserves the right to make any necessary changes to the program at short notice. There will be no pro rata refund of registration fees for changes to the program.

Scientific Data

Information communicated by presenters should be considered “personal communication.” Please seek permission from the presenter before quoting unpublished research results or using data as a basis for further investigations. Photographs or recording (audio or visual) of data, whether displayed on screens, in posters, or elsewhere is forbidden. Your cooperation is greatly appreciated.

Photography

By attending the Congress, you allow the congress photographer to take pictures of you. These pictures will only be made accessible to the participants of the Congress.

Other Considerations

As a courtesy to all Congress attendees, please make sure all mobile phones are turned off when sessions are in progress.

Taxes

The Value-Added Tax, or VAT, is a general, broadly based consumption tax assessed on the value added to goods and services. It applies to most goods and services that are bought and sold for use or consumption in the European Union. The standard VAT rate in Slovenia is 22%. Prices indicated are always including VAT.

Registration

Four Points by Sheraton Ljubljana Mons, Pot za Brdom 4, SI-1000 Ljubljana, Slovenia.

Registration is possible at Registration desk (behind the hotel reception) on Wednesday, September 30 from 19:00 to 21:00 and on Thursday, October 1 from 8:00 to 9:45.

Presenter Guidelines

Presentations should be formatted for widescreen (16:9), and all presentations must be in PowerPoint file (media and special fonts must be embedded).

If you included a video, please test the playback on the site.

A good presentation has a clear objective, a well-defined structure, and uses clear and simple illustrations.

Tailor your presentation to a diverse, international audience with varying microbiological backgrounds.

Focus on key findings, implications, and scientific relevance.

Avoid heavy text—use visuals, diagrams, and graphs where possible.

Ensure all images and data are clearly labeled and cited.

Do not use abbreviations or explain them clearly at the beginning.

Rehearsal of your presentation is strongly recommended! Please note that presenting to a live audience can take a little longer than during a rehearsal.

Please be very careful that your presentation is scientific and not commercial.

It is important to adhere to the time schedule.

Session Talks

10 minutes for presentation and 3 minutes for Q&A.

Plenary Keynote Speakers

45 minutes for presentation and 5 minutes for Q&A.

Posters

The measurements of your printed poster should be in A0 Portrait (maximum 84.1 cm wide x 118.9 high – 33.1 in. wide and 46.8 in. high) .

There is one (1) poster board available per presentation; you are required to use 'Portrait' layout for your poster.

Include the presentation title, name of authors, institution, city and country on your poster.

Please be very careful that your presentation is scientific and not commercial.

Mounting and taking down your poster

We will provide you with the materials needed to put up your poster, which you can collect on site.

Place the highlights at eye level (i.e. the upper half of the wall element).

Posters can be mounted on Wednesday, 30 September, from 19:00 onwards.

Posters can be taken down after 18:00 on Friday, 2 October.

Poster presenter tips

The dedicated poster session will take place on Friday, 2 October, and we kindly ask you to be present at your poster during this time to address any questions from participants.



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*Trudelle-Schwarz McGowan, R. Tapping into those 'gut feelings': impact of BL999 (*Bifidobacterium longum*) on anxiety in dogs. ACVB Symposium 2018.

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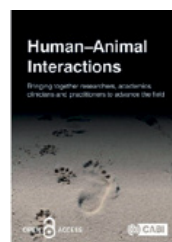
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Programme

Thursday, October 1, 2026

8:00 – 9:450	Entry Hall Registration	
10:00 – 10:30	Plečnik 1-3 Opening Ceremony	
10:30 – 11:15	Plečnik 1-3 Plenary Session Chair: Christine Halsberghe Daniel Mills: A History of Veterinary Behavioural Medicine and the People Who Have Shaped It	
11:15 – 12:00	Plečnik 1-3 Plenary Session Chair: Christine Halsberghe Mitja Šedlbauer: Beyond the Five Freedoms: The Next Generation of EU Animal Welfare Policy	
12:00 – 12:30	Coffee Break	
12:30 – 14:00	Plečnik 1 Parallel Session – BM Chair: Tomàs Camps Morey Giacomo Riggio: Inside the Dog Inside the Cage: Behavioural and Welfare Implications of Domestic Crating Irena Czycholl: The crate dilemma: Is being crated in home alone settings beneficial for or a threat to the welfare of dogs? Sylvia Masson: Validation of the Canine Behavioral Evaluation Score (Can-BES) Using Specialist Clinical Diagnosis as the Reference Standard Laura Saiz i Vivas: From arbitrary labels to behavioural structure: sequential analysis of dog interactions in field conditions Pascalie Roulaux: Desexing Effects on Dog Behaviour and Owner Reported Reasons for Desexing Vanessa Ashall: The human-animal bond and relational veterinary clinical research: informing contextualised ‘care’ in the veterinary clinic.	Plečnik 2-3 Parallel Session – AWSEL Chair: Jožica Ježek Anna Rademann: Cattle and human welfare at Austrian abattoirs Virginia Sherwin: Factors shaping treatment choices and non-steroidal anti-inflammatories use in pre-weaned calves: perspectives of farmers and veterinarians Lina Elmersson: Cattle cleanliness on Swedish beef and dairy farms – an analysis based on animal welfare inspection reports Rok Marzel: Beyond the “happy cow” narrative: Behavioral, physiological and production-related responses of dairy cows to the first pasture release Genesis Cordero-Arbelo: Sheep Peripartum Behavior Score Susanne Waiblinger: Effects of a virtual fence on heart rate variability and behaviour of goats

14:00 – 15:00 **Lunch**

15:00 – 16:30 **Plečnik 1**

Parallel Session – BM

Chair: Sylvia Masson

Javier Guerra: Behavioural and Physiological Responses of Dogs to Different Olfactory Stimuli Under Double-Blind Conditions

Audrey Besegher: Effects of Cannabidiol- and Cannabidiolic Acid-Rich Hemp Extract on Stress-Related Behaviours in Shelter-Housed Dogs

Karen Kam: Pregabalin for Fear and Anxiety in Dogs: A Retrospective Multicentre Study of Clinical Use, Client- and Vet-Reported Efficacy, and Adverse Effects

Valentina Alonso Montenegro: Use of Citalopram on dog behavior problems: preliminary results on 74 cases

Marie Lacoste: Therapeutic reassessment of severe aggression revealing dysthymia in a Jack Russell Terrier

Punyanuch Likitteerasub: Management of Hyperarousal and Frustration-Related Behaviours in a Juvenile Small Breed Dog: A Case-Based Report

Plečnik 2-3

Parallel Session – AWSEL

Chair: Marina Štukelj

Eva Mainau: Automatic monitoring of sows and piglet behaviour using Computer Vision to predict the onset of farrowing and assess its progression

Alenka Seliškar: Feasibility and limitations of a single-lumen peripherally inserted central catheter in pigs

Maria Francisca Ferreira: Who is responsible for the sow's welfare? Ethical Gaps of EU Pig Production

Anna Valros: Is It Possible to Rear Intact Boars with Intact Tails?

Anna Lena Palmetzhofer: Adapting fully slatted pens for growing-finishing pigs towards improved welfare: Effects on manipulatory behaviour and lesions

Deborah Temple: Do pigs distinguish between dead and resting pen-mates?

16:30 – 17:00 **Coffee Break**

17:00 – 18:15 **Plečnik 1**

Parallel Session – BM

Chair: Anouck Haverbeke

Morgane Van Belle: Cat-related factors affecting sociability in multi-cat households

Ebru Yalcin: Fear, Anxiety, and Stress-Related Behavioural Problems in Cats Fed Using Automatic Feeders

Denise Remy: Adoption of Laboratory Cats: A retrospective Study and Improvement protocol

Christine Arhant: Sickness Behaviours in Guinea Pigs – an Online Survey in German-speaking Households

Gaëlla van Walraven: From human neuromodulation to canine behaviour: a pilot study of transcranial direct current stimulation in dogs

Plečnik 2-3

Parallel Session – AWSEL

Chair: Alenka Dovč

Monika Budzyńska: Measuring Human-Animal Interaction in Alpacas and Its Relationship to Health Assessment

Barbara Padalino: How to Apply Positive Reinforcement-Based Training for Self-Loading and Self-Unloading in Dromedary Camels

Alexandra Harlander: Pushing the Limits of Flight: Biomechanical Constraints on Vertical Movement in Laying Hens

Evangelia Sossidou: Effects of dietary supplementation with Lactobacillus Plantarum and Yarrowia lipolytica yeast on performance and welfare indicators in broilers

18:15 – 19:00

Plečnik 1

Poster Teasers – Section A

Plečnik 2-3

Poster Teasers – Section B

19:00

Welcome Reception

Friday, October 2, 2026

09:00 – 10:30

Plečnik 1-3

Plenary Session

Chair: Ožbalt Podpečan

Mitja Gombač, Tamara Dolenšek: The Role of the Veterinary Pathologist in Cases of Suspected Animal Abuse

10:30 – 11:00

Coffee Break

11:00 – 12:30

Plečnik 4-5

Parallel Session – BM

Chair: Urša Ravnik Verbič

Camille Bezancon: Proposed definition of abandonment and closed list of reasons for dogs and cats to enter and leave the care of facilities and organizations

Ana Margarida Fernandes Araújo: Low-Stress Handling in Dogs: Improving Safety, Welfare, and Clinical Outcomes

Caroline Gilbert: Canine-assisted intervention and best practices: the case of Snoopy, an auxiliary care dog at Institut Curie, France

Pantaleo Gemma: An Investigation into Dog Owners' Perspectives and Management Strategies Regarding Firework-Related Behavioural and Welfare Issues in the Maltese Islands

Julia Miller: Association of Age at Adoption and Attachment Style in Companion Dogs

Peter Sandøe: Which Factors Predict Successful Treatment of Canine Separation-Related Problems? A Retrospective Cross-Sectional Survey of Scandinavian Dog Owners

Šubic 1-2

Parallel Session – AWSEL

Chair: Karen Hiestand

Karen Hiestand: Ought to Report? Navigating Animal Abuse and Neglect in UK Veterinary Practice

Frida Lundmark Hedman: Farm animal welfare offences in Swedish courts

Kirsi Swan: Veterinarians as Assessors in the Pretrial Phase of Criminal Proceedings: An Empirical Legal Study

Denise Remy: A Study of the French Veterinary Code of Professional Conduct and the Ethical Dilemma between the Moral Duties towards the Animal and the Client

Ida Blomfjell: What is 'fair' in animal welfare inspections? Understanding the animal keepers' perspectives

Andrew Knight: Animal Welfare Concerns During Carbon Dioxide Stunning of Pigs and Chickens

12:30 – 13:30

Lunch

13:30 – 14:30

Poster Sessions

14:30 – 15:45

Plečnik 4-5

Parallel Session – AWSEL

Chair: Ludovica Pieratoni

Chiara Mariti: A Survey of Italian Veterinarians Expert in Animal-Assisted Services Part 1: the Welfare of Involved Cats and the Working Setting

Giulia Russo: A Survey of Italian Veterinarians Expert in Animal-Assisted Services Part 2: the Suitability Evaluation of Involved Cats

Anne Quain: Undervalued, underestimated, understudied and overdone: nail clipping in dogs and cats impacts welfare of patients and veterinary team members

Eleonora Uber: Do Animals Think and Feel? Views on Animal Emotion and Cognition amongst children in Karamoja (Uganda)

Manuel Magalhães-Sant'Ana: Do Humans Have a Moral Obligation to Be Vegan? A Reflective Equilibrium Approach

Šubic 1-2

Parallel Session – AWSEL

Chair: Petra Kramarič

Beatrice Benedetti: Development and application of a tailored welfare assessment protocol for horses kept in groups at pasture

Rita Campilho: Welfare of Stabled Horses in Portugal – Preliminary Results

Emanuela Dalla Costa: Smart monitoring of horse behaviour using non-invasive sensors: clinical applications and welfare implications

Olivia Curry: Pain-Related Expressive Change in Horses: A Novel Application of Qualitative Behaviour Assessment

Gemma Pearson: First reported use of Memantine as part of a multi-modal analgesic regime in horses

15:45 – 16:15

Coffee Break

16:15 – 17:00

Šubic 1-2

Sponsors Presentations

17:00 – 18:00

Šubic 1-2

Awards

19:30

Plečnik 1-3

Gala Event

Plenary Sessions

A History of Veterinary Behavioural Medicine and Its Implications for Animal Welfare Science

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European & RCVS Recognised Specialist in Veterinary Behavioural Medicine
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The Co-Evolution of Veterinary Behavioural Medicine and Animal Welfare Science: Changing Conceptions of Behaviour

Introduction

Veterinary behavioural medicine is a multidisciplinary discipline that draws from medicine, behaviour, ethics and welfare. To understand where the field is now, and where it might go next, it is useful to look back at how it developed. This involves understanding more than a chronological history of the specialty. The history of veterinary behavioural medicine is not simply a history of how we have treated behaviour problems. It is a history that has progressively redefined our understanding of the nature of behaviour. The history of veterinary behavioural medicine is a history of changing scientific ideas about the nature of behaviour itself. Each generation has redefined what behaviour represents, and in doing so has fundamentally altered how veterinarians understand health, disease and animal welfare. The history of veterinary behavioural medicine represents the culmination of more than a century of thinking about the biological significance of behaviour. As I will show, this history also mirrors the history of animal welfare science, as both disciplines share many similar goals concerning the internal state of other animals and so have faced similar scientific challenges. Therefore, it is not surprising that the two disciplines so often come together as they do within this College.

Both veterinary behavioural medicine and animal welfare science have repeatedly broadened our scientific conception and perception of animals. We have moved from seeing animals principally as biological machines, to recognising them as psychologically active organisms, and increasingly as psychologically complex sentient beings whose behaviour emerges from dynamic interactions between brain, body and environment. Thus, the scientific and professional questions asked have changed accordingly. Initially, the concern was “What is the animal doing?”, then it became “Why is it doing it?”, then “What is the animal experiencing?” and now we are increasingly asking “How do biological, psychological and environmental processes interact over an animal’s lifespan to create a certain quality of life?” These are not merely different questions, they represent paradigmatic shifts in scientific thinking that have challenged the status quo and demanded acceptance of new ways of thinking about and doing science. As a result, each shift has also expanded what we believe our professional responsibilities as veterinarians should be.

Both fields have also extended their area of interest from a focus on animal populations, to understanding the individual and now the wider ecosystem in which it operates. This shift means that what was noise or nuisance is now being increasingly understood as important information that gives us insight into an individual’s internal state and how they might be experiencing the world. This progression: from behaviour, to emotion, to sentience, to psychobiology to ecosystem is the real history of the discipline. It has also enabled the veterinary profession to move from caring about animals to more comprehensively caring for them with true compassion and understanding. Historically, veterinarians excelled at caring about animals by preventing disease, improving productivity and reducing mortality. However, the profession is increasingly asking about how we should care for individuals in terms of their subjective experience, psychological needs and the quality of life that they lead.

From Observation to Academia: The Beginnings of the Veterinary Behaviour Sciences.

It is convenient to think of veterinary behavioural medicine beginning with the “modest proposal” for the discipline by Tuber et al. in 1974; however the importance of behaviour to veterinary medicine was recognised long before this.

James Lupton's famous criticism of Victorian stabling in 1884 remains strikingly contemporary. He argued that it was fundamentally inconsistent with the nature of an animate being to confine horses within environments that prevented meaningful behavioural activity. His observation that "life is action" anticipated by almost a century our modern understanding of behavioural needs, environmental enrichment and agency. Likewise, Mayhew's discussions in 1888 of crib-biting, recognised links between management, diet and gastrointestinal disease that resonate strongly with current theories concerning stereotypic behaviour and gastric ulceration. In 1904, Williams published *Some Neuroses of Animals*, discussing behavioural abnormalities occurring in the apparent absence of gross pathological lesions. A few years later, Friedberger and Frohner's *Veterinary Pathology* devoted substantial discussion to stereotypic behaviour and behavioural disorders in horses. By the mid-twentieth century, Hutya and Marek's influential pathology text contained sections devoted to functional nervous diseases, anxiety states and psychoses in domestic animals. These works remind us that veterinarians were already attempting to understand the relationship between behaviour, disease and physiology decades before the modern discipline of veterinary behavioural medicine formally existed.

Indeed, understanding behaviour has always been central to veterinary medicine. Long before the emergence of applied ethology as a scientific discipline or the routine use of diagnostic clinical pathology, veterinarians relied upon behavioural observation to diagnose disease, assess suffering, handle animals safely and judge treatment success. Behaviour was not an optional extra; it was, and remains, one of the clinician's primary sources of information. Behaviour was therefore embedded within veterinary practice from its inception, even if it was rarely recognised as a discipline in its own right. Veterinary behavioural medicine did not arise because veterinarians suddenly became interested in behaviour or behaviour problems. Rather, behaviour eventually acquired its own discipline status because veterinarians had long recognised its clinical importance and the profession was increasingly recognising the value of specialisation (Edwards, 1945).

This history tells us that behavioural medicine did not begin with sophisticated neuroscience or cognitive psychology, it began with careful clinical observation. Indeed, one of the recurring lessons throughout the history of veterinary behavioural medicine is that practitioners often noted and acknowledged important biological phenomena long before we had the scientific methods to explain them. My late father captured this beautifully in a principle he often used to cite to me, that deserves wider recognition: Never confuse knowledge with wisdom. Scientific progress often involves addressing what experienced observers have already observed, providing the biological explanations that were previously lacking. This is one of the joys but also frustrations of academia especially within the fields of veterinary behavioural medicine and animal welfare, as much research is applied but often greeted with "Well I knew that already" by members of the public. But, this highlights another important point: the difference between a scientific fact and personal belief. Many members of the public have an interest in our work and it is not surprising that they believe they can explain many poorly understood phenomena. This presents an additional challenge for researchers in the form of having to navigate not only public opinion but also the pseudoscience of non-academics, including some practitioners. At this point, it is worth remembering another favourite quote of my father's this time from Mark Twain : Never argue with a fool, onlookers may not be able to tell the difference. Nonetheless, it should be noted that those outside of academia have played a critical role in shaping the discipline. We do however need to be cautious about popularist views and opinions, especially in an age of social media buzz and memes.

The Convergence of Veterinary Medicine and Ethology

A formal scientific convergence between veterinary medicine and ethology began during the 1960s. The Brambell Report is often, quite rightly, cited as one of the key drivers of the scientific discipline of animal welfare, recognising that good welfare was more than good physical health. This led to increased interest in applying the behaviour sciences within the context of the domestic farm environment. However, another important legacy was a recognition that understanding welfare required a multidisciplinary approach, bringing together veterinarians, ethologists, psychologists and other disciplines. Thus, the Brambell Report laid the foundation for a transformation within veterinary science that widened its scientific basis to more formally recognise behaviour. This has resulted in several key changes (revolutions) in our interpretation of problem behaviour, and has made us revise the concept of the diagnosis and the role of veterinary medication as a

result. We have now moved from a culture of identifying the causes and cures for disease to one focused more on risk factors and the support required.

However, two academic publications that preceded the Publication of the Brambell Report are of particular note at this time: Hafez (1962) published the first edition of *The Behaviour of Domestic Animals*: a text that remained core to the veterinary curriculum at some Schools well into the 1980s. While in 1964, in France, Brion and Ey published *Psychiatrie Animale*, laying foundations for the later European development of veterinary behavioural medicine. However, it seems that it took a non-academic text in the form of Ruth Harrison's *Animal Machines* (1964) to create the political momentum for greater scientific investment in the field. This also raised the uncomfortable question: "Could the veterinary profession really claim to be the guardian of animal welfare, given its limited scientific understanding of animal behaviour?" This provided important impetus to a greater inclusivity within the profession, as it recognised the need to embrace those with other scientific skills. Thus in 1966, the Society for Veterinary Ethology was established, (now the International Society for Applied Ethology). It is worth reflecting on the original title, as it highlights how the founders did not establish a society for ethologists interested in veterinary medicine, rather they focused on a society for veterinarians who recognised the importance of ethology to veterinary science. This is illustrative of an enduring characteristic of veterinary behavioural medicine. Many of its greatest advances have occurred when the veterinary profession reaches out beyond its traditional boundaries. Likewise, the academic study of behaviour has never been a singular discipline. From its earliest days there were at least two fundamental Academic Schools with different approaches: Behaviorism, centred on the US; and Ethology, centred on Europe.

The Clinical Revolution: The Birth of Behavioural Medicine

The establishment of applied ethology during the 1960s led to increased scientific endeavour aimed at understanding why certain problem behaviours arose in certain populations. It did not however, lead to the immediate birth of veterinary behavioural medicine; a discipline focused on the individual. This would require another form of paradigmatic shift, which was underpinned by growth in small animal veterinary practice. Thus, applied ethology could help us understand the nature of certain welfare concerns, but small animal clinicians often faced rather different questions: "Why did my dog bite someone?" Prior to the birth of veterinary behavioural medicine, the answer was often to blame either the victim or the dog but sometimes the owner. In the case of the latter, the solution was often focused on "proper training". However, during the 1950's, the hegemony of Freud's psycho-analysis within human psychiatry was being weakened by the rise of behaviorism, and in 1958 Joseph Wolpe published his landmark text on the use of the technique of systematic desensitisation (originally called reciprocal inhibition): the bedrock to so many clinical interventions in the management of human anxiety and more generally in veterinary behavioural medicine. However there are two important points to note here. First, although the rise of behaviorism provided a critical cultural context for the acceptance of this technique, Wolpe's interest was fuelled less by an interest in the Laws of Reinforcement being studied by behaviorists like Skinner, and more by his interest in the work of Pavlov. Nonetheless, his work clearly reflected the value of synthesis of different theories of animal learning. Secondly, the technique was based on careful observations of behaviour made much earlier in 1947 on cats at the University of the Witwatersrand, that might be considered more ethological in terms of their scientific approach. He noticed that conditioned fears did not extinguished when the punisher was removed, however the cats did overcome their fears through gradual and systematic exposure. Thus, far from the techniques of behavioural medicine being born out of the human sciences, it might be argued that veterinary behavioural medicine was the birthplace of scientifically grounded techniques in human psychiatry. Another important point of note is the development by Wolpe of his Subjective Units of Distress Scale (SUDS), which is still widely used today (Fig 1 below).

0: Totally relaxed; peaceful.

10–20: Very mild; minimal notice; slight annoyance.

30–40: Mild/Moderate; noticeable anxiety; can still function and focus.

50–60: Moderate/Severe; uncomfortable; heart rate rises; concentration suffers.

70–80: Severe; panic starting; strong urge to escape; physical symptoms dominate.

90–100: Highest distress; total panic; completely overwhelmed; unable to function

Fig 1. Wolpe's Subjective Units of Distress Scale (SUDS) for use in systematic desensitisation. Although based on self-report in human's it forms the basis of the observations used in application of the technique in animals.

This careful systematisation of the process and attention to detail is typical of those who have developed such techniques. Indeed, in some of the earliest publications, describing the application of this technique in companion dogs (Hothersall and Tuber, 1979), it is notable how meticulous the authors are in their application of the technique, using heart rate monitors to guide progression through the programme. It is a matter of some regret that this level of attention to detail is rarely applied nowadays, despite the greater availability of such monitoring equipment and its potential to improve clinical practice.

The advent of such techniques, also marked another key transition point in the evolution of the field: a shift from a focus on training and trainers working with groups of animals towards behaviour modification and veterinarians and clinical animal behaviourists working with individuals. Nonetheless the scientific approach of both was rooted in the traditions of behaviorism and has become known as the behaviorist paradigm within clinical animal behaviour.

Thus the field of applied ethology focused on how species behave, while veterinary behavioural medicine sought to understand why a particular individual behaved differently. This reflects an important shift in conceptual focus and scientific thinking. Ethologists seek general principles. Clinicians seek to understand the individual. Thus, behavioural medicine and animal welfare science have increasingly become “the science of the individual rather than the average.” This change in focus is critical as it exposes the importance of a scientific understanding of individual factors like life history, health status, individual differences in temperament and relationships in shaping personal development. It also highlights the limits of traditional “population based” scientific studies. This distinction was not a new idea to science, with neo-Kantian philosopher Wilhem Windelbrand, highlighting in his 1894 “History and Natural Science” (Geschichte und Naturwissenschaft) the distinction between the nomothetic sciences that seek to generate universal laws from the idiographic sciences which focus on understanding unique events. However, these were areas that the traditional biological sciences of ethology and behavioural ecology had not generally embraced, and studying the individual involved acceptance of the value of alternative ways of doing science. This remains an issue for the field with the frequent misunderstanding and misapplication of scientific thinking in the name of “evidence based medicine” or “evidence based practice”. Rigorous methods for studying the individual are however well established within the field of human psychology and the wider social sciences. However this does involve accepting the limits of the scientific method and understanding more broadly the nature of knowledge. An area in which few veterinarians have received formal training.

A New Clinical Philosophy

By the late 1980s veterinary behavioural medicine had become recognisable as a distinct clinical discipline, and moves were afoot in the US to form the first veterinary specialty College. The academic grounding of the founders of this College in biology, meant that alongside the strong practical focus there was also a strong academic one. This led to an inevitable growth in interest in the mechanistic basis to behaviour which was paralleled by developments within the field of animal welfare that was shifting towards understanding the neurobiological basis to welfare concerns. This resulted in a new paradigm within clinical animal behaviour which has been called the Medical approach. Unlike the Behaviorist paradigm that focused primarily on how the immediate antecedents and learning history of the individual that affected its behaviour; the Medical paradigm viewed problem behaviours as disorders with a physical cause that often required physical intervention alongside behaviour therapy. This approach borrowed heavily from human psychiatric practice, creating diagnostic groupings out of collections of co-occurring behavioural patterns. Likewise in the wel-

fare field, behavioural syndromes of concern were increasingly described in terms analogous to those used in human psychiatry. Thus, with the medicalisation of problem behaviour, the field of veterinary psychiatry was born. While the focus on underlying neurobiology helped give the fields greater face validity as a scientific discipline, this approach potentially pushed back against the previous focus on the individual. Now, the diagnosis was king!

Medicalisation undoubtedly moved the science of problem behaviour forward in terms of understanding its physical basis, but the framework often seems to be blind to the essential biological scaffold of making evolutionary sense. To quote the famous axiom of Theodosius Dobzhansky “Nothing in biology makes sense, except in the light of evolution”. Psychiatric disorders need to make sense from an evolutionary perspective. They are not qualitatively distinct diseases like infections, but reflect the effects of complex reciprocal interaction between the organism and its environment. Indeed, an important consequence of the increased interest in the neurobiological basis to behaviour was a greater understanding of the neurobiological basis of this reciprocal interaction and greater awareness that the brain and behaviour were not reactive in the behaviorist sense but proactive and predictive. This also laid the foundation for the emergence of a new field that would transform both animal welfare science and veterinary behaviour medicine: Affective neuroscience. Now it became scientifically acceptable to talk about animal emotions. This resulted in a profound conceptual shift. The concern was less about the behaviour and more about the individual’s internal psychological state. The fundamental biological problems with the medical model apparent in human psychiatry, especially the lack of diagnostic markers and failure to frame things within an evolutionary context, were also evident in the animal field. Thus the foundations were in place for the development of a third paradigm within the field of veterinary behavioural medicine: the psychobiological approach.

Through the pioneering work of Jaak Panksepp and others, animals were understood to possess evolutionarily conserved emotional systems that organised behaviour according to adaptive biological priorities. This provided the fundamental link between individual problem behaviour, internal state and biology. The frightened dog was not merely behaving fearfully, its nervous system was organised around threat detection. The frustrated horse was not simply displaying undesirable behaviour, its behavioural responses reflected activation of motivational systems whose goals had been blocked. Behaviour became a visible component of invisible psychobiological processes. The focus in both veterinary behavioural medicine and animal welfare was now on differences in individual subjective experience of the environment and their responses as a result.

These core psychological processes were no longer speculative anthropomorphic concepts. They were biologically based explanatory constructs grounded in neuroscience, physiology and evolution.

Towards a Greater Psychobiological Understanding of Behaviour

If this interpretation of our history is correct, then veterinary behavioural medicine has never simply been about managing behaviour. It has progressively expanded the biological sophistication with which we understand the individual animal. Every conceptual revolution has moved us further away from controlling behaviour and closer to understanding the processes that generate it. Every scientific discipline provides increased insight into a phenomenon, but eventually reaches a point where its existing conceptual framework becomes insufficient to explain the observations accumulating before it. This is the nature of scientific progress. However progress can take time to get a foothold within a discipline because of the pervasive scientific or political culture. Behaviorism and Cognitive Psychology have taught us much about learning. Ethology and Behavioural Ecology have helped us understand behavioural function. Medicine has emphasised the importance of the diagnosis. Neuroscience has revealed the biological basis to emotion. Yet none, in isolation, is capable of explaining the complexity of the behaviour of the individual patient sitting in the consulting room. It is increasingly recognised that behavioural responses are emergent phenomena, i.e. they cannot be understood by simply reducing them to their component parts. This is why animals with similar presenting complaints often respond very differently to the same treatment interventions. The more clinicians observe individual cases, the clearer it becomes that the behaviour itself is not the unit requiring explanation. Instead, it is the animal’s internal psychological state. The problems we face often do not lie with the observations, they lie with the questions we are asking, because of the way we are looking at things.

We do not see the world as it is, but as our brain constructs it. This is as true for us as it is for the animals we are concerned about.

So what can we learn from its history? Perhaps the most important lesson is one of intellectual humility. Again and again, each generation has believed it had finally understood animal behaviour. Again and again, the next generation has revealed that understanding to have been incomplete. Each scientific revolution within the field does not replace its predecessor. Rather, it expands on it. The future of veterinary behavioural medicine will not be determined by better behaviour modification techniques, nor by better drugs. It will be determined by whether we can understand the animal's experience with sufficient biological precision to prevent behavioural issues before they develop. So the logical conclusion, I present here, is that our present understanding is almost certainly incomplete too.

Thus scientific history does not teach us what to believe, rather it reminds us why we should remain curious.

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Beyond the Five Freedoms: The Next Generation of EU Animal Welfare Policy

Mitja Šedlbauer

When drafting animal welfare legislation, any government navigates a fundamental challenge in animal welfare policy: balancing the public demand for higher protection standards with the realities facing the agricultural, food production, transport and other sectors. While simplistic, often populist slogans dominate public discourse, they cannot serve as the basis for workable legislation across 27 diverse Member States. Sustainable progress requires robust legal frameworks that carefully weigh ethical imperatives and scientific knowledge against economic and logistical feasibility.

Our legislative approach must keep pace with modern developments in animal welfare science. Historically, welfare policies were guided by the traditional Five Freedoms, which focused primarily on minimizing suffering and preventing negative states. Today, scientific understanding has shifted toward the Five Domains model. This modern framework emphasizes that it is no longer enough to simply prevent harm; we must also promote positive physical and mental experiences. Translating this advanced scientific concept of a “life worth living” into practical, enforceable EU legislation is one of the greatest challenges policymakers face as this transition from “surviving” to “thriving” is exactly why drafting modern EU animal welfare legislation has become so economically and politically complex.

The foundation of modern animal welfare law in the European Union rests on the recognition of animals as sentient beings, enshrined in Article 13 of the Treaty of the functioning of the European Union. This principle has guided the incremental development of species-specific protections over the decades. Today, any expansion of this legal framework begins with scientific evidence. The European Food Safety Authority (EFSA) provides the essential scientific baseline for new initiatives. However, translating these scientific recommendations into binding law is a complex administrative and political process. What starts as an extensive scientific opinion often gets very diluted by the time the new legislation is adopted.

Before new legislation is proposed, the European Commission conducts a rigorous Impact Assessment to quantify both the qualitative welfare benefits and the financial costs of transition for operators. This step ensures that the costs to farmers and other stakeholders are proportionately balanced against the expected improvements in animal welfare, acting as a strict filter against economically unsustainable policies.

Once a proposal clears this internal review of the European Commission, it enters the Ordinary Legislative Procedure, where the European Parliament and the Council of the EU negotiate the final text. The ongoing revision of the EU Animal Transport Regulation serves as a practical example of this dynamic. Several proposed measures included in the Commission proposal are topics of a heated political debate and represent the tension between technical animal welfare science and the physical and financial limits of the transport industry. These measures require intense political and technical compromise among the general public, animal welfare advocates, industry representatives, and policymakers.

Looking ahead, the legislative horizon includes the recently adopted rules regarding the welfare and traceability of dogs and cats, as well as the highly anticipated regulations on welfare of farm animals. The ongoing modernization of EU animal welfare law demonstrates that while scientific ideals point the way forward, turning those ideals into enforceable reality requires time and a commitment to practical, balanced compromise.

The Role of the Veterinary Pathologist in Cases of Suspected Animal Abuse

Mitja Gombač, Tamara Dolenšek, Kristina Tekavec Kmetec, Marko Cvetko in Tanja Švara

Postmortem examination, also referred to as necropsy or autopsy, is a systematic examination of an entire animal carcass performed to assess anatomical structures, identify pathological processes, establish morphological diagnoses, and determine the cause of death or euthanasia. In cases in which animal abuse is suspected, a conventional postmortem examination is insufficient. Instead, a forensic postmortem examination is required. This represents an extended and substantially more detailed examination conducted by a veterinary pathologist with appropriate specialist knowledge and experience.

Animal abuse encompasses intentional acts and/or negligence that cause animals physical or mental suffering and adversely affect their quality of life. It may include abandonment, physical abuse, animal fighting, animal hoarding, neglect, failure to provide necessary veterinary care, and inappropriate or unnecessary killing. When a dead animal is suspected to have been subjected to abuse, the forensic postmortem examination is the principal method by which such suspicion can be confirmed or excluded.

In addition to determining the cause of death, forensic examination aims to establish the manner of death, as well as distinguishing between natural death, accidental death and violent death. It may also provide information about the mechanism by which the injuries happened, the instrument or weapon used, the approximate time of death, and, in some cases, the location or circumstances in which death occurred. Importantly, the veterinary pathologist must determine whether the observed injuries occurred during the animal's lifetime or developed after death.

A complete forensic postmortem examination cannot be replaced by an external inspection of the carcass, examination of visible injuries alone, radiographic imaging, or removal of projectiles by a veterinary clinician. Such procedures may provide useful supplementary information, but they cannot reliably establish the cause of death. Only a complete examination of the carcass allows the veterinary pathologist to evaluate all relevant organs and tissues and to interpret individual findings within the context of the entire case.

The forensic investigation effectively begins at the location where the animal is found. Close cooperation between the veterinary pathologist, police officers and official veterinarians is therefore essential. Investigating authorities collect the case history, including circumstances preceding death, witness statements, the position and condition of the carcass, and a detailed description of the location where it was discovered. Extensive photographic documentation is highly desirable and, in some cases, indispensable. The information collected at the scene guides the veterinary pathologist during the subsequent postmortem examination.

After examination of the scene, the carcass should be placed in an appropriately sized clean plastic bag, securely closed, labelled and transported for postmortem examination as soon as possible. If immediate transport is impossible, freezing may be necessary. Following death, progressive and irreversible postmortem changes of the carcass develop and eventually result in its decomposition. Advanced postmortem changes can complicate or even prevent interpretation of lesions that developed during life. Nevertheless, certain postmortem phenomena, including rigor mortis, cooling of the body, hypostasis and insect activity, may assist in estimating the postmortem interval and occasionally provide information concerning the site of death.

During the forensic postmortem examination, particular attention is given to the recognition, description and interpretation of injuries and their consequences. The veterinary pathologist attempts to determine how each lesion developed and what type of force or instrument caused it. In firearm-related cases, the examination may include reconstruction of the projectile trajectory and assessment of the possible position and distance of the shooter. All relevant lesions are photographed and/or diagrammatically recorded, while projectiles and other foreign objects recovered from the carcass are carefully labelled, documented and preserved as evidence.

A detailed postmortem record is produced, documenting the examination of individual organs, all pathological findings, recovered foreign material and samples collected for ancillary testing. Depending on the indi-

vidual case, these may include histopathology, bacteriology, parasitology, virology, molecular diagnostics, radiography and toxicology.

Histopathology is particularly important in forensic cases. Microscopic examination of tissue samples allows more precise characterization of pathological processes and may help establish their aetiology. Of major forensic significance is the possibility of estimating the age of lesions. In animals that died as a consequence of trauma, histopathological findings may help determine how long an injury had been present and, consequently, how long the animal survived after it was inflicted. This information can be crucial when evaluating the duration of suffering.

Bacteriological, parasitological and virological testing may be required when infectious agents are suspected. These examinations are particularly relevant in cases of neglect involving failure to provide veterinary care to a diseased animal. Molecular methods may be used for species identification, sex determination or identification of remains when advanced decomposition prevents recognition of the animal. Toxicology is essential when poisoning is suspected. When shooting is suspected, radiographic examination of the entire carcass is particularly valuable for locating projectiles before dissection, especially in large animals or when small projectiles are deeply embedded in tissues.

Following completion of the postmortem examination and ancillary testing, the veterinary pathologist prepares a forensic report that may subsequently serve as expert evidence in criminal proceedings. The report contains the relevant case history, identification of the animal, a detailed description of normal and abnormal findings, interpretation of lesions, morphological diagnoses, results of ancillary testing, the final diagnosis and the cause of death. It should also provide an expert opinion concerning the mechanism of death and, where possible, the type of instrument responsible for the injuries, as well as answers to specific questions posed by the police or official veterinarian. Key questions commonly include why the animal died, when death occurred, how long it survived following injury, and whether the findings are consistent with animal abuse.

In conclusion, a complete forensic postmortem examination performed by a properly trained veterinary pathologist is essential whenever abuse is suspected in a deceased animal. External examination or diagnostic imaging alone cannot reliably determine the cause of death or establish whether injuries contributed to death. A properly conducted forensic examination can confirm or exclude suspected abuse, determine the cause and manner of death, reconstruct the mechanism of injury and, in many cases, estimate the period of survival after trauma. Its evidentiary value depends not only on the expertise of the veterinary pathologist but also on continuous cooperation with police officers, official veterinarians and prosecuting authorities, from examination of the scene through the final expert opinion.

Parallel Sessions

Behaviour Medicine

Inside the Dog Inside the Cage: Behavioural and Welfare Implications of Domestic Crating

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Crating dogs is increasingly common, yet household crate use and its behavioural and welfare impacts remain poorly explored (Bleuer-Elsner and Masson, 2024). This study sought to characterise crate management practices, identify predictors, quantify exposure and test associations with problematic behaviours. An online questionnaire yielded 859 responses from Italian dog caregivers, 258 (30.0%) of which reported crating or having crated their dog at home. Median age at first crating was 2 months. Median 24-h crating time was 9 h (3 h daytime, 6 h overnight). Most dogs could change posture and turn, but one in five lacked full postural freedom. Crating was more likely among younger caregivers and apartment residents, younger or intact dogs, dogs purchased from professional breeders, engaged in performance activities, and belonging to specific breeds (Border Collie, American Staffordshire Terrier, Czechoslovakian Wolfdog). Most caregivers reported no change in problem behaviours after introducing the crate, but when change occurred it was predominantly negative for all behaviours investigated (from 8.1% for repetitive behaviours to 22.9% for hyperexcitability and intraspecific aggression), except house-soiling and destructiveness. Furthermore, adjusting for pre-crating behaviour levels, longer consecutive daytime crating significantly predicted greater fear of unfamiliar places ($p = 0.021$) and increased destructiveness in the caregiver's presence ($p = 0.048$), suggesting a potential negative impact on dog behaviour and welfare. Perceived benefits of crating may reflect mechanical containment rather than modification of motivation or emotional state. Pending longitudinal, controlled studies, dog caregivers and canine behaviour professionals must carefully evaluate potential welfare risks before resorting to crating.

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The crate dilemma: Is being crated in home alone settings beneficial for or a threat to the welfare of dogs?

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Some dog professionals recommend using crates for certain trainings while others have expressed concerns about negative effects on welfare; there is clearly need for scientific evidence. Here we present first results from a larger research effort. First, a convenience sample of Danish dog owners (n=2342) using crates was asked for which reasons and for long they placed their dog in crates. On average, dogs were crated 23 days/month for 4h/day, most frequently for transportation, puppy training and to deal with home-alone situations. In an on-going study, video recordings of crated dogs in home-alone settings are being analysed. Owners deliver videos of 1h length on 2 separate days. An ethogram encompassing 31 behaviours (body postures, signs of relaxation/stress) has been developed and tested to deliver good reliability (ICC>0.85). First results (based on 13 crated dogs/26h of video material) show that the dogs spend most time (84%) lying down with head up or down. Most common stress signals are lip licking and yawning, whereby high individual differences exist: the frequency ranges from 3 dogs with no stress signals to 2 dogs with >40 lip lickings and >6 yawns/h. Across-session analysis reveals high intra-individual consistency, i.e. dogs have a consistent coping pattern to the situation. Within-session analysis reveals a consistent settling pattern, with a transit from more active and alert states in the first 20min towards deeper rest later on. Currently, work is done to enlarge the dataset and to compare the results from the crated dogs to uncrated dogs in home-alone settings.

Validation of the Canine Behavioral Evaluation Score (Can-BES) Using Specialist Clinical Diagnosis as the Reference Standard

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Objective: to validate the Canine Behavioral Evaluation Score (Can-BES), a brief owner-completed questionnaire for screening and clinical profiling of canine behavioral disorders, and to refine its axis-specific interpretive thresholds.

Methods: Can-BES includes 29 items across five domains: self-controls, fear, attachment, social integration, and communication/education. Items are scored on a three-level color-coded scale (green = 0, yellow = 10, red = 100), generating axis-specific profiles for rapid clinical interpretation. A total of 385 questionnaires were completed before consultation in dogs presented to a specialist in veterinary behavioral medicine, whose clinical diagnosis served as the reference standard. Diagnostic performance was examined separately for each axis to refine thresholds distinguishing alert-level scores from those suggestive of pathology.

Results: the initial framework was based on a clinically intuitive use of weighted scores: 30 points, corresponding to three yellow responses, indicated an early alert, whereas 100 points, corresponding to one red response, suggested likely pathology. Axis-specific refinement showed that thresholds differed across domains. Final thresholds were 50/150 for self-controls, 40/150 for fear, 50/150 for attachment, and 40/150 for social integration, while communication/education retained a lower 30/100 threshold and was interpreted primarily as an alert domain.

Conclusions: Can-BES appears to be a concise, clinically grounded screening and profiling tool whose strength lies in axis-specific thresholding rather than a single undifferentiated score. Validation against specialist clinical diagnosis supports its potential utility for structured behavioral assessment, triage, and early detection in practice. Further multi-clinician validation is warranted.

From arbitrary labels to behavioural structure: sequential analysis of dog interactions in field conditions

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Attributing functional meaning to behavioral units is a common practice in behavioral research. However, such interpretations are often based on a priori assumptions, which may introduce bias when behaviors are used as explanatory variables. Ideally, the function of behavior should be verified before it is used in interpreting behavioral dynamics. However, conducting a formal functional behavior assessment in field conditions is rarely feasible due to limited experimental control and the complexity of natural environments.

In this context, the present study proposes sequential analysis as an alternative approach to explore potential functional relationships between behavioral units. Behavioral interactions were recorded in free-ranging dogs in The Gambia and coded as discrete events. Transitions between consecutive behaviors were analysed using a first-order transition matrix. To reduce sparsity while preserving low-frequency interactions, rare behaviors were grouped into a single “other” category. Sequential associations were assessed using standardized adjusted residuals (Z-scores), with $|Z| > 1.96$ considered statistically significant.

The analysis revealed a non-random organisation of behavioral sequences. Certain transitions occurred consistently above chance levels, indicating structured relationships between behavioral units. Notably, circling approach was frequently followed by gaze aversion and subsequently by ignoring, forming a consistent sequence of behavioral disengagement. In parallel, offensive and defensive postures showed strong reciprocal transitions, suggesting a dynamic interaction pattern rather than a simple linear escalation. Additionally, some behaviors showed high probabilities of self-transition, indicating temporal stability once initiated. These patterns emerge directly from the observed sequences, without the need to assign predefined functional meanings to individual behaviors.

These findings suggest that sequential analysis can provide insight into the organization of behavior without relying on predefined functional labels. While this approach does not establish behavioral function, it allows the identification of consistent temporal patterns that may suggest underlying functional relationships and generate testable hypotheses about behavioral function.

Desexing Effects on Dog Behaviour and Owner Reported Reasons for Desexing

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Male dogs are often desexed to correct unwanted behaviour (58% of 249 desexed males), whereas female dogs are desexed mainly for preventative health reasons (Roulaux et al., 2020). The latter may follow from received professional advice, which was given mainly by veterinarians. Common behaviours that are reason for desexing males are urine marking, mounting, and roaming, which occurred in 78%, 25% and 32% of 242 intact males respectively (Roulaux et al., 2023). Urine marking and mounting occurred less often in desexed males, though in older intact dogs mounting was also less common, suggesting a possible natural decrease with age. As behavioural effects vary and there are few health benefits for male dogs, reversible chemical castration (CC) may be used prior to surgical castration (SC), to ensure desired effects thereof. The most common reason for CC was testing the influence of SC on behaviour (Roulaux & Van Herwijnen, 2025). Similar numbers of owners subsequently left their dog intact or opted for SC. Owner-reported effects of CC and SC were completely or largely the same in 81.7% of the cases. Our cross-sectional study setups prohibit us from concluding causal effects of desexing. In our ongoing follow-up study, which includes the CBARQ both before and six months after planned desexing, we aim to provide much needed data from a large-scale prospective study.

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The human-animal bond and relational veterinary clinical research: informing contextualised 'care' in the veterinary clinic.

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Contemporary contextualised or spectrum of care approaches recognise that veterinary decision-making should be based upon more than isolated clinical information, instead encompassing a broader consideration of individual animal and human circumstances. Whilst ongoing efforts to operationalise contextualised care identify a need to incorporate the human-animal bond as one key component in veterinary decision making, we suggest that the profession currently lacks a sufficient evidence base and appropriate clinical frameworks to do so.

This presentation introduces relational veterinary clinical research as a vital step towards the development of meaningful data on human-animal relationships and their role in shaping veterinary decision making. Drawing on emerging literature in the field of Human-Animal Interaction (HAI) research, we compare substantialist and relational research approaches to demonstrate the unique features of relational research which are underutilized in existing veterinary clinical research. We show that to capture the complex and multidimensional nature of human-animal relationships, a fundamental shift in veterinary clinical research perspectives and practices is required. We highlight the need for an expansion of the purpose of veterinary clinical studies, increased qualitative and observational research, integration of social and relational theory, and multi-disciplinary collaboration.

We conclude that further developing the field of relational veterinary clinical research will generate critical evidence which connects human-animal relationships with professional responsibilities. Embedding the human-animal relationship within contemporary clinical decision-making processes and frameworks will advance the delivery of ethical contextualised 'care', with implications for improved animal welfare, client satisfaction and veterinary staff wellbeing.

Behavioural and Physiological Responses of Dogs to Different Olfactory Stimuli Under Double-Blind Conditions

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Olfactory stimuli may help to characterize behavioural and physiological responses relevant to canine welfare. This pilot study evaluated the effects of three olfactory stimuli under double-blind conditions. Nine neutered adult dogs were included in a randomized balanced within-subject design. Animals were individually exposed to three olfactory stimuli: leaf alcohol (LA), floor cleaner base (CB), and lavender (LV) during one-hour experimental sessions. Behaviour was assessed through spatial distribution across six predefined quadrants and double-blind observational classification of facial expressions during voluntary approach to the stimuli. Physiological variables included heart rate (HR), respiratory rate (RR), and heart rate variability (HRV). Friedman analyses revealed significant differences in spatial distribution during exposure to the LA stimulus ($p = 0.0339$) and CB stimulus ($p = 0.0019$), with dogs spending more time in entrance quadrants. No significant spatial differences were detected during LV exposure ($p = 0.0815$). Double-blind facial expression classifications differed descriptively among stimuli, with LV more frequently associated with behaviours classified as positive, whereas the LA stimulus showed a higher proportion of behaviours classified as aversive. LV was the only stimulus associated with significant changes in HRV and HR across exposure phases. HRV differed between pre- and during-exposure phases (Wilcoxon, $p = 0.028$), while HR differed between during- and post-exposure phases (Wilcoxon, $p = 0.045$). These preliminary findings highlight distinct behavioural and physiological patterns associated with olfactory stimuli, with LV showing combined behavioural and autonomic changes potentially compatible with a favourable response pattern associated with more relaxed behaviour.

Effects of Cannabidiol- and Cannabidiolic Acid-Rich Hemp Extract on Stress-Related Behaviours in Shelter-Housed Dogs

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Shelter-housed dogs are chronically exposed to stressors that may compromise their welfare. Although cannabidiol (CBD)-based products are increasingly used to manage canine anxiety, scientific evidence supporting their efficacy remains limited, particularly in stress-exposed populations. In this double-blind, placebo-controlled pilot study, 17 reactive shelter dogs were randomised to receive either CBD- and cannabidiolic acid (CBDA)-rich hemp extract (6 ± 1.4 mg/kg/day; $n = 7$) or placebo ($n = 10$) for four weeks. Stress-related behaviours were assessed via video recordings at baseline and post-administration, and activity was monitored for 48 hours at each period in a subset of nine dogs using an accelerometer collar. Video analyses yielded no statistically significant product effects; however, accelerometry revealed a significant group $\times$ period interaction across all activity levels, with increased resting and reduced activity in the CBD/CBDA group (most markedly during nighttime), while no comparable change was observed in the placebo group. Descriptive trends in video data, including increased resting, reduced locomotion and postural transitions, and fewer dogs displaying repetitive locomotion, were consistent with this pattern. Taken together, these findings suggest a selective calming effect, potentially reflecting reduced nocturnal vigilance and reactivity, rather than generalised sedation. Given the small sample size and substantial inter-individual variability, results warrant cautious interpretation, and larger studies incorporating pharmacokinetic monitoring are needed to confirm these preliminary observations.

Pregabalin for Fear and Anxiety in Dogs: A Retrospective Multicentre Study of Clinical Use, Client- and Vet-Reported Efficacy, and Adverse Effects

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Fear- and anxiety-based behavioural disorders are common in dogs and can compromise welfare, safety, quality of life, and the human-animal bond. Pregabalin is commonly used off-label in canine behavioural medicine, yet published data describing its clinical use and effectiveness remains limited.

Clinical records from two referral veterinary behaviour services were retrospectively reviewed. Eligible cases included dogs prescribed pregabalin for behavioural disorders in which fear and/or anxiety were identified as the primary emotional motivation. Cases receiving pregabalin solely for analgesia or seizure management were excluded. Data collected included signalment, behavioural diagnosis, pregabalin dose and dosing frequency, concurrent behaviour modification plans, follow-up interval, owner-reported and clinician-assessed response to treatment, and adverse effects. Treatment response was categorised using a four-point Likert scale: worse, no difference, mild improvement, or targeted improvement.

Preliminary data of analysis of client comments in 51 dogs showed that behaviour was worse in 9.8%, there was no change in 2.3%, a slight improvement 39.2% and a definite improvement in 27.4% of the dogs. The most frequently commented-on aspects were improvements in anxiety and calmness, overall reactivity and sleep patterns.

The next stage in our analysis is to identify any consistent features in the dogs that may explain the difference in the outcomes.

This study provided clinically relevant descriptive data on an increasingly used but underreported medication in veterinary behavioural medicine. Findings may help guide case selection, dosing strategies, client counselling, and future prospective studies evaluating pregabalin as a treatment option for canine anxiety disorders.

Use of Citalopram on dog behavior problems: preliminary results on 74 cases

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The use of psychotropic drugs for the treatment of behavioural problems in dogs is well documented. In long-term interventions, serotonergic neurotransmission plays a key role in the regulation of anxiety, impulsivity and aggression. Selective serotonin reuptake inhibitors (SSRIs) are commonly used drugs that modulate the neural circuits involved in emotional regulation³. Currently, only fluoxetine and clomipramine are registered for long-term use, which justifies the exploration of alternatives, notably citalopram. The available evidence⁴, together with its safety profile⁵ and lower cost compared to other registered SSRIs, could enhance its accessibility. Objectives were assessing Citalopram's efficacy in different behavioural contexts, its adverse effects at therapeutic doses, and to compare the results with those of other serotonergic drugs used in dogs. The retrospective study analyzed prescriptions made between May 2023 and January 2026. Cases with incomplete information and those that did not complete at least one month of treatment were excluded. For the efficacy analysis, the outcome was categorized as satisfactory or unsatisfactory based on the patient's adaptation to the problem. For the contextual analysis, diagnoses were classified into six categories: social intra and interspecific, noises, separation, ADHD-like, abnormal repetitive and street problems. The study obtained the following results: 1) Citalopram showed an overall clinical response rate of 71%; 2) The therapeutic response varied depending on the context, with better results observed in intraspecific social problems, separation related problems and ADHD-like; 3) It exhibited an acceptable safety profile, with adverse effects occurring in 15% of cases, most of which were mild and transitory.

Therapeutic reassessment of severe aggression revealing dysthymia in a Jack Russell Terrier

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This clinical case describes Roxy, a 4-year-old spayed female Jack Russell presented for a behavioral medicine consultation after a severe injurious aggression toward her owner.

From 6 months of age, she displayed aggression related to food and resting-place guarding, as well as impulse-control aggression when touched. Aggression showed an overall progressive worsening over time despite fluctuations.

Additional clinical signs included hyperreactivity, characterized by emotional responses of increased intensity. This resulted in uncontrolled movements and interactions, apparent lack of food satiety, increase of playtime and solicitation to play, and delayed bite inhibition with persistent mouthing.

According to the French diagnostic model, the main initial diagnostic hypothesis was hypersensitivity-hyperactivity syndrome (HSHA), considered a canine ADHD-like disorder.

However, a social relationship disorder associated with a dysfunctional relational framework was also identified to explain this type of aggressions, that is normally absent in HSHA.

Treatment with fluoxetine at a dose of 2,5 mg/kg once a day, combined with behavioral therapy, led to a major clinical improvement, with resolution of aggressive episodes and a marked reduction in hyperreactivity, supporting the initial diagnosis. However, after 5 months of stabilization, the recurrence of aggressive episodes, organized as oppositional defiant behavior led to diagnostic reassessment. A dysthymic disease, typically characterized by changes in mood and explaining the fluctuations observed was considered. The addition of cyproterone acetate at a dose of 1,2 mg/kg twice a day resulted in complete resolution of the clinical signs.

Management of Hyperarousal and Frustration-Related Behaviours in a Juvenile Small Breed Dog: A Case-Based Report

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A 1.5-year-old Pomeranian weighing 4.26 kg presented for excessive barking, leash biting, destructive behaviour, and difficulty settling during routine daily activities. The objectives of this case report were to assess the underlying emotional state associated with the presenting behaviours and to evaluate the response to behavioural management focused on arousal reduction and emotional regulation. Behavioural assessment was conducted through detailed history taking, direct observation during consultation, and evaluation of social interactions with a cohabiting dog. Observed behaviours included pacing, persistent barking, jumping up, difficulty maintaining stationary behaviours, leash biting during walk anticipation, and intense play solicitation toward the other dog. No offensive aggression was observed during consultation.

The behavioural formulation suggested hyperarousal with frustration-related behaviours and poor impulse control. Environmental management and behaviour modification were implemented, including reinforcement of calm behaviours, impulse control exercises, structured enrichment using feeding toys and lick mats, and maintaining predictable daily routines. A short trial of alpha-casozepine supplementation was initiated but later discontinued due to lack of perceived effect by the owner.

At 6-week follow-up, the owner reported approximately 50% improvement in behavioural intensity. The dog demonstrated improved waiting tolerance, reduced barking intensity, improved settling during car travel, and better engagement with enrichment activities. However, difficulty settling in unfamiliar environments remained. This case highlights the importance of identifying hyperarousal and frustration-related behaviours in companion dogs and demonstrates the clinical value of arousal-focused behavioural management.

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Cat-related factors affecting sociability in multi-cat households

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Social relationships between cats vary, but the factors affecting this – especially in the domestic setting – are largely unknown. We recruited seventy-seven two-cat households with adult and healthy cats (all neutered) to explore cat-related factors affecting social relationship type. Caregivers participating in the study completed a survey on the individual characteristics and social behaviour of their cats, and recorded at least fifteen videos of spontaneous cat-cat interactions in the home environment. This was used to assess the social bond between the cats via expert consensus. Further statistical analysis of related behaviours, including unsupervised clustering methods followed by recursive partitioning and regression tree, placed this within the framework of a specific form of social relationship. This resulted in the definition of three types of social relationships: bonded cats, non-bonded cats, and acquainted cats (i.e. asymmetric, unstable or cautious relationship). Repeated Fisher Exact tests with Holm-Bonferroni correction were used to assess associations between these social relationships and cat-related factors, including relatedness, socialisation (introduced after/before 16 weeks old), sex composition, and age composition. A significant association was found between sex composition and relationship type ($p < 0.05$), with female-female pairs commonly being non-bonded, male-male pairs rarely being non-bonded, and male-female pairs being equally distributed across the relationship types. No significant associations were found between social relationship type and relatedness, socialisation or age combination. While it remains difficult to fully understand the mechanisms that determine the sociability of companion cats, neutered male-male pairs are potentially associated with more harmonious multi-cat households.

Fear, Anxiety, and Stress-Related Behavioural Problems in Cats Fed Using Automatic Feeders

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The purpose of this study was to highlight fear, anxiety, stress (FAS)-related behavioural problems that may be associated with inappropriate feeding intervals and portion sizes in cats fed using automatic feeders.

Domestic cats have evolved as solitary hunters that typically consume multiple small meals throughout the day. Automatic feeders have become increasingly popular because they allow caregivers to schedule meals, regulate portion sizes, provide feeding when the caregiver is away from home, and, in some models, monitor the cat via an integrated camera. Although these devices may offer practical advantages, inappropriate meal frequency, prolonged intervals between meals, or excessive energy restriction may contribute to hunger-related frustration, persistent attention-seeking behaviour, constant waiting near the device, reduced caregiver interaction, and decreased tolerance toward humans or other cats in the household.

This clinical case series included 13 neutered cats of both sexes, aged 1–10 years, that had been fed using an automatic feeder for at least two months. Three cats lived as single cats, whereas 10 lived in two-cat households. The cats were presented because of human-directed aggression and/or inter-cat aggression. During detailed history taking, caregivers reported that fear, anxiety, stress-related behaviours developed after the introduction of automatic feeder use. Complete blood count, serum biochemistry, radiography, ultrasonography, urinalysis, and faecal examination were performed to exclude underlying medical conditions, and all findings were within normal limits.

These findings suggest that inappropriate automatic feeder settings may contribute to fear, anxiety, stress-related behavioural problems in cats. Veterinarians should consider feeding management when evaluating aggression-related behavioural complaints.

Keywords: Feline behaviour; automatic feeder; fear; anxiety; stress; human-directed aggression; inter-cat aggression

Adoption of Laboratory Cats: A Retrospective Study and Improvement Protocol

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The future of animals used for experimentation raises serious ethical issues. They have often been euthanized after their use. However, a few programmes have been put in place in order for the healthy animals to be adopted after experimentation. Cats represent only 0.05% of laboratory animals and the authors only found two international reports about adoption post experimentation.

An adoption programme was introduced in 2022 for laboratory cats used in our institution's research facility. The objective of this study was to carry out a retrospective analysis of the satisfaction of the adoptive families in order to improve the procedure.

Therefore, the authors developed a questionnaire that obtained the agreement of our institutional ethics committee and that inquired about the conditions of life of the animals, the motivations of the adoptive family, their satisfaction, the animals' adaptation.

Results were obtained for 11 animals out of 13. Almost all owners adopted because they felt they were doing a good deed. No behavioural problem was reported. All owners were satisfied with the relation they had established with their cats. However, they felt they had not been informed sufficiently about the adopted animal's character and about the type of research protocol the animal had been involved in.

Based on these results, the authors set up an improved adoption protocol in which animals will be subject to a temperament test and adoptive families will be selected in accordance with the test's results.

Sickness Behaviours in Guinea Pigs – an Online Survey in German-speaking Households

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Recognizing sickness behaviour in pet guinea pigs is essential for timely veterinary care. We surveyed 1,181 German-speaking guinea pig caretakers about husbandry, health, behaviour, and human–animal interactions. At the time of the survey, for 141 animals health issues were reported; 134 caretakers provided more detailed information: For instance, 25.4 % indicated dental issues, 14.9 % skin problems, 14.2 % ovarian cysts, 6 % upper respiratory tract signs and/or dyspnoea, bloated stomach (5.2%), abscesses (5.2 %), foot-pad problems (4.5 %), or diarrhea (4.5 %). According to Mann-Whitney U tests, animals with health issues displayed behaviours associated with discomfort more frequently, including perianal gland marking, teeth grinding, and teeth chattering (all $p < 0.01$). Sick animals also gnawed at furniture more often ($p < 0.01$). Positive-valence behaviours such as popcorning occurred less often ($p < 0.01$). Social behaviours were reduced in sick animals, including social play, resting and sleeping together with conspecifics (all $p < 0.01$). Aggressive behaviours, such as biting, chasing, fighting, did not differ significantly between health groups, nor did food blocking, or stealing. Caretakers engaged more often in verbal interaction ($p < 0.01$), fed sick animals more by hand ($p < 0.05$) and conducted more health and hygiene checks (e.g. anterior teeth checking, anogenital cleaning, eye-region cleaning, all $p < 0.05$). Health issues in guinea pigs were associated with an increased number of negative-valence behaviours and reduced social affiliative interactions. Such behavioural changes may indicate the need for a veterinary examination.

From human neuromodulation to canine behaviour: a pilot study of transcranial direct current stimulation in dogs

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Transcranial direct current stimulation (tDCS) is a non-invasive neuromodulation in which a weak current is delivered via scalp electrodes to modulate brain areas. While tDCS has shown promise in human neuro-psychiatric and cognitive research, its potential in canine behavioural disorders remains unexplored. Before application in clinical cases, foundational studies in healthy dogs are required.

This pilot study evaluated the safety, feasibility, and preliminary cognitive effects of tDCS in dogs. Twelve healthy detection dogs from the Belgian Federal Police were enrolled in a cross-over study. Dogs received either 20-minute active or sham tDCS prior to completing three cognition-related tasks: object discrimination (OD), cylinder and sustained attention tasks. Following a washout period, treatments were reversed and testing repeated. Side effects, electrode placement, and feasibility were monitored.

tDCS was successfully applied in all dogs using pre-gelled ECG electrodes, electrode gel, and surgifix bandages. Mild transient redness in 3/12 dogs was the only adverse effect observed. Some dogs showed mild stress-related behaviours during electrode placement, which improved with acclimatisation and positive reinforcement. Among the cognitive tasks, the OD-task appeared most suitable due to its repeatability, ecological relevance for working dogs and direct learning assessment. Practical challenges identified included clipping and manipulation, standardising handler interactions and objectively scoring behaviour.

In this pilot trial, a test protocol for assessing potential effects of tDCS in healthy dogs was successfully developed, as well as guidelines regarding practicality and feasibility. This is a valuable step towards the assessment of tDCS as a potential treatment of canine behavioural problems.

Proposed definition of abandonment and closed list of reasons for dogs and cats to enter and leave the care of facilities and organizations

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The fight against abandonment is a major issue in France. Given this situation, the French Observatory for the protection of Domestic Carnivores (OCAD) was set up to foster collaboration among stakeholders, extend knowledge and identify appropriate solutions to combat abandonment. The French Reference Centre for Animal Welfare (FRCAW), acting as the OCAD's expert body, drew up lists of reasons for animals entering and leaving rescue organizations and propose a definition of abandonment.

To identify the ways dogs and cats enter and leave pounds or animal protection associations, an online questionnaire was created and completed by over 800 establishments. The FRCAW also carried out a comparative analysis of regulatory frameworks on abandonment and stray animal management in Europe and worldwide, and conducted 16 semi-structured interviews with stakeholders to understand abandonment mechanisms and propose a definition.

Intake reasons (capture of roaming animals, owner surrenders, transfers from other structures, ...) and exit reasons (adoption, transfer to another facility, return to owner, death, euthanasia) applied differently depending on the four categories of structures: pounds, shelters, pound-shelters and associations without shelter facilities. The FRCAW defined abandonment as 'the deliberate act of disburdening oneself of ownership or keepership and of abrogating one's responsibility of care for an animal, with a probable negative impact on the animal's mental and physical health'. These results, published on the FRCAW website in 2026, were used to establish a common position shared by all those involved in the OCAD and improve monitoring and accounting of abandoned dogs and cats.

Low-Stress Handling in Dogs: Improving Safety, Welfare, and Clinical Outcomes

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Stress-related challenges during veterinary consultations are highly prevalent in canine patients and require specific clinical considerations. Dogs exhibit substantial phenotypic and behavioral variability driven by breed diversity, genetics, and life experiences. Such variability underscores the need for tailored clinical approaches and individualized handling protocols. Adapting these methods to each patient's behavioral profile is essential to enhance cooperation and mitigate distress. Stress and anxiety within the veterinary environment are known to alter physiological parameters (e.g., heart rate, respiratory rate, cortisol levels), reduce tolerance to handling, interfere with diagnostic accuracy through stress-induced artifacts, and compromise treatment outcomes and recovery rates. The implementation of targeted pharmacological support (e.g., pre-visit pharmaceuticals) remains underutilized despite its important role in clinical practice. These interventions facilitate low-stress handling and decrease the need for sedation, ultimately promoting positive associative learning. A dog-friendly clinical approach prioritizes the early recognition of behavioral indicators of discomfort, including subtle changes in body language and “calming signals”, allowing intervention before escalation along the aggression spectrum. Minimizing stress is fundamental for animal welfare, diagnostic accuracy, treatment outcomes, and recovery rates, while facilitating patient cooperation, reducing caregiver burden, and preserving the human–animal bond. These considerations also support the integration of veterinarians with expertise in behavioral medicine into clinical practice and recognize the value of applied ethology in improving patient management. Through the analysis of different clinical scenarios, this review offers practical, evidence-based guidance for the routine application of ethology in veterinary settings, enhancing clinical procedures, patient experience, and animal welfare.

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Canine-assisted intervention and best practices: the case of Snoopy, an auxiliary care dog at Institut Curie, France

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Canine-assisted interventions is a growing practice, particularly in healthcare settings such as retirement homes and hospitals. The Institut Curie initiated an innovative project: the adoption of a shelter dog, Snoopy, to work full-time in the hospital. Snoopy, an “auxiliary care dog” (Fromantin et al., 2024) is fully integrated into the healthcare team, contrarily to “traditional” therapy dogs. The team involved share his custody at work and during week-end or holidays.

We aimed at proposing 1) guidelines of a health protocol ensuring compliance with hospital hygiene standards, and 2) guidelines for the assessment of animal welfare through a list of risk points and recommendations.

The sanitary protocol encompasses vaccination schedules, antiparasitic treatments, allergen risk management among vulnerable patients, and the establishment of daily hygiene measures (e.g. brushing). The guidelines for welfare assessment identified 7 risk points: training of the team, team cohesion, selection of the dog (temperament), retirement, acclimatation in the hospital, living conditions and respect of needs and time-budget, and welfare assessment during assisted interaction sessions. As an example, considering the selection, we recommend to adopt a dog who is trainable, friendly towards humans, emotionally stable, not anxious or fearful, adaptable, and calm.

The next step of our study is to assess Snoopy's welfare at work with the team, during its everyday life, and during sessions of interactions with patients and caregivers.

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An Investigation into Dog Owners' Perspectives and Management Strategies Regarding Firework-Related Behavioural and Welfare Issues in the Maltese Islands

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This study investigates the perspectives and management strategies of dog owners' in the Maltese Islands in relation to firework-associated dog behavioural and welfare issues. Data was collected using an online questionnaire through google forms. The questionnaire focused on owner demographics, dog characteristics, the dogs' behavioural responses to fireworks, the effectiveness of management strategies and treatments used to reduce fireworks-related fear. 378 dog owners collaborated voluntarily in this survey. Results indicate that 61% of dogs exhibited some degree of firework-related fear, with 25% classified within the highest fear severity category. The most frequent behavioural responses included: attempts to hide (40%), vocalisation and trembling (26%), escape attempts (20%), and cowering behaviours (19%). In most cases, fear responses were limited to the duration of the fireworks display (54%). Despite the high prevalence of fear-related behaviours, 81% of owners did not seek professional advice nor did they administer any type of treatment to calm the dogs. Furthermore, desensitisation techniques were not used in 74% of cases. Statistical analyses identified significant associations between fear severity and accommodation type ($p = 0.017$), provenance of the dog ($\chi^2(8)=17.054$, $p = 0.030$), and attendance with dog to public fireworks displays ($p < 0.001$). Nonetheless, as assessed by Cramer's V, the strength of these associations was weak (0.159, 0.164, 0.273 respectively). No significant associations were found between fear severity with either the age of the dog or the number of dogs owned. The multinomial logistic regression model for fear severity resulted to be statistically significant, ($\chi^2(28) = 56.450$, $p = 0.001$). Of the five explanatory variables, two were statistically significant: How many canines do you own ($\chi^2(4) = 13.456$, $p = 0.009$) and Origin ($\chi^2(8) = 22.602$, $p = 0.004$). Overall, these findings highlight fireworks as a concern for dog welfare in the Maltese Islands and highlight the need for increased owner education and the promotion of evidence-based management strategies.

Association of Age at Adoption and Attachment Style in Companion Dogs

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Adult dogs are less likely to be adopted from animal shelters compared to puppies. One barrier to adoption may be the perception that adult dogs will not form secure attachment bonds with their new owners. Previous research has shown that securely attached dogs, as measured by the Secure Base Test, are comforted by their caregiver when exposed to a stressful experience, reflecting the caregiver's role as a secure base. We compared attachment styles in dogs adopted as young puppies (≤ 3 months; $n = 29$) with those adopted as adults (≥ 12 months; $n = 25$) using an in-person Secure Base Test, consisting of three 2-min phases. During Baseline, owners interacted with their dog only if approached and otherwise ignored them. The dog was then left alone (Separation), after which the owner returned (Reunion) and followed the same instructions as during Baseline. Attachment style was classified based on the dog's behaviour during reunion, considering proximity, contact seeking, exploration, play, and stress signs. Secure attachment was more common in dogs adopted as puppies than as adults (72.4% vs. 43.5%) and insecure ambivalent (20.7% vs. 43.5%) and insecure avoidant (6.9% vs. 13.0%) attachment were more common in dogs adopted as adults; however, a chi-square test of independence found no significant association between age at adoption and attachment style, $\chi^2(2, N = 52) = 4.47$, $p = .107$, Cramér's $V = .29$. While we found no association between age of adoption and attachment styles, future research can utilize additional measures of human-dog bonds.

Which Factors Predict Successful Treatment of Canine Separation-Related Problems? A Retrospective Cross-Sectional Survey of Scandinavian Dog Owners

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The purpose of this retrospective cross-sectional questionnaire study was to map and quantify associations between selected dog-, treatment-, and household-related factors and successful versus unsuccessful treatment outcomes in canine separation-related problems (SRP). Data were obtained from responses to an online questionnaire provided to dog owners from three Scandinavian countries (Denmark, Sweden, and Norway) who reported on their most recently completed professional SRP treatment program. Participants were recruited through kennel clubs, practitioner networks, Facebook groups, and targeted Facebook advertisements. In total, 1,012 individuals accessed the survey link. After applying inclusion and exclusion criteria, 233 respondents were retained for analysis. Among dog-related factors, age of SRP onset was associated with treatment success ($p=0.018$; $p=0.005$ following adjustment for SRP severity), with higher treatment success among dogs with late (≥ 6 months) compared to early onset (< 6 months). An interaction between age of onset and severity was also found ($p=0.049$), with a greater success for severe cases if the SRP onset was late. Dogs that had never successfully learned to be left alone during puppyhood had a lower proportion of successful treatment outcomes ($p<0.001$). Regarding treatment strategy, more frequent “home-alone training” was associated with a higher proportion of successful treatment outcomes ($p=0.017$). In terms of household factors, successful treatment was more common in households with more than one dog ($p=0.008$). Given the exploratory nature of the analyses and the number of variables examined, the findings should be interpreted as hypothesis-generating and confirmed in future prospective studies.

Welfare Science, Ethics, and Law

Cattle and human welfare at Austrian abattoirs

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Killing non-human animals for human consumption is contested, including concerns regarding their treatment at abattoirs and workers' (mental) health. We assessed the welfare of cattle from unloading until after killing on eight Austrian abattoirs using the Welfare Quality® Protocol (WQP). The 40 measures were integrated according to the protocol to 10 criterion, four principle and one overall score(s). Workers' work satisfaction, load, and personal well-being were assessed using a questionnaire with 43 items on 5- or 11-point Likert scales. Items were reduced to five components using principal component analysis. All abattoirs scored (very) good on the WQP scale from 0-100, i.e., reached overall scores between 74-87 (median: 81). They scored worst and mainly differed in the criterion score human-cattle interactions (scores: 28-69, median: 48): 5-57% (median: 16) of cattle were driven to stunning without physical interactions, and for 14-74% (median: 45), more than five physical interactions were used. Most interactions were not forceful, but on two abattoirs, electric prods were used on 25 or 32% of the cattle, respectively. There were no differences (Mann-Whitney U Test, $p > 0.05$) between the principle scores of smaller (< 150 cattle/week, $n = 4$) and larger ($n = 4$) abattoirs. Contrary to expectations, work satisfaction and well-being were high (median ≥ 4 or ≥ 7.5) throughout the sample with some variation at larger abattoirs. Considering One Welfare, the principle score Good health was highly positively correlated with an abattoir mean for personal well-being ($r_s = 0.771$, $p = 0.025$). The results indicate generally permissible conditions at the visited abattoirs, although improvements, especially regarding human-cattle interactions, are recommended.

Factors shaping treatment choices and non-steroidal anti-inflammatories use in pre-weaned calves: perspectives of farmers and veterinarians

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Pre-weaning calf mortality and morbidity have been associated with substantial welfare, economic, and sustainability impacts on farms. In some regions, legislation permits farmers to administer veterinarian-prescribed antibiotics and non-steroidal anti-inflammatory drugs (NSAIDs) to livestock. Treatment effectiveness depends on the timely recognition of illness and intervention by farm staff. These studies aimed to identify factors influencing treatment decisions for pre-weaned calves.

Study 1 used an online survey incorporating eight video scenarios of pre-weaned calves displaying different clinical signs to assess the likelihood of treatment. Data were analysed using descriptive statistics and multivariable logistic regression. Data from 657 respondents (314 farmers and 343 veterinarians) highlighted NSAIDs were more likely to be administered for respiratory disease than diarrhoea. Farmers' decisions were more strongly influenced by individual clinical signs than those of veterinarians, indicating greater reliance on experiential judgement and variable interpretation of symptoms or protocols.

Study 2 comprised of focus groups with farmers and veterinarians to explore underlying drivers of NSAID use in calves. Data were analysed thematically using a six-step analytical framework. NSAID use was influenced by intrinsic factors, including welfare values, perceived efficacy, and education, as well as extrinsic factors such as economic constraints, legislation, and drug accessibility. Barriers included limited NSAID knowledge, habitual practices, staff skill variability, inconsistent veterinary support, and the normalisation of poor calf health.

These findings highlighted widely varying treatment approaches, indicating inconsistencies in disease recognition and response, highlighting the need for targeted, industry-led education to support evidence-based calf health management.

Cattle cleanliness on Swedish beef and dairy farms – an analysis based on animal welfare inspection reports

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Dirty cattle is a prevalent issue in several countries, including Sweden, where this is repeatedly reported as one of the most common non-compliances during official animal welfare inspections. However, beyond this prevalence statistics, limited contextual information is available regarding the affected animals.

The aim of this study was to investigate impaired cattle cleanliness on Swedish farms, through a systematic analysis of animal welfare inspection reports, including the number of affected animals, severity and anatomical distribution of dirtiness, prevalence of affected animals across different production and housing systems, as well as animal sex and age categories.

The data comprised all inspections reports on cattle farms from 2023 in which “animal cleanliness” was recorded as a non-compliance (n=230), collected from the County Administrative Boards in Sweden. Furthermore, to investigate to what extent dirty cattle constitute a recurring problem within farms, national inspection data from 2010-2023 was also analysed.

Dirty animals were found on both dairy and beef farms of varying sizes, across multiple housing systems both indoors and outdoors, and among all animal categories. The number of affected animals ranged from a few individuals to a large proportion of the herd, and severe dirtiness was common. The animals were predominantly dirty on the thighs and belly. Non-compliances were frequently unresolved at follow-up inspections. Overall, the findings show that dirty cattle is a prevalent issue on Swedish farms and indicate that the problem often persists over time.

Beyond the “happy cow” narrative: Behavioral, physiological and production-related responses of dairy cows to the first pasture release

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Pasture release following prolonged indoor housing is widely regarded as a positive welfare event for dairy cattle. However, relatively little is known about the immediate responses of dairy cows to pasture release and whether behavioral responses are accompanied by consistent physiological or production-related changes.

Twenty-two Holstein-Friesian cows were monitored over five consecutive days, including two days of indoor housing followed by the first pasture release and two subsequent days of daily grazing between morning and afternoon milking. Behavioral responses during the first pasture release were assessed using video recordings, while milk serum cortisol concentration, milk yield, and somatic cell count (SCC) were monitored throughout the study.

Pasture release elicited a pronounced behavioral response characterized by locomotor play, increased social interactions, and elevated activity levels. A total of 173 social interactions were recorded during the initial turnout period, significantly exceeding the frequency observed indoors ($P < 0.001$). In contrast, milk cortisol concentrations, milk yield, and SCC did not differ between indoor and grazing phases ($P > 0.05$). Considerable variation among individual cows was observed in behavioral responses and cortisol concentrations. Milk cortisol concentration was negatively associated with the frequency of social interactions ($\rho = -0.233$, $P < 0.001$).

Pasture release did not elicit a uniform response among cows. Instead, marked individual variation suggests that pasture release may be experienced differently by individual animals, highlighting the complexity of interpreting behavioral responses following turnout.

Sheep Peripartum Behavior Score

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Understanding the factors that shape early maternal behavior in sheep is essential for improving lamb survival and welfare. The objective was to develop a peripartum score combining lambing and postpartum ewe behaviors to capture individual variability and facilitate comparisons of maternal profiles. Sixty sheep were continuously recorded from the appearance of the amniotic fluid bag to lamb expulsion (lambing behavior) and three hours postpartum (maternal behavior). A PCA was used to obtain a Sheep Peripartum Behavior Score that explained 69.1% of variability and was composed by 4 components (PC): (PC1) lambing arousal, characterized by increased yawning and reduced activity, (PC2) exploration, defined by frequent standing, posture changes and pacing, (PC3) maternal care, reflecting higher frequency of low-tone bleats and longer grooming period despite later grooming onset, and (PC4) vocal response, combining vocalizations during and after lambing with pacing. Each PC and overall score were analyzed using GLIMMIX in SAS, with parity (primiparous vs. multiparous), birth type (single vs. double) and lambing duration (short vs. long). An interaction between lambing duration and birth type was detected ($P=0.019$). PC1 was affected by lambing duration ($P=0.008$) indicating reduced arousal in longer lambing. PC3 was influenced by birth type, with twin lambing showing higher maternal care scores ($P=0.0007$), but it was also influenced by interactions with parity ($P=0.038$) and lambing duration ($P=0.006$). PC4 was affected by birth type, with twins associated with more vocalization response scores ($P=0.009$). This PCA approach provides an integrated peripartum score that facilitates identifying factors shaping ewe maternal performance.

Effects of a virtual fence on heart rate variability and behaviour of goats

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Virtual fences (VF) may offer a potential labour-saving technology for pasture management. Animals wear a GPS controlled collar that emits an audio signal when they approach the virtual boundary and, if animals do not stop, an electric pulse is delivered. We examined the effects of VF on heart rate variability (HRV) and on pasture use.

In a cross-over design, 20 Blobe goats in two groups experienced being pastured for 4.5 h per day in a paddock fenced completely with an electric fence (control) or with VF on one side. Presence of goats in four zones was recorded from videos. HRV was measured in the barn in undisturbed, lying goats. Linear mixed models were calculated. Goats in the VF treatment spent less time in the Warning Zone (0 – 3 m from the VF) and Observation Zone (3 – 9 m) but more time in the Transition Zone (9 – 10.5 m) and Front Zone (>10.5m; all $p < 0.001$), with no significant differences observed during the initial training days. Increased use of the Transition Zone in later days suggests that goats may have learned to associate it as a 'safe area'. Resting heart rate was higher ($p = 0.013$), and the HRV parameter RMSSD/SDNN ratio was lower ($p = 0.009$) after seven days of VF exposure compared to the control, indicating increased sympathetic activation and heightened stress.

These findings suggest that goats exposed to VF experience behavioural adaptations in pasture use that may indicate location learning, and physiological stress responses. Further studies are needed to assess long-term welfare impacts.

Automatic monitoring of sows and piglet behaviour using Computer Vision to predict the onset of farrowing and assess its progression

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The peripartum period in sows is a critical phase associated with welfare and productivity risks, mostly due to piglet mortality. This study aimed to develop a YOLO-based computer vision model to predict and notify the onset of farrowing and monitor its progression. Video recordings from 52 farrowings across three farms (France, Spain and Denmark) were annotated using a behavioural ethogram and used to train the model. The prediction of farrowing onset achieved a detection rate of 87.1% (12.9% non-detection cases). Farrowing was predicted on average 13.4 h before the onset (95% CI: 7.3-21.3 h), mainly driven by posture changes (41.9%), followed by reduced lying time (22.6%) and increased restlessness, defined as head movements outside the crate area (22.6%). To monitor the farrowing, the model was evaluated using 1,167 images across behavioural classes. Posture classification performed strongly (mean average precision; $mAP_{50}=87.9\%$), with lying lateral reaching near-perfect detection ($mAP_{50}=98.9\%$) and restlessness, moderate results ($mAP_{50}=71.2\%$). Behavioural pain indicators, though inherently difficult to detect, while leg pushing towards the abdomen, a subtler and less frequent behaviour, showed limited detection ($mAP_{50}=19.3\%$), highlighting the need for larger annotated datasets for infrequent behavioural events. Placenta detection, used as an end-of-farrowing indicator, achieved $mAP_{50} = 57.0\%$, and piglet presence was detected with $mAP_{50} = 74.2\%$. These preliminary results demonstrate the potential application of computer vision to predict the onset of farrowing 13h in advance and to monitor its progression. Alarms can be sent to support the farmer enabling close observation of sows and timely interventions in difficult farrowing.

Feasibility and limitations of a single-lumen peripherally inserted central catheter in pigs

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Pigs are widely used as translational models in biomedical research, and increasing emphasis on animal welfare necessitates refinement of experimental procedures. Repeated blood sampling in long-term studies presents welfare and methodological challenges, as venipuncture requires physical restraint and may induce stress and discomfort, potentially influencing experimental outcomes.

This study evaluated the feasibility and limitations of using a single-lumen peripherally inserted central catheter (PICC; 3 Fr CT PICC Easy, Vygon, Ecouen, France) for repeated blood sampling in 12 grower pigs (31.17 ± 4.6 kg). The investigation was conducted in accordance with the 3Rs principles and integrated into studies assessing the safety of electrochemotherapy of portal vein anastomosis (Stupan et al., 2023) and the pharmacokinetics of subcutaneously administered levobupivacaine (Vake et al., 2024). Ethical approval was obtained from the National Ethics Committee (U34401-2/2021/5, 3 March 2021).

Following surgery under general anesthesia, the PICC was inserted via the auricular vein into the external jugular vein using the Micro-Seldinger technique. The catheter was flushed with saline and locked with a 3% trisodium citrate solution. It was secured with sutures and protected using a non-adhesive medical-grade honey wound dressing.

The pigs tolerated the catheter well for 48–72 hours, after which it was removed. The main limitations were related to the small catheter diameter, which reduced blood sampling speed, and frequent catheter occlusion at the junction with the detachable extension line. Despite these drawbacks, PICC placement enabled repeated blood collection while minimizing handling and restraint.

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Who is responsible for the sow's welfare? Ethical Gaps of EU Pig Production

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Intensive pig production remains a central component of European animal agriculture, operating under existing EU legislation. Despite this regulatory framework, the coexistence of private animal welfare certification schemes, inspections from competent authorities, and veterinary supervision contributes to a fragmented governance system in which accountability is diffuse, and enforcement is inconsistently applied.

This study applies the Ethical Matrix framework to examine the distribution of ethical responsibilities and welfare-related costs among stakeholders in intensive sow production. It draws on a recent Portuguese case in which public exposure of an animal welfare-certified pig farm revealed inadequate living conditions, suggesting failures not only in on-farm practices but also in veterinary supervision.

Analysis indicates that economic dependence may constrain veterinarians' ability to report non-compliance, while certification bodies may face potential conflicts of interest. Limited resources and insufficient follow-up may reduce the effectiveness of enforcement by competent authorities. At the production level, farmers may bear increasing welfare-related costs while experiencing reduced autonomy in farm management decisions, whereas consumers may pay higher prices for welfare-labelled products despite limited transparency. Ultimately, sows remain positioned as production units, subject to confinement and culling practices closely linked to reproductive performance.

This highlights a gap in clearly identifying responsibilities for sow welfare among relevant stakeholders, including farmers, veterinarians, competent authorities, certification bodies and consumers. It also suggests that animal welfare may be framed within the pig industry as a value-added attribute, warranting caution in how welfare policies are designed and implemented.

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Is It Possible to Rear Intact Boars with Intact Tails?

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Mutilations of pigs, specifically tail docking and castration are increasingly questioned. As limited data is available on whether intact boars run an increased risk of tail biting, we studied welfare impacts of rearing non-docked intact boars on commercial farms.

Within 126 litters on 3 farms in Finland half of the male piglets were castrated, half were not. In total, 315 female, 288 castrates and 327 boars reached the finisher units, where they were housed in single-sex pens of 9-11 pigs each. We observed skin, ear and tail lesions of pigs 1) after arrival to the finisher farms and 2) before slaughter. Data was analysed on pen level with GLMMs.

The average percentage of animals with skin lesions (>10 scratches or >2 wounds) decreased between visits (36 vs 6 %), being higher for boar (27 %), as compared to castrate (19%) ($p=0.001$) and gilt pens (17%) ($p<0.001$). The percentage of pigs with fully intact tails decreased between visits (75 to 64%) being higher in castrate as compared to boar pens (72% vs 65%, $p=0.004$). Overall, severe tail lesions (> 2 cm) were observed in 2.3 vs 4.5% of the pigs on visit 1) and 2), respectively, with no effect of sex ($p > 0.1$).

Boars fought more than gilts and castrates, and also had a slightly increased risk for tail lesions. Severe tail lesions were rare and occurrence did not differ between pens of different sexes. We conclude that the negative consequences for the undocked boars were minor.

Adapting fully slatted pens for growing-finishing pigs towards improved welfare: Effects on manipulatory behaviour and lesions.

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Growing pigs are commonly kept on slatted floors with limited space and enrichment. Therefore, an 'improvement-package' was implemented on eight Austrian pig farms comparing improved pens (IP) with control pens (CP). Measures included: increased space-allowance (+0.1 m²/pig), larger pens (≥ 20 m²), slat-reduction (max. 10 % perforation on 1/3 of the pen flooring), cooling devices and additional organic enrichment.

The aim was to evaluate the effectiveness of these measures on (redirected) exploratory behaviour and resulting lesions, required antibiotic treatments and detected abscesses at meat inspection. Over four batches, farms were visited three times (beginning/middle/end of fattening). Behavioural and clinical observations were conducted on pen level (behaviour: IP: n = 268, CP: n = 800; clinical: IP: n = 116, CP: n = 358). Antibiotic treatment and meat inspection data were collected on treatment level (IP: n = 26; CP: n = 15). Data were analysed using generalized linear mixed models in R (4.4.2). In IP, more pigs explored enrichment material (mean: IP = 11.6%; CP = 6.18%; $p < 0.01$) and less pigs manipulated tails (mean: IP = 0.36%; CP = 0.81%; $p = 0.024$). Similarly, the prevalence of tail lesions was lower in IP (mean: IP = 0.99%; CP = 1.69%; $p = 0.010$). In contrast, manipulation of the body, shoulder/flank, or ears, resulting lesions, treatment incidences and abscesses at meat inspection did not differ. Overall, welfare-related problems occurred at low prevalence, explaining the relatively small differences between treatments. Nevertheless, the package improved exploratory behaviour leading to reduced tail biting, which is a crucial welfare issue.

Do pigs distinguish between dead and resting pen-mates?

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This study explores the behavioural responses of domestic pigs (*Sus scrofa domesticus*) to spontaneously dead conspecifics in a commercial herd. The investigation was embedded within a larger observational study in which group-housed pigs were continuously video-recorded. Twelve spontaneous mortality events were identified by farm personnel, and the exact time of death was retrospectively determined from video footage. Using continuous focal sampling, we quantified the frequency, duration, and type of interactions directed by pen-mates toward the dead individual. Behaviours included nosing, nudging, proximity, and oral manipulation. Interactions were compared with those observed at the same time on the previous day, when the focal pig was alive and resting. Temporal dynamics were analysed from death until body removal.

Pigs spent significantly more time interacting with dead conspecifics than with resting counterparts (22% vs. 3% of observation time; Wilcoxon test, $P < 0.0001$). Nosing increased across most body regions, including the orofacial area ($P < 0.0001$), head-top ($P < 0.001$), trunk, genital region, and limbs ($P < 0.01$), but not the tail. The strongest increase occurred in the orofacial region, with an approximately 8-fold rise, accounting for 39% of total interaction time. Orofacial interactions included nose-to-nose, nose-to-mouth, and nose-to-eye contacts. Mouth-to-mouth contact was observed exclusively toward dead conspecifics (6% of interaction time). Cluster analysis grouped head proximity, orofacial nosing, mouth contact, head-directed nudging and air swallowing.

These results demonstrate distinct and sustained behavioural responses of pigs to dead conspecifics, characterised by increased interaction intensity and a marked focus on the orofacial region.

Measuring Human-Animal Interaction in Alpacas and Its Relationship to Health Assessment

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There is a growing number of research in human-animal interaction (HAI) from welfare perspective in several farm and pet species. Observation of animal behaviour toward humans as well as health and body condition provides information about an individual's mental and physical well-being. The objective of this work is to provide overview of our last research on the HAI measurement including the use of behavioural observation, questionnaires and comparing these measures with alpacas' health assessment. Behaviour measures involved an assessment of animal responses (body language and stress-related behaviours) to humans during exposure to routine procedures (physical examination of body condition and health). Questionnaire survey included a caretaker's evaluation of animal's behaviour characteristics and its ease of handling. Alpacas' assessment during physical examination included body condition score (BCS) and other health indicators: eye mucous membranes' colour, toenails' and incisors' appearances. Testing behaviour (vocalising, spitting, kicking) during physical examination did not show intense stress responses in alpacas but some signals of anxiety were noted in their body language while introducing to the examination box. Moreover, shorter examination times were associated with desirable traits such as gentleness and adaptation to new situations, evaluated in the caretaker survey. Alpacas' spitting was negatively correlated with their BCS and eye mucous membrane colour and it can suggest a potential association between stress and health indicators. This example of research provides potential tools for better understanding the key importance of HAI that can influence animal well-being as well as safety and ease of human-alpaca interaction.

How to Apply Positive Reinforcement-Based Training for Self-Loading and Self-Unloading in Dromedary Camels

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This study aimed to describe how to train dromedary camels to self-load and unload using positive-reinforcement-based training. Twelve camels underwent nine days of training plus an initial day of behavioural tests. Six unbroken male camels (group A) and six broken mixed gender camels (group B) were included. The training session consists of six phases: loading the clicker, approaching the truck, ramp, truck, unloading, and returning to the station. Eye temperature was measured before and after training using infrared thermography, and camel behaviour during training was recorded. Overall, 8 camels (66.7%) loaded and unloaded successfully. The average daily and total training duration were 8.5 and 72 minutes per camel, respectively, and the fastest camel took only 30 minutes of total training to load. Loading the clicker phase decreased by 41% per additional training day ($p < 0.001$) and was higher in camels that completed the training session compared to unsuccessful individuals ($p = 0.027$). Similarly, the time required to approach the truck decreased significantly across training days ($p < 0.001$). The ramp phase was shorter in the group of successful camels ($p = 0.038$). Loading inside the truck increased by 50% with each additional training day ($p = 0.007$). Camels in group B had significantly lower maximum eye temperatures than those in group A ($p = 0.019$), with no significant effect of day or time ($p = 0.373$). In conclusion, it is possible to train dromedary camels to self-load and unload without an increase in eye temperature.

Pushing the Limits of Flight: Biomechanical Constraints on Vertical Movement in Laying Hens

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Aviary systems are intended to enhance movement opportunities, yet they require hens to navigate vertical space. Laying hens are ground-adapted birds with high wing loading that rely on short bursts of flapping flight. This study synthesizes three biomechanical experiments examining how physical constraints influence descent and landing performance across age, strain, and health conditions.

First, aerodynamic capacity was challenged in 34-week-old hens ($n = 18$) by reducing wing area by 50%. When descending from 1.5 m, hens showed high vertical velocity (3.9 m/s) and increased horizontal acceleration without adjustments in wingbeat frequency or amplitude, indicating limited ability to compensate for reduced lift (Leon et al., 2021).

Second, the effects of keel bone fractures (KBF), foot pad dermatitis (FPD), and analgesic treatment were assessed in 70-week-old hens ($n = 37$). Birds descended from 30 cm and 170 cm onto a force plate. Landing forces increased from approximately 3.3 times body weight at 30 cm to 6.6–7.1 at 170 cm. Hens with KBF exhibited higher descent velocities and tended toward higher impact forces, while analgesic treatment did not reduce loading and increased impact at greater height in hens with FPD (van Staaveren et al., 2023).

Third, wing-assisted incline running training was evaluated in 37-week-old hens ($n = 82$). Training slightly increased initial velocity but did not alter descent velocity or trajectory (Hong et al., 2024).

Overall, hens operate near biomechanical limits, with limited capacity to modulate descent. Increased height, injury, and feather loss elevate impact risk. Aviary design should account for these constraints to improve welfare outcomes.

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Effects of dietary supplementation with *Lactobacillus Plantarum* and *Yarrowia lipolytica* yeast on performance and welfare indicators in broilers

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The inclusion of probiotics and yeasts in broiler diets has been recently studied as alternative feed supplements, demonstrating benefits in performance, gut health, immune response and feed efficiency. This study evaluated the effects of dietary supplementation with *Lactobacillus plantarum* and *Yarrowia lipolytica* on growth performance and welfare in broilers. After a 13-day adaptation period, 108 Ross-308 broilers were randomly assigned to three dietary treatments; control diet (CON), diet supplemented with *Y. lipolytica* (YAR) and a diet supplemented with *L. plantarum* (LACT). The experimental period lasted 29 days, during which body weight gain, feed intake, feed conversion ratio, feather cleanliness, foot pad dermatitis and hock burn were assessed. Broilers fed the supplemented rations with YAR or LACT exhibited significantly higher body weights at days 27, 34 and 41 ($p=0.001$) and total feed intake ($p = 0.013$) compared to the control group. Early feed conversion ratio was improved in supplemented groups, although overall feed conversion ratio and body weight gain were not significantly affected ($p \geq 0.05$). Welfare assessment revealed improved feather cleanliness in YAR and LACT groups, with a higher proportion of birds exhibiting completely clean plumage ($p = 0.01$). However, no significant differences were observed in foot pad dermatitis or hock burn incidence. In conclusion, dietary inclusion of *Y. lipolytica* and *L. plantarum* improves growth performance and specific welfare indicators, especially feather cleanliness. These results support their use as functional feed additives in broiler production. This work was co-funded by the European Union's Horizon Europe Project 101136346 EUPAHW (SOA18, Task 4).

Ought to Report? Navigating Animal Abuse and Neglect in UK Veterinary Practice

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Animal abuse and neglect, as defined under the UK Animal Welfare Act (2006), involve causing unnecessary suffering or failing to provide for an animal's welfare needs. While veterinarians in some jurisdictions are legally required to report suspected contravention of welfare laws, UK veterinarians are not subject to mandatory reporting. Instead, the Royal College of Veterinary Surgeons Code of Professional Conduct permits disclosure of confidential information where animal welfare concerns justify doing so. Despite this professional discretion, underreporting of suspected abuse and neglect has been documented.

This study explored factors that influence reporting decisions among UK first-opinion small-animal veterinarians through reflexive thematic analysis of semi-structured interviews. Findings revealed that reporting decisions are shaped by a complex interaction of professional, practical, and moral considerations. Participants described balancing obligations to animal patients, clients, themselves, and the wider profession when deciding whether to escalate concerns. Perceived likelihood of a successful outcome, confidence in external agencies, and concerns about the consequences of reporting also influenced decision-making.

Veterinarians reported uncertainty regarding their scope of responsibility and societal expectations. Participants also demonstrated low levels of familiarity with animal welfare legislation and differing interpretations of what constitutes neglect. As opposed to animal abuse, definitions of neglect were mitigated by context, intent, and available owner resources.

These findings suggest that ambiguity surrounding professional obligations, legal frameworks, and societal expectations may contribute to reporting reluctance. This highlights a gap in veterinary education and professional guidance regarding animal welfare responsibilities, reporting processes, and ethical dimensions of intervention in suspected cases.

Farm animal welfare offences in Swedish courts

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In Sweden, knowledge of how animal welfare cases are handled through prosecution and judicial decisions remains limited, making it difficult to assess the predictability and legal certainty of animal welfare legislation in practice. The aim of this study was to map and analyse judgments from the general (criminal) courts concerning prosecutions for offences against the Animal Welfare Act and animal cruelty involving farm animals, to understand the circumstances under which animal keepers are convicted or acquitted. The material comprised 203 judgments issued during 2020–2025. Of these, 66% involved cattle, 24% sheep, and 10% pigs. The results showed that inadequate care of sick or injured animals was the most common animal welfare violation. In total, 269 individuals were prosecuted, of whom 88% denied the allegations. The explanations presented by the accused were grouped into the following themes: displacement of responsibility, life circumstances, normalization, lack of knowledge, and justification based on intentions. The most common evidence presented by the prosecution consisted of oral and/or written evidence from the County Administrative Board (supervisory authority for animal welfare). Additional evidence included statements from, for example, veterinarians and police, as well as photographic and video evidence. Of the prosecuted individuals, 81% were convicted and 19% acquitted. Day-fines (ranging from 140 to 3,850 euros) were the most common penalty, while imprisonment was imposed only seven times, with nine months being the longest sentence. The findings indicate that cases proceeding to prosecution most often result in convictions, suggesting that the evidence is generally considered sufficient.

Veterinarians as Assessors in the Pretrial Phase of Criminal Proceedings: An Empirical Legal Study

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It is well recognized that veterinarians have a duty as experts and responsible professionals to assist animal owners, caretakers, and policymakers in protecting and improving animal welfare. In many countries, such as in Finland, veterinarians are responsible to assist the police in preliminary investigations concerning veterinary issues. In addition, Finnish animal welfare legislation supervisory authorities have an obligation to report to the police if there is a reason to suspect that the welfare law has been violated. This results in a significant number of various levels suspicions of violations reaching the preliminary investigation authorities.

This research aims to gather an overview of the role of the veterinarians as assessors, to enhance the collaboration of authorities in addressing animal welfare issues effectively.

We reviewed 436 pretrial investigation reports in southern Finland, in three different police departments. Administrative reports done by official veterinarians were included in 145 cases. Number of statements of veterinarians, either oral or written, required by the police during the investigation were present in 128 cases. Statements of other than official veterinarians, such as pathologists and clinicians were included in 36 cases.

Our preliminary results show that police rely on assistance of veterinarians as experts during the preliminary investigation process. Thus, the role of the veterinarian in preliminary investigation is emphasized. Therefore, further research on the content of these veterinary statements is needed to enhance the co-operation and efficiency of these authorities.

A Study of the French Veterinary Code of Professional Conduct and the Ethical Dilemma between the Moral Duties towards the Animal and the Client

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The conflict between veterinarians' moral duties towards the animal and the client is amongst the most reported and prominent ones. It is therefore of utmost interest to study the Veterinary Code of Professional Conduct (VCPC) in relation to this conflict, especially as the French VCPC is currently under revision and such an analysis could help shape the new version of the Code.

Four researchers (TD, DR and two "lay persons" who own pets and are clients of a veterinary practice) independently carried out a deductive content analysis of the VCPC, classifying each sentence of the Code within the following categories: the duty to the animal, the duty to the client, both duties, or "not relevant". A consensus meeting made it possible to agree on the classification of all 216 sentences.

The results showed that there was ten times more text only dedicated to the moral duty towards the client than text dedicated only to the moral duty towards the animal. If the text relating to both duties is added to the portions of the text previously analysed, the portion of text describing the moral duty towards the client remains 2.5 times higher than the portion of text describing the moral duty towards the animal. The French VCPC focuses mainly on the moral duty to the client in comparison with England and Ireland which focus mainly on the moral duty to animals. On the contrary, Portugal and Denmark focus more than France on the moral duty to the clients.

What is 'fair' in animal welfare inspections? Understanding the animal keepers' perspectives

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Animal welfare inspections, including the interpretation and implementation of regulations, are important for ensuring animal welfare in practice. Previous research has shown that inspections may be perceived as stressful by animal keepers, partly due to concerns about inconsistent judgments and unfair treatment. Fairness and equality before the law are therefore important perspectives in the study of animal welfare inspections, yet limited research has explored how animal keepers themselves understand fairness in this context.

This study explored animal keepers' understandings of fairness in animal welfare inspections, particularly regarding consistency and inspectors' use of discretion. Data were collected through questionnaires (n = 316) and semi-structured interviews (n = 11) with Swedish animal keepers who had been subject to animal welfare inspections. Data were analysed using a mixed-methods convergent design.

Animal welfare inspections were generally viewed as legitimate and necessary. Respondents perceived inspectors as objective and competent and reported fair treatment during inspections. However, both personal experiences and accounts of unfair treatment of others appeared to influence perceptions of fairness more broadly. Fairness was associated both with consistency in the application of regulations and with inspectors' ability to make informed and well-grounded case-specific judgments. Similar cases were expected to be treated similarly, while assessments were also expected to be based on sufficient information, professional competence, and contextual understanding. Inspectors' communication and treatment during inspections seemed important for perceived fairness.

We conclude that animal keepers understand fairness in animal welfare inspections as dependent both on consistency in enforcement and on well-informed professional judgment.

Animal Welfare Concerns During Carbon Dioxide Stunning of Pigs and Chickens

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Carbon dioxide (CO₂) stunning is widely used in commercial slaughter systems for pigs and poultry because it permits high-throughput processing and reduced manual handling. However, growing scientific and public concern exists regarding the welfare impacts experienced prior to loss of consciousness. These reviews evaluated animal welfare and ethical concerns associated with CO₂ stunning in pigs (Mace & Knight 2025) and chickens (Mace & Knight 2026), while also considering alternative stunning methods. Published scientific literature, industry reports, and recent observational evidence were assessed to examine behavioural and physiological indicators of distress, including escape attempts, gasping, vocalisation, aversion, respiratory distress, and excitation responses. Evidence consistently demonstrated that exposure to high concentrations of CO₂ is aversive for both pigs and chickens, with animals commonly displaying signs indicative of fear, pain, and respiratory discomfort. In pigs, welfare concerns associated with alternative approaches such as argon or inert gas stunning were compared with those associated with CO₂ systems, including practical considerations related to commercial implementation. In poultry, recently released footage of commercial gas stunning systems was evaluated alongside existing scientific literature to assess the likely severity and duration of suffering experienced during gradual immersion into increasing CO₂ concentrations. Although alternative stunning systems may also present welfare challenges, evidence suggests some methods may reduce the intensity of aversive experiences associated with CO₂ exposure. These findings raise important ethical and welfare concerns regarding continued reliance on CO₂ stunning systems within commercial slaughter industries and support ongoing investigation into more humane alternatives and improved regulatory oversight.

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A Survey of Italian Veterinarians Expert in Animal-Assisted Services Part 1: the Welfare of Involved Cats and the Working Setting

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Animal-Assisted Services/Interventions (AAS/AAl) involving cats have been scarcely investigated. This study provides an overview of Italian veterinarians' perspective on the welfare of cats involved in AAS. In May 2026, an online survey was distributed to 212 Italian veterinarians certified for AAS; 81 responded.

Veterinarians were mainly middle-aged women (50.8 ± 9.7 years old; $N=64$), certified for more than 5 years (67.9%). Despite their training, only 42.0% ($N=34$) had evaluated cats for AAS, mainly due to lack of opportunity. Among veterinarians who had evaluated cats for AAS, 64.7% reported having considered at least one cat unsuitable, mainly for behavioural reasons (68.2%). Cats evaluated for suitability were mainly European shorthair/mixed-breed ($N=22$), Ragdoll ($N=13$) and Maine Coon ($N=8$). They were involved in AAS conducted with minors (64.7%), older adults (47.1%), and people with disabilities (41.2%) across different settings; only 11.8% were in the cat's home. Reported issues for cats during AAS included interactions with users (55.9%), unfamiliar settings (44.1%), and transportation (29.4%).

Overall, most respondents considered cats suitable only for specific AAS (64.7%) or depending on the characteristics of the individual cat (11.8%) and of the setting (8.8%), while 8.8% considered cats as generally unsuitable. In line with this, when asked which species was in their opinion the most suitable for AAS, 67.6% responded the dog, 11.8% the donkey, 5.9% the horse, and none selected the cat.

These preliminary data suggest that veterinarians have significant concerns about cat welfare in AAS, highlighting the need for further research facilitating selecting and monitoring procedures in this context.

A Survey of Italian Veterinarians Expert in Animal-Assisted Services Part 2: the Suitability Evaluation of Involved Cats

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Animal-Assisted Services (AAS) involving cats have been scarcely investigated. This study aimed at identifying the requirements assessed by veterinarians during the suitability evaluation of cats for AAS. In May 2026, an online survey was distributed to 212 Italian veterinarians certified in AAS; 81 responded.

Veterinarians were mainly middle-aged women (50.8±9.7 years old; N=64). Despite their training, 47 (58.0%) respondents had never assessed the suitability of a cat for AAS.

Among veterinarians who had evaluated cats for AAS (N=34), 52.9% collaborated with other professionals, whereas 47.1% performed the assessment by their own for behavioural (8.8%) or both behavioural and health parameters (38.2%). Regarding health requirements, 76.5% veterinarians considered parasite control (61.8% performed stool examinations), 64.7% considered vaccination status, 41.2% performed blood tests, and 58.8% added further examinations depending on the specific project, including dermatological examinations (26.5%).

In most cases (64.7%) they judged at least one cat not suitable, due to behavioural (38.2%), health/demographic (8.8%) or both (17.6%) reasons. Moreover, some respondents had changed their opinion over time about cats initially considered suitable, because of behavioural (11.8%), health (8.8%), or both (5.9%) issues.

The main obstacles for the evaluation process were the inability to reproduce AAS stimuli (67.6%), concerns about welfare (67.6%), and difficulty finding a suitable evaluation setting (35.3%).

Finally, the aptitudinal characteristics associated with cat's suitability for AAS were sociality (70.6%), adaptability/resilience (41.2%), curiosity (29.4%), and tolerance to transportation (20.6%).

Findings highlight the need to develop a feasible and reliable assessment tool, given the importance of selecting suitable cats.

Undervalued, underestimated, understudied and overdone: nail clipping in dogs and cats impacts welfare of patients and veterinary team members

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Nail clipping is frequently performed in veterinary primary care settings. This minor procedure can induce acute fear, anxiety and stress (FAS) in canine and feline patients, with possible development of long-term aversion to veterinary care.

We developed an online, mixed methods questionnaire to characterise the knowledge, attitudes and practices of Australian veterinary team members regarding nail clipping in companion animals.

Of valid responses received (n=242), most (71.9%) (n = 174/242) reported nail clipping multiple times per week. Dogs (72.4%, n = 165/228) and cats (59%, n = 134/227) frequently displayed FAS (score > 2/5) during nail clipping. Most respondents (79.8%, n = 193/242) reported being injured while performing nail clipping. Respondents reporting a negative attitude towards nail clipping were 5.5 times (95% CI = 1.7–17.8) more likely to report being injured during a nail clip than those with a positive attitude. Respondents reported feeling pressure to persevere with nail clipping when it was unnecessary or when animals exhibited severe FAS. Where used, pre-visit pharmaceuticals (PVPs) and sedation were reported to effectively reduce FAS, along with non-pharmaceutical interventions such as gentle handling and counter-conditioning. Respondents perceived nail-clipping to be a difficult, undervalued task.

This presents opportunities to refine nail clipping to improve the welfare of a large number of dogs and cats, as well as the safety of veterinary team members. Strategies discussed include client education around counter-conditioning, extended time for nail clipping appointments, improved training of veterinary team members, and judicious use of PVPs, sedation or anaesthesia where indicated.

Do Animals Think and Feel? Views on Animal Emotion and Cognition amongst children in Karamoja (Uganda).

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Pastoralist communities in Karamoja maintain close, multifaceted relationships with animals from early childhood, yet little is known about how children conceptualise animal emotions and cognitive abilities¹. This pilot study explored these conceptions among primary school students in Karamoja, Uganda, within the AICS All-In-One Project (AID 012590/04/1).

A cross-sectional study was conducted using a structured questionnaire administered to 326 students (mean age 13 ± 2 years) at Kasimery Primary School, Moroto, comprising yes/no questions, open-ended items, and matrix-type associations between species, emotions, and abilities. Data were analysed using descriptive statistics and generalised linear models (GLM).

Most children attributed a wide range of emotions to animals, with anger (79.6%) and happiness (78.2%) most frequently recognised and disgust least attributed (63.2%). The likelihood of recognising emotions differed significantly by emotion-type ($p < 0.001$) and species ($p = 0.004$), with significant interactions ($p = 0.022$). Species differences emerged for happiness, fear, and love towards other animals (all $p \leq 0.006$), with ruminants and chickens receiving higher attribution than dogs, suggesting children's emotional perceptions reflect each species' role in pastoral life rather than an abstract hierarchy. Students from pastoralist households showed lower animal emotion scores than those whose fathers were not farmers (69.4 ± 1.7 vs. 74.8 ± 1.7 ; $p = 0.025$). Significant interspecies differences also emerged for cognitive abilities, including water-finding, danger-recognition, and returning to the village alone (all $p < 0.001$).

These findings highlight the importance of culturally sensitive, One Health-oriented educational strategies, incorporating children's experiential knowledge into animal welfare and health interventions.

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Do Humans Have a Moral Obligation to Be Vegan? A Reflective Equilibrium Approach

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Animal welfare science is increasingly influenced by claims that humans have a moral obligation to adopt veganism. However, public and academic debates on this topic are frequently shaped by dichotomies that oversimplify complex ethical questions (eg, vegan versus carnivore; pro-animal versus pro-human). This presentation aimed to critically examine whether veganism constitutes a categorical moral imperative and to explore alternative ethical frameworks for human–animal relationships.

A reflective equilibrium approach grounded in Aristotelian syllogistic reasoning and contemporary applied ethics was used to analyse common arguments supporting veganism. The logical structure of key vegan arguments was dissected, particularly the claim that because animals are sentient and farming causes suffering, humans are morally obliged to avoid animal products. Additional analysis explored analogous reasoning applied to companion animal ownership, environmental ethics, conservation, and historical analogies between animal use and slavery.

The analysis identified several conceptual and epistemological weaknesses in abolitionist arguments. First, many arguments relied on false dichotomies and category errors that conflated opposition to animal suffering with opposition to all animal use. Second, conclusions favouring universal veganism frequently exceeded what the premises logically justified, as the same premises were also compatible with welfare reform, reduction of meat consumption, or context-dependent animal use. Third, analogies with slavery assumed, rather than demonstrated, moral equivalence between animals and human persons.

The presentation concludes that a categorical moral imperative for veganism would require the systematic rejection of human–animal relationships in nearly all their forms, an outcome that is neither ethically self-evident nor socially desirable.

Development and application of a tailored welfare assessment protocol for horses kept in groups at pasture

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Welfare assessment tools are generally designed for horses kept in individual housing systems. However, horses may also live in groups at pasture, which, despite being more natural, can compromise welfare. To date, no objective protocol exists for assessing welfare in this system.

This study aimed to develop and apply a tailored and feasible welfare protocol for horses kept in groups at pasture and create a scoring system that reflects their overall welfare.

The protocol included a group and individual level, with indicators classified as negative, welfare-alerting, or positive according to their welfare impact.

The protocol was applied to 339 horses across 32 groups and proved to be feasible and time-efficient for field use. Indicators of good welfare were present, including the absence of respiratory problems and diarrhoea, as well as positive indicators such as social proximity and synchronised group behaviours. Conversely, welfare hazards were also identified, including distance from water, poor pasture quality, and the presence of predators.

An elaborate scoring system was developed to describe the welfare level of the groups according to negative and positive welfare dimensions. For each dimension, the score results from a weighted (dependent on group size) combination of scores at individual and group levels. The score system provided a clear view of the welfare status of the groups, detecting the critical ones.

Overall, this study developed an objective, tailored and feasible protocol to assess the welfare of group-kept pasture horses and represented a first step towards systematically incorporating positive welfare indicators in the assessment.

Welfare of Stabled Horses in Portugal – Preliminary Results

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In Portugal, most horses are used for recreational purposes and housed in equestrian centres, yet their welfare remains undocumented. This study aimed to characterise housing conditions and assess horse welfare in equestrian centres across mainland Portugal using the AWIN protocol, complemented by behavioural and physiological indicators. Eighteen centres were randomly selected from the Portuguese Equestrian Federation database, one per district. Preliminary results from nine centres are presented.

A total of 87 horses (mean age 14 years; 5–28) were assessed, with an average evaluation time of 18 min 24 s. Most horses were used for sport (42.35%) or riding school activities (34.12%). Housing included indoor stalls (67.82%), outdoor stalls (9.20%), individual stalls with paddocks (12.64%), group stalls with paddocks (8.05%), and tie-stalls (1.15%). Mean stall area was 8.58 m², with 50% classified as unsatisfactory. Social contact was mainly limited to olfactory and visual interaction through grids (61.18%). Forage was provided three times daily to 58.33% of horses, while only 10.71% had *ad libitum* access; 65.88% experienced forage deprivation periods exceeding 10 hours. Free locomotion was available to 54.12% of horses, with only 34.69% occurring in groups.

Behavioural assessment showed that 66.67% of horses displayed at least one *Horse Grimace Scale* facial indicator, most commonly ears held back and tension above the eye. Qualitative Behavioural Assessment most frequently identified horses as “at ease” and “friendly”. These preliminary findings highlight welfare concerns regarding forage access, social contact, and free movement, while demonstrating the applicability of the AWIN protocol in Portuguese equestrian centres.

Smart monitoring of horse behaviour using non-invasive sensors: clinical applications and welfare implications

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Behavioural monitoring is increasingly recognized as a valuable tool for assessing equine health and welfare (Auer et al., 2021). However, traditional behavioural observations are often limited by short observation periods, observer presence, and environmental influences (Giannone et al., 2026). This work describes the practical application of sensor-based technologies for continuous behavioural monitoring in horses presented for clinical and welfare-related disorders. Two clinical cases were assessed using wearable sensors and complementary non-invasive monitoring tools. In Case 1, an 18-year-old KWPN mare used for show jumping lessons presented recurrent limb lesions and episodes of collapse. Behavioural monitoring was performed for 7 consecutive days using a triaxial accelerometer combined with video recordings. Data revealed only one short lying bout and confirmed multiple collapse episodes compatible with sleep deprivation syndrome. Environmental and management modifications were recommended, including improved bedding comfort and reduction of social stressors. Follow-up monitoring showed increased recumbency duration, although occasional collapse episodes persisted after disruption of routine during competitions.

In Case 2, an 18-month-old PRE stallion showed prolonged recumbency and difficulty in standing up without external stimulation. Sensor monitoring demonstrated excessively long lying bouts (exceeding six hours), associated with difficulties changing position and asymmetrical recumbency patterns.

These cases highlight the value of continuous behavioural monitoring through sensor technologies in identifying and managing clinically relevant welfare problems in horses. The integration of objective behavioural data with clinical assessment may improve diagnostic accuracy, support individualized management strategies, and contribute to better welfare outcomes.

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Pain-Related Expressive Change in Horses: A Novel Application of Qualitative Behaviour Assessment

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Objectives. Qualitative Behaviour Assessment (QBA), an established equine welfare method, is unvalidated for pain. This study tested whether a fixed-list QBA developed for pain detects expressive change across castration and recovery, shows adequate inter-rater agreement, and converges with independent ethogram coding.

Methods. Fifteen horses undergoing castration were filmed at five timepoints: baseline, surgery day, day after surgery, final analgesia day, and first post-analgesia day. Seventy-five 45-second clips, randomised and blinded to timepoint and study purpose, were scored against the fixed list by two equine veterinarians and three academics in behaviour and welfare. Concurrent 30-minute sessions were coded with a custom ethogram. Consensus scores were analysed using PCA; Kendall's W quantified inter-rater agreement; Friedman tests with FDR-corrected contrasts examined timepoint effects.

Results. Two components explained 71% of the variance: PC1 (high: calm, content; low: tense, anxious, distressed) and PC2 (arousal). Inter-rater agreement was moderate-to-good (Kendall's W: PC1 = 0.675, PC2 = 0.779). PC1 scores showed a large decrease on surgery day, with partial recovery thereafter (Friedman $p = 0.002$; T0 vs T1 $p = 0.013$, $r = 0.830$); PC2 was unaffected. Independent ethogram coding showed the same pattern; behaviours including ears back and head turning to wound were most marked on surgery day.

Conclusions. The PC1 decrease on surgery day, corroborated by independent ethogram coding, is consistent with fixed-list QBA detecting expressive change associated with acute surgical events in horses. Moderate-to-good inter-rater agreement supports QBA as a novel, feasible equine pain assessment method with potential to inform clinical pain recognition.

First reported use of Memantine as part of a multi-modal analgesic regime in horses

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Use of NMDA antagonists, in particular amantadine and memantine, to treat chronic pain in companion animals has increased over recent years. Whilst subcutaneous ketamine has anecdotally proven useful, there is no reported use of oral memantine in horses to treat chronic pain in the literature.

This case series describes the use of memantine in 5 horses. All 5 horses presented for problematic behaviors including 4 x primary problematic ridden behaviors, such as bucking, rearing or planting and one case of human directed aggression during management. Regarding signalment, there were 2 geldings and 3 mares, ages ranged from 5-21yrs and all cases were different breeds. Two cases presented with known pathology and pain was diagnosed by the pain and behavioural medicine clinic in the other 3. The sources of pathology varied but included: musculoskeletal system (n=5), gastrointestinal (n=3), dental pathology (n=2).

Alongside a behaviour modification plan, memantine was initiated orally at a dose of either 0.3mg/kg bid or 0.6mg/kg sid alongside a NSAID (either firocoxib or phenylbutazone) and one or more psychopharmaceuticals: Trazodone (n=2), amitriptyline (n=2) and/or fluoxetine (n=2).

Duration of treatment ranges from 1-7mths and 4/5 cases have demonstrated improvement. Due to the multimodal approach to treatment, efficacy of memantine cannot be inferred. However, there are no reported side effects in this case series.

In summary, memantine appears safe and may be efficacious for use in treating horses with chronic pain.

Posters

Assessment and treatment of a refractory car travel problem in an adult dog – case report

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Car travel problems are common with 23% to 43% of dogs reported to suffer from this (Cannas et al. 2009; Mariti et al., 2012; Mills and Mills, 2003). Problems may be related to nausea, excitability, anxiety, attention-seeking, or the need to eliminate (Gandia Estellés and Mills, 2006). However, no research has explored the potential role of pain, and very little is known about treatment interventions and their efficacy (Conder et al., 2008; Flint et al., 2024; Gandia Estellés and Mills, 2006; Landsberg et al. 2025; Ricci-Bonot, 2024).

A 6-year-old female neutered mixed breed dog presented with a 4 year history of car travel problems, including severe reluctance to enter the car, present since adoption. During travel, she remained quiet and stationary, with occasional lip licking and yawning. Previous desensitisation and counterconditioning were unsuccessful due to unavoidable travelling. Various situational anxiolytics (trazodone, gabapentinoids, dexmedetomidine, alprazolam) were trialled with no improvement, although they were effective in other situations, such as vet visits.

Previous investigations had revealed mild hip dysplasia and osteoarthritis, managed with memantine, CBD, ad-hoc grapiprant and physiotherapy.

A multifactorial aetiology, including chronic pain, low-grade nausea, and anticipatory anxiety about destination, was suspected. Behavioural management included temporary avoidance of car travel, introduction of predictable cues and distinct cars for “safe” and “scary” journeys, alongside desensitisation and counterconditioning with use of crate and steps. Dog appeasing pheromone (Zenidog Virbac), games, and scentwork around the car complemented the plan. The “safe” cue was used for positive destinations with travel time ≤30 minutes. For longer journeys, additional alprazolam, maropitant, and grapiprant were used, for potentially negative destinations, a “scary” cue and a different car were used.

This multimodal approach resulted in satisfactory resolution, with stability maintained.

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When Pain Triggers Panic: a multifactorial case of episodic running associated with inappropriate elimination in a domestic cat

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Inappropriate elimination is one of the most common behavioral complaints in feline practice; however, its underlying causes are often multifactorial and may reflect systemic stress-related processes rather than isolated behavioral disease. This case illustrates how chronic stress and pain can interact to produce complex, multisystemic clinical presentations in cats.

A 7-year-old spayed female domestic shorthair cat was presented for evaluation of episodic running behavior associated with defecation outside the litter box and signs of distress. Previous veterinary assessments were inconclusive with only partial improvement. The problem began following environmental changes and evolved into recurrent episodes characterized by sudden running, hiding, and defecation of small, hard fecal pellets. Subsequent clinical signs included postures suggestive of dysuria.

Diagnostic evaluation revealed findings compatible with urinary tract involvement (ureteritis) and mild ileocecal and jejunal lymphadenopathy suggestive of reactive or inflammatory processes. Early intervertebral disc degeneration at T13–L1 was also identified; however, no single condition fully explained the clinical presentation.

Medical management with multimodal analgesia (gabapentin, meloxicam, buprenorphine, and prazosin) and dietary adjustments resulted in improvement of urinary signs but persistence of episodic behavioral events. Behavioral assessment supported a multifactorial process involving pain-associated behavioral responses and stress related to a potentially traumatic event.

The multisystemic nature of the clinical signs, their episodic course, and their association with environmental stressors support the hypothesis of a dysregulated stress response contributing to concurrent urinary, gastrointestinal, and behavioral manifestations.

Early recognition of pain-related behavioral changes and an integrated, multidisciplinary approach are essential to improve outcomes in complex feline cases.

Relationship between Human–Animal Bond, Cognitive Bias and Welfare in Pet Rabbits (*Oryctolagus cuniculus*)

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The domestic rabbit (*Oryctolagus cuniculus*) is increasingly kept as a pet; however, its welfare and behavioural needs are often underestimated by guardians (McMahon and Wigham, 2020; Skovlund et al., 2023). This study aims to evaluate the influence of the human–animal bond on rabbit welfare, an area of growing interest in companion rabbit research (Dobos et al., 2023).

An online survey was conducted among rabbit guardians (n = 100), collecting data on management, behaviour, and interaction. The responses were analysed and composite indices were constructed to quantify welfare, bond quality, affiliative behaviours, and cognitive bias. The statistical analysis used Spearman correlations and chi-square tests.

The results showed a moderate and statistically significant positive correlation between bond quality and welfare ($\rho = 0.4$; $p < 0.001$), indicating that rabbits with a stronger relationship with their guardians display more behaviours associated with positive emotional states, such as affiliative behaviours and proximity-seeking, and fewer signs of stress. This is consistent with research linking positive human–animal relationships with improved welfare outcomes (Rault et al., 2020). In addition, a positive relationship was observed between welfare and cognitive bias ($\rho \approx 0.33$; $p < 0.001$), suggesting that individuals with higher welfare respond more optimistically to novel stimuli, in line with the use of cognitive bias as an indicator of animal emotion and welfare (Mendl et al., 2009).

These findings highlight the central role of the human–rabbit bond in emotional welfare and suggest that strengthening this bond may improve quality of life in the domestic environment.

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Evaluation of associations between owner presence and indicators of stress in dogs during a specialist-led investigation

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Veterinary examination has been associated with signs of stress and fear in some dogs. Recently Stellato et al. (2020) reported that owner presence during veterinary examinations has a positive effect. Whereas routine examinations are generally conducted with an owner present, it is common practice for animals to be moved for specialist-led investigation. The aim of this study was to evaluate the influence of owner presence on behavioural and physiologic indicators of stress (including salivary cortisol and chromogranin A) in dogs during echocardiographic examination.

A sample of privately owned dogs were recruited in a randomized, controlled study. Dogs underwent a standardized, video-recorded echocardiographic examination with or without their owner. Salivary cortisol and chromogranin A were collected pre and post visit. To assess the owner-dogs relationship owners were asked to complete a part of Cat/Dog-Owner Relationship Scale (C/DORS) scale (Riggio et al., 2021). A temperament score was assigned to each animal during echocardiography.

Forty-one dogs were enrolled (21M/20F) with median age of 9 years and weight of 18 kg; cortisol and chromogranin A were determined only in 21 dogs due to retrieve enough saliva. No differences were found between temperament score and owner-dogs relationship and owner presence; no cortisol and chromogranin A differences were found between groups and time collection (pre and post examination). Regarding behaviour the only significant difference was that dogs in the owner-present had a significant lower rate of bite ($p=0.02$).

Results suggested that, when practical, owners' presence during a specialist-led investigation could reduce risk for veterinarian.

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Development and Validation of a Short Form Dog Personality Questionnaire in Working and Companion Dogs

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Understanding canine personality is important for both behavioral research and the selection and training of working dogs. Jones (2008) developed five-factor model of canine personality, conceptualizing it through 5 dimensions: Fearfulness, Aggression Towards People, Aggression Towards Animals, Activity/Excitability, and Responsiveness to Training (RTT).

The aim of this study was to examine the factorial validity of the short version of the Dog Personality Questionnaire (DPQ), developed from Jones' framework.

The sample consisted of 123 dogs (62 females), comprising: police dogs (N = 35), search and rescue dogs (N = 26), assistance dogs (N = 23), and non-working pet dogs (N = 39). The groups did not differ in sex distribution or mean age. Dog personality was assessed by owners or dog handlers using a 15-item inventory, with three items per dimension. Respondents rated each item on a 7-point Likert scale ranging from 1 (completely disagree) to 7 (completely agree).

Principal Components Analysis with Promax rotation yielded a four-factor solution explaining 67.8% of the variance. The original two aggression dimensions merged into a single factor, while the remaining dimensions replicated the expected structure. Aggression was positively associated with Fearfulness and negatively with Activity/Excitability and RTT. Playfulness showed a positive relationship with RTT and a negative with Fearfulness. Police dogs exhibited a non-significant trend toward higher Aggression, Playfulness, and RTT, and lower Fearfulness. Pet dogs demonstrated significantly higher Fearfulness compared to police and rescue dogs.

The short-form DPQ demonstrated a largely stable factorial structure with some evidence of overlap between the aggression dimensions.

Key words: Dog Personality, DPQ, Police Dogs, Rescue dogs, Assistance Dogs

Cat Behaviour During Owner Absence: Preliminary Insights into Separation-Related Responses

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Separation anxiety syndrome has been poorly investigated in cats, whereas it is well documented and commonly reported in dogs. The syndrome includes behavioural and physiological reactions, mainly inappropriate elimination, vocalization, and destructive behaviour, occurring when the cat is separated from a preferred attachment figure (Schwartz, 2002; Schwartz, 2003; Vitale et al., 2019).

This study aimed to analyse cats' behaviour during owner absence, with particular attention to the identification of behavioural indicators of distress.

Sixty-four cats were video recorded while left home alone for 60 minutes. Owners completed a questionnaire including information on cats' characteristics, medical history, physical and social environment, and cats' behaviour when home alone. Twenty behavioural categories were defined to assess the duration and frequency of activities.

Cats had a mean age of 6.94 years, and most were European Shorthair (82.8%). The most frequently observed behaviour was resting (2312.48 ± 2165.98 s), followed by looking behaviour (203.24 ± 398.17 s) and grooming (137.18 ± 235.26 s). Lower durations were recorded for standing, walking, exploratory behaviour, play behaviour, and meowing, whereas hiding and scratching at the door were rarely observed. Among point events, sniffing was the most frequent behaviour (7.94 ± 10.677), followed by jumping, stretching, yawning, and lip licking.

Stress-related behaviours reported by owners were infrequent: vocalizations occurred in 9.4% of cats, whereas alopecic areas, gastrointestinal signs, and repetitive behaviours were reported less commonly.

These findings provide preliminary insights into cats' behaviour during owner absence and may contribute to a better understanding of separation anxiety syndrome in cats, supporting future investigations into feline separation-related problems.

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Temporary Decreased Olfactory Sense Due to Buspirone Use in Generalized Anxiety Dog - Case Report

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In humans, temporary olfactory alteration is a documented side effect of buspirone (Bristol-Myers Squibb, 2010). However, information regarding sensory side effects in dogs is lacking, which is a significant gap given the relevance of nose work for canine training. This report aims to document decreased scent perception during the first month of anxiolytic use. A 6-year-old dog (male German Pinscher) presented leash pulling, compulsive fabric nibbling, startle responses to novelty and dyspneic thoracic respiration, but no separation anxiety nor alteration in clinical exams; thus being diagnosed with generalized anxiety. While behavioral modification initially yielded results, the dog struggled with distractibility in the presence of different stimuli (e.g., car sound, other dogs) and progress stagnated after a month. Consequently, buspirone (0.5mg/kg BID; Simpson&Papich, 2003) was introduced. After a week, the dog, previously highly motivated by food, lost interest in olfactory exercises (e.g., food search in the dark for olfactory development, treats in front of him as delayed gratification for self-control), but ate normally during meals (i.e., same previous food at the same place and time with the same verbal command). His reaction as if no food was around during the exercises was confirmed with different treats. The nose work continued despite this apparent disinterest. Similarly to humans, the dog's interest in olfactory exercises returned to pre-treatment levels after four weeks of buspirone. This case demonstrates the importance of awareness of this side effect and maintaining stimulation in the presence of noticeable altered sensory processing during the anxiolytic adjustment phase in dogs.

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Early Health Detection, and One Health Assessment

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Background

In companion animal medicine, behavioural signals frequently precede detectable physiological changes — yet they can be overlooked between veterinary visits. Existing research on dogs, cats, rabbits, and horses has been conducted in controlled clinical or structured settings, without the goal of establishing individual naturalistic behavioural baselines where environmental stress confounds the data. Documenting behaviour across four species with profoundly different domestication histories offers a unique comparative window into what domestication has actually changed about companion animal behaviour. Animals in natural conditions, free from human routine and emotional dependency, will show us something true about health and behaviour.

Objective

The Companion Animal Observatory (CAO) proposes to establish the first expert-annotated natural behaviour database for domestic dogs, cats, rabbits, and horses observed in semi-naturalistic outdoor enclosures with minimal human contact, using the Animal Facial Action Coding System (AnimalFACS) and validated grimace scale descriptors. By documenting behaviour in the absence of caretaker routine, commands, and emotional dependency, the observatory provides a unique reference point for understanding the One Health dimension of human impact on companion animal behaviour.

Methods

Structured ethological focal animal sampling using DogFACS, CatFACS, and EquiFACS alongside the Feline Grimace Scale, Horse Grimace Scale, and Rabbit Grimace Scale. Individual baselines established through longitudinal observation of a founding cohort per species; sample size and observation duration are currently being determined. Expert-annotated observations and photographs constitute a labelled training dataset for species-specific AI behaviour classification models. Enclosure design grounded in wild counterpart habitat selection science — wolf and jackal ecology for canids, European wildcat microhabitat data for felids.

Expected Outcomes

First validated natural behaviour baseline for four companion animal species in semi-naturalistic outdoor conditions. Comparative domestication behaviour dataset across species with distinct evolutionary histories. Foundation for AI-assisted longitudinal health monitoring. European research collaborators and pilot partners are warmly invited to make contact.

Keywords: companion animals; natural behaviour; domestication; AnimalFACS; grimace scales; health monitoring; One Health; dogs; cats; rabbits; horses

Socio-Emotional Profile in Autism Spectrum Disorder-Like Dogs: Implications for Behavioral Medicine

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Objectives: This study reviews scientific evidence on social and sensory profiles in dogs compared to human Autism Spectrum Disorder (ASD) and discusses its utility as a conceptual framework for clinical evaluation.

Methods: A literature review was conducted across Scopus, PubMed, and Google Scholar to assess ASD-like behavioral and neurobiological factors in dogs. Thirteen relevant canine articles with defined methodologies and quantifiable measures were selected, excluding assistance or therapy dogs.

Results: Social orientation varies significantly among dogs when stimuli compete for attention, showing parallels with early human social attention. Some dogs struggle to ignore minor differences between similar stimuli, displaying reduced flexibility and lower generalization. Canine genetic models with mutations associated with human autism show alterations in early auditory and tactile processing alongside altered social interactions. Spontaneous repetitive phenotypes, like tail chasing in Bull Terriers, interfere with daily life, correlating with high activation, emotional regulation difficulties, and altered neuroendocrine stress markers. Furthermore, oxytocin is consistently linked to affiliation and social orientation; female dogs with Shank3 mutations exhibit reduced natural affiliative behaviors and oxytocin levels, which increase after intranasal oxytocin administration.

Conclusions: The results support continuous individual variability in social orientation, sensory processing, and behavioral rigidity in dogs. Evaluating these individual profiles enables precise clinical assessments and personalized therapeutic interventions to improve canine welfare. This comparative framework is proposed for veterinary behavioral medicine without assuming strict diagnostic equivalences

Exploring Differences in Animal Welfare Science Education: A Pilot Study Among Romanian, French-Division, and Bosnian Veterinary Students

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The aim of this study was to identify and analyse potential differences in animal welfare education among veterinary students originating from an EU country compared with those from a non-EU country, and from an institution accredited by the European Association of Establishments for Veterinary Education (EAEVE) versus one that is a candidate for EAEVE accreditation. The study was conducted between October 2024 and August 2025.

Data were collected using a Google Forms survey distributed to veterinary students from all years of study. Participation was voluntary and did not involve the collection of personal data, ensuring no risks related to data protection.

A total of 154 responses were obtained: 59 from Romanian students, 24 from French students studying in Romania, and 71 from students studying in Bosnia and Herzegovina. Preliminary results showed notable differences in the primary sources of information on animal welfare. Romanian students mainly reported educational institutions, starting from kindergarten (81.40%), while French students most frequently cited qualified professionals such as veterinarians (91.67%). In contrast, Bosnian students primarily identified social media as their main information source (71.83%).

Regarding challenges in promoting animal welfare, Romanian and French students identified convincing owners, farmers, the public, and veterinarians about the positive impact of animal welfare implementation as the main challenge (28.81% and 53.34%, respectively). Bosnian students considered improving animal welfare education a priority in their country (22.54%).

These findings provide initial insights into how educational environments shape veterinary students' perceptions of animal welfare in Eastern Europe and the Balkan region.

What we know about lying behaviour of domestic donkeys? Insights from a pilot study using triaxial accelerometers

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Lying behaviour is a key component of animal welfare; however, quantitative data on domestic donkeys are still limited (De Santis et al., 2021). This pilot study aimed to investigate lying behaviour in group-housed donkeys. Fifteen donkeys from 2 farms were enrolled (group-housed in paddock with a shelter, hay at libitum), including 10 females (66.7%), 3 geldings (20.0%), and 2 jacks (13.3%), with a mean age of 7 ± 5 years (2–16 years). Lying behaviour was continuously monitored for five days using triaxial accelerometers (MSR145-MSR Electronics GmbH, Switzerland) attached to the metacarpal left forelimb. Descriptive statistics (mean $\pm$ SD) were used to evaluate daily lying time, number and duration of lying bouts, and circadian distribution over a 24-h period. Mean daily lying time was 251.2 ± 154.6 min/day. Donkeys showed 7.5 ± 3.5 lying bouts/day, with a mean bout duration of 33.9 ± 9.6 min. Sex-related differences were limited: males showed slightly longer lying time (200.6 ± 178.1) and number of bouts (7.1 ± 3.3) than females (195.8 ± 89.4 min; 6.7 ± 3.3 bouts), whereas females showed longer bout duration (32.2 ± 5.3 vs 25.1 ± 15.5 min). Young donkeys (≤ 3 years) spent more time lying down (332.0 ± 182.2) and showed longer (197.4 ± 113.7) and more frequent lying bouts (6.8 ± 3.1) than adults. Lying behaviour followed a clear nocturnal pattern, with peaks between 2–5 and 21–23, while a minimal time was observed during daytime hours (8–11 and 16–19). These preliminary findings provide initial insights into the resting behaviour of donkeys under farm conditions and may contribute to highlight the potential value of this behaviour as a practical welfare indicator in domestic donkeys.

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When Expertise Lacks Authority: Governance Failure and Structural Welfare Risk in a Public Educational Farm

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Educational farms are increasingly used in France for public education and human–animal interaction, yet they operate without specific regulatory frameworks governing direct visitor–animal contact. This study presents a multi-species welfare audit conducted in a municipal educational farm, aiming to assess animal welfare, particularly during public sessions involving children.

Data were collected over five on-site visits (September 2023–February 2024) through an integrated organisational, welfare, and sanitary assessment based on the Five Domains model. Existing tools such as Welfare Quality® were not applicable due to the small-scale, multi-species context.

Findings revealed significant welfare impairments. During public sessions, animals exhibited increased vigilance, avoidance behaviours, reduced resting, and limited withdrawal capacity, consistent with negative visitor effect and stress induced by low predictability and lack of control over interactions (Bassett & Buchanan-Smith, 2007; Sherwen & Hemsworth, 2019). Outside these periods, behaviours normalised. Structural issues included inappropriate nutrition, lack of refuge areas, insufficient sanitary management, absence of preventive veterinary care. Moreover, all interactions were initiated by humans and often intrusive. Organisational deficiencies (unclear governance, lack of staff training, absence of protocols, and inadequate institutional expertise) were identified as central drivers of welfare degradation.

These conditions pose significant risks of injury and zoonotic transmission (Brugère-Picoux et al., 2025).

This case highlights the critical link between animal welfare and organisational functioning in public institutions. Improving welfare requires not only technical measures but also structural reforms in governance and accountability. These findings may extend beyond the local scale to similar facilities lacking appropriate oversight.

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Vocalization During Owner Absence Associated with Relapse of Immune-Mediated Polyarthritis in a Dog: A Case Report

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The objective of this report is to describe a case in which separation-related vocalizations were associated with pain secondary to chronic inflammatory disease.

A 10-year-old spayed female mixed-breed dog with a several-year history of immune-mediated polyarthritis, treated with a maintenance dose of prednisolone and pregabalin, was evaluated for howling during the owner's absence. Anxiety related behaviours such as increased locomotion, howling and panting were observed immediately after the owner's departure. The behavior developed after a household change in which a co-habiting dog and one of the owners moved out. The dog had never been alone before and the environmental changes were thought to have contributed to the emergence of a separation related problem.

Behavioral modification, environmental enrichment, fluoxetine (1 mg/kg) and situational trazodone (5 mg/kg) resulted in partial improvement. Although the dog could remain relaxed during some absences, intermittent howling occurred approximately three hours after owners departure, representing an unusual and inconsistent pattern.

Orthopedic reassessment revealed carpal joint effusion indicating relapse of immune-mediated polyarthritis despite ongoing therapy. Adjustment of prednisolone dosage led to complete resolution of vocalization, including during prolonged absences. Discontinuation of situational anxiolytics was also possible after modification of anti-inflammatory therapy.

This case illustrates how behavioral signs may function as early clinical indicators of pain and the importance of recognizing the bidirectional relationship between organic disease and behaviour. When presentation or treatment response deviates from expected progression, systematic medical reassessment is essential to prevent misdiagnosis and delayed therapeutic intervention.

Behavioural and Feeding-Management Factors Associated with Response Variability in Feline Weight-Loss Programs: Exploratory Findings from an Electronic Feeder Study

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Background: Behavioural and feeding-management factors may influence feline weight-loss outcomes. Food-seeking behaviour (“begging”) is commonly reported during caloric restriction and may negatively affect owner compliance and treatment response.

Objectives: To explore behavioural and feeding-management factors associated with heterogeneous responses during feline weight-loss programs, particularly begging behaviour, poor-response profiles, owner experience, and the potential role of an electronic feeding system.

Methods: Forty-four overweight or obese domestic cats (BCS > 6/9) participated in a controlled 13-week weight-loss study and were randomly allocated to a control group (n = 23) or an electronic feeder group (n = 21). Outcomes included percentage weight loss, owner-perceived success, veterinarian satisfaction, and owner-reported begging behaviour. Exploratory k-means cluster analysis identified weight-loss response profiles.

Results: Begging behaviour increased significantly from baseline to Week 8 (McNemar’s test, $p = 0.031$), followed by partial stabilization by Week 12. Cats that did not beg tended to show greater average weight loss than cats that begged. Greater owner-perceived success was associated with greater total weight loss ($p = 0.027$). Cluster analysis identified marked responders, moderate responders, and poor responders/weight gain profiles. Ad libitum feeding and higher feeding frequencies were associated with poor-response cluster membership ($p = 0.008$). The electronic feeder group showed fewer poor responders and lower variability in weekly weight-loss trajectories.

Conclusions: Weight-loss response in cats appears heterogeneous and influenced by behavioural and feeding-management factors. Preparing owners for increased food-seeking behaviour during the initial stages of caloric restriction may improve adherence and treatment outcome.

Venlafaxine Use in a Behavioural Rehabilitation Program for Shelter Cats: A Case Report

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Behavioral problems and impaired sociability toward humans are common in shelter-housed cats and may negatively affect welfare and adoption potential. Pharmacological options for feline behavioral disorders remain limited, and administration can be challenging in shelter environments. Venlafaxine, a serotonin–nor-epinephrine reuptake inhibitor widely used in human medicine, has recently gained interest in feline behavioral medicine due to its potential efficacy and possible ease of administration. This case report describes a behavior modification program combining venlafaxine treatment with environmental optimization strategies in eight shelter cats exhibiting impaired interspecific social interactions with humans. The program included oral venlafaxine administration together with environmental interventions aimed at reducing stress, addressing feline ethological and emotional needs, and promoting positive human–cat interactions. These interventions included structured play sessions and food-based positive reinforcement conducted by trained volunteers under controlled conditions. Behavioral monitoring was conducted through monthly assessments. During their stay in the shelter, the cats showed progressive improvements in social interactions with humans, including increased engagement in play and human interaction, resulting in the successful adoption of all eight cats within 20 months, with no post-adoption returns reported. Caregivers were carefully selected and informed about the cats' behavioral characteristics and rehabilitation program prior to adoption. The combination of environmental optimization and pharmacological support appeared to facilitate behavioral rehabilitation and promote positive social interactions. These preliminary observations suggest that a multimodal approach integrating venlafaxine administration with environmental optimization and structured human interaction may improve sociability, welfare, and adoption rates in shelter-housed cats with impaired human-directed social behavior.

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Use of Nutraceutical Supplements for Behavioural Problems in Dogs and Cats: A Descriptive Survey of Owners' Practices and Perceived Outcomes

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Behavioural disorders are common welfare concerns in companion animals, and nutraceuticals are increasingly used as supportive interventions despite limited evidence regarding owners' attitudes and perceived efficacy in veterinary behavioural medicine (Landsberg et al., 2013; Overall, 2013). This study aimed to investigate the use of nutraceutical supplements for behavioural problems in dogs and cats through an owner-based questionnaire.

A total of 59 owners completed the survey, including 40 dog owners and 19 cat owners. Most respondents were female (83.1%) and aged 45–64 years (45.8%). Approximately one-third (33.9%) reported using nutraceutical supplements for themselves.

Most dogs were aged 4–7 years (50.0%), and 42.5% were spayed females; 65.0% lived in a home environment with regular walks. The most frequently behavioural problems for which nutraceuticals were used, alone or in combination, were separation anxiety (67.5%) and fear-related behaviours (50.0%). Bach flower, α -casozepine, and mixed calming formulations mainly containing L-theanine, vitamin B1, and L-tryptophan were the most commonly used products (15.0% each).

Most cats were aged 4–7 years (47.4%) and lived exclusively indoors (68.4%) as single cats (52.6%). Nutraceuticals were mainly used for fear-related behaviours (47.4%) and inappropriate elimination (31.5%), either alone or in combination with other behavioural disturbances. Pheromone diffusers (36.8%) and formulations containing α -casozepine (10.5%) were the most commonly used products.

In both dogs and cats, nutraceuticals were prescribed mainly by veterinarians (approximately 60% of cases).

These preliminary findings suggest widespread owner-driven use of nutraceuticals for behavioural disorders in companion animals, highlighting the need for controlled efficacy studies.

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French Bulldog Ownership in the Maltese islands: Assessing Awareness, Health Issues, and BOAS Perceptions

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This study investigated owner awareness, perception, and attitudes toward health and welfare issues among French Bulldog owners in the Maltese Islands. Using a structured questionnaire distributed to 100 owners, the study explored demographic characteristics, motivations for breed choice, prior knowledge of health risks, prevalence of reported clinical conditions, and perceptions regarding Brachycephalic Obstructive Airway Syndrome (BOAS) and responsible breeding practices. Results showed that the main reasons for choosing a French Bulldog were personality and behaviour (52%), followed by appearance (32%). Before acquiring their dog, 72% of owners were aware of breathing problems associated with the breed. Awareness of specific conditions included narrow nostrils (63%), small airway/trachea (57%) and elongated soft palate (50%). Regarding health issues, 48% of owners reported allergies, 42% breathing problems, and 33% skin problems. Clinical signs associated with BOAS were also common, with 71% of respondents observing snoring during sleep, 55% heat intolerance, and 32% exercise intolerance. When compared to other breeds, 49% of respondents considered French Bulldogs to have a similar level of health, while 36% considered them less healthy. Compared to other French Bulldogs, 64% considered their own dog to be of average health. Despite these concerns, 65% of respondents stated that they would acquire another French Bulldog in the future. Additionally, 79% indicated that they would prefer a puppy from BOAS-tested parents. In conclusion, the results highlight the need for responsible breeding practices and greater promotion of BOAS testing to improve the health and welfare of the breed.

With or without a bit, what difference does it make to the horse?

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The objective of this study was to evaluate the influence of the bit on physiological, behavioral, and subjective indicators in ridden horses.

Eighteen horse-rider pairs performed the same dressage test once with the horse's usual bit [UB] and once with a bitless bridle [BL] in a randomly determined order. Each horse was fitted with an Equimètre® sensor and filmed using two cameras. Comparisons between UB and BL situations were performed using parametric or non-parametric tests depending on variables.

The heart rate was significantly higher in the UB group (101.4 ± 13.8 bpm vs. 96.5 ± 11.3 bpm; $p < 0.05$). UB horses spent more time with their heads behind the vertical ($16.3\% \pm 24.0$ vs. $2.1\% \pm 8.3$; $p < 0.01$). BL horses more often held their heads in an open position ($72.3\% \pm 28.5$ vs. $47.1\% \pm 34.9$) and their ears forward ($28.0\% \pm 17.3$ vs. $18.4\% \pm 17.2$). The stride length at trot was slightly greater in BL group ($2.1 \text{ m} \pm 0.2$ vs. $2.0 \text{ m} \pm 0.2$; $p < 0.05$). The riders' assessments showed no difference between the conditions. A dressage judge analyzed videos and awarded a higher performance score to UB group ($66.2 \pm 7.0\%$ vs. $62.7 \pm 8.0\%$; $p < 0.01$).

These results obtained on a small sample of amateur riders need to be confirmed in future studies. However, riding with a bit appears to increase physiological stimulation but offers a more stable posture; BL promotes a more relaxed expression but seems biomechanically less favorable.

Follow-up of an inter-ministerial working group aiming to define and formalize veterinary forensic medicine in France: focus on the anatomical pathology sector

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Veterinary forensic medicine is an emerging discipline in France, currently practiced mainly within the National Veterinary Schools (ENV) by veterinary anatomic pathologists. Although it remains relatively under-developed, the marked increase in reports of animal abuse has led to a rise in judicial proceedings. Law enforcement agencies are therefore increasingly confronted with situations requiring the intervention of a forensic veterinarian, making it essential to define and structure this still nascent profession in France. In order to better understand the challenges and needs of the discipline, a working group bringing together veterinary anatomic pathologists from the four ENV and the National Division for the Fight against Animal Maltreatment was established. Since 2023, it has been assessing the current state of veterinary forensic medicine in France, identifying major issues, and proposing areas for improvement, notably through the national harmonization of practices, clarification of roles, and the development of standardized documents, such as harmonized protocols and a standardized template report. The model of human forensic medicine, as well as the organizational frameworks in place in the United States and the United Kingdom, where the profession of forensic veterinarian is already established, also serves as a source of inspiration in France. Beyond its contribution to the justice system, veterinary forensic medicine is closely linked to human forensic medicine. The concept of “The Link” demonstrates that violence within a household is often global, affecting both animals and humans, thereby reinforcing the importance of developing this discipline.

High intellectual potential in dogs? A preliminary study to identify “cognitive gifted” dogs

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In humans, high Intellectual Potential (HIP) refers to a higher cognitive intelligence, in relation with superior cognitive functioning, often associated with specific emotional and behavioral characteristics. Being gifted is multidimensional and integrates intellectual, emotional, and motivational aspects. In dogs, some studies, particularly those on Gifted Word Learners (GWL; Fuggaza et al. 2022), suggest the existence of dogs displaying exceptional cognitive performances, although the existence of a “canine HIP trait” remains to our knowledge unproven.

We investigated whether this concept could be transposed to dogs, based on recent advances in animal cognition research. Junttila et al. (2021, 2022) behavioral tests were used to evaluate various cognitive abilities (memory, attention, reasoning, inhibitory control) in 30 adult dogs. Four tests were used: the detour test (spatial memory), the bowl test (visual working memory to find a treat under a bowl), the cylinder test (inhibitory control to find a treat in a transparent cylinder), and a counting test (auditory discrimination between one versus three treats in two bowls). The analyses revealed strong interindividual variability: some dogs showed particularly high learning speed and cognitive flexibility, especially in the detour and memory tests. Others demonstrated excellent inhibitory control, suggesting notable differences in problem-solving strategies. In particular, one female dog over-performed in the four tests.

This work opens new opportunities to take into account higher cognitive performances of some dogs, to better advise owners to adapt their environment and activities, explain the fast-learning abilities of some dogs, and potentially better select dogs for various tasks.

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Pain and problematic behaviour in horses: a retrospective analysis of clinical cases

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Pain is a common contributing factor to problematic behaviour (PB) in companion animals. However, there is currently limited work exploring this relationship in horses. The aim of this study was to investigate the prevalence of pain in cases presenting to The University of Edinburgh's Equine Behavioural Medicine Clinic. Retrospective analysis of n=47 new cases seen by the clinic over a 12mth period (01/01/2025 – 01/01/2026) was undertaken. Pain was suspected as a contributing motivational factor to the PB in 77% (n=36) of cases based upon clinical evaluation. Further veterinary investigation revealed a source of pain in 83% of suspected cases (n=30). Of the cases where pain was suspected but not confirmed, further veterinary investigation was not performed in 5/6 cases. Pain was most commonly localised to the musculoskeletal system alone (n=13, 43% of confirmed pain cases), followed by pain localised to an internal medicine condition(s) and the musculoskeletal system (n=9, 30% of confirmed pain cases). Logistic regression was performed, demonstrating that increasing age ($P=0.038$) and sex (mare>gelding, $p=0.038$) were risk factors for pain being diagnosed as a significant contributing factor; there was no association with breed/type. Study limitations include the small number of cases evaluated and that cases may have already undergone variable clinical workup prior to referral. Although further work is needed to determine the significance of painful conditions in problematic behaviour cases compared to other potential motivational factors, this study demonstrates that, nonetheless, practitioners should consider pain as a common contributing factor to problematic equine behaviour.

Veterinarians' Attitudes Toward Caregiver Engagement in Cat-Friendly Methods: A COM-B-Informed Secondary Mixed-Methods Analysis

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Background: Previous analyses showed that veterinarians felt capable of providing transport-related advice to reduce stress but perceived caregivers as having limited interest. However, attitudes toward caregiver engagement extend beyond transport and include perceived expectations, professional capability, and cost-benefit considerations.

Objectives: To examine sociodemographic associations with veterinarians' attitudes toward caregiver engagement in cat-friendly practices and to explore underlying behavioural components using the COM-B framework.

Methods: This secondary analysis used survey data from veterinarians in Germany, France, and Switzerland. A cumulative attitude score was derived from five items addressing perceived caregiver expectations, self-reported capability, and perceived benefits and time costs of providing guidance. Associations with sociodemographic variables were analysed using regression models. Free-text responses were examined using directed content analysis based on the COM-B model, with integration at the interpretation stage.

Results: Higher attitude scores, reflecting a more favourable orientation toward caregiver engagement, were positively associated with prior training in animal behaviour ($P = 0.008$), working in Cat Friendly or Fear Free accredited clinics ($P = 0.002$), and greater professional experience ($P = 0.004$). Working in larger clinics was associated with lower attitude scores ($P < 0.001$). Among 77 caregiver-related comments, most were coded under opportunity ($n = 55$) and motivation ($n = 48$), with minimal reference to capability ($n = 1$). Negative perceptions of caregiver receptiveness predominated.

Conclusions: Attitudes toward caregiver engagement appear primarily shaped by perceived social norms and reflective beliefs rather than capability. Addressing normative assumptions and cost-benefit perceptions may support broader adoption of caregiver-oriented cat-friendly practices.

Continuous Physiological Monitoring of Kennel-Housed Companion Dogs During Human–Dog Interactions: A Pilot Study

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Recent advances in wearable technologies may facilitate continuous physiological assessment in dogs under kennel conditions. This pilot study explored the use of an artificial intelligence-assisted collar device to describe physiological responses associated with different human–dog interaction contexts in two kennel-housed dogs. Dogs were continuously monitored over a 20-day period during routine daily activities, including passive human presence and additional walking sessions involving direct interaction with a familiar person at predefined times. Physiological variables included heart rate, respiratory rate, heart rate variability (HRV) and activity-related measures. HRV was considered a non-invasive indicator of autonomic regulation and animal welfare. Continuous monitoring suggested context-related variations in physiological activity and behavioural response patterns across daily routines. In these two dogs, no clear indications of marked physiological dysregulation or responses typically associated with severe stress were observed. Variations in physiological activation and activity indices were observed across contexts, although these findings should be interpreted cautiously given the preliminary nature of the study and the limited sample size. Overall, the findings support the feasibility of using wearable, artificial intelligence-assisted devices for minimally invasive continuous physiological monitoring in kennel-housed companion dogs and provide preliminary descriptive data for future welfare-related research under everyday management conditions.

Study of pain expression in riding school horses using a pain ethogram

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Animal welfare is an increasingly important issue, with the absence of pain, injury, and disease being a key component.

In this study, we focused on the presence of musculoskeletal pain in horses at riding schools and aimed to determine how successfully riders recognise and interpret behaviours indicating pain. We also investigated whether factors such as general education, equestrian education, years of experience, and the rider's current well-being influence the ability to recognise these behaviours more accurately.

The study was conducted in three riding schools, where we examined signs of pain expression in 38 horses. Pain-related behaviours were assessed using Dr Sue Dyson's pain ethogram, which comprises 24 characteristic behaviours. The presence of eight or more behaviours was considered indicative of musculoskeletal pain. Facial expressions were assessed on site, while other behaviours were assessed by video recording. After the riding lesson, the riders completed a questionnaire. The first part of the questionnaire included basic information about the riders, their experience, and training, while the second part asked them to name behaviours they had observed while riding.

Results showed that 60.5% of horses displayed signs consistent with musculoskeletal pain. Although riders identified some pain-related behaviours better than chance, they generally failed to associate them with pain, instead attributing them to disobedience, mood, or bad habits. General education, equestrian education, riding experience, and current well-being did not significantly improve the recognition of pain-related behaviors.

Fast, Feasible, Defensible: Inspection-Ready Indicators for Dairy Cows' Ability to Rest

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New Finnish animal welfare legislation requires that farmed animals can meet key behavioural needs, including adequate rest. Translating welfare science into official inspection tools is challenging when indicators must be practicable on farm and legally defensible. We developed a process to screen and field-test indicators of dairy cows' ability to meet lying needs in loose-housing systems, focusing on feasibility, interpretability, and robustness to situational variation. For to do that, an expert panel (n=7) selected 36/45 candidate indicators, which were rated in a workshop with herd-health veterinarians and official animal welfare inspectors (n=30; Likert 1–5). Indicators with strong agreement ($\geq 3/5$) were then tested on farm by a multidisciplinary group (students and expert panel members, n=6). The expert panel subsequently analysed the findings. Assessment was context-dependent: single indicators rarely supported firm conclusions, whereas combining complementary observations improved judgement. Participants prioritised animal-based indicators over detailed resource measurements. Practical indicators of unmet lying need included a high proportion of cows ruminating while standing, severe lesions, and marked hindquarter or tail dirtiness. Potential indicators supporting adequate rest included fluent cow traffic and good air quality. Time-consuming stall and bedding measurements were mainly useful for explaining or confirming problems. Legally defined overstocking should be assessed by comparing the number of animals with the number of available lying places. In the next phase, we will focus on the most severe animal-level findings, reflecting the enforcement aims of official inspections (vs advisory herd-health visits). This refined, primarily animal-based indicator set will be field-tested with official animal welfare inspectors.

Behavioural and health outcomes in dogs originating from commercial breeding establishments – a case report

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Objectives: Dogs originating from commercial breeding establishments are believed at increased risk of behavioural and medical problems due to careless breeding. The presented cases aims to illustrate the complex interaction between early-life conditions, health status, and behavioural outcomes in two affected dogs.

Methods: A retrospective case report was conducted on two Labrador-type dogs originating from commercial breeding establishments, presenting with behavioural and medical problems. Both dogs underwent comprehensive behavioural assessment and received multimodal treatment, including behaviour modification, environmental management, and veterinary care addressing concurrent medical conditions.

Results: Both dogs had early-onset fear-related behaviours, including hypervigilance, impaired coping, and persistent maladaptive responses to environmental stimuli. Medical comorbidities were identified in both dogs and were considered likely contributing factors to the severity and persistence of behavioural pathology. Despite prolonged and structured intervention, improvement remained limited. Both dogs continued to show significant behavioural impairment, resulting in an overall poor long-term prognosis.

Conclusions: These cases illustrate the complex interaction of careless commercial breeding activities, early-life adversity, and ongoing health and behavioural problems. International legislation and better reinforcement on commercial dog breeding establishments, are necessary to prevent welfare and health problems in this population of dogs of dubious origin.

Assessing Heart Rate Variability in Multiparous Holstein Cows Before and After Calving

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Heart rate variability (HRV) provides a non-invasive measure of autonomic nervous system activity and may be useful for assessing physiological stress in transition dairy cows. This study investigated changes in HRV around calving and examined associations with environmental, cow- and calf-level characteristics.

HRV was measured opportunistically in 134 multiparous Holstein cows on a commercial dairy farm between 10 days before and 7 days after calving using wearable heart rate monitors. Time-domain, frequency-domain and non-linear HRV parameters were analyzed. Environmental conditions, cow- and calf- characteristics and transition disease data were also recorded. Linear mixed-effects models were used to assess associations between HRV parameters and explanatory variables.

Heart rate increased as calving approached and peaked 1.39 days before parturition. Root mean square of successive differences between heartbeats and standard deviation 1, indicators of parasympathetic activity, showed quadratic relationships with days relative to calving, reaching minimum values near calving. Standard deviation 2 also showed a quadratic association, whereas the standard deviation 2/ standard deviation 1 ratio declined linearly throughout the study period. These findings indicate reduced HRV and increased physiological stress around calving.

Carrying twins, dairy-sired calves and transition disease were associated with lower HRV and higher heart rate suggestive of increased stress. Increased temperature-humidity index was negatively associated with high frequency and positively associated with low frequency/high frequency ratio. Longer time spent in the close-up pen was associated with higher HRV.

These findings support the use of HRV as a welfare-related indicator of physiological stress during the transition period in dairy cows. 2026 Abstract ESVCE conference.

Abstract: Preventing behavior and welfare problems in parrots requires acknowledging their needs as non-domesticated, highly intelligent prey animals with advanced cognitive abilities and social behaviors. Proper housing, nutrition, enrichment, and care are essential, along with opportunities to spend time outside the cage and outdoors. Climate control must be adapted to the species. It is important not to underestimate parrots' sensitivity to human body language and attitudes, or to overlook the significance of lack of privacy as a serious stress factor. Ensuring that parrots are approached and treated with respect—thereby fostering mutual respect and mutual trust—is essential. When parrots are not tame or do not feel comfortable in the presence of their caretaker, behavior and welfare issues are predictable. A 5-step behavioral protocol will be discussed developed to reduce fear and stress, foster mutual respect and mutual trust, and shape desired behavior by acknowledging parrots as intelligent prey animals. Definitions of normal-, undesired-, desired-, enforced-, and displacement behavior provide tools to understand and manage parrot behavior as well as our behavior. Displacement behavior can be used to prevent and resolve conflicts. The concepts are based on ethology and making it possible to cross the boundaries between human animals and non-human animals.

Keywords: Prevention, behavior, welfare, captivity related problems

Vitamin E and selenium concentrations of wild donkeys and their diets in the extreme desert ecosystem of Death Valley, California, versus captive donkeys

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Vitamin E and selenium are micronutrients that play key roles in metabolic functions and anti-oxidant defense, directly influencing equid health (Finno & McKenzie, 2025). There are no published reference intervals for concentrations of these micronutrients in healthy donkeys. We compared serum vitamin E and whole blood selenium concentrations in wild, recently captured donkeys with concentrations in donkeys managed in captivity for at least half a year. We analyzed the diet of wild donkey herds using next-generation sequencing of fecal samples. We conducted a cross-sectional study of 113 donkeys from Saline Valley and Butte Valley in Death Valley National Park, and captive donkeys from Davis, CA, and San Angelo, TX. Wild donkeys had significantly higher vitamin E concentrations ($p < 0.001$, difference = 180 $\mu\text{g/dL}$, CI = 132-228 $\mu\text{g/dL}$, Tukey multiple comparisons of means test). Captive donkeys, had significantly higher selenium concentrations ($p < 0.001$, difference = 4.97 $\mu\text{g/dL}$, 95% CI = 3.51-6.43 $\mu\text{g/dL}$, Tukey multiple comparisons of means test). Reference intervals were established for these micronutrients in wild donkeys. The vitamin E reference range for wild female donkeys was 211-754 $\mu\text{g/dL}$ and for wild male donkeys was 164-780 $\mu\text{g/dL}$; the selenium reference range for wild female donkeys was 8-21 $\mu\text{g/dL}$ and for wild male donkeys was 12-26 $\mu\text{g/dL}$. The fecal analysis found mixed feeding behavior with both grazing and browsing elements. This study characterizes the dynamics of vitamin E and selenium concentrations in wild donkeys from Death Valley compared to captive populations, establishing species-specific reference intervals to enhance their management.

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Promotion of dairy cattle welfare – cooperation among stakeholders in Slovenia

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Ensuring dairy cattle welfare is essential for animal health, longevity and productivity, while also becoming increasingly important for consumers and the dairy industry. To promote high welfare standards and showcase good farming practices, dairy Ljubljanske mlekarne (Lactalis) launched the annual “The Best Barn” competition in 2023 for its milk suppliers.

An expert jury composed of representatives from the Veterinary and Biotechnical Faculties of the University of Ljubljana, Ljubljanske mlekarne and the agricultural newspaper Kmečki glas visited all participating farms. The assessment focused on housing conditions, barn design and equipment, cleanliness, comfort, and the welfare of all cattle categories, from calves to dairy cows. Animal condition, behaviour, cleanliness, injuries, lameness and management practices were also evaluated.

The overall welfare of animals on each farm was the key criterion in the final evaluation. While participating farms generally demonstrated good husbandry standards, the most common shortcomings were related to housing conditions for calves and young stock, and insufficient space for dairy cows.

The highest-rated farm received the “The Best Barn” award, while additional categories in different years recognized excellence in sustainability, innovation and young animal housing. A public voting campaign also selected the winner of the “Voice of the People” award.

All participating farms were promoted through Kmečki glas and social media channels, followed by a formal award ceremony. The competition attracted significant media attention and became a valued recognition among farmers. Overall, “The Best Barn” has proven to be an effective initiative for promoting animal welfare and encouraging the adoption of best practices in dairy farming.

Growth of neonatal Norwegian Red calves managed with different social and feeding opportunities

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There is increasing evidence that pre-weaned dairy calves benefit from high milk allowances in social environments, yet we know less about how such practices affect the growth of neonatal calves. Calves, in equal groups of 6 in four batches, were enrolled into treatments: minimal Norwegian standards (MIN, n=24, cow-calf separation at birth, 2.4 m² individual pens, 7L milk/d), peer contact (PEER, n=24, cow-calf separation at birth, 23.1 m², ad libitum milk 4x1h/d), or cow-calf contact (CCC, n=30, 16.0 m² calving pen, whole-day dam contact, milk from suckling). Proportions of female calves were 42%, 52% and 71% for MIN, PEER and CCC, respectively. Within 30 min of calving, all received 4L colostrum. During the study period (first three d after birth), calf body weights (at birth and then at 10:00 AM for d1-3) and calf milk intake (MIN and PEER) were registered. A mixed effects model evaluated the effect of treatment on ADG while controlling for d, batch, and sex and including calf as a repeated measure. The mean ($\pm$ SD) birthweight (39.8 kg (5.11)) was similar across treatments ($F(2, 76)=1.45$, $P=0.241$). The ADG intercept was 1.52 kg (95% CI 0.67-2.38). Growth did not vary with treatment ($P=0.364$), nor calf sex ($P=0.689$) but compared to d1, d2 ADG was lower (-1.8 kg, $P=0.002$). Compared to MIN calves, PEER calves had a lower ADG at d3 (-2.2 kg, $P=0.016$). Day 2 may be critical for calf development, thus caretakers may need to provide extra attention.

Human–Dog Relationship in the Context of Dog Abandonment Experiences: A Survey Study in Serbia

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Dog abandonment represents an important animal welfare and public health issue in Serbia. Therefore, this study aimed to examine associations between abandonment-related experiences, attitudes toward dogs, and perceptions of responsible ownership.

A survey was conducted among 640 citizens of the Republic of Serbia in 2026. The questionnaire included socio-demographic data, dog abandonment experiences, and Likert-scale statements assessing perceptions of the human-dog relationship. Descriptive statistics were calculated, while associations between abandonment-related experiences and perceptions of the human-dog relationship were examined using Spearman's rank correlation coefficient. Differences between respondent groups were additionally assessed using the Kruskal-Wallis test.

Respondents generally expressed positive attitudes toward dogs, particularly agreeing that dogs are sentient beings capable of feeling and suffering, can form strong emotional bonds with humans, and represent an important source of companionship and emotional support. Spearman correlation analysis revealed statistically significant, although weak, associations between abandonment-related experiences and attitudes toward dogs. Direct experiences of dog abandonment were negatively associated with perceiving dogs as emotionally significant companions, perceiving dog loss as highly stressful, and agreeing that owners should adapt their lifestyle to a dog's needs. In contrast, helping abandoned dogs was positively associated with stronger perceptions of owner responsibility and emotional attachment to dogs. Current dog owners also showed stronger emotional attachment compared to non-owners. Experiences related to dog abandonment appear to influence perceptions of the human–dog relationship and responsible ownership.

Understanding how abandonment-related experiences shape the human–dog bond may be important for the development of effective animal welfare and abandonment prevention strategies.

Keywords: human-dog relationship, experiences of dog abandonment, responsible ownership

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WelFarmers – Collaborative project with the aim to improve pig welfare across the European Union

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The European animal welfare regulation is currently under review to improve housing and management of pigs. However, resilience of pig production systems depends on identifying welfare improvements that are not only scientifically sound but also practically and economically feasible under commercial conditions. Structured, multi-country evidence of such implementable practices remains limited.

The WelFarmers project (welfarmers.com), funded by Horizon Europe, is a unique collaboration between pig producers, researchers, advisors, and veterinarians across 8 European countries, representing more than 50 % of the pig herd across the EU.

Two rounds of good practice collection were conducted across four priority themes: loose housing of lactating sows; production of pigs with undocked tails; pain mitigation in castration / production of entire or immunocastrated males; and space allowance & flooring for growers and finishers.

A total of 200 submitted practices were evaluated using a structured multi-criteria scoring system (0-5 scale) assessing technical quality, impact, and probability of successful implementation across welfare, economic and environmental dimensions. Through voting by stakeholders and experts in pig production and welfare, a final 24 winning practices were selected. The selected practices are being documented and presented through technical summaries, visual media and virtual farm demonstrations to facilitate knowledge transfer and uptake across the European pig sector.

High-ranking practices demonstrated that welfare-oriented management and housing adaptations can be integrated into existing commercial systems without compromising operational feasibility. The identified practices provide evidence-based, field-validated examples to support resilient pig production systems capable of adapting to evolving societal and regulatory expectations.

The association between dopamine receptor D4 gene polymorphism and personality traits in Holstein-Friesian cattle

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Understanding the genetic basis of behavior in dairy cattle is essential for developing sustainable breeding strategies and improving herd management. Behavioral differences linked to coping styles can influence animal welfare, health, reproductive performance, and adaptability to intensive farming systems. These traits are increasingly recognised as having a genetic component. This study examined the relationship between polymorphisms of the dopamine D4 receptor (DRD4) gene and personality traits associated with coping behavior in Holstein-Friesian heifers.

A total of 82 non-lactating pregnant Holstein-Friesian heifers were subjected to behavioral testing, including assessments of approachability, fear of humans, responses to novel objects, impulsivity, and agonistic behaviour. Blood samples were collected for DRD4 genotyping, focusing on a G/T substitution at position 140. Principal component analysis (PCA) was applied to evaluate associations between genotype and behavioral characteristics.

PCR amplification was successful in 80 animals, revealing three DRD4 genotypes: GG (29), GT (36), and TT (15). The groups did not differ significantly in age, body weight, body condition score, or pregnancy stage. PCA identified two principal components, with the first explaining most of the behavioral variation. Traits contributing most strongly to this component were novelty-seeking, aggressiveness, and impulsivity, while the second component was mainly associated with fearfulness and immobility.

The TT genotype was clearly separated from GG and GT genotypes, indicating greater novelty-seeking behavior and higher aggressiveness. These findings demonstrate that DRD4 polymorphisms are associated with behavioral variation and coping styles in dairy cattle, underscoring the potential of genetic tools to improve animal welfare and productivity.

Behavioural Responses and Enrichment Effects in Captive Non-Domestic Felids

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Animal welfare, encompassing both physical and psychological well-being, is a central priority in modern zoological institutions. Accordingly, institutions housing non-domestic felids strive to provide environments that meet their ethological needs. This study aimed to present an overview of behavioural health concerns and their management in European Association of Zoos and Aquaria-accredited institutions.

Behavioural parameters and their associations with environmental and management factors were assessed in 31 adult animals from eight institutions using a twenty-question survey, distributed to zoo veterinarians via convenience sampling (ongoing). The cohort included 24 *Panthera* spp. (15 males, 9 females) and 7 *Acinonyx jubatus* (6 males, 1 female).

Fear-related behaviours were observed in 22/31 animals, avoidance behaviours in 12/31, and abnormal repetitive behaviours (ARBs) in 10/31.

Enrichment was significantly associated with reduced ARBs ($p = 0.006$) and avoidance behaviours ($p = 0.015$), independently of frequency, while no association was found with fear-related behaviours. Males exhibited more ARBs than females ($p = 0.01$), although sex distribution was uneven. No associations were detected with husbandry or health status.

Management strategies included environmental and behavioural interventions while the use of psychopharmaceuticals was not reported.

The absence of an association between enrichment and fear-related behaviours despite their high prevalence, suggests that fear responses might be driven by more persistent or context-specific stressors compared to avoidance behaviours and ARBs. Similar patterns are described in domestic cats in clinical settings, indicating potential parallels warranting further investigation. These preliminary findings highlight the need for targeted, context-specific management of fear-related behaviours in captive non-domestic felids.

The Role of Sanitation Procedures in Broiler Health and Welfare on Farms

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Sanitation procedures represent a key biosecurity tool in commercial broiler production and can significantly influence flock health and welfare. Properly performed sanitation reduces environmental infection pressure associated with increased morbidity, impaired feed conversion, higher carcass condemnation rates, and mortality. Effective sanitation requires regular monitoring of sanitation efficiency and strict compliance with sanitation protocols.

The aim of this study was to evaluate the effect of sanitation efficiency on broiler health using rapid detection methods and plate cultivation. The obtained results were compared with mortality and carcass condemnation rates in broiler houses.

Monitoring was performed in two commercial broiler houses with identical environmental conditions and a capacity of 47,000 ROSS broilers each. Samples were collected from drinkers, concrete walls, and metal wall surfaces (100 cm²) before sanitation (BS) and after sanitation (AS). A mobile flow cytometer (MFC) was used for the detection of viable bacterial cells (IC), and the results were supplemented by cultivation methods (CFU). Statistical analysis was performed using Student's t-test, Wilcoxon test, and chi-square test.

MFC results showed that the highest residual contamination after sanitation was detected on drinkers (5.99 log IC). A significant reduction of IC (AS) was confirmed at all monitored sites ($p < 0.05$); however, sanitation efficiency remained low (21.07–30.59%). Cultivation methods confirmed persistent enterococcal contamination (1.46–2.52 log CFU). Following revision of the sanitation program, mortality significantly decreased ($p < 0.01$) by 69.36–76.22%. Carcass condemnation rates were also reduced by 63.42–70.33%. The results confirm the importance of effective sanitation procedures for broiler health and welfare.

Consumer Acceptance of Sustainable Diets for Dogs and Cats: Surveys of Companion Animal Guardians

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Interest in more sustainable companion animal diets is increasing because of concerns about the environmental and animal welfare impacts of conventional or raw meat-based pet foods. This study investigated consumer acceptance of sustainable diets for dogs and cats, including cultivated meat-, vegetarian-, vegan-, and microbial protein-based foods. Surveys were conducted of 2,639 dog guardians (Mace et al. 2025a) and 1,536 cat guardians (Mace et al. 2025a) internationally. Data were collected regarding current feeding practices, determinants of pet food purchasing decisions, acceptance of more sustainable dietary alternatives, and sources of dietary information used. Most (dogs – 84%, cats – 89%) pet guardians currently fed conventional or raw meat-based diets. However, substantial proportions (dogs – 43%, cats – 51%) considered at least one more sustainable alternative acceptable. Cultivated meat-based diets were the most popular alternative for both dogs (24%) and cats (33%), followed by vegetarian (dogs – 17%, cats – 14%) and vegan (dogs – 13%, cats – 18%) diets. Acceptance of sustainable diets was strongly associated with education level and guardians' own dietary choices and ethical concerns regarding animal welfare and environmental sustainability. Nutritional soundness and good pet health outcomes were consistently identified as the most important determinants influencing purchasing acceptance of alternative diets. Information sources commonly used included labels/packaging, scientific literature, and business webpages. Veterinary staff were less trusted as reliable sources of dietary advice by guardians feeding unconventional diets. These findings demonstrate growing openness toward more sustainable pet diets, particularly when products are nutritionally sound, good for pet health, and offer environmental or farmed animal welfare benefits.

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Evaluation of Welfare Conditions in Cold-Blooded and Warm-Blooded Horse Stables: Comparing Owners' Perceptions with Observational Assessments

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Assessment of animal welfare requires the integration of objective welfare indicators with owners' perceptions to identify potential discrepancies between management practices and actual welfare outcomes. This study evaluated welfare conditions in stables housing cold-blooded and warm-blooded horses in Slovenia by comparing owners' self-assessments of the importance and adequacy of welfare parameters with structured observational evaluations conducted by veterinarians. Welfare was assessed across five domains: general status, animal behaviour, health status, living conditions, and environmental conditions. A harmonised owner questionnaire and a standardised welfare assessment protocol were used to ensure consistency in data collection.

The results revealed statistically significant differences between owners' perceptions and observed welfare conditions across all assessed domains. The greatest discrepancies were found in environmental and housing conditions, particularly regarding dust accumulation, ammonia odour, and thermal comfort within stables. Overall, owners evaluated welfare conditions more favourably than indicated by the observational assessments. Participation in professional education and training programmes was associated with improved welfare outcomes and more accurate owner evaluations, whereas years of experience alone showed no meaningful relationship with observed welfare conditions. Differences between cold-blooded and warm-blooded horse stables were most evident in the environmental domain, reflecting variations in housing systems and management practices.

These findings suggest that owner perception alone is insufficient for reliable evaluation of equine welfare. The results highlight the importance of implementing structured welfare assessment protocols and targeted educational interventions to improve horse welfare, particularly regarding stable environmental conditions.

Concurrent gastrointestinal signs in dogs referred for behavioural consultation: a retrospective clinical study

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Growing evidence supports bidirectional gut–brain interactions in dogs, with intestinal microbiota influencing behaviour and behavioural states affecting gastrointestinal (GI) function (Albright and Haug, 2026). GI discomfort may contribute to behavioural manifestations, although these comorbidities require further investigation (Ludvigsson et al., 2026; Crisante et al., 2025).

Clinical records of dogs evaluated during behavioural consultations by an ECAWBM Behavioural Medicine Resident between April 2024 and July 2025 were retrospectively reviewed. Extracted data included signalment, behavioural complaints, feeding behaviour, concurrent clinical conditions, GI manifestations, symptom patterns, and reported treatment responses. GI signs were classified as major (vomiting and diarrhoea) or minor (repetitive licking behaviours, flatulence, borborygmi, grass eating, polyphagia, and pica). Behavioural complaints were categorised as anxiety/fear-related disorders, reactivity/aggressive behaviours, separation-related problems, hyperarousal/agitation, and abnormal repetitive behaviours.

Among 107 cases (3–168 months; median=36), 27 dogs (25.2%; 7–84 months; median=36) showed caregiver-reported GI signs or histories suggestive of gastrointestinal involvement. Reported signs comprised vomiting, diarrhoea, grass eating, increased intestinal borborygmi, repetitive licking behaviours, polyphagia, and pica. Manifestations were described as recurrent and stress-exacerbated, but relied mainly on caregiver reports and were not consistently investigated through specialist gastroenterological consultation. Major GI signs were identified in 11.1% of GI-positive dogs, whereas minor signs suggestive of chronic GI discomfort were identified in 18.5%. Behavioural diagnoses mainly comprised anxiety/fear-related disorders (82.8%), hyperarousal/agitation (48.3%), reactivity/aggression (37.9%), and separation-related problems (34.5%).

The co-occurrence of GI and behavioural signs supports the need for an integrated multidisciplinary approach in clinical practice to improve animal welfare.

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Comparative Analysis of Hip Scores in Golden Doodles and Labradoodles and Their Purebred Origins

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The rising popularity of designer dog breeds in the UK has been accompanied by claims of improved health and welfare due to hybrid vigour, including a presumed reduced risk of inherited disorders seen in their purebred progenitors. However, evidence for these claims remains limited. Canine hip dysplasia (CHD), a painful and welfare-compromising orthopaedic condition, is common in many of the large breeds used to create designer crosses.

Using hip score data from the British Veterinary Association Hip Scheme, this study assessed whether Goldendoodles and Labradoodles exhibited improved hip scores compared to Golden Retrievers, Labrador Retrievers, and Standard Poodles. Log-transformed hip scores were analysed using linear mixed models, accounting for age, sex, year of testing, and genetic effects (sire and litter). To address sample size imbalances, stratified analyses using age- and sex-matched subsets were also conducted.

Hip scores were significantly higher in females ($p < 0.001$), increased with age at scoring ($p < 0.001$), and decreased over time across breeds ($p < 0.001$). Labradoodles had significantly higher hip scores than Labrador Retrievers ($p < 0.01$), but not Poodles. Goldendoodles did not differ significantly from either progenitor breed.

These findings raise important animal welfare concerns, indicating that crossbreeding alone does not protect from a propensity to clinical burden of CHD. Systematic health screening and responsible breeding practices should still be applied, which would be better promoted with the formal recognition of these newer breeds. As hip scoring becomes more widespread in designer breeds, a clearer understanding of the welfare implications will emerge.

The influence of bedding on broiler performance

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Keeping of broiler poultry is important agricultural sector. The popularity of broiler meat is associated with low price. Poultry meat production is influenced by keeping conditions and by keeping technology like bedding. The bedding affected the production, well-being and welfare. The bedding must fulfill hygienic and isolation demands and must satisfy the broiler natural behavior (enrichment). The aim of this study was to assess the influence of two types of beddings (straw and peat) on mortality and culling rate of broiler chickens. The study was conducted in two halls of commercial broiler chicken farm with capacity of approximately 46,000 ROSS hybrids of each. During 12 cycles were monitored two halls, where 6 cycles were on straw and 6 cycles were on peat. Broilers were kept in recommended conditions (temperature, humidity, ...) by the producer of the ROSS producer. Due the technological reasons in farm was peat used in summer and the straw was used in winter. The Chi-squared test was used to determine the mortality and culling rates. The mortality was statistically significant higher ($P < 0.01$) in the halls with peat (hall A: 1.088 %, hall B: 1.060 %) compared to straw (hall A: 0.945 %, hall B: 0.845 %). A statistically significant difference ($P < 0.01$) was confirmed in culling too. The culling rate was higher in hall A where the broilers were kept on straw (1.437 %) compared to peat (1.301 %). In the hall B was the culling higher on peat (1.401 %) compared to straw (1.335 %).

Development and implementation of the Behavioural First aid Care Framework

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Behaviour problems in dogs and cats present a significant challenge in veterinary practice, with implications for animal welfare, client and staff safety, and veterinary team wellbeing. These cases are often time-pressured and require vets and nurses to make rapid decisions regarding handling and management. Therefore, there is a need for accessible resources and evidence-based guidelines to support welfare-centric decisions in patients with acute behavioural presentations.

The IVC Evidensia Care Frameworks are unique tools that synthesise the latest evidence and incorporate real-world clinical experience from subject matter experts into a concise, practical format. They are designed for point of care use, aim to enhance clinical reasoning, and improve patient outcomes, while supporting veterinary professionals in staying current with new evidence.

The Behavioural First Aid Care Framework was co-produced by a multi-disciplinary team including veterinary behaviourists, veterinarians and nurses ($n = 29$). Development began in July 2025, and the Care Framework was launched in November 2025. The framework consists of ten best practice recommendations covering welfare, diagnostics, treatment, client care and team wellbeing, which are supported by 45 decision-support resources, reviewed and refined by subject matter experts.

The Care Framework was implemented across the group's interactive pages on the intranet, which can be accessed by all colleagues in over 900 UK clinics. The resource provides rapid, evidence-informed guidance on enhancing welfare, safety, support for clients and team wellbeing that can be adopted by all veterinary professionals.

Toward an Ethogram of Heavy Pigs

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Behavioural observations of heavy pigs (body weight range 70-160kg) carried out during 5 trials were merged into a dataset to analyse common traits and draft a preliminary ethogram for this neglected animal category. Observations were carried out on videorecordings of collective pens (5 animals/pen) using the scan sampling technique (10 seconds of sampling every 10 minutes). In total, 200 animals and 8448 hours of videos were analysed. Behavioural differences by body weight categories and daily hours (morning vs. afternoon vs. night) were assessed using the Kruskal-Wallis test.

Over the 24h, the most represented behaviour was lateral recumbency (60% on average), followed by lateral recumbency (18%), pen exploration (9%) and eating (5%, liquid feed was distributed twice a day). Standing inactive and sitting inactive were observed for less than 3% of the time each, and other behaviours, only sporadically observed due to the sampling technique, included drinking, walking and social interactions. Lateral recumbency was more frequent during the night, while sternal recumbency, pen exploration and standing inactive were observed more in the afternoon ($P < 0.001$ for all differences). Concerning body weight, as animals grew from light (70-100kg) to intermediate (100-130kg) and then to heavy (130-160kg), exploring, standing inactive and sternal recumbency decreased, while lateral recumbency increased (for all behaviours, heavy pigs significantly differed from lighter categories, $P < 0.001$).

Pending analysis on larger datasets, these results highlight the typical behaviour of heavy pigs and the importance of providing adequate space and conditions for comfortable resting (i.e., lateral recumbency) in terms of animal welfare.

Refining a Behavioral Questionnaire for Welfare Monitoring in Therapy Dogs Involved in Animal-Assisted Interventions

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Behavioral assessment in dogs often relies on interviews and clinical observation, and practical tools for longitudinal welfare monitoring in dogs involved in animal-assisted interventions remain limited. We therefore refined the Canine Behavioral Evaluation Score (Can-BES), a brief clinically grounded questionnaire, developed by the authors, for longitudinal welfare monitoring in therapy dogs. The original instrument comprises 29 items exploring five behavioral axes relevant to emotional regulation and relational functioning.

Within a Virbac Foundation-supported research project conducted in collaboration with the French Association for Animal-Assisted Therapy, a mediation-specific section was added to improve relevance in animal assisted activity dogs. This section included six scored items and two open questions targeting early signs of possible work-related strain, such as anticipatory behavioral change before sessions, discomfort with specific audiences, contact avoidance, emotional change during imposed handling, reduced spontaneous social engagement, altered responsiveness to basic cues, and contextual events potentially affecting behavior.

The refined questionnaire was used repeatedly in therapy dogs over a 2- to 6-month period. Fourteen dogs were followed longitudinally, allowing repeated within-dog comparisons across time.

Preliminary observations suggested that the tool was able to capture subtle behavioral variations relevant to the intervention context. These exploratory findings also indicated that quarterly follow-up may represent a realistic and clinically meaningful monitoring interval in practice.

Can-BES may therefore provide a useful framework for early identification of possible work-related strain in therapy dogs and support more welfare-centered decision-making in animal-assisted interventions. Further prospective studies on larger cohorts are warranted.

Who Speaks for Pigs? The AVMA, Proposition 12 and Gestation Crates

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California's Proposition 12 is widely regarded as one of the most significant farm animal welfare reforms in recent United States history. The law restricts the sale of pork produced using gestation crates, extreme confinement systems that prevent breeding pigs from turning around and are incompatible with welfare needs established by animal welfare science. This presentation examines the role of the American Veterinary Medical Association (AVMA) in opposing Proposition 12 and related state legislation through support for the Federal Farm Bill and associated lobbying efforts.

The presentation draws on documentary analysis of AVMA and American Association of Swine Veterinarians (AASV) policy statements, congressional lobbying letters, legal documents, and wider farm animal welfare policy debates. It also considers the broader political and institutional context surrounding Proposition 12, including the Supreme Court case *National Pork Producers Council v Ross* and federal efforts to override state animal welfare legislation.

The analysis finds that AVMA support for overturning Proposition 12 raises important questions about veterinary authority, professional independence, and institutional alignment with livestock industry interests. While gestation crates have been widely criticised within animal welfare science for decades, veterinary authority has been mobilised publicly in support of preserving their use within industrial pork production systems.

The presentation concludes that Proposition 12 provides an important case study for examining how veterinary institutions shape farm animal welfare governance and public understanding of animal welfare science.

The Use of Different Non-Pharmaceutical Adjunctive Therapies in Dogs Prior to Referral to a Behaviour Clinic

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Undesirable behaviours are common in dogs (Dogs Trust, 2024), and owners may turn to non-pharmaceutical adjunctive therapies (NPAT) to help improve them, and may consider these safer than pharmaceuticals (van Haaften et al., 2020; Nicotra et al., 2025). This paper aims to retrospectively assess the usage of NPAT in the dogs seen prior to a veterinary behavioural medicine referral clinic.

Data were collected from owner completed pre-consultation questionnaires and medical histories from 178 cases referred to the behaviour clinic (1st of January 2022- 31st December 2024). Analysis of data was undertaken using Microsoft Excel and Minitab 22 for descriptive statistics, with a one-Proportion Hypothesis Test with ($p < 0.05$) used to determine if vet knowledge of NPAT usage was a random occurrence.

NPAT use was relatively common with 68/178 (38%) of owners having used these, with 1-8 products used per case. A total of 133 NPAT products were used: 60% ($n=80/133$) nutraceuticals and 35% ($n=46/133$) pheromones. NPATs were used for an average of 168 days (range: 1-730 days). Efficacy varied, with 53% ($n=71/133$) of owners deeming the NPAT to be ineffective. Only 13% ($n=9/68$) ($p < 0.001$) of patients referring veterinarians note in their history that they are aware their patient was using NPAT suggesting this is not simply random occurrence.

The study shows relatively common but mostly ineffective use of NPATs by dog prior to referral to a behaviour clinic. Surprisingly, veterinarians were usually unaware of these products being used in their patients, raising concerns over lack of veterinary oversight of their use.

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How true are behavioural stereotypes regarding sighthounds? Preliminary results

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Breed stereotypes describe sighthounds as active, independent, difficult to train and insecure. We used 1840 answers (924 sighthounds and 916 non-sighthounds) from an international online dedicated survey on canine behaviour to assess whether sighthounds were indeed more active, independent, difficult to train, insecure and fearful than other dogs as perceived by their caretakers. Answers indicating the dogs levels of activity, independence, ease/difficulty of training and insecurity were coded on a 0 to 10 scale, and were analysed using Mann-Whitney U tests. Another question asked whether the dogs exhibited out of context/disproportionate fear. The answers were coded as a binary yes/no answer, and analysed using a chi-square test. There were no significant differences in reported activity levels ($p=0.180$) and independence ($p=0.150$), whereas sighthounds were reported to be less trainable than non-sighthound dogs. The results concerning insecurity and fear were conflicting, although dogs reported as exhibiting out of context/disproportionate fear ($n=1626$) were indeed rated significantly more insecure (3 vs 1, $p<0.001$) than those reported as not exhibiting it. Surprisingly more sighthounds than non-sighthounds were reported as exhibiting out of context/disproportionate fear responses (29.0 vs 23.5; $p=0.007$), but sighthounds were rated less insecure than non-sighthounds (median 2 vs 3, $p=0.014$). These findings support the importance of the exact terms used and possibly also of the answer format. Additionally, breed stereotypies should be taken with extreme caution given the influence of other factors, including developmental and environmental ones, in canine behaviour.

Use of platforms and social behaviour in a group of three related lynxes

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The Eurasian lynx (*Lynx lynx*) is often found in controlled environments, but few studies focus on environmental enrichment in this species. We aimed to assess the use of raised platforms and social behaviour in a group of three related lynxes (Daeneris, mother, 13 years; Nymeria, daughter, 9 years; Tyrion, son, 9 years) housed at the Wildheart Animal Sanctuary, Isle of Wight, UK, in a 713m² naturalistic enclosure. Using on-line live-streaming webcams, lynxes' position was recorded 600 times (200 sample points x 3 lynxes) using "opportunistic" instantaneous scan sampling during 20 days. Ten 20-minute (total 200 minutes) continuous behavioural observation for social behaviour on 10 days between 8:15pm and 9:30pm (UK time) were also done. Lynxes used platforms 26.8% of the times (67.5% of sample points), The 5-level platform structure was used 26.3% of the times (64.5% of sample points), more often (Kruskal-Wallis, $p < 0.001$, pair-wise corrected Bonferroni) between dawn and 1pm than between sunset and dawn and between 1pm and sunset. In 13.0% of the scans more than one lynx was using the structure. Thirteen episodes of affiliative behaviour (resting in proximity, play chase, head butting/allorubbing) were recorded, mainly between the two females or the two siblings, and none that could be identified as agonistic.

It is concluded that further studies should be done on environmental enrichment and on the effects of social housing on this solitary species. The results of the present study suggest that the latter could be positive for at least some animals.

First Psychometric Evaluation of the Turkish Feline Behavioural Assessment and Research Questionnaire

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The aim of this study was to evaluate the factor structure and internal consistency of the Turkish version of the Feline Behavioural Assessment and Research Questionnaire. A total of 615 cat–caregiver dyads were recruited through an online survey. Items 1–100 were scored on a 0–4 Likert scale, where 0 indicated “never” and 4 indicated “always”. Missing responses were handled using listwise deletion. The dimensional structure of the questionnaire was examined using exploratory factor analysis with principal axis factoring and varimax rotation. Fifteen factors with eigenvalues ≥ 1.00 were retained, collectively explaining 64.6% of the total item variance. The extracted factors represented clinically meaningful behavioural domains, including positive sociality, human-directed aggression, aggression and fear towards other cats and dogs, separation- or alone-time-related anxiety, predatory behaviour, elimination problems, compulsive grooming and repetitive behaviours, play/activity, and destructive chewing. Internal consistency was assessed using Cronbach’s alpha and McDonald’s omega coefficients for each subscale. Reliability was excellent for positive sociality, human-directed aggression, separation- or alone-time-related anxiety, and play/activity; good for predatory behaviour; and acceptable for elimination problems and compulsive/repetitive behaviours. Lower internal consistency was observed for subscales related to inter-cat aggression and aggression/fear towards dogs. A single global problem behaviour score was not psychometrically supported, as indicated by a negative Cronbach’s alpha. Overall, the Turkish version of the questionnaire showed a multidimensional factor structure and satisfactory reliability for most behavioural domains, supporting its potential use as a behavioural assessment tool for Turkish-speaking cat caregivers.

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Approval was obtained from the local ethics committee (2022/11-8).

Keywords: Feline behaviour; psychometrics; Turkish adaptation; cat–caregiver dyads; questionnaire validation

Can unexpected Rejections of Animal Transports by Countries of Destination be resolved in a legally sound Manner?

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Various reports on live animal transports indicate that countries of destination frequently delay or even refuse the announced shipments. The “animal goods” fail to meet the recipient’s requirements, either in reality or in perception. The animals are rejected, but cannot be returned to the country of dispatch due to legal provisions.

Thus, in most cases the fate of these „stranded“ animals is disastrous: They are often held on the trucks or vessels without adequate supplies of water, food and bedding, and without necessary care or treatment. Many animals die or are ultimately euthanized.

To improve animal welfare conditions during transport, notably at the borders of destination countries, the international legal framework must be amended.

Whereas almost all destination countries for transcontinental animal transports are signatories to the Terrestrial Animal Health Code (TAHC) of the World Organisation for Animal Health (WOAH), hardly any of them have enacted national animal welfare laws.

The core measures are to oblige the WOAH members

- to issue national animal welfare implementing regulations, particularly of live animal transports, to enforce them, and to penalize non-compliance, and
- after years of inactivity, to clarify and standardize, with contingency protocols, the existing provision (TAHC) that “The welfare of the animals should be the first consideration in the event of a refusal to allow the completion of the journey.”

Additionally, several proposals for improvements of animal welfare in this very specific area of rejections of transports and delayed shipments are highlighted in the presentation.

The Gender Pay Gap in Veterinary Medicine and its Impact on Animal Welfare

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Although there is a greater number of female practitioners in the veterinary field in France, salary inequalities are largely reported between them and their male counterparts. Causes relate to gender bias in recruitment as well as in the assessment of performances and promotion opportunities. The “motherhood penalty” is also a major reason for the radical differences in pay and in the way women and men are treated. Furthermore, analyses show that women are less likely to work in the most lucrative parts of the field due to a lack of specialisation. They are also less likely to be offered a position of leadership within their practice.

These inequalities could have notable impacts on the quality of care given to animals. Women are often dissatisfied with their career. This has been shown to lead to a gradual “quiet quitting” which has a direct impact on the quality of care offered to animals. Similarly, clients are more likely to disrespect female practitioners and often doubt the diagnosis of female veterinarians leading to a lack of care and a potential worsening of animal’s condition.

Some countries set up different measures to foster equality, such as parental leave offered equally to father and mother and pay transparency. It is necessary to put in place a system to enforce laws aimed at reducing discriminations toward women in the workplace. The authors also suggest to make students aware of this gender equality issue through education programmes.

A Comparative Study of the Medical and Veterinary Codes of Professional Conducts in France

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It is of particular interest to compare the veterinary and the medical Codes of Professional Conducts (CPC) as the two professions were differently classified in EU regulations, respectively as service and health professions. The purpose of this study was to highlight both similarities and differences between the two Codes and determine whether the EU classification is justified.

The authors carried out a quantitative and qualitative content analysis comparison. The quantitative research aimed at comparing the lexicon, the semantic fields and the themes, using Jaccard's improved coefficient as well as two softwares, Antconc and Semato. The authors subsequently independently carried out a qualitative content analysis, studying in detail each CPC separately, section per section, looking for correspondences with the other CPC. A consensus meeting made it possible to agree on the results of this qualitative analysis.

The results showed that the qualitative analysis was much more informative than the quantitative one. The two CPC present many similarities and common duties, especially regarding professional independence, confidentiality, collegiality, the roles of the Statutory Bodies, the duties towards patients or clients. However, it appeared that the One Health concept and the consequences of one's practice on public health and the environment is only tackled in the veterinary CPC. Two other differences were highlighted, namely regarding the delivery of drugs, which concerns veterinarians only, and care regulations, which are stricter for medical doctors. It can thus be concluded that considering the veterinary profession as a service profession is not justified.

Paws of Comfort: An Italian Survey on Companion Animals Visiting Their Guardians in Palliative Care

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Companion animals may offer crucial psychological comfort during end-of-life care (Geisler, 2004). This questionnaire-based study investigates public perceptions in Italy regarding companion animals visiting their guardians in hospice care. Responses from 1,556 participants revealed an overwhelmingly positive outlook: 97.5% supported animal access to hospices ($p < 0.001$), and over 90% expressed a desire to receive visits from their own pets if hospitalized ($p < 0.001$). Multivariate logistic regression identified the area of residence and pet management style as the primary predictors of a positive attitude. Participants living in towns were significantly more supportive of visitations compared to city residents ($OR = 4.029$, $p < 0.05$). Conversely, opponents were characterized by outdoor pet management practices; guardians who kept their dogs outdoors ($OR = 0.118$, $p < 0.01$), cats exclusively outdoors ($OR = 0.108$, $p < 0.05$), or cats both indoors and outdoors ($OR = 0.141$, $p < 0.05$) were significantly more likely to oppose visitations compared to those keeping pets indoors. Univariate analyses also showed that being female ($OR = 2.741$, $p = 0.004$) and currently living with a pet ($OR = 6.239$, $p < 0.001$) strongly correlated with positive perceptions. Stepwise discriminant analysis successfully classified 87.1% of responses ($p < 0.001$). It revealed that opposition was primarily driven by concerns that animals would complicate hospice management or act as a nuisance through odors and noise. These findings may provide a framework for policymakers to implement safe, inclusive pet-visitation protocols that consider the well-being of all parties involved.

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Cooled Perches as a Heat Stress Mitigation Strategy for Laying Hens in Cage-Free Systems

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Laying hen welfare is affected by housing conditions, with environmental enrichment playing a central role. Among enrichment features, perches are particularly important as they support natural behavior, help reduce aggression, and contribute to skeletal health. In hot climates, the thermal environment poses an additional challenge that standard perch systems do not address. This study presents an approach to simultaneously advance thermal comfort and welfare in cage-free laying hen systems, evaluating the efficacy of actively cooled perches as a tool for mitigating heat stress.

The study was conducted over summer in an experimental cage-free system housing 50 laying hens at 7 hens/m². The pen was divided into two sections, each equipped with littered floors, feeders, drinkers, laying nests, and perches. One set of perches was actively cooled to 24°C using circulated water. Internal data loggers implanted in 24 hens continuously recorded core body temperature, and heart rate in a subset of four. Behavioral observations were captured via continuous video recording.

High ambient temperatures and humidity throughout the experiment created significant heat stress conditions. The cooled perch system consistently maintained its target temperature. Hens with access to cooled perches showed lower core body temperatures (0.3–0.5°C) and more stable thermal profiles, and spent significantly more time on perches, particularly during hot afternoons and evenings. Control hens clustered on litter or gathered near drinkers. Laying rates were unaffected by treatment.

These findings demonstrate that cooled perches offer a viable, sustainable solution for managing heat stress and improving the welfare of laying hens in cage-free systems, particularly in houses without active climate control.

Evaluating Pain Assessment Methods in Sheep: Post-Surgical Pain and Lameness as Models

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Pain assessment in sheep is challenging due to their stoic nature and the inability of animals to self-report. This study combined data from two complementary investigations evaluating two pain assessment methods: the Sheep Grimace Scale (SGS) and clinical evaluation (CE). Both studies were conducted at the Agricultural Research Organization experimental farm under veterinary supervision, with the participation of high school research students.

The first study evaluated post-operative pain in nine Afec-Assaf sheep undergoing laparoscopic or open abdominal surgery, assessed before surgery, one hour post-operatively, and one to two days later. The second study compared five lame sheep to five healthy controls. In both studies, CE was performed by a veterinarian and scored four domains: comfort and alertness, movement and palpation, appetite, and cardiorespiratory parameters (each domain was scored 0-4). CE successfully detected significant pain differences in both models: post-operative sheep showed markedly elevated scores one hour after surgery ($p=0.005$), and lame sheep scored significantly higher than healthy controls ($p=0.009$).

The SGS, based on orbital tightening, ear and head position, and flehming, was independently scored by two evaluators with differing levels of experience. The experienced evaluator (veterinarian) detected significant differences between painful and control sheep in both models, whereas the inexperienced evaluator (high school student) failed to reach significance in the lameness model ($p=0.187$ vs. $p=0.008$), highlighting the critical impact of evaluator expertise on SGS reliability. A moderate-to-strong correlation between SGS and CE was found in the post-operative model ($R=0.705$).

These findings support the SGS as a practical, non-invasive tool for ovine pain assessment, while emphasizing that evaluator experience is essential to its accuracy.

Can Dietary Tannins Improve Broiler Welfare? Evidence from Reduced Contact Dermatitis in Commercial Broiler Production

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Contact dermatitis, including footpad dermatitis (FPD) and hock burn dermatitis (HBD), is a major animal welfare concern in intensive broiler production. These painful lesions can impair locomotion, reduce comfort, and compromise the ability of birds to express normal behaviours. Therefore, strategies that improve environmental conditions and reduce the occurrence of contact dermatitis may contribute substantially to broiler welfare. The aim of this study was to evaluate the effects of dietary tannin supplementation on litter moisture and the severity of contact dermatitis in broiler chickens.

A total of 150 Ross 308 broilers were randomly allocated to three groups: control, hydrolysable tannins (0.75 g/kg feed), and condensed tannins (0.75 g/kg feed). Birds were reared for 42 days under commercial conditions. Litter moisture and the severity of FPD and HBD were assessed throughout the production cycle using the Welfare Quality® assessment protocol.

Both tannin-supplemented groups showed significantly lower litter moisture compared with the control group. Reduced litter moisture was accompanied by significantly lower FPD and HBD severity, indicating an improvement in welfare-related outcomes.

These findings suggest that dietary tannins may contribute to improved broiler welfare by reducing environmental risk factors associated with contact dermatitis and decreasing the severity of painful skin lesions. Nutritional strategies targeting litter quality may therefore represent an effective welfare-oriented approach in intensive poultry production. Future research should investigate the long-term welfare implications of tannin supplementation, optimal inclusion levels, and the biological mechanisms underlying their effects on litter quality and skin health.

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Anxiety In Dogs: When Motor Symptoms Mimic Neurological Disorders. An Interdisciplinary Case Report

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Paroxysmal movement disorders in dogs represent a diagnostic challenge, as anxiety can manifest with motor symptoms mimicking neurological conditions such as paroxysmal dyskinesias (PD) or focal epileptic seizures (Mandigers et al., 2024). This case report describes a 4-year-old intact male Shiba Inu referred for behavioral consultation following recurrent “epileptiform” episodes triggered by environmental stressors including thunderstorms and power outages. Neurological examination and blood work were unremarkable. Behavioral assessment revealed paroxysmal anxiety characterized by hypervigilance, autonomic activation, excessive attention-seeking.

Differential diagnoses including PD, focal epileptic seizures, psychogenic movement disorder, and metabolic encephalopathy were evaluated and excluded based on clinical presentation, preserved consciousness during episodes, normal inter-ictal neurological status, and identification of specific emotional triggers (Lowrie & Garosi, 2017; Mandigers et al., 2024).

A multimodal therapeutic approach was implemented, combining alpha-casozepine (22 mg/kg once daily) and fish muscle hydrolysate (Zylkene Plus©) with a cognitive-olfactory enrichment program and environmental management to improve stimulus predictability.

At 30-day follow-up, caregivers reported an improvement in overall well-being and total cessation of motor episodes, even during previously significant triggers. At three months, the nutraceutical was gradually discontinued. Six months post-onset and three months after treatment cessation, the dog remained free of motor episodes and anxiety recurrences, exhibiting emotional stability and improved resilience.

This case highlights that paroxysmal motor episodes in dogs may represent behavioral expressions of underlying anxiety rather than primary neurological disorders (Denenberg, 2020). An interdisciplinary collaboration between veterinary neurologists and behavioral medicine specialists is essential for accurate diagnosis and effective management. Nutraceutical therapy combined with behavioral modification can achieve complete and lasting resolution of anxiety-related motor symptoms (Porcheron et al., 2023; Masson et al., 2024).

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Welfare Deficiencies in Finnish Dogs – What Animal Welfare Inspection Reports Tell Us?

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Recent legislative reforms in Finland, including the mandatory identification and registration of dogs implemented in 2023 and the Animal Welfare Act enacted in 2024, together with forthcoming EU-level regulations on dog and cat welfare and traceability, aim to improve the welfare of dogs. However, there is no up-to-date research about welfare deficiencies regarding Finnish dogs to assess the effectiveness of legislation. The aim of the study is to determine the relative proportions of different types of welfare deficiencies affecting dogs and any changes in these over the past five years.

Over 900 animal welfare inspection reports and administrative decisions issued between 2021 and 2025 in nine rural and small-town municipalities in Southern Finland were tabulated and analysed. The results show that the most common medical problems observed concerned dental health. For basic home health care, deficiencies in nail trimming were relatively common. Reports of insufficient feeding were more frequent than observations of overweight dogs. As environmental deficiencies, particularly the presence of urine or faeces on surfaces, were common, followed by hazardous living conditions and inadequate overall cleanliness. Behavioural observations showed a lack of exercise and activation. Shyness was reported more than twice as often as aggressive behaviour.

While the dataset includes severe and extensive deficiencies at the individual level, the majority of observations relate to relatively simple aspects of everyday dog care. These findings highlight the importance of improving owner awareness and support for routine welfare practices. Addressing common, preventable deficiencies may yield substantial population-level improvements in dog welfare.

TransformDairyNet: Experiences gained from a pilot Cow-Calf Contact Living Lab

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Cow-Calf Contact (CCC) systems have been increasingly raising interest among the public and stakeholders of the dairy sector in recent years (Sirovnik et al., 2020). Greece is a country where CCC practices are unknown, as the dairy sector is rooted in modern intensive systems. The study aimed to test in practice a pilot CCC farm - a Living Lab (LL) - with a full-time contact dam rearing system under an Automated Milking System (AMS). The pilot began on a small scale, with two cow-calf pairs. Two healthy calves were born under the system, a female one (Holstein Friesian) and a male one (Holstein Friesian x Belgian Blue). A range of key indicators was monitored during weekly visits over a period of three months, including cow and calf health and welfare, calves' growth and cow and calf behaviour. Collars of the cows were used to collect data on lying and resting time, rumination, and general activity patterns. The AMS enabled the continuous collection of data such as machine milk yield. Calves showed rapid growth, reaching 122 kg at 74-78 days, outperforming the conventional rearing group. The milk yield increased from 37.0 to 55.0 kg/day after calf separation. Behavioural observations indicated improved expression of resting behaviours and natural behaviours, including play and social activity. The Greek Living Lab was organized and implemented under the framework of 'TransformDairyNet' project, a 3-year (2024-2027) Horizon Europe thematic network to support farmers to upscale cow-calf contact (CCC) systems funded by the European Union (Grant no. 101133326).

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Serum 25-Hydroxyvitamin D3 Status as a Welfare-Oriented Nutritional Indicator in Intensively Housed Beef Heifers

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Animal welfare in intensive beef finishing systems depends on housing, handling, and health-oriented nutritional monitoring. Serum 25-hydroxyvitamin D3 (25(OH)D3) indicates vitamin D status and is relevant in indoor systems with limited sunlight exposure. As part of a doctoral study evaluating the welfare impact of parenteral vitamin D3 administration, this analysis assessed serum 25(OH)D3 responses in intensively housed beef heifers. The study was conducted on a Slovenian commercial finishing farm with approximately 1,400 cattle. Heifers were loose housed on fully slatted concrete floors and fed a ration formulated according to the Gruber feeding table for an average daily gain of 1.2 kg. The ration contained maize silage, grass silage, straw, ground maize, and a mineral-vitamin concentrate. At an expected average daily ration intake of 15.5 kg per animal, the calculated daily vitamin D3 intake was 18,359 international units (IU). Serum 25(OH)D3 concentrations were measured on 16 July 2025, 23 October 2025, and 23 February 2026. At baseline, 30 heifers were evaluated. Concentrations ranged from <8.1 to 11.7 ng/mL, with 17 below the analytical reporting limit – all values indicating hypovitaminosis. The experimental group received parenteral vitamin D3, while controls remained on the standard ration. In October, mean serum 25(OH)D3 concentrations were 46.3 ng/mL in supplemented heifers and 19.1 ng/mL in controls. In February, corresponding means were 67.5 and 18.8 ng/mL, respectively. These findings suggest that serum 25(OH)D3 monitoring may complement ration formulation and support welfare-oriented nutritional management.

Balancing Animal Welfare and Research Objectives: The Role of the Animal Welfare Body in Laboratory Animal Science in Slovenia

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Directive 2010/63/EU mandates that the Animal Welfare Body (AWB) bridge the gap between institutional research and rigorous ethical standards for animal protection in laboratory animal science (LAS). By promoting the principles of the 3Rs, the AWB aligns institutional processes with both evolving science and the legal obligations. The Directive is implemented through national legislation and covers all vertebrates and cephalopods, rather than just traditional laboratory animals. While AWBs are complemented by ethics boards and 3R centers, their number and organizational structure vary across EU member states (Grignaschi et al., 2018).

According to national legislation, the AWB must comprise a welfare officer, their deputy, and one scientist with experience as a LAS project manager. The AWB of the Veterinary Faculty in Slovenia faces an additional challenge, as most studies in the institution are based on data collected from farm and companion animals. To ensure comprehensive oversight, three additional members were appointed to the board: a clinician and two LAS-designated veterinarians. This enhanced composition ensures a more robust, multidisciplinary evaluation that integrates diverse perspectives into institutional review.

To help differentiate clinical care from experimental procedures, the AWB developed a flow chart and a structured request form. These resources assist clinicians in determining the primary intent of a procedure. Specifically, they clarify whether an activity serves patient health and welfare, constitutes a regulated One Health intervention, or involves data collection for scientific purposes, the latter requiring approval from a national ethics committee. Targeted improvements effectively refine institutional processes, establishing clear and objective protocols for animal welfare.

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Ramp Redesign Reduces Hematoma Condemnations at a Bovine Slaughterhouse: A Throughput-Adjusted Before-and-After Study

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A poorly designed infrastructure directly influences meat condemnations in bovine slaughterhouses. This study evaluated whether replacing a conventional ramp with a redesigned system — built in accordance with animal welfare recommendations featuring gentle slopes, smoothed turns, and reduced length — significantly reduced hematoma condemnations at a commercial abattoir in Medellín, Colombia. A retrospective before-and-after cohort study analyzed 179,306 condemnation records from 290,183 slaughtered cattle obtained from the SIP+[®] veterinary inspection software/system. Two balanced 226-day periods were compared: Before (1 Jan – 14 Aug 2025; n = 142,136 animals) and After (15 Aug 2025 – 28 Mar 2026; n = 148,047 animals). Rates were compared using an exact Poisson rate test (primary), a two-proportion z-test, and a difference-in-differences (DiD) analysis. Economic losses were estimated using commercial carcass reference price. Condemned hematoma tissue weight decreased by 52% (17,492 vs. 8,395 kg; p < 0.001, Mann-Whitney U), while inflammation condemnations fell 55% (728 vs. 326 cases), supporting the hypothesis of reduced slip-and-fall events on the redesigned incline and anti-slip flooring. After adjusting for the 4.2% increase in slaughter throughput, the per-animal hematoma condemnation rate decreased from 4.61% to 4.41% (rate ratio = 0.957; p = 0.012, Poisson exact). DiD confirmed an 18.4% relative reduction controlling for background trends. Annual savings reached approximately USD 75,683. Left-side hematomas exceeded right-side (ratio ~1.5:1), consistent with the old ramp geometry forcing repeated lateral impacts to the left. Ramp redesign following animal welfare standards significantly reduced hematoma frequency, condemned tissue weight, and inflammatory lesions, with measurable welfare and economic benefits, supporting infrastructure improvement in bovine slaughter facilities.

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Who let the dogs ride? Dog welfare during car transport

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Regulation, instructions and knowledge of transporting animals that fall outside the scope of Council regulation on the protection of animals during transport (EC No 1/2005) are scarce. Some national regulations may exist, but the effectiveness of the regulations is often weakened by the fact that generally they are not specific enough to impose a punishment on a driver.

We performed a literature survey on research related to dog safety and welfare during non-commercial transport by car, focusing on legislation, safety and stress during travel. Based on this review, we prepared a guideline for dog owners.

Keeping dogs unrestrained during transport is a significant safety risk, as an unrestrained dog can distract the driver and thus elevate the risk of accidents. However, we found that safety standards for restraint methods are lacking, making the choice of restraint method challenging. Stress during transport arises from several, uncontrollable factors like noises, uncontrolled movements, challenges related to the maintenance of comfortable temperature and an unfamiliar environment. Owners may have difficulties differentiating between stress and other factors such as motion sickness. Stress can be mitigated through early acclimatization and training, alongside pharmacological aids and other substances such as pheromones.

We concluded that further research and standardization of safety equipment for dogs is needed. There is also a need for increased awareness among dog owners of dog safety and welfare during transport. Most of the findings may be applied to transports in the commercial context as well.

Beyond animal replacement: how New Approach Methodologies reshape bioethical responsibility

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New Approach Methodologies (NAMs)—human-derived in vitro and in silico models including organoids and AI-enabled analytics—are increasingly positioned as ethical alternatives to animal research. This framing oversimplifies the moral landscape. Traditional animal research ethics has centered on utilitarian harm–benefit analysis, justifying animal suffering through anticipated population health gains. NAMs do not resolve these ethical tensions within the utilitarian frameworks that have structured animal research ethics; instead, they relocate scrutiny toward distinctly human-centered concerns requiring pluralist engagement. These include deontological questions surrounding informed consent and permissible uses of human biological materials; relational autonomy frameworks recognizing consent as contextual and dynamic rather than transactional; privacy and re-identification risks inherent in linked multi-omics datasets; and justice considerations regarding who bears research burdens and who accesses resulting benefits. As regulatory frameworks increasingly incorporate NAM-derived evidence, proportionate and transparent ethical governance becomes essential. This work advances an ethical account of NAMs that integrates scientific rigor and translational validity with explicit attention to autonomy, justice, and governance, supporting responsible innovation while sustaining public trust as these technologies move toward widespread implementation.

Dyadic Synchrony and Lateralised Positioning in Feline Agonistic Interactions

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Cats, as solitary predators, face substantial fitness costs from physical injury during agonistic encounters, which has likely favoured ritualised behavioural strategies that reduce the need for direct physical fighting (Maynard Smith and Price, 1973; Huntingford and Turner, 1987). Cerebral lateralisation may underlie these strategies, yet lateralised positioning in feline agonistic interactions remains unexplored.

This study examined lateralised positioning and dyadic coordination in spontaneous cat-cat agonistic encounters using systematically collected and coded publicly available video recordings. A total of 60 dyadic interactions were analysed. Hemiface orientation was coded at the first observable interaction, at any lateral direction change, and immediately before fight, categorised as right, left or both (changing orientation).

At the onset of interaction, cats showed a significant right-hemiface bias at the population level (69.2%; $p < 0.001$), but this directional bias was absent immediately before fight escalation. Despite this loss of directional bias, dyadic concordance remained near-universal: 95.0% of dyads showed same-side orientation at first interaction ($p < 0.001$), and 96.3% of codeable fight dyads maintained concordant orientation immediately before escalation ($p < 0.001$). This exceeded the level expected under statistical independence, indicating genuine dyadic coordination beyond individual lateral biases.

A population-level right-hemiface bias at the first observable onset of agonistic encounters suggests preferential left-hemisphere involvement during ritualized agonistic interactions in domestic cats, consistent with a left-hemisphere role in approach-motivated aggressive behaviour reported across other species (Harmon-Jones and Allen, 1998; Giljov and Karenina, 2019). The high dyadic concordance in hemiface orientation across encounter phases further suggests strong inter-individual coupling in lateralized behavioural expression. Together, these findings indicate that lateralized positioning in cats may serve as a useful indicator of emotional and motivational states, with potential implications for feline welfare assessment and the interpretation of cat-human interactions.

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Dog Behaviour After Pet Dog Companion Loss: Associations with Euthanasia and Expected Death in a Cross-Sectional Study From Italy and the UK

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While scientific literature has increasingly documented the emotional impact of pet dog loss on humans, far less is known about how such loss may affect another cohabiting dog (Park et al., 2023; Uccheddu et al., 2022), despite the relevance of this topic for animal welfare. Building on our previous work (Uccheddu et al., 2022, 2019), this exploratory study investigated whether euthanasia (vs. unassisted death) and expected death were associated with reported behavioural changes in a cohabiting dog in Italy and the UK. The Mourning Dog Questionnaire was completed online by 655 caregivers (65% from Italy; 35% from the UK), and multiple regression analyses were performed. No direct association emerged between the circumstances of death and the behavioural or emotional changes reported in the surviving dogs. However, both euthanasia and expected death were associated ($p < 0.05$) with lower caregiver grief distress, particularly across the dimensions of grief and anger. In turn, higher caregiver grief and anger were associated ($p < 0.05$) with an increased likelihood of reporting behavioural changes in the surviving dog, including diminished appetite, increased vocalization, fearfulness, attention-seeking, avoidance of the deceased dog's belongings, and prolonged behavioural alterations. UK participants reported higher grief than Italian participants and were more likely to report increased sleeping and longer persistence of alterations in surviving dogs. These findings suggest that the surviving dog's post-loss behavioural changes may be indirectly associated with the caregiver's emotional response to the loss, highlighting the importance of culturally sensitive caregiver support in veterinary end-of-life care.

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Dynamics of corticosterone incorporation into feathers during the growth of broiler chickens

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Feather corticosterone (CORT) analysis is increasingly used for retrospective assessment of stress in birds; however, the interpretation of CORT concentrations may be affected by several biological and methodological factors. Therefore, this study aimed to evaluate the dynamics of CORT incorporation into wing and interscapular feathers during the growth of broiler chickens.

A total of 114 samples were collected from broilers at 15, 23, 29, and 36 days of age and analyzed using the ELISA method. Significantly higher CORT concentrations were observed in wing feathers compared to interscapular feathers in 15- and 23-day-old broilers. In 29- and 36-day-old broilers, CORT concentrations remained higher in wing feathers; however, the differences were not statistically significant. In both feather types, CORT concentrations significantly decreased with increasing age. Because wing feathers markedly increased in size during growth, a potential dilution effect associated with feather growth was considered. However, the significant decrease in CORT concentrations between 23 and 29 days of age remained evident even after normalization to feather weight, suggesting that the observed decline was not caused solely by feather growth, but likely also reflected reduced CORT deposition into developing feathers.

These findings indicate that feather type, feather growth dynamics, and animal age may substantially influence CORT concentrations and should therefore be considered in future studies evaluating stress and welfare in broiler chickens.

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Why animal transports from the EU to Türkiye cannot be authorized

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Using the example of a cattle transport, stuck at the Bulgarian Turkish border (Kapikule, October 2024), this presentation shall discuss legal and veterinary reasons, demonstrating that road transport of cattle from the EU to Türkiye, in compliance with existing regulations is not possible:

- Transports can result in severe heat stress.
- Transports to eastern Türkiye and transits to Iraq exceed the maximum permitted transport time (Türkiye lacks authorized staging points /“controlposts”).
- Unpredictably long delays on the Turkish side of the border reduce the remaining permitted transport time, thus previous destinations don't remain accessible.
- Animals' suffering due to waiting times at Kapıkule border crossing are a frequent and serious reality.
- Animals subjected to waiting times have not received emergency care / have not been killed instead.
- Turkish border authorities usually don't take action to prevent or alleviate animal suffering at transport delays.
- There are no intergovernmental agreements (EU- Türkiye) regarding the return of animals if a consign-ment is refused.
- In Türkiye, and other high-risk animal welfare countries, animals are most often slaughtered without stunning, causing significant pain and suffering
- The (WOAH) Terrestrial Animal Health Code principle “The welfare of the animals should be the first consideration in the event of a refusal to allow the completion of the journey“ has not been observed in any of the known cases
- The organizer can rarely justify signing the “journey log”-guarantee, that „suitable arrangements are made to safeguard the welfare of the animals”.

A scoping review on Livestock Guarding Dog behaviour

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Livestock guarding dogs (LGDs) are highly effective at protecting livestock from predators such as wolves and bears, supporting peaceful human–wildlife coexistence. However, attacks on tourists in mountain areas have raised concerns about the behavioural management of these dogs.

A 2025 scoping review, following PRISMA guidelines, examined LGD behaviour, and management of it (i.e., training and socialization). The literature search was carried out by using the search string '(LGD OR "livestock guarding dog") AND (behaviour OR training OR socialization OR socialisation) AND dog' in PubMed, Web of Science and Scopus. From 77 retrieved documents, 49 were retained after manual removal of the duplicates. Nineteen items were excluded because their abstracts did not address the topic of interest. As a result, 30 were retained for full text review. Three were eliminated: one focused only on genetics, and two discussed the efficacy of predator control programs. Among the remaining 27 studies, 9 (23,68%) relied on owner interview, mainly addressing management practices, interactions with other animal species, and reasons for dog failure. Nine (23,68%) used GPS tracking, 8 (21,05%) behavioural observation, 7 (18,42%) behavioural tests, 2 (5,26%) scats and 1 telemetry.

Only one study compared dogs with different levels of human socialisation and found that less socialised LGDs showed more aggression. At the same time, excessive socialisation may reduce guarding behaviour as LGDs may choose proximity to humans over remaining with and protecting livestock. Further research is therefore needed to identify the balance between human socialisation and effective livestock protection in LGDs.

Structured training in the management of aggressive behaviours in cats with diagnosed pain: welfare benefits and risks

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In behavioural medicine, improvement of the presenting complaint may mask, rather than reflect, improvement of the underlying welfare problem. It is clinically relevant when cats with diagnosed pain present with human-directed aggression during physical contact.

We present case series of three cats selected from a cohort of similar clinical presentations observed in the author's practice. Patients showed aggressive or defensive responses during attempted physical contact and were later diagnosed with one or more of: FORL, spine/hip pathology.

After the initial evaluation, a structured training approach was implemented in all three cases. This combined desensitisation and counterconditioning of gradually increasing physical contact, teaching functional communication between the cat and caregiver, and establishing predictable safety rules during interactions. Caregivers conducted training sessions once daily for a few minutes. Sessions were recorded and assessed, ensuring proper methodology and timing.

The behavioural change was substantial. Cats accepted progressively more intense or prolonged contact, communicated more clearly during interaction, and became easier to handle. In some cases, the outcome was not merely tolerance of touch: cats began to voluntarily approach, initiate, continue or actively seek contact.

As signs of possible pain persisted, including changes in gait and litter box posture, all cats were further diagnosed and treated. This suggests that technically appropriate training can produce meaningful welfare benefits even before the painful condition has fully resolved. Thus, training matters even with palliative cat care. Caveat: highly effective training may reduce the most visible behavioural alarm while painful conditions remain undiagnosed or undertreated.

How do dog owners behave in the presence of working livestock guarding dogs? Preliminary results

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Livestock guarding dogs (LGDs) are important in protecting the livelihoods of farmers/livestock breeders in areas inhabited by wolves/bears, decreasing human-wildlife conflict. Incidents/conflict can occur between people, their dogs and working LGDs, when they meet, especially when people do not know how to behave around LGDs (e.g., they leave their dog off leash and the dog/owner approaches the herd). Using 811 answers (679 women, 114 men, 18 others; 60.3% from Italy, 21.7% from other EU countries, 18.0% from outside Europe) to a dedicated online survey targeting dog owners, we investigated factors possibly influencing auto-reported behaviour in the presence of working LGDs. A “caution around LGDs score” (CaLGDs; on three levels: low, intermediate, high caution) was created from the answers to four questions regarding agreement on keeping dogs on a leash, avoiding the area if with/without dogs, approaching sheep without their/a dog. Kruskal-Wallis and post-hoc Bonferroni corrected Mann-Whitney Tests were used to assess the effect of respondent and dog demographics and of how much time the owner shared with the dog on CaLGDs. CaLGDs was influenced by respondent’s gender ($p < 0.001$; women > men); country of residence ($p < 0.001$, Italy > other EU; Italy > outside EU), dog’s age ($p = 0.006$) and shared time ($p = 0.011$), but not by respondent’s age, residential area (rural, village, town or city), dog’s gender or having LGDs. Only 27.4% of the respondents obtained a high CaLGDs, highlighting the need for provision of educational programs dedicated to educating dog owners, and the general public, about safety rules concerning coexistence with LGDs from a one-welfare perspective.

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