

# UFAW International Conference: Advancing Animal Welfare Science

The Royal College of Physicians, Edinburgh, UK

## List of posters

- 1. Evidence for multiple temperament traits in sheep**  
Leigh Atkinson, Rebecca Doyle, Andrew Woodward and Ellen Jongman (*University of Melbourne, Australia*)
- 2. Preliminary investigation on the effect of housing system and stocking density on behavioural response of farmed rabbit *Oryctolagus cuniculus* in humid tropics**  
Mathew Ayoola, Mobolaji Alabi and Oguntunji Abel O (*Bowen University, Nigeria*)
- 3. Effects of weaning regimes on growth performance and stress response in weanling pigs**  
Temitope Bankole, Olufemi Adebisi, Emmanuel Ewuola, Ayoola Oluyemi and Olusoji Abiola (*University of Ibadan, Nigeria*)
- 4. Effect of positive human interaction on attention bias and affective states of commercial breeding dogs**  
Uri Baqueiro-Espinosa, Tsz Lo, Victoria McEvoy, Rachel Hunter and Gareth Arnott (*Queen's University Belfast, UK*)
- 5. Risk factors for integumentum alterations in the carpal region of Norwegian dairy cows**  
Conor Barry and Camilla Kielland (*Norwegian University of Life Sciences (NMBU), Norway*)
- 6. Does canine osteoarthritis affect step count?**  
Leanne Blake, Jack O'Sullivan, Cameron Smith and Lucy Asher (*Newcastle University, University of Lincoln and University College London, UK*)
- 7. Validation of an integrative approach to study Fin whale behavioural repertoire as an objective welfare indicator**  
Anik Boileau, Jonathan Blais, Roxane Plante, Marion Desmarchelier and Jamie Ahloy-Dallaire (*Université Laval, Centre d'éducation et de recherche de Sept-Îles (CERSI) and Université de Montréal, Canada*)
- 8. Pandemic puppies: A canine welfare timebomb?**  
Claire Brand, Dan O'Neill, Zoe Belshaw, Camilla Pegram, Fiona Dale, Kim Stevens and Rowena Packer (*The Royal Veterinary College and EviVet Evidence-based Veterinary Consultancy, UK*)
- 9. Salivary biomarkers of acclimatization in dairy cows with different milk yield potential**  
Liliana Cachucho, Flávio Silva, Catarina Matos, Ana Geraldo, Lénia Rodrigues, Cristina Conceição, Fernando Capela e Silva, Elsa Lamy and Alfredo Pereira (*University of Évora, Alentejo Biotechnology Center for Agriculture and Agro-food (CEBAL), Polytechnic Institute of Beja (IPBeja), Centre for Interdisciplinary Research in Animal Health (CIISA) and University of Trás-os-Montes e Alto Douro, Portugal*)
- 10. The impact of the COVID-19 pandemic on cat and dog relinquishment and abandonment**  
Grace Carroll, Alice Torjussen and Catherine Reeve (*Queen's University Belfast and University of Sussex, UK*)
- 11. The prevalence of feather damage in broiler breeder flocks in Turkey**  
Enver Çavuşoğlu and Metin Petek (*University of Bursa Uludag, Turkey*)

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12. **Proximity interactions in a permanently housed dairy herd: Network structure, consistency, and individual differences**  
Kareemah Chopra, Holly Hodges, Zoe Barker, Jorge Vázquez Diosdado, Jonathon Amory, Tom Cameron, Darren Croft, Nick Bell and Edward Codling (*University of Essex, Writtle University College, University of Exeter and Royal Veterinary College, UK*)
13. **Tell me how you feel – Using a modified novel arena test (MNAT) to assess sow welfare in three different post-weaning housings**  
Jen-Yun Chou and Thomas Parsons (*University of Pennsylvania, USA; University of Veterinary Medicine, Austria; Teagasc, Ireland*)
14. **Automatic detection of enrichments usage in Rhesus monkeys**  
Giulia Ciminelli, Claire Witham and Melissa Bateson (*Newcastle University and MRC Harwell, UK*)
15. **Untwisting questions about nesting materials and laboratory mouse welfare**  
Kendall Coden, Jerome Geronimo, Michael Gutierrez, Kyna Byrd and Joseph Garner (*Stanford University, USA*)
16. **The growing trend of intraorgan euthanasia injections in companion animals**  
Kathleen Cooney (*Companion Animal Euthanasia Training Academy and Colorado State University, USA*)
17. **Lame cow welfare: What is the mobility team thinking? Or who sees pain how?**  
Emily Craven, Jenny Stavisky, Natalie Robinson and Rachel Dean (*Oakwood Veterinary Group and VetPartners, York, UK*)
18. **Getting close to animals at the zoo: Impacts on animal welfare and human psychology**  
Katherine Cronin, Stephen Ross and Maureen Leahy (*Lincoln Park Zoo, USA*)
19. **Puppy separation related behaviour: Effect of preventative advice on puppy behaviour when left alone**  
Fiona Dale, Charlotte Burn and Rachel Casey (*Royal Veterinary College and Dogs Trust, UK*)
20. **An investigation into *Sus scrofa domestica* and milk replacer pre-weaning, focusing on size and social behaviours in the farrowing crate**  
Holly Deacon and Jonathan Amory (*Writtle University College, UK*)
21. **Genetic parameter estimates of fear-related behaviours in Nigerian indigenous turkeys (*Meleagris gallopavo*)**  
Samuel Durosaro, Oluwaseun Iyasere, Babatunde Ilori, Victor Oyeniran and Michael Ozoje (*Federal University of Agriculture, Nigeria*)
22. **Associations between behaviour modification program progression, cat stress score, and latency to emerge from hiding in shelter cats (*Felis catus*) from hoarding environments**  
Bailey Eagan, Karen van Haaften and Alexandra Protopopova (*University of British Columbia and The British Columbia Society for the Prevention of Cruelty to Animals, Canada*)
23. **Penile bites in growing pigs: A case report**  
Chinedu Eze, Godwin Okpe, Theophilus Nnaji, Kenneth Ogbanya, Davison Anyogu, Nnamdi Okereke, Patience Ugwu, Chinelo Uju, Nnenna Emejuo and Thadeus Ezeobialu (*University of Nigeria, Nigeria*)
24. **“End the cage age” - Is it possible to manage gestating sows without individual stalls?**  
Maria Costanza Galli, Claudio Mazzoni, Federica Mereghetti, Elena Bordignon, Barbara Contiero and Flaviana Gottardo (*University of Padova, Swivet Research snc and Azienda agricola Lucrezia, Italy*)
25. **Measuring affective state in the horse (*Equus caballus*): The emotional response to a reward prediction error paradigm**  
Julia Gerke, Claire O’Brien, Ourania Kyrozi and Sebastian McBride (*Aberystwyth University, UK*)

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26. **Facial expressions of acute pain in Japanese macaques: Development of an assessment tool**  
Vanessa Gris, Takako Miyabe-Nishiwaki, Nelson Broche Jr., Akihisa Kaneko, Munehiro Okamoto, Juri Suzuki and Daniel Mills (*Kyoto University, Japan and University of Lincoln, UK*)
27. **Friends? – Effects of gilts’ social experiences and genetic line when meeting an unfamiliar pig at 5 and 20 weeks of age**  
Linda Marie Hannius, Linda Keeling, Claes Anderson, Daiana de Oliveira, Stina Emriksson and Anna Wallenbeck (*Swedish Universities of Agricultural Sciences, Sweden*)
28. **Does regenerative agriculture address animal welfare, human well-being, and environment conservation (One Welfare approach)? – A review**  
Matías Hargreaves-Méndez and María Hötzel (*Universidade Federal de Santa Catarina, Brazil*)
29. **Changes in prevalence of owner reported separation related behaviour with time dogs left alone during COVID restrictions**  
Naomi Harvey, Robert Christley, Rebecca Mead, Jane Murray, Melissa Upjohn and Rachel Casey (*Dogs Trust, UK*)
30. **Welfare considerations for chickens used as laboratory animals**  
Lindsay Henderson, Kris Hogan, Amanda Novak, Adrian Sherman and Helen Sang (*University of Edinburgh, UK*)
31. **Bowls are boring: Investigating the use of enrichment feeding for pet dogs and the associated perceived benefits and challenges**  
Madeline Heys, Imogen Lloyd and Carri Westgarth (*University of Liverpool, UK*)
32. **The effect of sleep quantity and quality on the affective state of the horse**  
Sophie Hicks, Gianluca Tucci, Aleksandra Mikolajczak, Rachel Anstey, Gabby Dickson, Ceris Owen-Fraser, Eloise Bournes, Linda Greening, Claire O’Brien and Sebastian McBride (*Aberystwyth University and Hartpury University, UK*)
33. **Investigating the relationship between recumbence and the frequency of stereotypical and feeding behaviour in two captive African elephants (*Loxodonta africana*) at night**  
Amber Ianniello (*Oxford Brookes University and Abingdon and Witney College, UK*)
34. **Nigerian indigenous chickens show individual differences in rising behaviour**  
Oluwaseun Iyasere, Victor Oyeniran, Samuel Durosaro, Oluw towo Oyekunle, Ajoke Afolayan, Kawther Inakoju, Oluwatosin Fawehinmi, Oreoluwa Ajayi, Yetunde Oshilaja and James Daramola (*Federal University of Agriculture, Nigeria*)
35. **Welfare and scientific limitations of the forced swim test**  
Kimberley Jayne, Julia Baines and Emily Trunnell (*People for the Ethical Treatment of Animals (PETA) UK and USA*)
36. **Avoiding frustration by providing a cheap alternative – Using a novel maximum price paid test to quantify the maternal motivation in dairy cows (*Bos taurus taurus*)**  
Emma Jensen, Melissa Bateson, Heather Neave and Margit Jensen (*Aarhus University, Denmark; Newcastle University, UK*)
37. **The structure and temporal changes in brokerage typologies applied to a dynamic sow herd**  
Sarah Jowett, Zoe Barker and Jonathan Amory (*Writtle University College and University of Reading, UK*)
38. **Light and larvae for layers: Early-life interventions to prevent feather pecking in laying hens**  
Saskia Kliphuis, Maëva Manet, Vivian Goerlich, Rebecca Nordquist, Frank Tuytens and Bas Rodenburg (*Utrecht University and Wageningen University & Research, Netherlands; Flanders Research Institute for Agriculture, Fisheries and Food (ILVO) and Ghent University, Belgium*)

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39. **Towards the study of boredom in pigs – Developing a task to assess pigs’ time perception**  
Kristina Kull, Christoph Winckler and Sara Hintze (*University of Natural Resources and Life Sciences (BOKU), Austria*)
40. **Weaned piglets’ reaction to human is linked to the response of their sow during gestation to the same human and their previous experience with him**  
Mathilde Lanthony, Marek Špinko and Céline Tallet (*INRAE, France; Czech University of Life Sciences, Czech Republic*)
41. **Using horses' facial expressions to assess pain levels automatically through deep learning-based modeling**  
Gabriel Lencioni, Rafael Sousa, Edson Sardinha, Rodrigo Corrêa and Adroaldo Zanella (*University of São Paulo (USP), Brazil*)
42. **The importance of comprehensive species-specific datasets in animal welfare research: An example with donkeys**  
Holly Little, Stuart Norris, Linda Evans, Andrew Judge and Sarah Tulloch (*The Donkey Sanctuary, UK*)
43. **Exploring a critical equine pedagogy to promote horse welfare**  
Karen Luke, Andrea Rawluk, Meg Hoey and Tina McAdie (*Central Queensland University, University of Melbourne and Meg Hoey Dressage, Australia*)
44. **The PDSA Animal Wellbeing (PAW) report 2022: The impact of COVID-19 on UK pet wellbeing**  
Rachel Malkani, Emma Tipton, Rebecca Ashman, Lynne James and Sean Wensley (*PDSA and University of Surrey, UK*)
45. **Primary validation and reliability testing of the animal welfare assessment grid for dogs**  
Rachel Malkani, Sarah Wolfensohn and Sharmini Paramasivam (*University of Surrey, UK*)
46. **MANYGOATS - A network to promote open and reproducible research on goat behaviour and welfare**  
ManyGoats, Federica Amici, Okan Atay, Mario Balaro, Monica Battini, Joao HC Costa, Ruan Daros, Shai David, Özdal Gökdal, Edna Hillmann, Nina Keil, Whitney Knauer, Lorena Lacuesta, Serge-Yan Landau, Rebecca Meagher, Carly Moody, Christian Nawroth, Heather Neave, Tjasa Pangerl, Fernando Sanchez-Davila, Janko Skok, Jenny Stracke, Jordan Tonooka, Rodolfo Ungerfeld, Beth Ventura, Arantxa Villagrà, Susanne Waiblinger and Gosia Zobel (*Leipzig University, Max Planck Institute for Evolutionary Anthropology, Humboldt-Universität zu Berlin and Research Institute for Farm Animal Biology and University of Bonn, Germany; Aydın Adnan Menderes University, Turkey; Universidade Federal Fluminense and Pontifícia Universidade Católica do Paraná, Brazil; University of Milan, Italy; University of Kentucky, University of Minnesota and UC Davis, USA; Zoological Center Ramat Gan and Agricultural Research Organization, Rishon LeZion, Israel; Centre of Proper Housing of Ruminants and Pigs, Switzerland; Universidad de la República, Uruguay; Dalhousie University, Canada; Aarhus University, Denmark; University of Maribor, Slovenia; Universidad Autonoma de Nuevo Leon, Mexico; Instituto Valenciano de Investigaciones Agrarias, Spain; University of Veterinary Medicine, Austria; AgResearch Ltd, New Zealand*)
47. **Effect of weaning age on various measures of health in Rhesus macaques (*Macaca mulatta*): A retrospective study**  
David Massey, Claire Witham and Melissa Bateson (*Newcastle University and MRC Harwell Institute, UK*)
48. **Trap-Neuter-Adopt (TNA) as a welfare friendly solution for improving unwanted dogs welfare**  
Liat Morgan, Naama Shir-Nissan, Rune Birkler, John Boone, Andrew Rowan, Wiessam Abu Ahmed, Amir Steinman, Boris Yakobson, Ehud Gazit and Melissa Bateson (*Tel Aviv University, The Hebrew University of Jerusalem and Kimron Veterinary Institute, Israel; Newcastle University, UK; Great Basin Bird Observatory and Wellbeing International, USA*)

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49. **Ethics assessment when publishing animal welfare research in an international scientific world**  
Birte Nielsen, Anna Olsson, Irene Camerlink, Péter Pongrácz, Jen-Yun Chou, Maria Camila Ceballos, Alexandra Whittaker and Huw Golledge (*UFAW, UK; Universidade do Porto, Portugal; Polish Academy of Sciences, Poland; Eötvös Loránd University, Hungary; Teagasc, Ireland; University of Calgary, Canada; University of Adelaide, Australia*)
50. **Does affective state alter the hedonic value of a social reward in laboratory mice?**  
Ryan Nolan, Candy Rowe, Matthew Leach and Jane Hurst (*University of Liverpool and Newcastle University, UK*)
51. **Tunnel handling affects anxiety-like behaviour but not measures of chronic stress**  
Janja Novak, Ivana Jaric, Marianna Rosso, Reto Rufener, Chadi Touma and Hanno Würbel (*University of Bern, Switzerland; University of Osnabrück, Germany*)
52. **Are palatability assessments a valid measure of hedonic responses in *Equus caballus*?**  
Claire O'Brien, Sebastian MacBride and Matthew Parker (*Aberystwyth University and University of Portsmouth, UK*)
53. **Manual and precision livestock farming (PLF) assisted welfare comparison between two housing systems used in organic egg production**  
Michael Odintsov Vaintrub and Pierfrancesco Di Giuseppe (*Università Politecnica delle Marche and Università di studi di L'Aquila, Italy*)
54. **Weekly alternation and continuous presentation of environmental enrichment on behaviour of grower pigs**  
Ayoola Oluyemi, Olufemi Adebisi and Temitope Bankole (*University of Ibadan, Nigeria*)
55. **Implementation and use of a novel welfare assessment tool to improve primate behavioural management programs**  
Carly O'Malley, Emilie Paterson and Patricia Turner (*Charles River and University of Guelph, Canada*)
56. **The effect of dog colour, size and environment on a human approach-stop task using videos of a simulated dog model displaying aggressive behaviours**  
James Oxley, Helena Ransome-Prince, Georg Meyer, Iain Cant, Giuseppe Ballantuono, Matthew Butcher Andrew Levers and Carri Westgarth (*University of Liverpool and Virtual Engineering Centre, UK*)
57. **Grazing restriction induces wool pulling behaviour in sheep and it can be evaluated through wool inspection**  
Ricard Pares, Pol Llonch, Xavier Manteca and Xavier Such (*Universitat Autònoma de Barcelona, Spain*)
58. **Automated labelling of facial features in domestic dogs**  
Marie-Claire Pagano, Cameron Smith and Lucy Asher (*Newcastle University and University College London, UK*)
59. **Early behavioural indicators of gastrointestinal parasitism in extensively farmed sheep for a precision livestock approach to welfare management**  
Michelle Reeves, Heather McDougall, Fiona Kenyon, Jessica Martin, Emma Baxter and Cathy Dwyer (*Moredun Research Institute, University of Edinburgh and SRUC, UK*)
60. **Pharmacological investigation of animal welfare measures in mice housed in standard cages**  
Agustina Resasco, Rocío Foltran, Fabricio Maschi, Miguel Ayala and Silvina Diaz (*University of Buenos Aires and National University of La Plata, Argentina*)
61. **Progress of primate environmental enrichment literature 1978 – 2019**  
Samuel Richardson
62. **A five domains approach to assessing the welfare of dairy donkeys**  
Karen Rickards, Fiona Cooke and Stuart Norris (*The Donkey Sanctuary, UK*)

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63. **Dam (*Canis familiaris*) welfare throughout the peri-parturient period in commercial-breeding kennels**  
Aynsley Romaniuk, Shanis Barnard, Jennifer Weller, Hsin-Yi Weng, Sriveny Dangoudoubiyam and Candace Croney (*Purdue University, USA; Agri-Food & Biosciences Institute, UK*)
64. **A humane death for black soldier fly larvae (*Hermetia illucens*) used in food and feed**  
Lizzie Rowe, Erika de Castro and Miha Pipan (*Better Origin, UK*)
65. **Human-animal relationships in animal agriculture: Evolving perspectives on developing respectful relationships with animals**  
Erin Ryan, Daniel Weary and Becca Franks (*University of British Columbia, Canada; New York University, USA*)
66. **Not good on foot? The occurrence of claw asymmetries during the lifetime of fattening pigs (*Sus scrofa*)**  
Sarah Seufert, Nina Volkmann, Johannes Schmidt-Mosig and Nicole Kemper (*University of Veterinary Medicine Hannover and vetvise GbR, Germany*)
67. **Development and encoding of arousal in Mongolian gerbil and Djungarian hamster infant vocalisations**  
Yara Silberstein and Marina Scheumann (*University of Veterinary Medicine Hannover, Germany*)
68. **Influence of bedding hygiene and colostrum management in dairy calves' health**  
Flávio Silva, Cristina Conceição, Severiano Silva, Pedro Caetano, Joana Ramalho, Sofia Pedro, Inês Azevedo, Luís Martins, Alfredo Pereira and Joaquim Cerqueira (*University of Trás-os-Montes e Alto Douro, University of Évora and Agrarian School of Viana do Castelo Polytechnic Institute, Portugal*)
69. **A guide to practical tools for improving scientific validity, animal welfare and health & safety**  
Adrian Smith and Bente Bergersen (*Norecopa, Norway*)
70. **The use of companion animals in media: Welfare implications and a possible regulatory solution**  
Ira Snir, Liran Plitman and Yael Arbel (*Israeli Veterinary Services and Animal Health, Israel*)
71. **(Anti-) social animal. Is sociality a matter of the rearing process in turkeys?**  
Jenny Stracke, Alicia Krasny, Stefanie Tensfeldt and Nicole Kemper (*University of Bonn and University of Veterinary Medicine Hannover, Germany*)
72. **Analysis of dairy cows' activity using a hybrid modelling approach for the early detection of health problems**  
Masoomah Taghipoor, Severine Bord, Laure Sansonnet, Quentin Bulk and Joon Kwon (*Université Paris-Saclay and Ferme expérimentale AgroParisTech, France*)
73. **The use of pigs vocalisations structure to assess the quality of human-pig relationship**  
Céline Tallet and Avelyne Villain (*PEGASE, INRAE, France*)
74. **Operationalize stunning of captured plaice (*Pleuronectes platessa*) and turbot (*Scophthalmus maximus*) at sea: Provisions to ensure improved welfare**  
Hans van de Vis, Michelle Boonstra and Hendrik Kramer (*Wageningen Livestock Research, Wageningen Marine Research and MDV-Beheer, The Netherlands*)
75. **Geometric morphometrics for the study of facial expression of pain in common marmosets**  
Duncan Wilson, Takako Miyabe-Nishiwaki, Kanako Muta, Erika Sasaki, Yoko Kurotaki, Takashi Inoue, Terumi Yurimoto, Hannah Buchanan-Smith and Daniel Mills (*Graduate School of Letters, Kyoto University, Jikei University School of Medicine, University of Tokyo and Central Institute for Experimental Animals, Japan; University of Stirling and University of Lincoln, UK*)

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76. **The use of body surface temperature to detect valence of affective state and magnitude of food reward**  
Chanakarn Wongsangchan, Ruedi Nager, Dominic McCafferty and Dorothy McKeegan (*University of Glasgow, UK*)
77. **Changing human behaviour for animal welfare: The case of sheep tail docking length in Australia**  
Madeleine Woodruff, Carolina Munoz, Rebecca Doyle, Grahame Coleman and Stuart Barber (*University of Melbourne, Australia; University of Edinburgh, UK*)
78. **How Japanese people make decisions about the happiness of zoo animals – A comparison between zoo visitors and professionals**  
Yumi Yamanashi, Yuko Ikkatai, Rie Akami, Nahoko Tokuyama, Moe Honjo and Duncan Wilson (*Kyoto City Zoo, Kyoto University, Kanazawa University, Japan Monkey Centre and Nagasaki University, Japan*)
79. **Beyond the lab: Animal welfare and the 3Rs in wildlife research**  
Miriam Zemanova (*University of Fribourg and Animalfree Research, Switzerland; Oxford Centre for Animal Ethics, UK*)
80. **Difficult paradigm shift? Reasons for continued animal use for educational purposes revealed in non-technical summaries**  
Miriam Zemanova, Andrew Knight and Susanna Lybæk (*Animalfree Research and University of Fribourg, Switzerland; Oxford Centre for Animal Ethics and University of Winchester, UK; Griffith University, Australia; The Norwegian Animal Protection Alliance (Dyrevernalliansen), Norway*)