

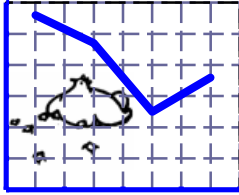
Recent advances in animal welfare science VI

UFAW Animal Welfare Conference

Centre for Life, Newcastle, UK, 28th June 2018

Posters:

- **Alabi OM, SO Akinoso and FA Aderemi** (Bowen University and University of Lagos, Nigeria)
Blood levels of cortisol and differential leukocytes as measure of stress among egg-type chickens on alternative housing systems
- **Akinoso SO and OM Alabi** (University of Lagos and Bowen University, Nigeria)
Mathematics as an important tool in animal welfare assessments: A review
- **Allen G** (Wild Welfare, UK)
Is a compensation climate in zoos preventing the use of more appropriate animal welfare measures?
- **Al-Rubaye ZR, AH Al-Sherbaz, WD McCormick and SJ Turner** (University of Northampton and Anglia Ruskin University, UK)
Identifying lameness movements in sheep via sensor data analysis
- **Andrews C, J Dunn, M Waddle and M Bateson** (Newcastle University, UK)
How much weight loss is too much?
- **Armstrong E, C Rufener, M Toscano, J Eastham, JH Guy, T Boswell and TV Smulders** (Newcastle University, UK; University of Bern, Switzerland)
Are keel bone fractures associated with suppressed adult hippocampal neurogenesis in laying hens?
- **Bains R, C Witham, H Cater, D Sneddon, P Nolan, S Wells and D Farningham** (MRC Harwell Institute and Newcastle University, UK)
Monitoring social interactions as indicators of health and welfare in mice and macaques
- **Bamford LA and K Snape** (University Centre Myerscough, UK)
Changes in canine skin surface temperature during hydrotherapy using infrared thermography
- **Bell L and S Holmes** (University Centre Myerscough, UK)
Puzzle solving behaviour and vocalisations of African grey parrots (*Psittacus erithacus*)
- **Berteselli GV, L Arena, L Candeloro, P Dalla Villa and F De Massis** (Istituto Zooprofilattico Sperimentale di Abruzzo e Molise "G. Caporale" and University of Teramo, Italy)
Risk factors' evaluation for dogs' welfare housed in long-term shelters
- **Berthelsen C and C Douglas** (Newcastle University, UK)
Why do owners purchase brachycephalic dog breeds with inherently compromised welfare?
- **Binding S, K Cronin and H Farmer** (European Association of Zoos and Aquaria, The Netherlands; Lincoln Park Zoo, USA; Whitley Wildlife Conservation Trust and Paignton Zoo, UK)
The challenges, opportunities and status of animal welfare research in zoos and aquaria
- **Brod S** (National Centre for the Replacement, Refinement and Reduction of Animals in Research, UK)
NC3RS: An update on our work in animal welfare
- **Bushby EV, SC Cotter, A Wilkinson, L Asher, K Griffin, K Stevens, NE O'Connell, M Friel and LM Collins** (Universities of Lincoln, Newcastle, Nottingham Trent, Portsmouth, Leeds and Queen's University Belfast, UK)
Early-life factors and their impact on welfare and health scores in pigs
- **Campos Luna I, F Wemelsfelder, A Miller, A Beard and M Leach** (Newcastle University and Scotland's Rural College, UK)
A method to develop an effective animal welfare protocol: Laboratory mice
- **Cecchi F, G Carlini, L Giuliotti and C Russo** (University of Pisa, Italy)
Inbreeding depression on morphological traits in an Italian population of the Basset hound dog



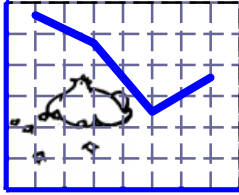
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Posters (continued):

- **Chapman A, E MacLeod, Y Kane and A Thiam** (World Horse Welfare and University of Edinburgh, UK; Ecole Inter-Etats des Sciences et Médecine Vétérinaires, Senegal)
Investigating the welfare and socio-economic role of working equids in Rusfisque, Senegal
- **Clark B, LA Panzone, GB Stewart, I Kyriazakis, J Niemi, T Latvala, P Jones, R Tranter and LJ Frewer** (Universities of Newcastle and Reading, UK; Natural Resources Institute, Finland)
Production diseases and farm animal welfare: What do the public think?
- **Clark CCA, EM King, JM Downes, KA Clarke, C Minnis and LE Green** (University of Warwick, One Health Veterinary Services and The Royal Veterinary College, UK)
Estimating the prevalence of selected animal-based welfare indicators in ruminants at abattoirs
- **Clarkson JM, MC Leach, PA Flecknell and C Rowe** (Newcastle University, UK)
Handling method alters laboratory mice's sensitivity to reward loss and gain
- **Clifton R, MC Reeves, J Kaler and LE Green** (Universities of Warwick and Nottingham, UK)
Development of an online learning resource about lameness in sheep
- **Collins LM** (University of Leeds, UK)
Systems within systems: Individual variation through the looking glass
- **D'Eath RB, M Jack, A Futro, D Talbot, Q Zhu, D Barclay and EM Baxter** (Scotland's Rural College, University of Edinburgh and Innovent Technology Ltd, UK)
Using technology to improve animal welfare: 3D cameras can detect lowered tail posture and give early warning of tailbiting in pigs
- **Deckers J** (Newcastle University, UK)
A proposal for an evolutionist animal welfare science
- **Dhoolappa M, RV Prasad, S Sundareshan and A Shanbhag** (Karnataka Veterinary, Animal and Fisheries Sciences University and Manipal Academy of Higher Education, India)
Welfaregraphy: Designing of non-invasive device to monitor animal welfare
- **Di Giminiani P and S Edwards** (Newcastle University, UK)
Application of infrared thermography for the evaluation of porcine tail injury
- **Dolman SJ, P Brakes and NK Hodgins** (Whale and Dolphin Conservation and University of Exeter, UK)
Bycatch: What future for marine mammal welfare post-Brexit?
- **Douglas CE, L Eastwood, A Smith and Y Ng** (Newcastle University, UK)
Piloting cognitive bias as a method of welfare assessment in cats
- **Douglas CE, K Redgwick, L Tilley and M Velazquez** (Newcastle University, UK)
The effect of irresponsible dog breeders on dog fear and aggression
- **Edgar JL, G Richards and CJ Nicol** (Universities of Bristol and Oxford, UK)
Socially-mediated arousal within domestic chick broods
- **Eusemann B, A-K Reinhard, L Schrader and S Petow** (Friedrich-Loeffler-Institut and Georg-August-Universität Göttingen, Germany)
Better foot health and fewer keel bone deviations in laying hens displaying a reduced laying rate after treatment with deslorelin acetate



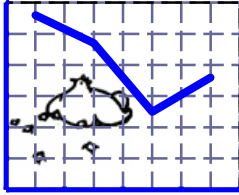
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Posters (continued):

- **Fontani S, L Bryant, J Billingsley, S Courtney, A Lott, A Mcauley, DJ Sheppard, HD Swain and S Vaglio** (Universities of Wolverhampton and Durham, UK)
The sensory enriched primate
- **Franchi GA, MS Herskin, CB Tucker and MB Jensen** (Aarhus University, Denmark; University of California Davis, USA)
Use of a feed thwarting test to assess hunger in dairy cows during drying-off
- **Giersberg MF, B Spindler and N Kemper** (University of Veterinary Medicine Hannover, Germany)
A new method of assessing plumage and integument condition in laying hens at flock level
- **Gould L, N Boyland, B Dixon, P Brooke and K Wojtas** (Compassion in World Farming, UK)
Towards humane slaughter for fish in the EU
- **Hammond TJ, SM Brown, SL Meddle, V Bombail and AB Lawrence** (University of Edinburgh and Scotland's Rural College, UK; Université Paris-Saclay, France)
Anxiety and physical condition may affect responses to tickling in male Wistar rats
- **Herskin MS, A Hels, I Anneberg and PT Thomsen** (Aarhus University, Denmark)
Livestock drivers' knowledge about dairy cow fitness for transport – A Danish questionnaire survey
- **Hewitt B, J Hockenhull, C Bunce, J Wilson, J Remnant and HR Whay** (Universities of Bristol, Edinburgh and Nottingham, UK)
Development of a multivariate analytical system to identify lameness in dairy cows
- **Hockenhull J, B Hewitt and HR Whay** (University of Bristol, UK)
Working towards an agreed definition of chronic lameness in dairy cows
- **Hockenhull J, SM Mullan and DCJ Main** (University of Bristol, UK)
"It's an independent eye": Pig farmer perceptions of the value of the welfare outcome assessment element of their farm assurance scheme
- **Howarth ERI, A Engelhardt, CS Wilding, CL Witham and EJ Bethell** (Liverpool John Moores and Newcastle Universities, UK)
Attention bias: A new tool for welfare assessment in captive rhesus macaques
- **Jackson P, A Nasirahmadi, JH Guy, B Sturm, SJ Bulland and SA Edwards** (Newcastle University, UK; University of Kassel, Germany)
Using CFD modelling to assess thermal comfort and welfare in sustainable housing systems for finisher pigs
- **Kaler J and KA Ellis** (University of Nottingham, UK; Intel Labs, Ireland)
Using technological advances and machine learning to develop algorithms for lameness and different behaviours in sheep
- **Laws GC, H Brearly-Bayliss, K-A Thompson, D Smith, E Whittle, EA Armstrong, J Roughan, T Boswell and TV Smulders** (Newcastle University, UK)
Adult hippocampal neurogenesis as a marker of chronic stress in a mouse model of chronic liver disease?
- **Lee CJ, CR Tyler and GC Paull** (University of Exeter, UK)
Does change matter? Creating stimulating environments for fish in captivity
- **Lopez Salesansky N, D Wells, L Whitfield and CC Burn** (The Royal Veterinary College, UK)
Olfactory effects of husbandry on laboratory mouse welfare: Preliminary findings



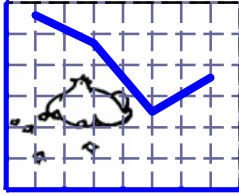
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Posters (continued):

- **Mazlan NH, CC Burn and D Wells** (The Royal Veterinary College, UK)
Marking mice: The humanness of ear punching and ear notching versus ink marks on the tail
- **Nordquist RE, FJ van der Staay, FJ van Eerdenburg, FC Velkers, L Fijn and SS Arndt** (University of Utrecht and Brain Center Rudolf Magnus, The Netherlands)
Welfare of farm animals in the light of mutilating procedures, management practices, and housing conditions – need for scientific evidence
- **Norman C, J Stavisky and C Westgarth** (Universities of Liverpool and Nottingham, UK)
Imported rescue dogs: Reasons, methods and welfare
- **O'Sullivan JS, C Ladha, Z Belshaw and L Asher** (Universities of Newcastle and Nottingham and VetSens, UK)
Rhythm of the night: Circadian rhythms in activity as a potential welfare indicator in dogs
- **Owles C, C Stevenson and J Harris** (University of Nottingham, UK)
Pain and inflammation associated with pig knee joint osteochondrosis
- **Oxley JA and VT Montrose** (University Centre Hartpury, UK)
Restraint of dogs in vehicles in the UK
- **Oxley JA, AP Wills, VT Montrose, J Bowen and A McBride** (University Centre Hartpury, Royal Veterinary College University of Southampton, UK)
Owner perceptions of the effects of fireworks on rabbits and guinea pigs
- **Pandolfi F, I Kyriazakis, K Stoddart, N Wainwright and SA Edwards** (Newcastle University and Agricultural and Horticultural Development Board PORK, UK)
Welfare benchmarking for commercially farmed pigs
- **Poirier C and M Bateson** (Newcastle University, UK)
Welfare and biomedical implications of stereotypic pacing in laboratory macaques
- **Quintavalle Pastorino G, E Mercugliano, MS Mazzola and C Spiezio** (Università degli Studi di Milano and Parco Natura Viva – Garda Zoological Park, Italy)
Personality and behaviours of zoo lions (*Panthera leo*) and zoo visitors: Are they linked?
- **Raffle J, JK Bizley and CC Burn** (University College London and The Royal Veterinary College, UK)
Ferret fun: A preliminary study into playtime effects on signs of boredom in ferrets
- **Rauterberg SL, M Fels, N Kemper and M Schmicke** (University of Veterinary Medicine Hannover, Germany)
Cortisol and dehydroepiandrosterone as endocrine biomarkers for chronic stress in pigs?
- **Rayner EL, I Otter, H Bacon, L Gamble, H Walters and F Langford** (University of Edinburgh, Scotland's Rural College and Public Health England, UK; Worldwide Veterinary Service, India and UK)
Assessment of an educational intervention on the knowledge of Indian vets to animal welfare and euthanasia
- **Reese L, G Haase, L von Fersen, M Ladwig-Wiegard, H Will, R Merle, D Encke, H Maegdefrau, K Baumgartner and C Thöne-Reineke** (Freie Universität Berlin and Tiergarten Nürnberg, Germany)
Deflighting zoo birds in the 21st century
- **Russo C, MN Benvenuti, F Cecchi, N Scampuddu and L Giuliotti** (University of Pisa, Italy)
Preliminary study on animal welfare index in sheep farms in Grosseto District
- **Smith LM, T Kartal, A Rowan, S Hartmann, A Munteanu, R Quinnell and LM Collins** (University of Leeds, UK; Humane Society International, UK and USA; FOUR PAWS International, Austria)
Investigating the impact of a catch-neuter-vaccinate-release method on the free-roaming dog populations in Asia



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- **Spiezio C, C Sandri, C Sammarini and B Regaiolli** (Parco Natura Viva – Garda Zoological Park, Italy)
A six-year story of success and fidelity of zoo Greater flamingos
- **Stirling J** (Edinburgh Napier University, UK)
Does the cage-trapping of corvids cause unnecessary suffering? A behavioural study of trapped magpies
- **Studer BHP, J Volstorf, MF Castanheira, JL Saraiva and P Arechavala-López** (fair-fish international association, Switzerland; Mediterranean Institute for Advanced Studies, Spain)
Fish ethology database for fish welfare
- **Su B and P Martens** (Maastricht University, The Netherlands)
How ethical ideologies relate to public attitudes toward animals
- **Tarantola M, E Valvassori, CM Mastrazzo, A Visconti, C Bellino and E Valle** (University of Turin and ASL TO5, Animal Health, Italy)
Horse breeding for meat production: critical aspects and horse welfare
- **Valle E, A Visconti, CM Mastrazzo, D. Bergero and M Tarantola** (University of Turin, Italy)
Reflection on the communication of the equine welfare: The “5F principles” proposal
- **Venis B and CE Douglas** (Newcastle University, UK)
Comparing differences in health and behaviour of newly recognised cross breed dogs (Cavapoo) and parent breeds
- **Yngvesson J, M Wedin, S Gunnarsson, L Jönsson, H Blokhuis and A Wallenbeck** (Swedish University of Agricultural Sciences, Sweden) Let me sleep! – Welfare of disturbed broilers (*Gallus gallus domesticus*)