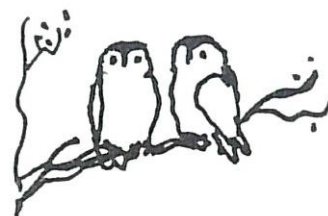


# Recent advances in animal welfare science 2022

## UFAW Annual International Conference

28-29<sup>th</sup> June 2022

The Royal College of Physicians, Edinburgh, UK



The conference will feature the following talks (speaker in **bold**):

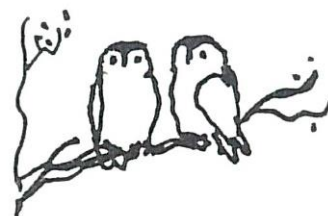
- **Sandra E Baker** (*University of Oxford, UK*)  
Assessing animal welfare impacts in wild Norway rat (*Rattus norvegicus*) management
- **Alicia Bartolomé**, Pau Carazo and Enrique Font (*University of Valencia, Spain*)  
Use of environmental enrichment for reptiles in zoos across Europe
- **Vincent Bombail**, Felix Effah, Lea Kreichati, Goharika Paladugu, Gabriel Auraujo Costa, Alistair Lawrence and Alexis Bailey (*INRAE, Université Paris Saclay, France; Scotland's Rural College, and Saint George's University of London, UK*)  
Tickle my brains: Playful interactions affect cerebral neurotransmitter receptors
- **Heather Browning** (*London School of Economics and Political Science, UK*)  
Determining the line of acceptable welfare
- **Kyna A Byrd**, Jacob H Theil, Jerome T Geronimo, Emily I Hui, Teagan K Felt, David K Chu, Stephen A Felt and Joseph P Garner (*Stanford University, University of California, Davis and Vanderbilt University, USA*)  
Pebble to the metal: A boulder approach to enrichment for *Danio rerio*
- **Jasmine M Clarkson**, Jessica E Martin, Julian Sparrey, Francesco Marchesi, Matthew C Leach and Dorothy EF McKeegan (*University of Glasgow, The Royal (Dick) School of Veterinary Studies, The Roslin Institute, Livetec Systems Ltd and Newcastle University, UK*)  
Gradual decompression shows promise as a humane alternative to carbon dioxide
- Ben Cooper, **Rachel A Casey**, Katharine Anderson, Jane K Murray, Kirsten McMillan, Melissa Upjohn and Robert M Christley (*Dogs Trust, UK*)  
Experience of dog ownership not matching expectation is associated with increased perception of undesired behaviours as 'problematic' in a UK survey
- **Matthew J Craven**, Jonathan H Guy, Timothy Boswell and Tom V Smulders (*Newcastle University, UK*)  
Does complexity of aviary design affect hippocampal plasticity in laying hens?
- **Alice MM Dancer**, JK Bizley, Maria Díez-León and Charlotte C Burn (*Royal Veterinary College, and University College London, UK*)  
The effects of different environmental enrichment strategies on the sleep quality of laboratory ferrets
- **Kate Hartcher**, Qing Yang, Ali Agus, Maria Catalina T de Luna, Shuichi Ito, Zulkilfi Idrus, Iman RH Soesanto, May J Jattuchai, Elissa Lane, Jayasimha Nuggehalli and Michelle Sinclair (*Global Food Partners, Singapore; University of Queensland, Australia; University of Edinburgh, UK; Universitas Gadjah Mada, Indonesia; University of the Philippines Los Baños, Philippines; Tokkaido University, Japan; Universiti Putra Malaysia, Malaysia; IPB University, Indonesia; Chulalongkorn University, Thailand; Harvard Law School, USA*)  
Challenges and solutions for cage-free egg producers in China, Indonesia, Japan, Malaysia, Thailand and The Philippines
- **Francesca Johansen**, Gareth Arnott and Stephanie Buijs (*Queen's University Belfast, Agri-Food and Biosciences Institute and AgriSearch, UK*)  
Providing a "priority lane" increases visits to the milking robot in dairy cows managed in an automatic milking system
- **Sarah Kappel**, Marco A Ramirez Montes De Oca, Sarah Collins, Katherine Herborn, Mike Mendl and Carole Fureix (*Universities of Plymouth and Bristol, UK*)  
Developing a visual attention bias test in horses
- **Martyna E Lagoda**, Keelin O'Driscoll, Joanna Marchewka and Laura A Boyle (*Teagasc, Ireland; Institute of Genetics and Animal Biotechnology, Jastrzębiec, Poland*)  
Improved welfare and reproductive performance of pregnant sows housed in enriched pens
- **Alistair B Lawrence**, Gerry Thompson, Neil A Mabbott, Barry W McColl and Sarah M Brown (*Scotland's Rural College (SRUC), The Royal (Dick) School of Veterinary Studies, Centre for Discovery Brain Sciences and The University of Edinburgh, UK*)  
Brain health: A new frontier for animal behaviour and welfare

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- **Maëva WE Manet**, Saskia Kliphuis, Arjen van Putten, Rebecca E Nordquist, Vivian C Goerlich, Lucas Noldus, Frank AM Tuytens and T Bas Rodenburg (*Utrecht University, Noldus Information Technology and Wageningen University & Research, Netherlands; Flanders Research Institute for Agriculture, Fisheries and Food and Ghent University, Belgium*)  
Brave breeds and brains under the spotlight: How do genetics and lighted incubation impact young laying hens stress responsivity?
- **Giovanna Massei** and Stephanie Boyles Griffin (*University of York, UK; Botstiber Institute for Wildlife Fertility Control and The Humane Society of the United States, USA*)  
Fertility control to mitigate human-wildlife conflicts and promote coexistence
- **Liat Morgan**, Rune Birkler, Shira Shacham-Niv, Yonghui Dong, Lior Carmi, Tal Wachsman, Boris Yakobson, Hagit Cohen, Joseph Zohar, Ehud Gazit and Melissa Bateson (*Tel Aviv University, Chaim Sheba Medical Center, Kimron Veterinary Institute and Ben-Gurion University of the Negev, Israel; Newcastle University, UK*)  
Metabolomics as a promising new approach in animal welfare science: Characterising the metabolomic fingerprint of exposure to acute stress in a pig saliva model
- **Vikki Neville**, James Lind, Elsa Mendl, Nathalie Cozma, Elizabeth S Paul and Michael Mendl (*University of Bristol, UK*)  
How can we improve laboratory rat welfare? A systematic review of refinements to laboratory rat housing and husbandry
- **Rowena MA Packer, Claire L Brand, Zoe Belshaw, Camilla L Pegram, Kim B Stevens and Dan G O'Neill** (*The Royal Veterinary College, and EviVet Evidence-based Veterinary Consultancy, UK*)  
Dogs in demand: How a puppy boom is causing a welfare bust
- **Stephen R Ross**, Christina Doelling and Katherine A. Cronin (*Lincoln Park Zoo, USA*)  
The potential and pitfalls of using behavioural diversity (H-Index) as a reliable animal welfare indicator
- **Remco S Schrijver**, Johan H Bongers, Winanda W Ursinus and Dick THM Sijm (*Netherlands Food and Product Safety Authority (NVWA), The Netherlands*)  
Animal welfare risk assessment of dairy cattle transported to slaughterhouses
- **Lena Skånberg**, Regine V Holt, Ruth C Newberry, Inma Estevez, Nicolas Nazar and Linda J Keeling (*Swedish University of Agricultural Sciences, Sweden; Norwegian University of Life Sciences, Norway; Department of Animal Health, Neiker, and Basque Foundation for Science, Spain; Universidad Nacional de Córdoba, Argentina*)  
Making the most of opportunities – the effect of early environmental choice on later success in laying hens
- **Holly M Vickery**, Rachael A Neal and Rebecca K Meagher (*University of Reading, UK; University of Dalhousie, Canada*)  
A survey of farmers' views on changing management practices for goat kids reared away from their dams
- **Mechthild Wiegard**, Delia Fiderer and Christa Thoene-Reineke (*Freie Universität Berlin, Germany*)  
Training of animals as an applied tool of stress reduction in pigs and therefore implemented refinement