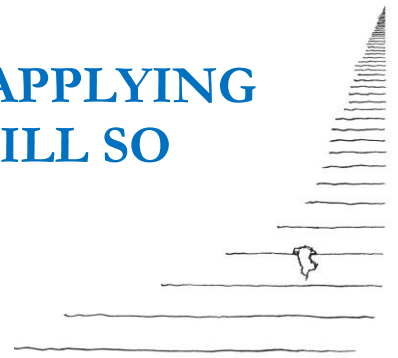# MEASURING ANIMAL WELFARE AND APPLYING SCIENTIFIC ADVANCES - WHY IS IT STILL SO DIFFICULT?

UFAW International Symposium 27th-29th June 2017
Royal Holloway, University of London, Surrey, UK

CALL FOR PAPERS

We would like to hear from anyone interested in making a contribution to the symposium on the subjects and themes of the meeting fundamental to the development of animal welfare science as a rigorous scientific discipline and the assessment of animal welfare – as below - or others relating to animal welfare and the sciences and other disciplines associated with it – eg applied ethology, veterinary, physiological and neuroscience.

Themes

- ***Will we ever be able to demonstrate sentience?*** Knowing where to draw the line about which animals to care for is important to, avoid wasting scarce resources on animals that are not sentient, and to ensure that animals that are sentient are protected. Are there new techniques that could help or is the problem insoluble? Where should the line be drawn?
- ***Are the techniques that we have to study emotional state (affect) adequate or are there new and better ways of assessing how animals feel about themselves and their environment?*** How should we best choose and interpret measures? Do technological advances offer us alternative approaches? Is it worth trying to put a numerical value on animal welfare or are qualitative measures more appropriate?
- ***How does time fit into the equation?*** Over what period of time should welfare be considered – what is meaningful and relevant to the animal? Do animals experience time as we do? How should we weigh up the challenges and good experiences to come so as to arrive at a view about the animals lifetime experience, and is this worth doing?
- ***How important is positive welfare?*** Should preventing suffering be our first priority or should we now be looking to maximise enjoyable experiences for animals in our care too? Is a permanent state of positive welfare possible, or do animals reset their emotional state so that attempts to achieve positive welfare are doomed to failure as the animal habituates to a better than adequate environment? What happens when those experiences preferred by an animal have a long-term negative impact on health?
- ***How robust is the data collected on animal welfare?*** Are there lessons to be learnt from other areas of research with respect to e.g. blinding, randomization, pre-registration of hypotheses, null results, meta-analysis, clinical trials?

Submissions should feature the title of the proposed presentation, the nature of the presentation – talk or poster, and the name and full contact details of all contributors. Abstracts must be in English, should be no longer than 400 words and formatted as below. Time allocated to talks at the meeting is likely to be in region of 20-25 minutes.

The deadline for submission of abstracts is **30th November 2016.** Please send a copy of the abstract – attached as a Word document - by email to Stephen Wickens @ wickens@ufaw.org.uk

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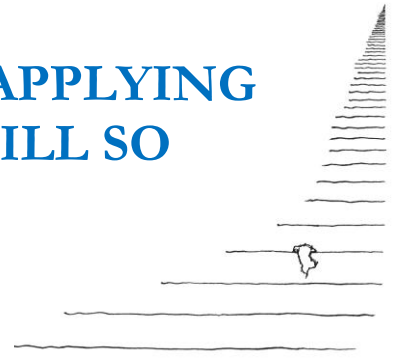
FORMAT OF ABSTRACTS
Abstracts should be formatted as follows:

Talk / Poster

<div align="center">

TITLE OF PAPER

AB Authorone [1], CD Authortwo [1] and EF Authorthree [2]

[1] Department of Animal Welfare Science, University of Wheathampstead, Hertfordshire, UK
[2] Department of Applied Animal Welfare, University of Brewhouse Hill, Ontario, Canada
*ab.authorone@wheathampstead.ac.uk*

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Abstracts should be written in English and not exceed 400 words, excluding the title and the authors' names and addresses, which should be formatted as above. Please use Microsoft Word for Windows when submitting an abstract. Text should be in Garamond 12 pt font.

The title should be centred and in bold capital letters (as above). Authors who have contributed to the abstract should be identified using their initials and surname and centred under the title in bold upper and lower case. Superscript numbers (eg [1]) should be used as necessary to indicate each author's institutional address. Institutional addresses should be centred and in title case, with superscript number used to link them with author(s) as necessary. Each address should start on a new line. The email address of the main author to be contacted with regard to the abstract in italics should follow. A blank line should precede the text. The text should clearly and concisely outline the main findings or premise **without reference(s)** to other text or paper or to future findings. It can include graphs or tables but must fit on one side of A4.

An example of how to format an abstract from a previous meeting can also be seen below.

Please send a copy of the abstract by email to Stephen Wickens @ wickens@ufaw.org.uk by **Wednesday 30th November 2016.**

If you wish to present a poster rather than a talk, please indicate this at the top of the submitted abstract.
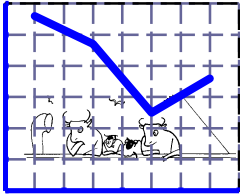
DEVELOPMENT OF A PIGLET GRIMACE SCALE TO ASSESS TAIL DOCKING AND CASTRATION PAIN

P Di Giminiani [1], EM Malcolm [1], A Scollo [2], F Gottardo [2], SA Edwards [1] and MC Leach [1]

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The surge of interest towards the application of the mouse grimace scale to laboratory animals has prompted its recent adaptation to larger species. We have explored the development of a Facial Action Coding System to assess pain evoked by routing husbandry procedures in commercial pigs, with a particular focus on tail docking and surgical castration without pain relief.

Video recordings of 3-days old piglets undergoing tail docking by cautery (n=8) were obtained by confining the animals in pairs in a custom-built observation arena. Four high definition cameras were placed at equal distances around the arena and recorded the piglets at head-height. Video recording occurred before and immediately after tail docking with each recording session lasting 5 minutes. For the piglets undergoing castration (n=15), images were collected from 4-day old piglets before and immediately following the procedure, with the animals photographed while being held with support of the sternum and hindquarters.

At each time point, 4 clear photographs were extracted from the tail docking videos and were combined with 1 photograph of piglets undergoing castration to compile a scorebook, which was then distributed to 30 observers with different degrees of experience and knowledge on pigs. All observers were blinded to the details of the images.

For each photograph, the following 10 potential facial action units (FAUs), identified in a pilot study, were scored on a 3-point scale (0=absent, 1=moderately present, 2=obviously present, 9=unsure/not visible): temporal tension, forehead profile, orbital tightening, tension above the eyes, cheek tension, upper lip contraction, lower jaw profile, snout angle, snout plate changes and nostril dilation.

The median scores obtained from all observers for each action were compared pre vs. post-treatment with a Wilcoxon Signed-Rank test. Inter-rater reliability was assessed by interclass correlation coefficient (ICC) analysis.

Preliminary results indicate that "orbital tightening" may be the only FAU significantly changing after tail docking with all observers assigning a higher score post-docking (p=0.041). For both procedures, an average ICC of 0.93 was recorded, suggesting a generally high level of agreement among observers in terms of the scores provided.

The change in "orbital tightening" is consistent with previous findings in other species. The absence of significant changes in other FAUs warrants further analysis to evaluate whether alternative FAUs should be identified at this stage of development or whether the recorded units should be related to the individual variability in facial morphology of pigs within the first days of their lives.