

# 5<sup>th</sup> European Student Conference on Behaviour & Cognition



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Conference Program and Book of Abstracts

**A behaviour test to detect age-related decline of stimulus-responsiveness in dogs**

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Sensory decline is a strong confounder for cognitive decline in senior dogs. Existing instrumental tests are uncomfortable for the dog, while non-invasive tests only inform about the presence or absence of function, thus none can be used routinely to assess partial sensory decline. We designed short behaviour tests which do not require pretraining and compared them to the veterinary tests and owners' opinions. We tested 51 dogs ( $10.5 \pm 2.46$  years). Auditory test: clap test (clapping at different distances from the dog), recorded sound test (RecTest; observing the dogs' reactions to 6 sounds). Vision test: vision acuity test (VAT; a food item was placed at various distances for the dogs to find it), obstacle test (OBS; dogs walked across an obstacle course to reach their owner). Spearman rho test showed a positive correlation between the owner's assessment and the auditory test ( $r = 0.533$ ,  $p = 0.028$ ). A positive correlation was found between the veterinary exam scores and the vision test ( $r = 0.767$ ,  $p = 0.028$ ). Ordinal regression models showed that, in the RecTest ( $p < 0.001$ ), younger dogs performed better ( $p < 0.001$ ) and that the sounds influenced the response ( $p = 0.004$ ); in the OBS ( $p < 0.001$ ), luminosity ( $p < 0.001$ ) and age ( $p < 0.001$ ) influenced the performance. In the VAT, dogs' performance decreased with increasing distances (GLMM;  $p < 0.001$ ). Our non-invasive behaviour tests are informative for the assessment of responsiveness to auditory and visual stimuli in dogs and do not require pre-training. After validation these tests could be used for routine screening of sensory functions in a wide range of settings. Funding: ERC680040, Bolyai Scholarship by HAS.

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## Confirmation of Participation

This is to certify that

**Zsófia Bognár**

attended the 5<sup>th</sup> ESCBC on the 6<sup>th</sup> and 7<sup>th</sup> of  
September 2018 at the University of Vienna, Austria  
and presented a poster.