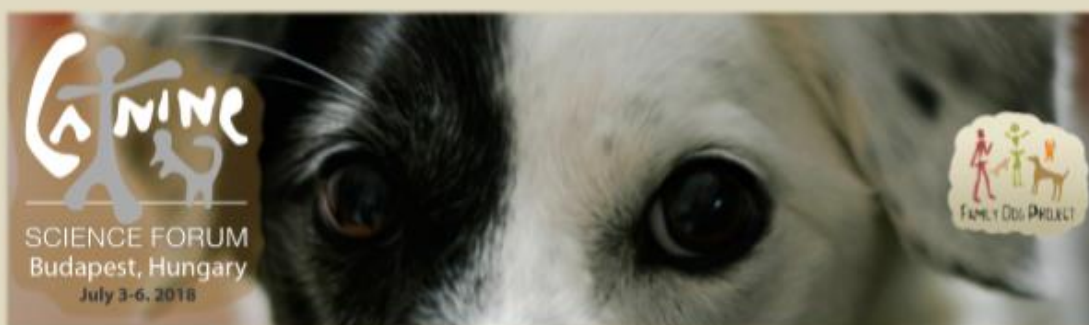




6th Canine Science Forum

Abstract Book



Performance in a problem solving task in old and young family dogs

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Little is known about the healthy ageing in dogs. The aim of this study was to develop a task which can detect age-related changes in problem-solving performance of healthy family dogs without any previous training. Until now, problem solving skills were mostly measured by behaviour tests that relied on lengthy pre training procedures, which make these tests less feasible for measuring the cognitive ability of old family dogs.

We tested 45 young (Mean=4.5, range: 2.5-6.5 years) and 79 old (M=10.5, range: 8-14.5 years) dogs of various breeds, balanced for sex. During the test, the dogs witnessed an experimenter hiding a treat in a box and then had the opportunity to obtain the treat. In the first 3 trials we used an opaque box,

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while later this was replaced by a transparent box of the same size for a further 7 trials. We measured latency to obtain the treat and number of mistakes.

Wilcoxon rank sum tests showed that age group had no significant effect on the latency to obtain the treat, for both box types (Opaque: $W = 3787.5$, $p = 0.549$; Transparent: $W = 3702$, $p = 0.723$). However, the young dogs committed less mistakes than the old ones in the case of the transparent box ($V = 1455.5$, $p = 0.045$) but not in the case of the opaque box ($p > 0.05$).

While the measure of latency was not able to detect age-related difference in problem solving, the number of mistakes in our problem solving apparatus is a useful and objective measure for cognitive decline. The transparent box particularly enabled us to assess changes in motor inhibition skills and impulse control.

Funding: European Research Council (ERC) under the European Union's Horizon 2020 research and innovation programme (Grant Agreement No. 680040) and János Bolyai Research Scholarship of the Hungarian Academy of Sciences.