

## **Abstract:**

*Equidae* belong to a group of large herbivores, which survival in natural environment depends beside others on their capability of fast predator recognition and detection. They can sensually recognise a possible threat in advance and react by immediate escape, which increases their survival. Also domestic horses still show very sensitive reaction to sudden (unexpected) stimuli. So we assume, that the ability to detect predator immediately is conserved despite of the long domestication process. The supportive indirect evidence is given by the successful breeding of the feral herds all over the world. However, studies showing the direct reaction of domestic horse toward the canids (as the most common predators), are still absent.

Aim of the work was to find, if the horses (*Equus caballus*) could recognize acoustic sign of dogs like predators and if they could recognize the level of potential threat according to the number of predators, similarly as their wild ancestors.

The recordings of barking of big dog breeds were obtained and modified. The final recording contained the set of barking coming from one individual or three different. The recording was played to the experimental horses, under controlled conditions, together with white sound as a control. The reactions were recorded. Altogether 12 horses out of one stable were entering the experiment and 226 minutes recorded. Seven behavioural categories were differentiated and used for statistical analysis (Directed gaze, Vigilance (%), Indifference (%), Fast movement, Excited movement (%), Non-excited movement (%) and Ear movement per minute).

The most significant factors were Vigilance where it was affected with the number of barking dogs (1 dog,  $p = 0,026$  and three dogs  $p = 0,023$ ). The Ear movement per minute was affected by the phase of the experiment (before barking,  $p = 0,017$  and after,  $p = 0,983$ ). Significant was also the sex ( $p = 0,096$ ). Non-excited movement is correlated with the age and the temperament of animals. There is negative correlation of excited movement with temperament. Based on the results it seems that horses do react on the dogs barking just with increased vigilance, therefore they identify the sound as dangerous, however, they do not differentiate the level of potential threat according to the number of barking individuals.

Key words: horses, dogs, vocalization, antipredatory behaviour