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**Book of Abstracts**

# Posters



## **A04. Discomfort-related use of audible and ultrasonic calls across development in pups of the fat-tailed gerbil *Pachyuromys duprasi***

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Ultrasonic calls (UCs) reflect discomfort in mice, rats and hamsters. We examined whether the ratios of audible and ultrasonic call types reflect discomfort in fat-tailed gerbils *Pachyuromys duprasi*. We tested the use of call types in 40 fat-tailed gerbil pups (17 males and 23 females from 11 litters) from birth to 40 days of age. The total test (420 s) was split to 4 sequential steps: Isolation, Touch, Rotation and Measuring. We considered that discomfort increased from the 1st to the 4th test step because of cumulative effects of handling and time of pup isolation from the nest. From the total of 590 tests, 83.3% contained audible clicks, 58.8% contained audible low-frequency calls, 4.2% contained audible high-frequency calls and 45.6% contained UCs. Along ontogeny the audible clicks occurred in 70-100% tests in all ages. The audible low-frequency calls were mostly used by 2-day pups (81.0% tests) and least by 40-day pups. The UCs emerged at 6 days (9.8% tests), reached maximum at 14 days (77.8% tests) and then decreased (47-58% tests). The rarest audible high-frequency calls were presented from birth to 36 days, with maximum at 16 days (11.9% tests). With increase of discomfort, the 2-6-day pups had not UCs and used more audible low-frequency calls and the same number of audible clicks; the 8-18-day pups used less UCs, more audible low-frequency calls, the same number of audible clicks; the 20-40 day pups used more UCs and the same number of audible low-frequency calls and audible clicks. We conclude that acoustic indicators of discomfort are age-dependent in the fat-tailed gerbil. The UCs are applicable as indicators of discomfort only after 6 days of age. Support: the Russian Science Foundation, grant 14-14-00237.