

Abstract

Personality, or behavioural differences among individuals, which are stable both in time and across contexts, is a highly popular topic. Currently there has been an increase of interest in the relationship between personality and repeatability, which is a methodical approach developed to measure the stability of interindividual differences in time. The aim of this thesis is to evaluate the personality of rats according to behavioural patterns exhibited under widely used testing procedures in new environment (open field test, hole board test) and to compare, how behavioural traits in these tests mutually correlate and change over time. Each test trial was repeated eight times with different intervals (24 hours, 6 days, 4 weeks).

The results suggest that most of the recorded behavioural variability can be explained with three principal axes. The first one is associated with loco-exploratory activity of the subject. The elements of behaviour associated with this axis are the most repeatable. The second axis is mostly associated with time the animal spent in the central part of the arena and the third axis represents the interest in holes in hole board test. These two axes are less repeatable. A significant effect of the identity of the animal was found in all behavioural traits, associated with these axes.

Key words: repeatability, personality, exploration, neophobia, open field test, hole board test