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Open field test

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We use this protocol and it's working

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Abstract

The open field test is a scientific research method that measures the general locomotion and willingness to explore of a rodent by placing it in a large, open enclosure. This protocol uses a black square arena without a top cover, in a field divided into 25 squares of equal size, with 300 LUX lighting. During the rat's exploration in the open field test, the researcher leaves the laboratory. To control for possible effects due to circadian cycles, all tests are performed at the same time of day. All tests are recorded on video with a central view of the field at a height of 2 m above the ground.

Guidelines

All tests should be conducted at approximately the same time of day. During the rat's exploration of the open field, the researcher should leave the laboratory.

Materials

Lux meter
Box with square base (85 × 85 cm) in black
Lamp
Canon video camera (model Vixia HF R70) with a 2.8-89.6 mm lens
Camera tripod
70% alcohol

Before start

Verify that there is uniform 300 LUX lighting within the open field and clean it with 70% alcohol on the base and walls. Transfer the rats to the behavior laboratory and wait 1 hour for habituation before beginning the open field test.

1 After 1 h of habituation in the laboratory, place the rat in the center of the field and allow it to explore for 5 min.

2 Remove the rat from the field and place it in a new box separate from its group.

3 After each trial, clean the base and walls of the open field test with 70% alcohol to eliminate olfactory cues.

4 Record locomotor activity as well as the frequency of rearing and grooming behaviors in the rats, using a blind observer.

Protocol references

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