

Review of: "Novel Method to Assess Group Dynamics in Rats Reveals Deficits in Behavioral Contagion in KM Rats"

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Potential competing interests: No potential competing interests to declare.

I read the manuscript titled "Novel method to assess group dynamics in rats reveals deficits in behavioral contagion in KM rats" from Smirnov et al.,

The manuscript is suitable for publication, but there are several flaws that must be corrected before acceptance.

Major flaws

1. Abstract. What does "instinctual" mean? Do you refer to instinctive behavior?
2. When you refer to rats living together, you must indicate per cage and measurements.
3. The highlights must be in bullet form, short and direct, and avoid the use of acronyms.
4. The hypothesis you refer to, "collective actions would be difficult..." I suggest being more direct in this phrase.
5. It is necessary to describe the capabilities of the Intelli Cage.
6. Figure 1. The group graphs are drawn... based on data, I assume. This must be clear!
7. IHNA is not defined!
8. It must be clear what time interval is used (30 min).
9. When you refer to "as an avalanche of simple acts..." It must be a repetitive display or an increase in the number of bouts or both? Please clarify it.
10. It is necessary to improve the figures. In Figure 2, the superior panels must have both axes (x and y) labeled, and the lower panel is number or frequency?
11. When you select shorter time periods, why do random fluctuations increase?

What are the neurophysiological mechanisms?

1. What does "poorly observed in KM rats" mean?

The result is significant or what? Please clarify it!

1. Why do you use quotation marks in "strain" and "conditions"? Are these the factors in the statistical analysis? Or not?
2. Yawning behavior is not neutral behavior. It has a circadian variation; see Arias et al., 1984, and the food schedule also induced an increase in yawning frequency due to expectancy, which means stress responses (see Holmgren et al., 1991; Collins and Eguibar, 2010).
3. In what way do you evaluate that KM rats pay less attention to a subject acting as a demonstrator?

4. It is necessary to add more arguments and/or references supporting KM rats as an ASD animal model.
5. In the manuscript, you suggest that dominant rats are more imitative. You must support this affirmation!
6. Did the slowest animals have more stress? How did you determine the slowest? How many visits to the water area?
7. How did you determine hierarchy?
8. It is necessary to review the English grammar.