



ESPS PEER-REVIEW REPORT

Name of journal: World Journal of Biological Chemistry

ESPS manuscript NO: 15450

Title: DNA microarray unravels rapid changes in transcriptome of MK-801 treated rat brain

Reviewer's code: 01905258

Reviewer's country: Spain

Science editor: Yue-Li Tian

Date sent for review: 2014-11-29 13:20

Date reviewed: 2014-12-15 16:37

| CLASSIFICATION | LANGUAGE EVALUATION | SCIENTIFIC MISCONDUCT | CONCLUSION |
|---|---|--|--|
| <input type="checkbox"/> Grade A: Excellent | <input type="checkbox"/> Grade A: Priority publishing | Google Search: | <input type="checkbox"/> Accept |
| <input type="checkbox"/> Grade B: Very good | <input checked="" type="checkbox"/> Grade B: Minor language polishing | <input type="checkbox"/> The same title | <input type="checkbox"/> High priority for publication |
| <input checked="" type="checkbox"/> Grade C: Good | | <input type="checkbox"/> Duplicate publication | |
| <input type="checkbox"/> Grade D: Fair | <input type="checkbox"/> Grade C: A great deal of language polishing | <input type="checkbox"/> Plagiarism | <input type="checkbox"/> Rejection |
| <input type="checkbox"/> Grade E: Poor | <input type="checkbox"/> Grade D: Rejected | <input checked="" type="checkbox"/> No | <input checked="" type="checkbox"/> Minor revision |
| | | BPG Search: | <input type="checkbox"/> Major revision |
| | | <input type="checkbox"/> The same title | |
| | | <input type="checkbox"/> Duplicate publication | |
| | | <input type="checkbox"/> Plagiarism | |
| | | <input checked="" type="checkbox"/> No | |

COMMENTS TO AUTHORS

The Ms. by Kobayashi et al. investigates the effect of MK-801 on gene expression in different areas of the rat brain. This represents an addendum to a previous study by Marvanová et al (Neuropsychopharmacology 2004; 29: 1070-1079) that identified genes regulated by MK-801 in the adult rat brain by cDNA microarrays analysis. This paper should be cited, and the published results by Marvanová should be compared with those obtained by the authors. Other comments: 1. Fig. 3 has not been included in the current version of the Ms. 2. Page 12, first sentence of last paragraph: What is the meaning of "> / < 1.5 / 0.75 fold"? 3. The RT-PCR analysis shown in Fig. 5 should include a gene of reference (beta-actin, GAPDH, or similar). In the absence of a reference no conclusions can be raised from this analysis (which should have been performed by real time PCR instead of classical RT-PCR). 4. The Discussion section should comment on the physiological conclusions derived from the GO analysis.

ESPS PEER-REVIEW REPORT

Name of journal: World Journal of Biological Chemistry

ESPS manuscript NO: 15450

Title: DNA microarray unravels rapid changes in transcriptome of MK-801 treated rat brain

Reviewer's code: 01172504

Reviewer's country: Italy

Science editor: Yue-Li Tian

Date sent for review: 2014-11-29 13:20

Date reviewed: 2014-12-13 01:10

| CLASSIFICATION | LANGUAGE EVALUATION | SCIENTIFIC MISCONDUCT | CONCLUSION |
|---|--|--|--|
| <input type="checkbox"/> Grade A: Excellent | <input type="checkbox"/> Grade A: Priority publishing | Google Search: | <input type="checkbox"/> Accept |
| <input type="checkbox"/> Grade B: Very good | <input type="checkbox"/> Grade B: Minor language polishing | <input type="checkbox"/> The same title | <input type="checkbox"/> High priority for publication |
| <input type="checkbox"/> Grade C: Good | <input type="checkbox"/> Grade C: A great deal of language polishing | <input type="checkbox"/> Duplicate publication | <input type="checkbox"/> Rejection |
| <input type="checkbox"/> Grade D: Fair | <input type="checkbox"/> Grade D: Rejected | <input type="checkbox"/> Plagiarism | <input type="checkbox"/> Minor revision |
| <input type="checkbox"/> Grade E: Poor | | <input type="checkbox"/> No | <input type="checkbox"/> Major revision |
| | | BPG Search: | |
| | | <input type="checkbox"/> The same title | |
| | | <input type="checkbox"/> Duplicate publication | |
| | | <input type="checkbox"/> Plagiarism | |
| | | <input type="checkbox"/> No | |

COMMENTS TO AUTHORS

The article from Yuka Kobayashi et al., investigates the impact of Dizocilpine (MK-801) acute treatment on gene expression profile of different rat brain regions by microarray analysis. As suggested by authors, this analysis could help to identify potential biomarkers associated with neurological damage and sounds interesting for the readers of WJBC. General comment. A weakness of this work concerns the validation of microarray analysis. Only 2 genes (Cyr61, up-regulated, and Amy1 mainly down-regulated in all the brain regions) have been verified by RT-PCR. In my opinion the validation by qRT-PCR of the genes discussed in the Result session would significantly improve the work. Specific points Line 18 p13 (Table 2): I did not find a Table 2 in the manuscript received. Klf4 p16: Klf4 is up-regulated in several regions after MK-801 treatment. This seems to be in contrast with observations from other laboratory. The authors should better clarify this point. Last line p17: remove "resulting" Figure 5: this figure shows data from a single experiment. The authors should indicate the number of experiments done and the standard deviation.