Reviewer’s report

Title: Safety of Safety Evaluation of Pesticides: Developmental neurotoxicity of chlorpyrifos and chlorpyrifos-methyl

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Reviewer: Jyrki Liesivuori

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This study is a bit different from other articles sent for evaluation to scientific journals. However, its message is highly important to toxicology as a science and especially to regulatory toxicology.

It can be supposed that in this particular case a real detective work is needed to go through all the data and to find bias in observations and then in the conclusions. Only the researchers fully dedicated to the science can conduct this kind of detailed study.

The authors point out that the test laboratory has not given accurate figures of the low-exposed groups on potential changes namely developmental neurotoxicity (DNT) featuring two analyses of cerebellum height (and other brain morphometrics). It is strange that the laboratory has failed with positive controls when lead nitrate was applied. Anyhow, the authors clearly show that interpretation of the results is not correct. The careful and detailed way this study has been conducted indicates that the only aim has been scientific will to show that even the best laboratories might do some mistakes. The Figure 1 in the manuscript reveals well enough that the results by the test laboratory are wrong.

This study has a special value as it proves that there is still a need for academic and independent research. Regulatory toxicology applied by authorities all over the world should be seen vitally important for human beings and the environment. Yet another issue is that national organizations should be able to recruit highly motivated and skilled staff to do the demanding work for considering different kind of limit values needed in successful risk management.

Level of interest
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An exceptional article

Quality of written English
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Acceptable

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