



Federal University of Pampa  
Research Group in Cell Toxicology  
*Campus of Uruguai*

## **Statement of Originality and Relevance**

To Acta Scientiarum Health Sciences

Dear Editor,

The manuscript entitled "Chlorpyrifos induces mutagenic effects on human leukocytes in vitro at low concentrations" which we submit to the Acta Scientiarum Health Sciences, in an unprecedented way, demonstrates the mutagenic effect of chlorpyrifos organophosphates at low concentrations in cultured human leukocytes. The data were obtained assessing parameters as frequency of micronucleus, numerical chromosomal instability, and apoptosis. The range concentration used (3, 35, and 350  $\mu\text{g/mL}$ ) was based in previous study of our group (data not shown).

Here, we report that the two higher concentration used were able to induce mutagenic effects in human leukocytes. The literature reports some works related to chlorpyrifos, however, few of them describe mutagenic effects in human cells. Leukocytes play a central role in immune responses as well as being recognized as sensitive to assess exposure to xenobiotics and to indicate the level of toxicity of these substances.

Furthermore, exposures to chlorpyrifos commonly reach systemic blood stream and elicit clinical conditions, but so far its mutagenic effect on human leukocytes at low concentrations has remained unknown. Therefore, we believe that the data we present

here regarding the mutagenic potential of chlorpyrifos could cooperate with broader discussions about its safety and toxicology.

*Prof. Dr. Luís Flávio Souza de Oliveira*

Federal University of Pampa – UNIPAMPA,

Mail box 118 – Zip code 97.500-970 – Uruguaiana - RS, Brazil

E-mail: [luisoliveira@unipampa.edu.br](mailto:luisoliveira@unipampa.edu.br)