



## Correction to: Assessment of biomarkers of early kidney damage and exposure to pollutants in artisanal mercury mining workers from Mexico

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Firstly, adscription number 3, which belongs to Dr. Arturo Gavilán García, is modified in this paper.

Firstly, in the abstract I kindly request the correction of the units of the concentrations presented:

Artisanal mercury mining (AMM) is an informal economic activity that employs low technology and limited protection, and poses a risk to workers and their families; due to the extraction process, these scenarios involve exposure to complex mixtures of pollutants that synergistically aggravate the health of miners and people living near the site. Although mercury is the predominant pollutant, there are others such as polycyclic aromatic hydrocarbons (PAHs), toluene, arsenic, and lead which have been classified as nephrotoxic pollutants. Therefore, the purpose of this research was to evaluate the association between exposure to a complex mixture

of pollutants (mercury, lead, arsenic, PAHs, and toluene) and kidney damage in artisanal Hg mining workers through early kidney damage proteins (KIM-1, OPN, RBP-4, NGAL, and Cys-C). The results demonstrate the presence of OH-PAHs at concentrations of 9.21 (6.57–80.63) µg/L, hippuric acid as a biomarker of exposure to toluene, As and Pb 655. 1 (203.8–1231) mg/L, 24.05 (1.24–42.98) µg/g creatinine, and 4.74 (2.71–8.14) µg/dL, respectively, and urinary Hg 503.4 (177.9–878.7) µg/g creatinine in the study population. As well as biomarkers of kidney damage, NGAL and RPB-4 were found in 100% of the samples, KIM-1 and Cys-C in 44.1%, and OPN in 41% of the miners. Significant correlations were found between several of the evaluated pollutants and early kidney damage proteins. Our results demonstrate the application of the early kidney damage biomarkers for the assessment of damage caused by the exposure to mixtures of pollutants and, therefore, the urgent need for monitoring in AMM areas.

And secondly, I kindly request that the following statement be presented in the acknowledgments section:

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The original article can be found online at <https://doi.org/10.1007/s11356-021-16628-x>.

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