

SERVIÇO PÚBLICO FEDERAL  
UNIVERSIDADE FEDERAL DO PARÁ  
INSTITUTO DE CIÊNCIAS BIOLÓGICAS  
LABORATÓRIO DE FARMACOLOGIA MOLECULAR



Head, Chemicals, and Health Branch  
Economy Division  
United Nations Environment Programme  
Palais des Nations  
8-14 avenue de la Paix  
CH-1211 Geneva 10, Switzerland

**Maria Elena Crespo Lopez**  
Laboratório de Farmacologia Molecular  
Instituto de Ciências Biológicas  
Universidade Federal do Pará  
Av. Augusto Correa, 01. Campus do Guamá.  
66075-110 Belém – PA, Brazil  
E-mail: [ecrespo@ufpa.br](mailto:ecrespo@ufpa.br)

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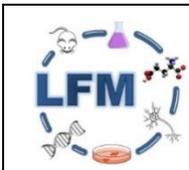
Dear Sir/Madam,

as Director of the Laboratory of Molecular Pharmacology at the Federal University of Pará in Belém (Brazil), I am sending our application with this letter of support to join UNEP Global Mercury Partnership, in the area of artisanal and small-scale gold mining (ASGM).

My group and I have been researching the toxicological effects of mercury since 2006 with a special focus in translational and epidemiological research of Amazonian populations (see links, bibliography and photos below). The exposure to this metal is a huge problem of public health in Brazil and worldwide.

Amazon is the largest tropical forest in the world, most of the area belonging to Brazil, a developing country that faces huge challenges for the consolidation of a universal health care system. Amazon is the lung of the world. We all depend on it. Populations living at it have the serious responsibility of the adequate conservation of this world treasure... as much as we have the responsibility to care about the health and quality of life of these populations. This is a major global health issue. Still, it is difficult and dangerous to access Amazonian riverine populations because of the geographical and socio-economic isolation. Despite of that, our studies have been enrolled the highest number of participants from these communities (see for example <https://doi.org/10.3389/fgene.2018.00285>) due to the climate of trust created over the years.

It should be noted that the consequences of ASGM are felt throughout the Amazon due to the fine balance of this ecosystem and the multiple anthropogenic interventions such as dams construction, mass burning and deforestation. Therefore, we need join efforts to generate knowledge to understand this complex problem. This better understanding will support effective strategies to combat the deleterious consequences of the presence of mercury in the Amazon for living beings and the ecosystem.



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Moreover, since 2019 we are living in exceptional circumstances with catastrophic consequences for the Amazon, worsened in the last year with the pandemic. These consequences will likely influence human exposure globally in the near future as we have highlighted in our recent review (*Mercury: what can we learn from the Amazon?*, available at: <https://doi.org/10.1016/j.envint.2020.106223>)

We are committed to generate knowledge that will better assist the development of preventive strategies and governmental actions for the adequate management of mercury in the Amazon. Therefore, here we expressed our support for the UNEP Global Mercury Partnership and our commitment to achieving its goal.

Best regards,

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**Prof. Maria Elena Crespo López**

Director of the PhD Program in Pharmacology and Biochemistry

Research Productivity Award by Conselho Nacional de Desenvolvimento Científico e Tecnológico (CNPq, Brazil)

Coordinator of the Laboratory of Molecular Pharmacology

Institute of Biological Sciences

Federal University of Pará

Av. Augusto Correa, 01. Campus do Guamá.

66075-110 Belém - PA. Brasil.

Phone: +55 (91) 32018212

Profiles:

ORCID: <http://orcid.org/0000-0002-1335-6853>

CV LATTES: <http://lattes.cnpq.br/9900144256348265>

RESEARCHGATE: [https://www.researchgate.net/profile/Maria\\_Crespo-Lopez](https://www.researchgate.net/profile/Maria_Crespo-Lopez)

GOOGLE SCHOLAR: [https://scholar.google.com.br/citations?hl=pt-BR&user=ZczezyQAAAAJ&view\\_op=list\\_works&sortby=pubdate](https://scholar.google.com.br/citations?hl=pt-BR&user=ZczezyQAAAAJ&view_op=list_works&sortby=pubdate)

PUBLONS: <https://publons.com/researcher/1814661/maria-elena-crespo-lopez/metrics/>

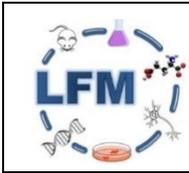
SCOPUS: <https://www.scopus.com/authid/detail.uri?authorId=8230111500>

Recent examples of our work:

Crespo-Lopez, M. E. *et al.* Mercury: What can we learn from the Amazon? *Environ. Int.* **146**, 106223, doi:10.1016/j.envint.2020.106223 (2021).

Santos-Sacramento, L. Human neurotoxicity of mercury in the Amazon: a scoping review with insights and critical considerations. *Ecotoxicol. Environ. Saf.* (2021).

Arrifano, G. *et al.* Genetic Susceptibility to Neurodegeneration in Amazon: Apolipoprotein E Genotyping in Vulnerable Populations Exposed to Mercury. *Front. Genet.* **9**, 285, doi:10.3389/fgene.2018.00285 (2018).



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- Arrifano, G. *et al.* Assessing mercury intoxication in isolated/remote populations: Increased S100B mRNA in blood in exposed riverine inhabitants of the Amazon. *Neurotoxicology* **68**, 151-158, doi:10.1016/j.neuro.2018.07.018 (2018).
- Arrifano, G. *et al.* Assessing mercury intoxication in isolated/remote populations: Increased S100B mRNA in blood in exposed riverine inhabitants of the Amazon. *Neurotoxicology* **68**, 151-158, doi:10.1016/j.neuro.2018.07.018 (2018).
- Arrifano, G. *et al.* In the Heart of the Amazon: Noncommunicable Diseases and Apolipoprotein E4 Genotype in the Riverine Population. *Int. J. Environ. Res. Public. Health.* **15**, 1957, doi:10.3390/ijerph15091957 (2018).



# UNEP GLOBAL MERCURY PARTNERSHIP

## INFORMATION ON BECOMING A PARTNER

This information sheet provides an overview of the United Nations Environment Programme (UNEP) Global Mercury Partnership for prospective partners. Further information is available at:

[web.unep.org/globalmercurypartnership](http://web.unep.org/globalmercurypartnership)

### GOAL OF THE PARTNERSHIP

The overall goal of the UNEP Global Mercury Partnership is to protect human health and the global environment from the release of mercury and its compounds by minimizing and, where feasible, ultimately eliminating global, anthropogenic mercury releases to air, water and land.

### PARTNERSHIP AREAS

The UNEP Global Mercury Partnership is a voluntary and collaborative relationship between various parties, governmental, non-governmental, public and private, in which all participants agree to work together in a systematic way to achieve its goal.

Initiated in 2005<sup>1</sup>, the Partnership today focuses its work on supporting timely and effective implementation of the Minamata Convention on Mercury; on providing state of the art knowledge and science on mercury; and on delivering outreach and awareness raising towards global action on mercury.

<sup>1</sup> UNEP Governing Council Decision 23/9

The Partnership is structured around eight areas:

- Artisanal and small-scale gold mining
- Mercury cell chlor-alkali production
- Mercury air transport and fate research
- Mercury in products
- Mercury releases from coal combustion
- Mercury waste management
- Mercury supply and storage
- Mercury releases from the cement industry

### OUR PARTNERS

Over 190 partners from governments, IGOs, NGOs, private sector and academic institutions:

- Support the overall goal of the Partnership.
- Contribute resources or expertise to the development and implementation of Partnership activities.
- Network with other organizations, agencies, entities and individuals addressing mercury issues.

### BECOMING A PARTNER

To become a partner, interested entities or individuals should submit a letter to UNEP signifying their support for the UNEP Global Mercury Partnership and their commitment to achieving its goal. The letter should also specify how they will contribute to meeting the goal of the Partnership.

Together with this letter, UNEP requests interested entities or individuals to also complete and submit the registration form (see reverse). Participation in the UNEP Global Mercury Partnership will be confirmed by UNEP. Partners' letters of support will be made public through the UNEP's website.

### SUPPORT LETTER AND REGISTRATION FORM SHOULD BE SUBMITTED TO:

**Head, Chemicals and Health Branch  
Economy Division  
United Nations Environment Programme**  
Palais des Nations  
8-14 avenue de la Paix  
CH-1211 Geneva 10, Switzerland  
E-mail: [metals@un.org](mailto:metals@un.org)

