To,

The Selection Committee

Sun Pharma Science Foundation

8C, 8 Floor, Hansalaya Building, 15-Barakhamba Road,

Connaught Place,

New Delhi-110 001

Subject: Statement of research work under reference has not been given any fellowship – Reg.

Throughout my research career, I have had the privilege of contributing to several significant studies in the field of toxicology, particularly focusing on the impact of environmental contaminants on biological systems. Our work has centered on investigating the mechanisms of toxicity induced by various chemical compounds, using zebrafish as a model organism. In one of our studies, I explored the neurodevelopmental toxicity caused by synthetic azo dyes, specifically Tartrazine. This research shed light on the mitochondrial pathways involved in apoptosis, providing crucial insights into how such chemicals affect early development at a cellular level. Our role in this study involved leading the research design, overseeing the experiments, and interpreting the results to understand the broader implications of these findings on public health. Another aspect of our research has delved into the relationship between endocrine-disrupting chemicals and chronic kidney disease. This work was pivotal in unraveling the complex biochemical interactions contributing to kidney damage, emphasizing the long-term health risks associated with exposure to these environmental pollutants. Our contributions included conceptualizing the study and ensuring the integrity of the data analysis. In another wok, we examined the transgenerational effects of Cadmium and Ketoprofen exposure, highlighting the potential for these toxicants to cause developmental deformities across generations. This research provided critical evidence for the lasting impact of environmental toxins, which has implications for regulatory policies and public health strategies. We were instrumental in guiding the experimental framework and interpreting the significance of the findings. Additionally, our research into the cytotoxic and teratogenic effects of wildfire residuals like Syringol offered new perspectives on the environmental hazards posed by natural disasters. Our primary role in this study was to lead the design and analysis, ensuring that the results were robust and informative.

Overall, our work reflects a deep commitment to advancing our understanding of toxicology and its implications for human health and the environment.

Bibliography details for one of our best papers associated with environmental research, published in top journals:

- Haridevamuthu, B., Murugan, R., Seenivasan, B., Meenatchi, R., Pachaiappan, R., Almutairi, B.O., Arokiyaraj, S. and Arockiaraj J*.,2024. Synthetic azo-dye, Tartrazine induces neurodevelopmental toxicity via mitochondria-mediated apoptosis in zebrafish embryos. Journal of Hazardous Materials, 461, p.132524. https://doi.org/10.1016/j.jhazmat.2023.132524. (IF – 12.2)

- Nayak, S.R.R., Boopathi, S., Haridevamuthu, B. and Arockiaraj J*., 2023. Toxic ties: Unraveling the complex relationship between endocrine disrupting chemicals and chronic kidney disease. Environmental Pollution, p.122686. https://doi.org/10.1016/j.envpol.2023.122686. (IF – 7.6).

- Madesh, S., Sudhakaran, G., Murugan, R., Almutairi, M.H., Almutairi, B.O., Kathiravan, M.K. and Arockiaraj, J., 2024. Parental (F0) exposure to Cadmium and Ketoprofen induces developmental deformities in offspring (F1): A transgenerational toxicity assessment in zebrafish model. Science of The Total Environment, p.175319.

- Priya, P.S., Guru, A., Ramu, M., Haridevamuthu, B., Velayutham, M., Seenivasan, B., Pachaiappan, R., Rajagopal, R., Kuppusamy, P., Juliet, A. and Arockiaraj J*, 2022. Syringol, a wildfire residual methoxyphenol causes cytotoxicity and teratogenicity in zebrafish model. Science of the Total Environment, 864, p.160968. https://doi.org/10.1016/j.scitotenv.2022.160968 (IF - 8.2)