

Biomarkers and their Utility in Occupational Safety and Environmental Health Settings [†]

Prashant Singh ¹, Nandini Gupta ^{2,*}, Rohith Krishna ², Neelkant Verma ²

¹ School of Medico-Legal Studies, National Forensic Sciences University, Gujarat, India; singhp1103@gmail.com (P.S.);

² School of Forensic Sciences, National Forensic Sciences University, Gujarat, India; guptanandini1011@gmail.com (N.G.); rohithkrishna161298@gmail.com (R.K); neelkant.verma@nfsu.ac.in (N.V);

* Correspondence: guptanandini1011@gmail.com (N.G.);

[†] Presented at Environmental Toxicology: Impact on Human Health, (Environ Tox 2021)

Received: 5.11.2021; Revised: 18.11.2021; Accepted: 20.11.2021; Published: 30.11.2021

Abstract: Every day, there is a new occupation in a new environmental setting, a new work role that every individual has to play. Multiple occupations exist in society, each of which contributes to the advancement of society. There is a risk associated with every occupation in the environment of either one or multiple pillars of occupational toxicology, i.e., biological hazard, chemical hazard, ergonomic hazard & psychological hazards that can harm a worker's health. Though multiple research exists on occupational safety & health (OSH) and environmental health, it is important to look forward to the new advancements that can help detect these hazards during the risk assessment and alert the organization. Biomarkers are useful indicators that can be used to assess workers' exposure and screen diseases to help medical professionals to determine the appropriate treatment. This review gives a new perspective to the scientific community on the utilization of biomarkers in OSH practice and the environmental health perspectives, with its potential. This paper can serve as a reference for future studies and research. Moreover, this paper highlights the critical areas associated with the use of biomarkers that needs more research to achieve the full potential of these biomarkers in occupational and environmental settings.

Keywords: occupational; health; safety; toxicology; biomarkers; hazards; risk; environment; bio-monitoring.

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Funding

This research received no external funding.

Acknowledgments

We would like to acknowledge the technical clarity and support provided by Dr. Neelkant Verma in writing this paper.

Conflicts of Interest

The authors declare no conflict of interest.