Journal of Biomarkers in Drug Development

Open access Commentary

The Use of Biomarkers in Exposure Studies is also Referred to as Biomonitoring

Henry Naveo*

Department of Biotechnology, University of the Santo Tomos, Belgium

DESCRIPTION

Biomarkers in analytical and environmental sciences are chemicals, metabolites, susceptibility traits, or changes in the body that are associated with exposure of living organisms to chemicals. They can determine whether exposure has occurred, the route of exposure, the route of exposure, and the resulting effects of exposure. The use of biomarkers in exposure studies is also called biomonitoring. His three types of biomarkers are useful in exposure assessment: Sensitivity biomarkers, exposure biomarkers, and efficacy biomarkers. Biomarkers of exposure are most commonly used because they can provide information about route, route and sometimes source of exposure. Susceptibility biomarkers are indicators of the natural traits of an organism that make it susceptible to chemical exposure. They help define which susceptibilities are more vulnerable and the critical times when exposure can be most damaging. It indicates how vulnerable a person is to the respiratory effects of exposure to the toxic compound brevetoxin. Examples of biomarkers include everything from blood pressure and heart rate, to basic metabolic studies and X-rays, to complex histological and genetic testing of blood and other tissues.

Biomarkers of exposure are actual chemicals or chemical metabolites that can be measured in the body or after excretion from the body to determine various characteristics of an organism's exposure. For example, human blood or fish blood can be tested to determine lead levels to measure exposure. A biomarker of efficacy is a quantifiable change experienced by a person that indicates exposure to a compound and may indicate the resulting health effects. For example, a woman exposed to her DDT, an organochlorine insecticide known to cause problems with the reproductive system, may experience a miscarriage that may be related to previous exposure.

Biomarkers of exposure are most commonly used because they can provide information about route, route, and sometimes source of exposure. These indicators help researchers identify exposures in advance and prevent them from causing further harm. This is different from effect biomarkers, where scientists can go back in time to determine if and what kind of exposure, but it may be too late to change anything. However, impact biomarkers will aid future research into chemicals of interest, and the results may aid in more stringent laws and policies related to chemicals. Biomarkers should be evaluated for their ability to predict and quantify radiation dose. There are certain characteristics that are desirable in associating biomarkers with exposures. These include high specificity (exposure to biomarkers), linear relationships over time, strong correlations with health effects, inexpensive studies, and consistency (same exposure yields same concentrations of biomarkers each time). Without these ideal properties, the use of biomarkers as strong predictors of exposure is limited. Many different classes of compounds can be measured in different tissues and parts of the body. Nearly every tissue in the body, from breath to hair to saliva, has been tested as a biomarker of exposure and contains virtually every major environmental pollutant, including Volatile Organic Chemicals (VOCs) and metals such as arsenic and lead identifiable by biomarkers. It all depends on the chemical structure of the compound and its reactivity with the composition of its storage space.

ACKNOWLEDGEMENT

The author is grateful to the journal editor and the anonymous reviewers for their helpful comments and suggestions.

CONFLICT OF INTEREST

The author declared no potential conflicts of interest for the research, authorship, and/or publication of this article.

Received:	01-November-2022	**Manuscript No:**	JBDD-22-15122
Editor assigned:	03-November-2022	**PreQC No:**	JBDD-22-15122 (PQ)
Reviewed:	17-November-2022	**QC No:**	JBDD-22-15122
Revised:	22-November-2022	**Manuscript No:**	JBDD-22-15122 (R)
Published:	29-November-2022	**DOI:**	10.21767/JBDD.22.3.136

Corresponding author Henry Naveo, Department of Biotechnology, University of the Santo Tomos, Belgium, E-mail: henrynaveo@99.com

Citation Naveo H (2022) The Use of Biomarkers in Exposure Studies is also Referred to as Biomonitoring. J Biomark Drug Dev. 3:136.