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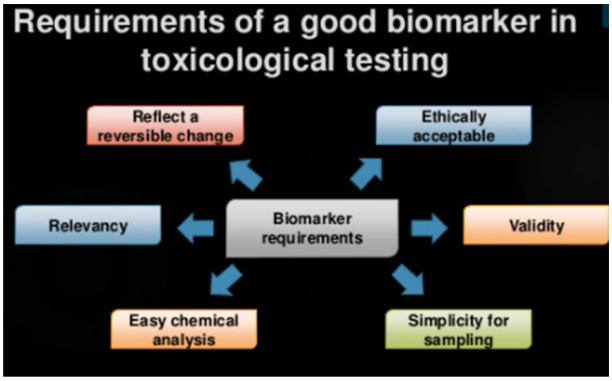
Biomarker Toxicology Effects

Priyanka Dubey*

Department of Genomics, Hamdard Institute of Medical Sciences and Research, New Delhi, India

Image Article



Biomarkers are biochemical indicators that can be used to monitor biological changes in response to toxins or other stimuli. Researchers can measure and predict toxicological effects with the understand-ing that biomarkers within a biological system will fluctuate accord-ing to changes in that system. Modern gene therapy is often defined as a way that replaces one gene with another normal or therapeutic one. Although gene therapy has been used for several decades, but thus far it's not produced any clear-cut therapeutic results. Each year, an estimated 3 million babies worldwide, have birth defects. Quite 6 thousands single-gene disorders are currently known. Gene therapy is that the therapeutic delivery of virus gene into a patient's cells to treat and cure diseases [1]. The toxicological effects, which are actually the pharmacological effects of RCAs, but are perceived as adverse or toxicological effects, can be local or topical as well as systemic following absorption. In addition, the effects can be acute or long term. Also, the exposure can be acute, long, or repeated. Biomarkers can help doctors and scientists diagnose diseases and health conditions, find health risks in a person, monitor responses to treatment, and see how a person's disease or health condition changes over time. For example, an increased level of cholesterol in the blood is a biomarker for heart-attack risk [2].

Biomarkers of exposure are used to assess the amount of a chemical that is present within the body. Many chemicals can be measured in urine, blood, saliva, and, if they are fat soluble, in body fat and breast milk (e.g., DDT). Biomarkers of exposure provide information on. chemical exposures in individuals. Biomarkers may be produced by the cancer tissue itself or by other cells in the body in response to cancer. They can be found in the blood, stool, urine, tumor tissue, or other tissues or bodily fluids [3]. Notably, biomarkers are not limited to cancer. Biomarkers can be also associated with some degree of risk. In clinical trials, this is less a concern because the patient will possibly benefit from the "new treatment." In quasi-experimental studies, the source of the biomarker may be critical [4]. Body fluids such as blood and urine are usually well tolerated. Biomarkers are biochemical indicators that can be used to monitor biological changes in response to toxins or other stimuli. Researchers can measure and predict toxicological effects with the understanding that biomarkers within a biological system will fluctuate according to changes in that system. Biomarkers can help identify not only.

A substance's degree of toxicity but also the mechanisms by which that substance causes toxic effects. Over the last few decades, the use of biomarkers has emerged as a valuable tool in many areas of life and health sciences, so Biomarkers in Toxicology is a much-needed resource, covering descriptions and applications of biomarkers inthe field of toxicology for a wide range of research purposes. Biomarkers in Toxicology are a timely and comprehensive reference dedicated to all aspects of biomarkers that relate to chemical exposure and their effects on biological systems [5]. This book includes both vertebrate and non-vertebrate species models for toxicological testing and development of biomarkers. Divided into several key sections, this reference volume contains chapters devoted to topics in molecular-cellular toxicology, as well as a look at the latest cutting-edge technologies used to detect biomarkers of exposure and effects.

References

1. Bacchetta, Carla, Rossi Andrea, Ale Analia, and Campana Mirta, et al. "Combined Toxicological Effects of Pesticides: A Fish Multi-Biomarker Approach." Ecol Indicators 36 (2014): 532-538.
2. Eason, Charles, and O'Halloran Kathryn. "Biomarkers in Toxicology Versus Ecological Risk Assessment." *Toxicology 181 (2002): 517-521.*
3. Bocchetti, Raffaella, Fattorini Daniele, Pisanelli Barbara, and Macchia Simona, et al. "Contaminant Accumulation and Biomarker Responses in Caged Mussels, Mytilus Galloprovincialis, to Evaluate Bioavailability and Toxicological Effects of Remobilized Chemicals During Dredging and Disposal Operations in Harbour Areas." Aquatic Toxicol 89 (2008): 257-266.
4. Amiard-Triquet, Claude, Amiard Jean-Claude, and Rainbow Philip S, eds. Ecological Biomarkers: Indicators of Ecotoxicological Effects. CRC Press, 2012.

***Address to correspondence:** Priyanka Dubey, Department of Genomics, Hamdard Institute of Medical Sciences and Research, New Delhi, India; E-mail: dubey.1988@gmail.com*

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5. Celander, Malin C. "Cocktail Effects on Biomarker Responses in Fish." Aquatic Toxicol 105 (2011): 72-77.

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