

Posters

Endocrine Disrupters: A Challenge That Need to be addressed for Better Sustainable Environment

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Abstract

The challenge posed by Endocrine-disrupting chemicals causes a rapid regulatory development in the area of environmental endocrine disruption, which present a series of potential problems. The literature still lacks original research and novel monitoring strategies and processes for assessing the effect of xenobiotics.

While hormone disrupters research expand very rapidly and a number of health effects linked to endocrine disrupters grow, cause-effect relationships still remain elusive. In support of attempts to develop appropriate hazard identification strategies for endocrine-disrupting chemicals, several regulatory initiatives have been launched. The most specific is the one developed by congress that epa should have regulatory framework on endocrine disruption, which is supposed to be placed by the end of 1998. Some of the knowledge gap may be filled in the coming few years, because research on endocrine disrupters is expanding greatly.

In general, endocrine disrupters are chemicals that mimic or otherwise alter or interfere with the activity of natural hormones. The effect associated with the exposure to endocrine-disrupting chemicals in human and wildlife includes but not limited to carcinogenic effects such as liver tumors in fish, reproductive effects as in abnormal sexual development, feminized responses and embryonic deformities. Among the effect also comes alteration of immune function as in birds and mammals.

In this paper, the current knowledge about environmental chemicals with estrogenic and other hormonal effects dealing with their adverse health effects in wildlife and human will be highlighted. Emphases will be given to available bioanalytical methodologies and processes used to detect endocrine disruption effect. In addition, special consideration will be given to in vitro and analytical methods used in this laboratory to assess specifically the hormonal and estrogen activity to exposure of a selected pesticide and phthalates.