Emerging issues in the assessment of endocrine disrupting chemicals

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Endocrine disrupting chemicals (EDC) can alter the homeostasis of the endocrine system therevy causing adverse health; due to the critical regulatory role of the endocrine system, the reproductive function as well as pre- and postnatal development are specifically susceptible to EDC. However, scientific evidence has yet to be translated into international guidelines for evaluating a number of critical, but still insufficiemtly investigated aspects. These include alterations induced in the peripubertal and long-term effects on tissue and organ programming, leading to enhanced predisposition to the development of tumors (e.g., testis and breast), and/or of the metabolic syndrome. A robust and consistent assessment of these effects is of paramount importance to reduce the risks associated with exposure to so many substances with still limited toxicological data or newly introduced into the market. Translation of experimental evidence into novel assays, endpoints and/or biomarkers can receive significant support from the implenentation of the Adverse Outcime Pathways betwork.

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Italian endocrine disrupters website: http://www.iss.it/inte