7th Euro-Global Summit on **Toxicology & Applied Pharmacology**

October 24-26, 2016 Rome, Italy

Bisphenol A alters maternofetal hypothalamic pituitary thyroid axis

R G Ahmed Beni Suef University, Egypt

In the last 10 years, there is accumulative interest about chemical pollutants that have the capability to act as hormone simulators. Bisphenol A (BPA, 2,2-bis (4-hydroxyphenyl) propane), a chemical frequently found in plastic packing from receipts to the lining of food cans and supposed to interrupt the endocrine system. Although, early-life BPA exposure might influence the maternofetal hypothalamic pituitary thyroid axis (HPTA) and contribute to childhood neural disorders, insufficient studies have examined the associations between BPA exposure and HPTA in pregnant or their offspring. The fetal hypothyroid state owing to the maternal administration of BPA disordered the levels of serum leptin, insulin growth factor 1 (IGF1), adiponectin, insulin, growth hormone (GH) and tumor necrosis factor-a (TNF-a). The reduction in the maternofetal body weight could propose a drop in the overall health level which can be significant in the clarification of HPTA effects. Accordingly, BPA binds to thyroid receptor (TR) and diminishes triiodothyronine (T3)-mediated gene expression by improving its reaction with the co-repressor N-CoR. These observations indicate that the maternofetal BPA might act as endocrine disruptor producing hypothyroidism and changing the development of the HPTA, the fat metabolism, and the perinatal activity. Finally, maternofetal BPA might exert intricate, mosaic actions during pregnancy, and might have consequences for fetal and neonatal development. Maternal thyroid function), thyroid hormones, and GH would be essential after any disruption in the developing HPTA. Additional experimentations are needed to elucidate the probable relations with human health.

ahmedragab08@gmail.com r_g_a_ahmed@yahoo.com

Effect of Benomyl on soil indigenous bacteria, Actinomycetes and fungi and their capability of degrading the fungicide in two soil types in Sudan

Randa H Elsalahi¹, Awad G Osman¹ Adil A Elhussein² and Ashraf M Sherif¹ ¹Environment and Natural Resource and Desertification Research Institute, Sudan ²University of Khartoum, Khartoum, Sudan

Two laboratory experiments were conducted to investigate the effect of different concentrations of Benomyl fungicide on the numbers of the main groups of soil micro flora and to elucidate percent fungicide degradation in sandy loam and clay loam soils in Sudan. Benomyl was applied in 4 concentrations; 0.032, 0.8, 3.2 and 8.0 mg/g soil. Counts of microorganisms in Benomyl treated soils were determined at 7, 15, 30 and 240 days' intervals. Benomyl residue was determined at the same intervals using RP C_{18} . HPLC. Results revealed the suppression of fungal flora in both soil types immediately after the first week of incubation. Numbers of organic nitrogen using bacteria increased earlier (15 days) in sandy loam soil compared to clay loam soil (30 days). While inorganic nitrogen using bacteria increased in numbers by Benomyl application at 15 days' interval and then decreased in numbers up to the end of incubation period especially at the highest concentrations in both soil types. Benomyl completely suppressed Actinomycetes in clay loam soil and was found to cause fluctuating effects on their numbers in sandy loam soil. Degradation of Benomyl at the first 3 concentrations started earlier in sandy loam soil compared to clay loam but the highest degradation values were recorded in clay loam soil after 240 days of incubation. At the highest concentration tested, Benomyl underwent higher and faster degradation in clay loam soil compared to sandy loam.

randa_9123@hotmail.com