HOW ENVIRONMENTAL CONTAMINANTS AFFECT OVARIAN FUNCTIONS. PROTECTIVE EFFECT OF SOME MEDICAL, FOOD AND DRINK PLANTS

ALEXANDER V. SIROTKIN

PhD, DrDc. Constantine the Philosopher University, Nitra and Research Institute of Animal Production, Luzianky, Slovakia
E-mail: asirotkin@ukf.sk

Abstract: This abstract summarizes the original data concerning direct influence of oil-related environmental contaminants (benzene, xylene, toluene), medical, food and drink plants (green tea, rooibos tea, flaxseed, chia, yucca, *Tribulus terrestris*) and plant molecules (resveratrol, quercetin, daidzein, diosgenin) on animal (mice, cow, pig, rabbit) ovarian functions. It was observed, that these molecules are able to affect ovarian cell proliferation, apoptosis and the release of steroid and peptide ovarian hormones. The effects of environmental contaminants depended of animal body condition/obesity rate. Some plants and plant molecules were able to prevent some effects on environmental contaminants. These observations demonstrate the direct influence of environmental contaminants on basic animal ovarian functions, as well as the ability of some plants and plant molecules to prevent negative effect of environmental contaminants.

Acknowledgements: these studies were supported by APVV (projects APVV-0854-11, APVV-4040-11 and APVV-15-0296) and VEGA (project 1/0392/17).

BRIEF BIOGRAPHY OF THE SPEAKER:

Alexander Sirotkin is known specialist in biology of reproduction and leader in studies of some ovarian signaling substances (small RNAs, transcription factors, protein kinases, metabolic hormones a.o.). He has get his RNDr. degree in the University of Leningrad (USSR), PhD gedree in the Institute of Evolutionary Physiology and Biochemistry (Leningrad, USSR), DrSc degree in the Research Institute of Animal Production (Nitra, Slovakia) and Professor title in Constantine the Philosopher University (Nitra, Slovakia). He worked as Research Scientist, Senior Research Scientist, Head of the Laboratory and Project Leader in the Research Institute of Animal Breeding and Genetics (Leningrad-Pushkin, USSR), International Laboratory for Biotechnology (Nitra, Czechoslovakia), Research Institute of Animal Production/Animal Production Research Centre (Nitra, Slovakia) and Constantine the Philosopher University (Nitra, Slovakia). He had fellowships in Institute of Physiology and Genetics (Libechov, Czechoslovakia), Institute of Experimental Endocrinology (Bratislava, Slovakia), Research Centre of Animal Production (Dummerstorf, Germany), Institute for Animal Science and Animal Behaviour (Celle, Germany), Institute of Animal Science (Mariensee, Germany), University of Colonia (Colonia, Germany), Babraham Institute (Babraham, UK), University of Bristol (Bristol, UK), University of Nottingham (Sutton Bonington, UK) and other international research centers. His teaching activities included lectures in more than 10 universities and research centers, as well as the supervision of more than 50 undergraduate and PhD student works. Actually he have more than 600 publications, mainly in international biomedical journals and several books including recent monograph “Regulators of Ovarian Functions” (NY, USA, 2014). His publications have been cited more than 2100 times. For the results obtained during his basic and applied studies and related publications in area of biology and endocrinology of reproduction he was nominated to a number of national and international awards.