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Effect of selected food, medical plants and plant molecules on ovarian functions

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The aim of our *in vitro* and *in vivo* studies was to examine the potential influence of some food and medical plants and their constituents on ovarian functions. For this purpose, we have studied the influence of green tea, rooibos, ginkgo, flaxseed, yukka extracts, as well as of plant molecules resveratrol, curcumin, quercetin, daidzein, diosgenin on proliferation, apoptosis, release of hormones and response to gonadotropins of porcine and rabbit ovarian cells as well as on rabbit fecundity. It was observed, that green tea, rooibos, ginkgo, flaxseed, extracts, as well as ofresveratrol, curcumin, quercetin, daidzein, diosgenin are able to suppress proliferation, promote apoptosis, to alter the release of steroid hormones and to inhibit the response of cultured ovarian cells to hormonal stimulators FSH and IGF-I. Yukka extract expressed an opposite effect. Furthermore, feeding of rabbits with yukka increased their fecundity. These observations suggest potential direct inhibitory influence of food and medical plants green tea, rooibos, ginkgo, flaxseed on ovarian functions. The similarity in plant and plant constituents' effects suggest that the observed plant effects can be due to presence ofcurcumin, quercetin, daidzein and diosgenin. The potential anti-reproductive effect of these plants should be taken into account by their consummation. On the other hand, yukka can be used as a natural stimulator of reproduction and fecundity.

Biography

Alexander V Sirotkin received his PhD degree in Institute of Evolutionary Physiology and Biochemistry, Leningrad, Russia and his DrSc degree at the Research Institute of Animal Production, Nitra, Slovakia. He is working as Professor at the Constantine the Philosopher University, as a Research Scientist at Research Institute of Animal Production in Nitra and as a Visiting Professor at the King Saud University in Ryiadh now. He has more than 500 publications including 120 full papers in the international journals. He is an Editorial Board Member of 3 international journals and a recipient of more than 10 national and international awards.

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