



IV WORKSHOP ON MALE REPRODUCTIVE BIOLOGY

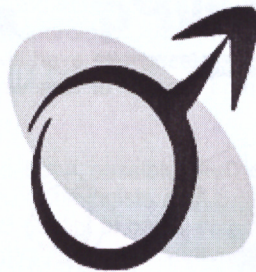
November 25-28, 2013
Hotel Travel Inn Live & Lodge Ibirapuera
São Paulo, SP, Brazil



OFFICIAL PROGRAM

Olga Popova

IV Workshop on Male Reproductive Biology



***Focus on environment and male
reproductive tract development and
fertility***

PROGRAM AND ABSTRACTS

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epidemiology and clinical fields alike. In this presentation the impact of different classes of chemicals on male reproduction will be presented and discussed.

T3 Impact of synthetic steroid hormones and lipid regulator drugs on male fish reproductive system. Yohana M. Velasco-Santamaría, Facultad de Ciencias, Agropecuarias y Recursos Naturales, Universidad de los Llanos, Grupo de Investigación sobre Reproducción y Toxicología de Organismos Acuáticos – GRITOX, Colombia.

Human and veterinary pharmaceuticals are found in significant concentrations in rivers, lagoons and surface freshwater due to their wide applications for different purposes around the world. Several studies have tried to evaluate the secondary effects of pharmaceuticals on fish health with special attention to the endocrine disrupting effects. Within the most used pharmaceuticals, synthetic steroids and lipid regulating compounds are frequently found in aquatic ecosystems with wide effect at different levels. In male fish the exposure to estrogenic compounds lead to decrease in the gonadosomatic index (GSI), testicular interstitial fibrosis, necrosis of germinal cells, reduction in the proportion of early germ cells and decrease in the tubule diameter and also to induction in plasma vitellogenin and upregulation of some genes related to estrogenic exposure. The fact that lipid regulators compounds decrease the cholesterol levels have been associated with the induced endocrine disruption alterations such as decreased 11-KT levels, up-regulation in the gonadal *star* mRNA, alteration in the gene expression of enzymes involved in the spermatogenesis and also some reports of the gonadal histology of males fish.

U2 Hormonal regulation of neonatal testicular function in mammals. Hector E. Chemes Center for Research in Endocrinology (CEDIE), National Research Council (CONICET), Buenos Aires Children's Hospital, Buenos Aires, Argentina.

The neonatal period in mammals (including humans) is characterized by a reactivation of the hypothalamo-pituitary-testicular axis that includes increased secretions of gonadotropins and testicular steroids, both of which may have important effects on the gonads. In the presentation the key role of Folicle Stimulating Hormone (FSH) in promoting proliferation of Sertoli cells will be stressed together with our findings on the regulation by FSH of spermatogonial proliferation probably through increased Sertoli cell secretion of paracrine factors that regulate germ cell proliferation. These studies led us to characterize a "critical period" of FSH dependency during the first postnatal days of testicular development in the rat. During this period, neutralization of FSH by different means leads to severe deficiencies in germ cell proliferation that severely affect pubertal and adult spermatogenesis. These findings have a parallel in humans indicating that the development of testicular germ cells during the postnatal period need an adequate secretion of FSH to stimulate a normal evolution of Sertoli and spermatogenic cells, an essential requirement for pubertal spermatogenesis. The presentation will also deal with the effect (or actually the lack of effect) of increased neonatal levels of testosterone on the germ cell line. High postnatal levels of testosterone do not result in stimulation of spermatogenesis due to the lack of expression of testosterone receptors in neonatal Sertoli cells. This phenomenon consists in a physiological and transient down regulation of testosterone receptors in neonatal Sertoli cells that