



INSTITUTE OF MOLECULAR BIOLOGY



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“NEW TRENDS IN LIFE SCIENCE”

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ABSTRACTS



CONCERN-ENERGOMASH



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CA2 fields which controls cell survival. It has been demonstrated that the MLO venom increases the rate of TD-PTP responses after high frequency tetanic stimulation of ipsilateral entorhinal cortex. Overall increase in firing rate of the hippocampal neurons can contribute to recovery processes after A β -induced neurodegeneration in hippocampus. Thus, MLO venom could reduce neuronal cell death and afford neuroprotection to rat brain.

INFLUENCE OF DIMETHYLSULFOXIDE MEDIUM ON ANTIRADICAL PROPERTIES OF FLAVONOIDS

G. Kocharyan

*A.B. Nalbandyan Institute of Chemical Physics NAS RA, Yerevan, Armenia
kocharyangg@ichph.sci.am*

On the basis of DPPH kinetic testing antiradical capacities of flavonoids (rutin, quercetin, naringin, morin) were determined in relation to the stable radical diphenylpicrylhydrazyl, DPPH, in the ethanol and ethanol/DMSO media for volume ratios 1/1 and 1/4, respectively. It was shown that increase in the dimethylsulfoxide (DMSO) concentration leads to diminishing in antiradical capacity of flavonoids under consideration up to 100%. This effect is explained by the formation of intermolecular hydrogen bonds between the electron-donor molecule of DMSO and flavonoids that results in blocking of the active antiradical centers. \

LEVELS OF FOLLICLE-STIMULATING HORMONE AND ASSISTED REPRODUCTION TECHNOLOGIES

O. Lyangasova, E. Tsigankova, K. Savikina

*Southern Federal University, Rostov-on-Don, Russia
oll@sfedu.ru*

Follicle-stimulating hormone (FSH) is fundamental for gamete maturation and is widely used in the treatment of hypogonadotropic hypogonadism and infertility in both sexes. This aim of the current study was to evaluate the FSH and luteinizing hormone (LH) levels in infertile women. The study involved 101 infertile women from 24 to 42 years old, who have passed the procedure of in vitro fertilization (IVF_ in "Center of IVF and reproduction" in Rostov-on-Don, Russia. Women were divided into 4 groups. Group 1 included 25 women with the number of mature follicles from 5 to 15 and with a pregnancy as a result of IVF (the control

group); group 2 was consists of 31 women with the number of mature follicles from 5 to 15 and with no pregnancy as a result of IVF; group 3 included 29 women with ovarian hyperstimulation with the number of mature follicles from 16 to 47, there was not embryo transfer during next two menstrual cycles; and group 4 included 16 women with a scanty number of follicles from 1 to 4 and with no pregnancy as a result of IVF. All women had normal levels of AMH. Women from group 1, 2, and 4 have taken only the first IVF attempt. Women from group 3 have taken from 1 to 5 IVF attempt and still had a large number of follicles. The levels of FSH and LH were measured by ELISA method in the 2-3-th day of the menstrual cycle for 5-6 cycles before the start of ovarian stimulation. According to the data, obtained for the FSH and LH levels in infertile women before ovarian stimulation, there was no statistically significant difference in FSH and LH levels between the groups. All women FSH and LH levels were within normal limits, but individually varied. Further studies aimed to investigate the association of polymorphisms of genes FSHB and FSHR with the number of mature follicles after ovarian stimulation are required to clarify this issue. Analytical work was carried out on the equipment of Center for collective use High Technology of SFedU. The reported study was funded by RFBR according to the research project № 16-34-01108.

INVESTIGATION OF CHEMICAL MECHANISM OF ANTIOXIDANT ACTION OF FOLIC ACID BY OXYGEN RADICAL ABSORBANCE CAPACITY METHOD

Z. Manukyan

*A.B. Nalbandyan Institute of Chemical Physics NAS RA, Yerevan, Armenia
Zaramanukyan@mail.ru*

Oxygen radical absorbance capacity (ORAC) method was used to detect antiperoxyradical capacity of the folic acid, the multifunctional, water-soluble vitamin of the B group. The antiperoxyradical capacity of folic acid is higher than that of the water-soluble analog of α -tocopherol: Trolox and close to the value determined for the butylatedhydroxytoluene (BHT). It was established that folic acid shows antiradical activity. The results obtained represent information to improve pharmacological forms of folic acid and to increase the efficiency of medical therapy.