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# **BIOLOGY**

## **THE SCIENCE OF THE 21<sup>ST</sup> CENTURY**

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**ABSTRACTS**

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#### IV.85 EFFECTS OF FLAVOCON® ON MOUSE PRIMARY EMBRYONIC FIBROBLASTS CULTURED *IN VITRO*

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**Flavocon**®, an antioxidant preparation of natural extraction, has been tested on mouse primary embryonic fibroblasts (MPEF) cultured *in vitro*. MPEF cells were obtained from 12-day-old embryos of outbred NMRI mice and cultured in DMEM with 10% fetal calf serum for 2-3 days to produce a monolayer at 37 °C in a 5 % CO<sub>2</sub> atmosphere. **Flavocon**® concentrations used were in the 0.001-1.0% range (v/v). The effect of different **Flavocon**® concentrations was assessed based on the cells' proliferative and metabolic activity.

It was found that the way MPEF cells developed depended on **Flavocon**® concentrations in the culture medium. The use of high concentrations of 0.05-1.0% led to an increased cell death rate resulting from the plasma membranes' barrier function reduction and the loss of their adhesion potential; whereas low concentrations of 0.001-0.005% stabilized the proliferative and metabolic activity indices, did not cause cell death and had no effect upon MPEF adhesive properties. Stimulating effects are exhibited when 0.01% **Flavocon**® is used. This concentration of **Flavocon**® significantly increases MPEF dehydrogenase activity and viability, as evidenced by the cells' morphofunctional characteristics and high adhesion capabilities when the monolayer is formed.

To summarize, the effects the antioxidant preparation **Flavocon**® has upon MPEF cultures differ depending on **Flavocon**® concentration. **Flavocon**® is not toxic for the cell type analysed, it has evident protective and stimulating effects upon these cells as long as its concentration in the culture medium does not exceed 0.01%. It is expected that **Flavocon**® will be used with cell cultures which have a reduced development and proliferation potential *in vitro*.