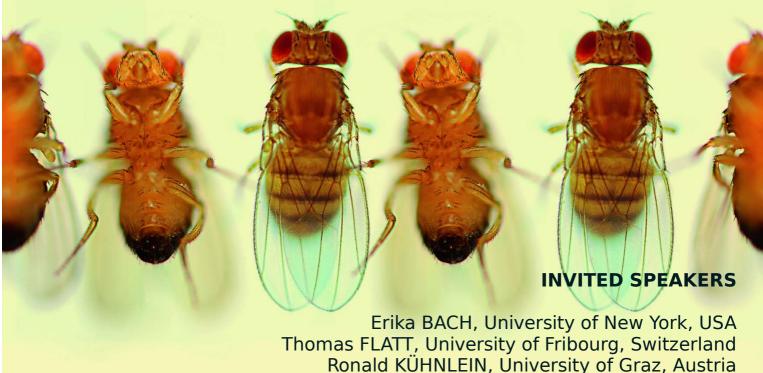
Conference Booklet 33rd annual French Drosophila conference



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Poster number 21

The pattern of antioxidant defense in Drosophila subobscura adults after exposure to extremely low frequency magnetic field (50 Hz, 0.5 mT) at different developmental stages

Branka Petković¹, Dajana Todorović¹, Jelena Trajković², Larisa Ilijin¹, Vesna Perić- Mataruga¹, <u>Tatjana Savić¹</u>

Nowadays, it is of importance to perceive the benefits and costs of enhanced technological development which implies the presence of various forms of magnetic fields in the living and working environment. Living organisms are confronted with that influence and it is useful to find out how we can minimize costs and reap the benefits. The aim of this research was to consider the pattern of antioxidant defense in *Drosophila subobscura* adults exposed at different developmental stages (embryons or just eclosed adults) to extremely low frequency magnetic field (ELF MF; 50 Hz, 0.5 mT, 48 h). The consequences of this treatment were evaluated by measuring the activity of superoxide dismutase (SOD) and catalase (CAT), as well as the content of total glutathione (GSH). The obtained results indicated different pattern of antioxidant defense in females and males after exposure to ELF MF. In females, decreased SOD activity together with increased CAT activity and GSH content were observed regardless of whether they were exposed to ELF MF as embryons or just eclosed individuals. In males, SOD activity was increased after exposure of embryons, while CAT activity and GSH content were increased after exposure of just eclosed individuals. In conclusion, ELF MF could be considered as a stressful factor affecting the pattern of antioxidant defense in *D. subobscura*.

¹Institute for Biological Research "Siniša Stanković", University of Belgrade,
142 Despot Stefan Blvd, Belgrade, Serbia

²Faculty of Biology, University of Belgrade, Studentski trg 16, Belgrade, Serbia