

**European Society of Photobiology
Education and Training Program - Short-Term Fellowships 2004**

Report of Denis Bragin

I have been visiting the laboratory of photodynamic therapy and fluorescence microscopy of the Institute for Laser Technology in Medicine and Metrology under supervision of Dr. Angelika Rueck for three weeks (March 1-21, 2004).

The investigations of the laboratory are focused on molecular mechanisms of cell damage under photodynamic therapy and especially on the role of calcium in the cell death under this type of treatment. This field is very close to my scientific interest and this visit was very helpful for improvement of my scientific skills and for exchange of experience.

During my visit we investigated the involvement of calcium elevation in the glioblastoma cell death under hypericin and ALPc4 induced photosensitization, subcellular localization of these photosensitizers, and interaction of these co-incubated photosensitizers during PDT. For our study we used time-resolved Laser Scanning microscopy. Cells were co-incubated with the photosensitizers and the calcium-sensitive probe Fluo-3 for measuring calcium changes or with Mito-tracker Green for colocalization.

As a results of this work we have submitted an abstract to the 20th Biennial Meeting of the International Society for Neurochemistry which will be held in Innsbruck, Austria (August 21-26). Furthermore we plan to present a communication at the 11th Congress of the European Society for Photobiology which will be held in Aix-les-Bains, France (September, 3-8) and to write a paper together with Dr. A. Uzdensky who have investigated hypericin-induced $[Ca^{2+}]_i$ changing in the other cell lines in J. Moan's group (Institute for Cancer Research, Oslo, Norway).

It was a very remarkable and fruitful visit and we plan to perform further investigations in this field. I am very grateful to the European Society for Photobiology for this Award, to group leaders of my home and host laboratory Dr. A. Uzdensky and Dr. A Rueck and other persons who helped me during this visit.

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