Electroporation for Medicine: Basic Knowledge, Applications and Technologies

Bucharest, May 30 – June 1, 2015

The 2nd edition of the course hosted by Carol Davila University of Medicine and Pharmacy of Bucharest was dedicated to the biomedical applications of electroporation (http://www.biophysicsnet.ro). The course was held in the G.E. Palade Amphitheater of the Faculty of Medicine. Co-organized by the COST TD1104 Action, the Romanian Society of Pure and Applied Biophysics, and the Părintele Galeriu Association from Bucharest, the course aimed to disseminate the latest knowledge and technological innovations on therapeutic applications of electroporation, namely: electrochemotherapy (ECT), gene electrotransfer, and tumor ablation by irreversible electroporation.

The course was organized as three sessions: Basics and Technology, Electrochemotherapy – from cutaneous to deep seated tumors, and Perspectives of electroporation-based therapies, consisting of lectures and tutorials given by experts in the field: Lluis M. Mir, CNRS-Institute Gustave Roussy (FR); Damijan Miklavcic, University of Ljubljana (SI); Franck André, CNRS-Institute Gustave Roussy (FR); Gregor Sersa, Ljubljana Institute of Oncology (SI); Caroline C. Plaschke, Herlev Hospital (DK); Declan Soden, Cork Cancer Centre (IE), on behalf of Francesco Izzo, Naples Cancer Institute (IT); Peter Voigt, Leipzig University (DE); and Mattia Ronchetti, IGEA (IT). During the tutorials, each participant had the opportunity to interact directly with every lecturer: asking questions, obtaining experimental or clinical details, or discussing research projects in a friendly, face-to-face ambient. Every 15 to 20 minutes the lecturers were moving to the next tutorial table to facilitate the interaction with all participants.
The course ended with a Round table during which formal administrative issues on how the Romanian patients may access an electrochemotherapy treatment were discussed, all the more necessary since ECT is not yet in clinical use in Romania. By organizing this course in Bucharest we intended to inform, and moreover stimulate the medical and scientific community of our country to put in practice such a procedure.

The course gathered medical doctors in oncology, dermatology, radiodiagnostics, surgical specialties, researchers and PhD students in human and veterinary medicine, engineering, biophysics, biochemistry, and biology. The students of the Faculty of Medicine could attend the lectures as well. There have been more than 100 participants during these three half-days of course.

COST TD1104 Action granted the participants: 10 travel grants for attendees from Bulgaria, Hungary, Italy, Slovenia, and FYR Macedonia, and 9 grants for Romanian participants coming from three important university centers other than Bucharest: Cluj-Napoca, Iaşi, and Timišoara.

The course had a preamble: a special session entitled *Electrochemotherapy – a new weapon in the fight against cancer* has been organized within the 3rd edition of the Carol Davila Congress, the largest interdisciplinary medical congress in Romania (http://www.congresumf.ro). Held in the Human Rights Hall of the House of the Parliament, in the morning of 30th of May, the ECT session had four speakers: Lluis M. Mir, Damijan Miklavcic, Andreia Coman (dermatologist and professor in pharmacology), and Vlad Constatin (surgeon and assoc. professor in digestive cancers), the latter two both from Carol Davila University. Intending to sensibilize approximately 100 medical doctors from various specialties present in the hall to the medical benefits of electroporation, the lectures gave more general information on the phenomenon itself, but stressed on the practical medical aspects of ECT.