



## Newsletter No. 33

International Scientific Workshop and Postgraduate Course  
Electroporation-Based Technologies and Treatments EBTT 2018

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### International Scientific Workshop and Postgraduate Course Electroporation-Based Technologies and Treatments: report on 2018 and invitation to the next EBTT 2019 this November

In the year that has just passed we have organised the 12<sup>th</sup> edition of the International Scientific Workshop and Postgraduate Course Electroporation-Based Technologies and Treatments. It was held November 11 – 17, 2018 at the University of Ljubljana, Ljubljana, Slovenia. The EBTT course is intended both for novices and experts in electroporation, including PhD students, researchers, and users. This year it was attended by 66 participants from 15 countries. According to the words of attendees, this course is an excellent platform to learn, extend, reaffirm, and develop knowledge on electroporation mechanisms and applications.

The topics covered at this year's course were electrical properties of cells and tissues and their behaviour in electric field, physical chemistry of membrane electroporation, electroporation *in vitro* and *in vivo*, development of devices and electrodes, electrochemotherapy of tumours, and applications of electroporation in gene transfection. Within the scope of these topics the invited lecturers presented state of the art results in their respective fields. This year, Hans Roelofs and Hennie Mastwijk showed us perspectives of electroporation treatment for cooking meal components. We had a unique opportunity to taste the food prepared with electroporation during the Thursday lunch break. Mark Wallace gave a lecture on imaging electroporation in artificial bilayers, and Rod P. O'Connor talked about developing plastic bioelectronics devices for measuring and manipulating cells *in vitro* and *in vivo*. Unfortunately, our invited speaker Luca Campana was feeling under the weather and had to cancel his talk at the last moment due to flu. We were successful in finding a replacement in the same field; Ibrahim Edhemović gave a lecture entitled "Treating cancer with electrochemotherapy".

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**3<sup>rd</sup> World Congress on Electroporation  
& Pulsed Electric Fields in Biology, Medicine  
& Food and Environmental Technologies**  
Toulouse, France September 3–6, 2019



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The morning lectures were vital to get all the theoretical knowledge, while in the afternoon the attendees were invited into laboratories to participate in practical work sessions. In the evenings, the get-together dinner and social events were organised to strengthen the relations between the attendees at the course.

The numbers reveal that in the twelve editions organised until now, 772 participants from 41 countries participated in the course since 2003 when it was organised for the first time.

We would like to invite you to the next, 13<sup>th</sup> edition of the EBTT course in Ljubljana during November 10 – 16, 2019. We have already selected four afternoon invited speakers, who have confirmed their participation. Govindarajan Srimathveeravalli will speak about tumour ablation with electroporation, Gianpiero Pataro will present PEF treatment in food technology and its limitations, Jonathan Cottet will talk about electric fields and microfluidics for lab-on-chip applications, and Mark Stewart will have a lecture about treatment of cardiac arrhythmias using pulsed electric field ablation. You can find more information on our web page [www.ebtt.org](http://www.ebtt.org). Registration will open this spring, reserve your seat before it is too late!



*Full lecture room at afternoon invited talk by Mark Wallace.*

## Forthcoming events

### 4<sup>th</sup> Veterinary Workshop on Electroporation-Based Treatments

Ljubljana, April 2 – 3, 2019

<https://goo.gl/vUKxtX> (click on the first entry, "Electroporation")

### 6<sup>th</sup> School on Pulsed Electric Field Applications in Food and Biotechnology

Cesena, June 3 – 7, 2019

<http://pefschool2019.electroporation.net>

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*Dedicated tutors waiting for participants to take them to various practical works*

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