



## Newsletter No. 43

International Scientific Workshop and Postgraduate Course  
Electroporation-Based Technologies and Treatments EBTT2019

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This year we have organized the 13<sup>th</sup> edition of the international scientific workshop and postgraduate course Electroporation-Based Technologies and Treatments (EBTT). It was held November 10 – 16, 2019 at University of Ljubljana, Ljubljana, Slovenia. EBTT is intended both for novices and experts in electroporation, including PhD students, researchers, and users in general. This year it was attended by 72 participants from 14 countries. According to the words of attendees, this course is an excellent platform to learn, extend, confirm, and develop the knowledge on electroporation mechanisms and applications.

The topics covered were electrical properties of cells and tissues and their behavior in the electric field, physical chemistry of membrane electroporation, electroporation *in vitro* and *in vivo*, development of devices and electrodes, electrochemotherapy of tumors, and applications of electroporation in gene transfection. Within the scope of these topics invited lecturers presented state of the art results in their field. Govindarajan Srimathveeravalli started the Monday afternoon lecture with his invited talk entitled *Tumor ablation with electroporation: Thinking outside the membrane*. Gianpiero Pataro gave a lecture on PEF treatment applications in food technology and limitations. Jonathan Cottet gave his talk *Electric fields and microfluidics for lab-on-chip applications*, and Mark Stewart presented his lecture entitled *Treatment of cardiac arrhythmias using pulsed electric field ablation*. Additionally, Lea Rems presented multiscale modelling of electroporation and Boštjan Markelc showed us the effects of electroporation and electrochemotherapy on normal and tumor blood vessels. We were privileged to the visit of Prof. Eberhard Neuman, one of the founding faculty members. He celebrated his 80<sup>th</sup> birthday this year, and was treated to a birthday cake surprise during the Gala Dinner on Friday.

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**7<sup>th</sup> School on Pulsed  
Electric Field Applications  
in Food and Biotechnology**  
Zaragoza, Spain **May 25–30, 2020**

**ISEBTT** International Society  
for Electroporation-Based  
Technologies and Treatments



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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 dinners or social events presented opportunities to strengthen the relations between participants.

The numbers reveal that in the thirteen editions held thus far, 844 participants from 41 countries visited the course since 2003 when the School was organized for the first time. We continuously strive to maintain and further improve the quality of the School in all aspects; organizational, scientific, as well as social.

We invite you to attend the next, 14<sup>th</sup> edition of the EBTT during November 15 – 21, 2020. Information will be made available in the following months on the web page [www.ebtt.org](http://www.ebtt.org). Registration opens in Spring; reserve your seat before it is too late!



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**Forthcoming events**

**5<sup>th</sup> Theoretical and Hands-on Course on Veterinary Electrochemotherapy**

Buenos Aires, November 14 – 15 and December 13 – 14 & 16, 2019

<http://www.electroporation.net/event/5th-theoretical-and-hands-on-course-on-veterinary-electrochemotherapy/>

**7<sup>th</sup> School on Pulsed Electric Field Applications in Food and Biotechnology**

Zaragoza, May 25 – 30, 2020

<http://pefschool2020.electroporation.net/>

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