Deep brain stimulation for movement disorders: state of the art and future perspectives

UNIVERSITY HOSPITAL DUBRAVA ZAGREB
Unit of functional Neurosurgery
Department of Neurology

&

UNIVERSITY COLLEGE LONDON
Unit of functional Neurosurgery
Queen Square London
### Invited Lecturers:

**Professor Kailash P. Bhatia**, MD, DM, FRCP  
Sobell Department of Motor Neuroscience and Movement Disorders, UCL Institute of Neurology, London, United Kingdom

**Professor Marwan Hariz**, MD, PhD  
Sobell Department of Motor Neuroscience and Movement Disorders, UCL Institute of Neurology, London, United Kingdom

**Professor John Hardy**, PhD, FMedSci, FRS  
Department of Molecular Neuroscience, UCL Institute of Neurology, London, United Kingdom

**Professor Patricia Limousin**, MD, PhD  
Sobell Department of Motor Neuroscience and Movement Disorders, UCL Institute of Neurology, London, United Kingdom

**Professor John Rothwell**, MD, PhD  
UCL Institute of Neurology, Sobell Department of Motor Neuroscience and Movement Disorders, London, United Kingdom

**Ludvic Zrinzo**, MD, PhD, FRCS  
Sobell Department of Motor Neuroscience and Movement Disorders, UCL Institute of Neurology, London, United Kingdom

**Professor Academican Ivica Kostovic**, MD, PhD  
Professor of Anatomy & Neuroscience at the School of Medicine University of Zagreb, Croatian Institute for Brain Research (CIBR), School of Medicine in Zagreb (SMZ)

**Professor Zvezdan Pirtošek**, MD, PhD  
Department of Neurology, University Medical Centre, Ljubljana, Slovenia

**Academican Vladimir S. Kostic**, MD, PhD  
Professor, Neurology clinic, Clinical Center of Serbia, Belgrade, Serbia

**Professor Renad Bogdanovic**, MD, PhD  
Department of Geriatric Medicine, Oslo University Hospital, Oslo Norway and Karolinska Institutet, Stockholm, Sweden

**Professor Silva Butkovic Soldo**, MD, PhD  
Department of Neurology, University Hospital Center Osijek, Osijek, Croatia, President of the Croatian Society of Neurology

**Professor Vedran Deletis**, MD, PhD  
Laboratory for Human and Experimental Neurophysiology (LAHEN), School of Medicine, University of Split, Croatia and St. Luke’s-Roosevelt Hospital New York, USA

**Zoltan Chadaide**, MD, Medtronic  
Market Development Manager Central & Eastern Europe

**Professor Silvio Basic**, MD, PhD  
Department of Neurology, University Hospital Dubrava, Zagreb, Croatia

**Professor Darko Chudy**, MD, PhD  
Department of Neurosurgery, University Hospital Dubrava, Zagreb, Croatia

**Vladimira Vuletic**, MD, PhD  
Department of Neurology, University Hospital Dubrava, Zagreb, Croatia
The first Regional DBS Meeting entitled "Deep brain stimulation for movement disorders: state of the art and future perspectives" is organized as a collaboration of University Hospital ‘Dubrava’ Zagreb with University College London - Unit of functional Neurosurgery, Queen Square London. Deep brain stimulation (DBS) has been developing during the past 27 years as a remarkable treatment option for several different disorders. DBS has also evolved significantly during the past decade in Croatia. University Hospital ‘Dubrava’ Zagreb (Croatia), as the only DBS center in this region, will discuss with University College London state-of-the-art clinical assessment of deep brain stimulation and future perspectives of this therapy. Different topics will be covered by internationally renowned experts. This will be the first educational course of this magnitude on deep brain stimulation for movement disorders in this part of the Eastern Europe region.

More than 120,000 patients worldwide have been treated by deep brain stimulation (DBS) for a drug refractory movement disorder. This course will benefit to general neurologists on the importance of accurate clinical diagnosis and identifying the cause of clinical problems; it will show clinical phenotypes of different form of hyperkinetic and hypokinetic movement disorders. Presentations will bring selection criterias for surgery which is necessary for appropriate patient selection and refferal of these patients to surgical centres. DBS implantation techniques, imaging, neurophysiology targeting, criteria and issues in movement disorders and other advanced therapies for Parkinson’s disease will be also discussed.

**Bring Your Own Patient workshop - interesting cases**

Participants are encouraged to submit their own cases to present at the workshop. All submitted presentations will be reviewed by the Course Director and Faculty who will accept a few cases to be presented.
At the conclusion of this activity, participants should be able to accomplish the following:

- Better understand the clinical phenomenology of hyperkinetic and hypokinetic movement disorders
- Provide an overview of DBS targets and indications in movement disorders
- Discuss about DBS and other advanced therapies for Parkinson’s disease
- Provide an overview of the selection process of candidates for deep brain stimulation in movement disorders – especially Parkinson’s disease, dystonia and tremor
- Outline the efficacy and associated risks of DBS
- Discuss different electrical parameters that can be adjusted for DBS and outline their biological effect
- Understand the role of neurologist in long-term management of DBS patients
- Discuss if DBS can produce lasting changes in brain circuits and genomic influence on therapy outcome
RECOMMENDED AUDIENCE:

This course is intended for

- movement disorder specialists
- neurosurgeons
- general neurologists
- neurophysiologists
- residents of neurology and neurosurgery
- and trainees

who want to become more involved in the selection and postoperative management of patients with movement disorders (tremor, dystonia, Parkinson’s disease, etc.) treated with deep brain stimulation
1st Regional DBS Meeting

ORGANIZERS AND CO-ORGANIZERS:

Co-Directors:
Prof. Darko Chudy, MD, PhD
Vladimira Vuletic, MD, PhD
Prof. Marwan Hariz, MD, PhD
Prof. Patricia Limousin, MD, PhD

Registration opening soon!
For registration and accommodation purposes please contact our technical co-organizer:

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1st Regional DBS Meeting

MEETING VENUE:

Falkensteiner Resort Borik
Ulica Majstora Radovana 7, 23000 Zadar, Croatia
http://www.falkensteiner.com/en/hotel/borik

DEEP BRAIN STIMULATION FOR MOVEMENT DISORDERS:
STATE OF THE ART AND FUTURE PERSPECTIVES
Before March 1st 2015
MDS Members € 100
Non-Members € 120
Junior Participants € 60

After March 1st 2015
MDS Members € 160
Non-Members € 180
Junior Participants € 90

Registration rates include all sessions, course materials, and coffee breaks.
For reference, registration fees are listed in Euro.
EVENT PROGRAM:

8.30-9.00 Welcome words
Silva Butkovic Soldo:
Introduction and welcome words on behalf of the Croatian Society of Neurology

9.00-9.30 Marwan Hariz:
DBS targets and indications in movement disorders - from established to investigational

9.30-9.40 Discussion

9.40-10.10 Kailash Bhatia:
Accurate clinical diagnosis - why is it important for DBS patients?

10.10-10.20 Discussion

10.20-10.50 Vladimir S. Kostic:
Parkinson's disease and Parkinsonism

10.50-11.00 Discussion

11.00-11.20 Break

11.20-11.50 Patricia Limousin:
DBS and other advanced therapies for Parkinson's disease

11.50-12.00 Discussion

12.00-12.30 Marwan Hariz:
DBS and dystonia

12.30-12.40 Discussion

12.40-13.10 Ludvic Zrinzo:
DBS implantation techniques, imaging vs. neurophysiology targeting

13.10-14.00 Lunch

14.00-14.30 John Rothwell:
Can DBS produce lasting changes in brain circuits?

14.30-14.40 Discussion

14.40-15.10 Vedran Deletis:
Neurophysiological criteria for DBS in minimally conscious state (MCS) and vegetative state (VS) patients

15.10-15.20 Discussion

15.20-15.50 Darko Chudy:
DBS in minimally conscious state (MCS) and vegetative state (VS) patients - results in 14 patients

15.50-16.00 Discussion

21.00 Welcome dinner
**EVENT PROGRAM:**

**Friday, May 1st (day 1)**

09.00-09.30  **Ivica Kostović:**  
Frontal lobe

09.30-09.40  Discussion

09.40-10.20  **Silvio Bašić:**  
Functional neurosurgery – neurological point of view

10.20-10.30  Discussion

10.30-11.00  **Nenad Bogdanović:**  
Cognition and DBS

11.00-11.10  Discussion

11.10-11.20  Break

11.20-11.50  **Vladimira Vuletić:**  
Effect of the DBS on NMS in Parkinson’s disease

11.50-12.00  Discussion

12.00-12.30  **Zoltan Chadaide:**  
Future of neurostimulation, technical improvements we can expect very soon

**Saturday, May 2nd (day 2)**

12.30-12.40  Discussion

12.40-13.10  **Zvezdan Pirtošek:**  
Neurologist and DBS - between hesitation and hope

13.10-13.20  Discussion

14.00-15.00  Lunch

15.00-19.00  Workshop: interesting cases

20.00  Dinner

**Sunday May 3rd (day 3)**

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EVENT PROGRAM:

Sunday May 3rd (day 3)

09.00-09.30  John Hardy:
Genomic analysis of Parkinson’s disease

09.30-11.00  Round table and closing remarks