

## EPNS Pre-Congress Symposium, Prague 2023

### “Drug-resistant epilepsy in the 21st century: From molecular mechanisms to precision therapies”

**Date:** Tuesday, June 20<sup>th</sup>, 2023

**Location:** Panorama Hall, Prague Congress Centre

#### Annotation:

The concept of drug-resistant epilepsy is in motion. What started as a simple definition of medically-intractable seizure disorder has morphed into a mosaic of conditions with various ages at onset, clinical presentations, genetic etiologies and increasingly of therapeutic options. Drug-resistant epilepsy is no more a single disorder but a multitude thereof. The originally clear-cut boundaries between "genetic" and "structural" epilepsy dissolve and re-organize themselves around specific genes and genetic variants that participate in the formation of structural and functional abnormalities of brain cortex. The symposium preceding EPNS Congress 2023 in Prague will guide you through the complex phenotypes and clinical presentations of patients with drug-resistant epilepsy. You will see how patient-derived genomic and phenotypic data contribute to the formation of relevant pre-clinical models that enable us to analyze the pathophysiological mechanisms of drug-resistant epilepsy. Through the improved understanding of epilepsy pathogenesis we will introduce novel approaches to the individualized targeted therapy of drug-resistant epilepsy and the new vistas for patient care and management.

## Programme

### Drug-resistant epilepsy: State of the art

J. Helen Cross, ILAE President  
(8:45-9:00)

### Session 1: Current challenges in the diagnostics and treatment of patients with drug-resistant epilepsy (9:00-10:30)

- Alexis Arzimanoglou – Challenges in the treatment of structural epilepsies
- Jo Wilmshurst – Opportunities for the therapy of genetic epilepsies
- Premysl Jiruska – The unresolved mysteries of epileptogenesis

**Coffee break**  
(10:30-11:00)

## Session 2: Mechanisms of drug-resistant epilepsy and novel therapeutic targets I.

(11:00-12:30)

- *Jeffrey L. Noebels* – Genetic epilepsies: from genes to neuronal and network dysfunction
- *Katja Kobow* – The role of epigenetic mechanisms in the pathogenesis of DRE
- *Helena Pivonkova* – The significance of glial abnormalities in epilepsy

### **Lunch break**

(12:30-14:00)

## Session 3: Mechanisms of drug-resistant epilepsy and novel therapeutic targets II.

(14:00-15:30)

- *Eleonora Aronica* – Understanding the complex nature of epileptogenesis for the development of disease-modifying therapy for DRE
- *Nadia Bahi-Buisson* – Pathophysiological mechanisms responsible for the endogenous epileptogenicity of epilepsy due to the malformations of cortical development
- *Ondrej Novak* – Novel experimental models and research tools to explore the mechanisms of DRE

### **Coffee break**

(15:30-16:00)

## Session 4: Prospects in the treatment of drug-resistant epilepsy

(16:00-18:00)

- *Christian Wolff* – Future of drug development in the treatment of DRE
- *Gabriele Lignani* – Gene therapy and gene modulation of DRE
- *Kees Braun* – Future directions of epilepsy surgery for DRE
- *Robrecht Raedt* – Neurostimulation as a future tool to treat DRE

### **End of the Symposium**

(18:00)

### **Opening ceremony of the 15<sup>th</sup> EPNS Congress**

(19:00)



15<sup>TH</sup> CONGRESS OF THE  
**EUROPEAN PAEDIATRIC  
NEUROLOGY SOCIETY**  
**20-24 JUNE 2023**  
**PRAGUE**  
CZECH REPUBLIC

