

1<sup>st</sup> Training School COST Action European Network on Brain Malformations CA16118  
**GENOMICS AND IMAGING OF MALFORMATIONS OF BRAIN DEVELOPMENT**  
Croatian Institute for Brain Research (CIBR)  
School of Medicine, University of Zagreb  
**9-11<sup>th</sup> April, 2018**

1<sup>st</sup> Day - 9<sup>th</sup> April 2018, Monday

**8:15 – 9:00 Registration**

9:00 – 9:05 Welcome Address – Director of the CIBR

9:05 – 9:15 European Networks on Brain Malformations COST CA16118

**Session 1: Introduction to brain development**

Chairpersons: N. Jovanov Milošević and M. Judaš

9:15 – 10:00 Ivica Kostović

**The microstructure of the laminar compartments in the cerebral wall: histological-MRI indicators of the typically developing human brain**

10:00 – 10:30 Zdravko Petanjek

**Dangerous trip for legal immigrants - cortical GABAergic neurons: dispersed origin and expanded time window of production**

10:30 – 11:15 Orly Reiner

**Developmental and cellular aspects of the brain**

*Discussion*

*11:30-12:00 Coffee Break*

**Session 2: The role of clinical geneticist and the impact of NGS on MCD**

Chairpersons: H. Kayserili and Andrew Fry

12:00-12:30 Grazia Mancini

**What is the role of the clinical geneticist in the diagnosis of prenatal MCD**

12:30 – 13:00 Peter Bauer

**The input of NGS Technology on the diagnosis of Brain Malformation and Identification of Novel Genes**

*13:00 – 14:30 Lunch*

**Session 3: Case Discussions I.**

Chairpersons: G. Mancini / Andrew Fry / Maha Zaki / Peter Bauer

14:30- 15:15 Postnatal cases (solved) Trainers / Trainees

15:15 – 16:00 Postnatal cases (unsolved) Trainers / Trainees

*16:00 - 16:30 Coffee Break*

**Session 4: Team work start-up**

Chairpersons: H. Kayserili / Maarten Lequin / Maha Zaki / Nataliya di Donato

16:30 – 18:00 Team work (*in four groups*)

***Nationwide / Institutional solutions for the definite diagnosis, follow-up strategies and treatment applications, research orientation of MCD group of disorders***

*20:00 Get Together Dinner (Trainers and Trainees)*

2<sup>nd</sup> Day; April 10<sup>th</sup> 2018, Tuesday

**Session 5: Child with neurodevelopmental disorders: Challenges to be met**

Chairpersons: G.Mancini and Z.Petanjek

9:30 – 10:00 Andrew Fry

**Polymicrogyria – clinical and molecular considerations**

10:00 – 10:30 Maha Zaki

**Midbrain and hindbrain anomalies**

10:30 – 11:00 Nataliya di Donato

**Lissencephaly: molecular diagnostics, management and counseling**

11:00 – 11:30 *Coffee Break*

**Session 6: How to reach to definite diagnosis on MCD**

Chairpersons: Andrew Fry/ H. Kayserili / Nataliya Di Donato / Maha Zaki

11:30- 12:00 How to solve the cases?

- Clinical neurologist approach (M. Zaki)
- Clinical dysmorphologist approach (H. Kayserili)
- Medical Geneticist approach ( A. Fry)
- Combined approaches to solve the case ( N. Di Donato)

13:00 – 14:00 *Lunch*

**Session 7: Clinical Radiology**

Chairpersons: Maha Zaki and Nataliya di Donato

14:00 – 14:45 Maarten Lequin

**Neuroradiological approach for MCD**

14:45 – 15:30 Gustavo Malinger

**Early prenatal ultrasonographic findings suggestive of malformations of cortical development**

15:30 – 16:00 *Coffee Break*

**Session 8: Case Discussions II. & Radiological Assessment of MCD**

Chairpersons: M. Lequin and G.Malinger

16:00 – 16:45 **Antenatal Cases** (solved / unsolved) Trainers / Trainees

16:45 – 17:30 **How to read MRIs**

Lissencephaly/ tubulinopathies and others; Trainers / Trainees discussion

19:00 *Dinner Free night*

3<sup>rd</sup> Day; April 11<sup>th</sup>, 2018, Wednesday

**Session 9: Future of Research and its impact on Neurodevelopmental Disorders**

Chairpersons: G. Mancini and Andrew Fry

9:30 – 10:00 Renzo Guerrini

**Malformations of cortical development and human phenotypes: directions for research**

10:00 – 10:30 Nadia Buisson

**The phenotypic spectrum of Dyneinopathies: from lissencephaly to Spinal Muscular Atrophy with lower limb predominance**

10:30 – 11:00 Miloš Judaš

**Cortical changes in holoprosencephaly and Walker –Warburg lissencephaly**

*11:00 – 11:30 Coffee Break*

**Session 10 Novel tool, organoids**

Chairpersons: R. Guerrini and N. Buisson

11:30 – 12:30 Orly Reiner

**Brain organoids for studying normal and diseased brain development**

*Discussion*

*12:30 – 13:30 Lunch*

**Session 11 Clinical & molecular genetics and radiology of MCD**

**Group presentations**

Chairpersons: N. Buisson and M. Leguin

13:30-14.15 **Quick Quiz** (what I have learned on molecular genetics and radiology of neurodevelopmental disorders) Trainers / Trainees

14:15-15.30 **Group Presentations (team work)**

*15:30 – 16:00 Coffee Break*

**Session 12 Wrap-up and Feedback**

Chairpersons: H. Kayserili and N. Jovanov Milosevic

16:00 –17:00 Wrap-up discussion Trainers / Trainees

Farewell