Fourth Annual EPICURE Meeting

FUNCTIONAL GENOMICS AND NEUROBIOLOGY OF EPILEPSY:
A BASIS FOR NEW THERAPEUTIC STRATEGIES (EC LSH-037315)

January 29 and 30, 2010
Alcazar Regional Library
58 Cours Belsunce - 13001 Marseille

Organized by A. Represa and G. Avanzini

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Program

Friday, January 29, 2010

8h00-9h00 Registration

9h00-9h10 Welcome and the word form G. Avanzini

9h10-10h30 Subproject 4 EPILEPSY AND DEVELOPMENT part 1

Four presentations 20 min each

9h10-9h30 *Electroclinical and MRI finding of FCD and proposal for a new classification system (Speaker TBC)*

9h30-9h50 *Pseudolamination in nodular heterotopia (Roberto's student)*

9h50-10h10 *In utero knock-down of flna causes neuroepithelium and radial glial fiber disruption leading to periventricular heterotopia in rats (A. Carabalona)*

10h10-10h30 *Involvement of ARX gene in the normal and pathological development of cerebral cortex (S. Beguin)*

10h30-11h00 Coffee break

11h00-12h00 Subproject 4 EPILEPSY AND DEVELOPMENT part 2

Three presentations 20 min each

11h00-11h20 *Mirror focus… Benzodiazepam and phenobarbital (R. Nardou)*

11h20-11h40 *Contribution of Array-CGH to the etiologic diagnosis of epilepsy, mental retardation and malformations of the cerebral cortex (V. Conti)*

11h40-12h00 *New insights into X-linked periventricular heterotopia and epilepsy: identification of new phenotypes and detection of genomic imbalances involving the FLNA gene (E. Parrini)*

12h00-13h30 Lunch buffet

13h30-15h10 Subproject 3 ACQUIRED CHANNELOPATHY AND NEURONAL NETWORK REORGANISATION UNDERLYING TEMPORAL LOBE EPILEPSY part 1

Five presentations 20 min each

13h30-13h50 Origins of interictal and ictal activities in human Hippocampus (R. Miles)

13h50-14h10 Changes in expression of M channels in models of temporal lobe epilepsy (A. Maslerova)

14h10-14h30 Impaired network activity in chronic epileptic mice (S. Gurgenidze)

14h30-14h50 Expression patterns of potassium chloride cotransporter type 2 in different phases of pilocarpine-induced epilepsy (R. Karlócai)

14h50-15h10 Dynamic changes of the CB1 receptor expression in the epileptic hippocampus of pilocarpine treated mice (K. Tóth)

15h10-14h40 Coffee break

15h40-17h20 Subproject 3 ACQUIRED CHANNELOPATHY AND NEURONAL NETWORK REORGANISATION UNDERLYING TEMPORAL LOBE EPILEPSY part 2

Five presentations 20 min each - General thematic : Hippocampus after TBI (traumatic brain injury) - any difference from post-SE hippocampus?

15h40-16h00 Organization of inhibitory neurons: comparison with SE (A. Pitkänen)

16h00-16h20 Expression of GABAergic subunits: comparison with SE (G. Sperk)

16h20-16h40 Granule cell inhibition: comparison with SE (I. Pavlov)

16h40-17h00 Inflammatory response: comparison with SE (T. Ravizza)

17h00-17h20 Inflammation-induced channelopathy (C. Bernard)

17h20-19h00 Subproject groups meetings ***In parallel***

19h30 Dinner

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Program

Saturday, January 30, 2010

9h00-10h40 Subprojects 1 GENETICS OF HUMAN EPILEPSIES **and 2** FUNCTIONAL CONSEQUENCES OF MUTATIONS IN ION CHANNEL GENES ASSOCIATED WITH IDIOPATHIC EPILEPSY AND GENETICALLY DETERMINED PHARMACORESISTANCE part 1

Five presentations of 20 min each

9h00-9h20 *Genome-wide association study in idiopathic generalised epilepsy: Quo vadis? (T.Sander)*

9h20-9h40 *The role of recurrent microdeletions in idiopathic generalised epilepsies (C. De Kovel)*

9h40-10h00 *GLUT1 mutation in IGE: phenotype, genetics, function (Florence, Genova and Ulm groups)*

10h00-10h20 *Combined CACNAlH and HCN4 mutations in a IGE family (Ulm group)*

10h20-10h40 *SCN1A mutations causing GEFS+ and SUPED (Madrid and Ulm groups)*

10h40-11h00 Coffee break

11h00-12h20 Subprojects 1 GENETICS OF HUMAN EPILEPSIES **and 2** FUNCTIONAL CONSEQUENCES OF MUTATIONS IN ION CHANNEL GENES ASSOCIATED WITH IDIOPATHIC EPILEPSY AND GENETICALLY DETERMINED PHARMACORESISTANCE part 2

Four presentations of 20 min each

11h00-11h20 *Hippocampal excitability in Nav1.1 knock-out mice, animal model of Severe Myoclonic Epilepsy of Infancy (SMEI) (Mantegazza group)*

11h20-11h40 *Influence of the cellular background on the functional effect of av1.1 mutations (Mantegazza group)*

11h40-12h00 *Functional impacts of a GEFS+ mutation in different SCN1A splice variants (Schorge/Kullmann group)*

12h00-12h20 *Status report of candidate sequence analyses in patients with familial idiopathic generalized epilepsies and functional characterization of novel missense mutations (Joint presentation SP1-WP3/SP2-WP3)*

12h20-14h00 Lunch buffet

14h00-16h00 Subproject 5 PHARMACOGENETICS OF REFRACTORY EPILEPSY, MECHANISMS OF DRUG RESISTANCE AND NEW THERAPEUTIC STRATEGIES

Six presentations of 20 min each

14h00-14h20 *Effects of drug transport inhibitors on high potassium induced seizure-like events in human temporal lobe epilepsy (Heinemann group)*

14h20-14h40 *Post-translational dysregulation of persistent Na+ currents by altered intraneuronal polyamine metabolism in chronic epilepsy (Beck/Becker groups)*

14h40-15h00 *Efficacy loss of carbamazepine in mice lacking sodium channel accessory subunits via paradoxical effects on persistent sodium currents (Beck group)*

15h00-15h20 *Transcriptional regulation of T-type Ca2+ channel subunits in epileptogenesis: Molecular mechanisms (Becker group)*

15h10-15h40 *Selective drug resistance in immature rat temporal cortex structures (Uwe lab)*

15h40-16h00 *Which models for the development of drugs in paediatric epilepsy? (O. Dulac)*

16h00-16h30 Coffee break

16h30-18h30 Brain bank, general discussion, implementation plan, future beyond, concluding remarks

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VILLE DE MARSEILLE

UNIVERSITE DE LA MEDITERRANEE AIX-MARSEILLE II

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