

# La plasticité cérébrale: imagerie et modèles

## 30 – 31 octobre 2003

### Jeudi, 30 octobre

08h30 – 08h50      Inscription (salle 5345) et café

08h50 – 09h10      Mots de bienvenue  
C. Léger, Directeur CRM  
Y. Joanette, Directeur RNQ  
B. Goulard, Comité d'organisation

### Section 1: Cognitive models : Human

09h10 – 09h50      R. Toro (Institut de Sciences Cognitives de Lyon, UMR 5015)  
“Geometric model of the cortical organisation: neuroanatomic constraints for plasticity”

09h50 – 10h30      S. Lehericy (University of Minnesota)  
“fMRI and MEG study of reorganization of brain function in dystonia”

10h30 – 11h00      Pause-café

11h00 – 11h40      J. Doyon (Dép. de psychologie, Université de Montréal)  
“Plasticity within the cortico-striatal and cortico-cerebellar systems during motor learning”

11h40 – 12h20      C. Weiller (Dept. of Neurology, University of Hamburg)  
“Studying brain reorganization during motor and language recovery using TMS, PET, fMRI and DTI-MRI”

Lunch

## **Section 2: Clinical models**

- 14h00 – 14h40 S. Cappa (Dept. of Neurology, University of San Raffaele, Italy)  
“Recovery and brain plasticity: methodological issues”
- 14h40 – 15h20 M. Lassonde (Dép. de psychologie, Université de Montréal)  
“Electrophysiological and functional imaging analysis of auditory localization in blind individuals”
- 15h20 – 15h50 Pause-café
- 15h50 – 16h30 H. Duffau (Service de Neurochirurgie, Salpêtrière, INSERM, Paris)  
“Study of brain connectivity and plasticity applied to surgery of low-grade gliomas in eloquent areas”
- 16h30 – 17h10 J.Gotman (Epilepsy Group, MNI, McGill University)  
“Combining EEG and fMRI in the study of epilepsy”

Cocktail de bienvenue

**Vendredi, 31 octobre**

**Section 3: a-Cognitive model: Animal**

- 08h30 – 09h10 S. Rossignol (CRSN, Université de Montréal)  
“Locomotor plasticity after spinal cord injuries”
- 09h10 – 09h50 F. Lepore (Dép. de psychologie, Université de Montréal)  
“Auditory activation of visual cortex in early enucleated rats”
- 09h50 – 10h20 Pause-café

**b- Data analysis and statistical models 1**

- 10h20 – 11h00 K. Worsley (Dept. of Mathematics & Statistics, McGill University)  
“Detecting brain damage using structure density, structure thickness and vector deformations”
- 11h00 – 11h40 T. Santner (Dept. of Statistics, Ohio State University)  
“Modification of the FDR procedure for fMRI data”

Lunch

**Section 4: a- Data acquisition and models**

- 13h45 – 14h25 L. Garnero (UPR 640, CNRS, LENA, Paris)  
“Dynamical imaging of cortical connectivity from MEG signals: methods and application to binocular rivalry”
- 14h25 – 15h05 D. Boas (MGH, Harvard University)  
“Near infrared spectroscopy and imaging of cerebral plasticity”
- 15h05 – 15h45 T. Paus (McConnell Brain Imaging Center, MNI, McGill University)  
“Changes in cortical excitability and connectivity induced by transcranial magnetic stimulation”
- 15h45 – 16h15 Pause-café

## **b- Data analysis and statistical models 2**

- 16h15 – 16h55 C. Büchel (Dept. of Neurology, University of Hamburg)  
“fMRI in systems neuroscience”
- 16h55 – 17h35 H. Benali (INSERM, Paris / CRM, Université de Montréal)  
“Functional networks. Functional MRI imaging and modeling”
- 17h35 – 17h50 Conclusion  
Y. Joanette, Directeur RNQ  
B. Goulard, Comité d’organisation