

La plateforme française pour les études de neuroimagerie multicentriques



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Faits marquants

Quelques dates clés

- Création : fin 2010
- 2011-2012 : mise de place de la structure et du réseau, harmonisation des protocoles,
- 2013-2014 : phase de plein régime (gestion des flux de données, harmonisation, contrôle qualité, analyses, fouille de données)
- 2015 : phase de pérennisation

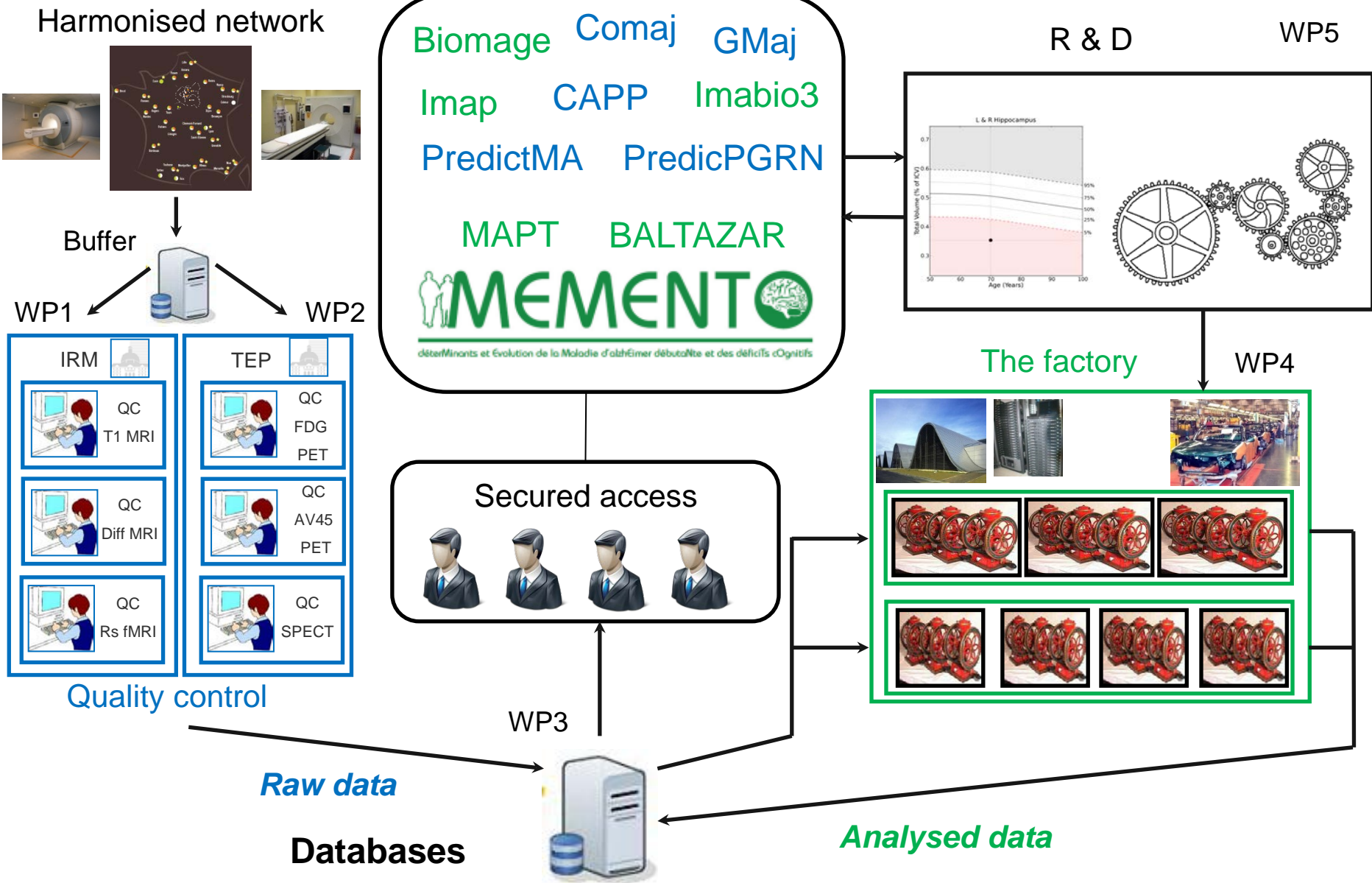
Personnel : > 30 CDD

Nombre d'examens recueillis : > 5000 (>800 TEP)

Nombre d'études : >20 études en cours, >10 études en phase de lancement ou en attente de financement

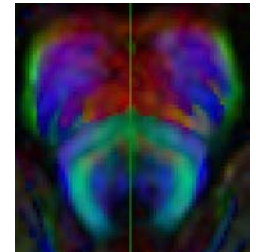
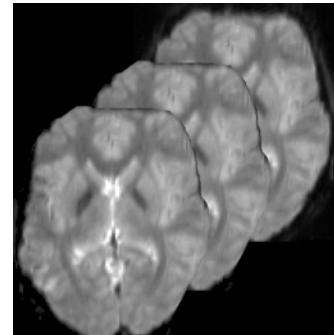
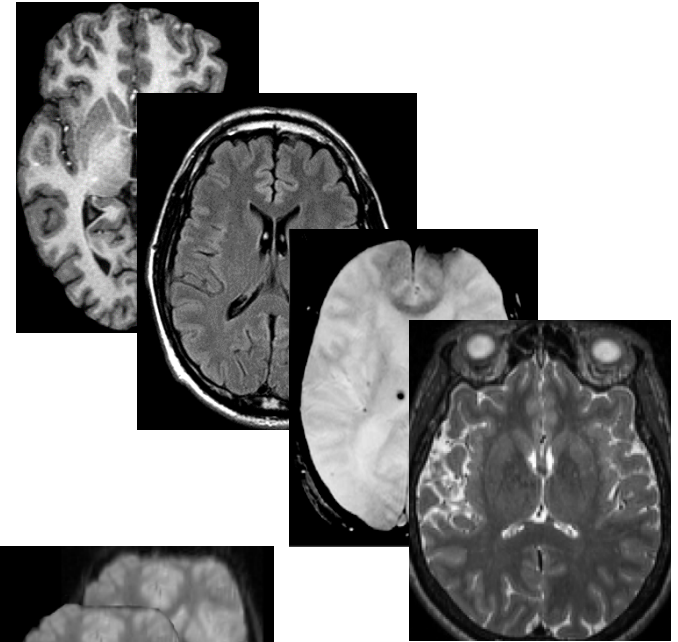
Mise en place régulière de nouvelles séquences : ASL, imagerie du fer SWI, TOF, hippocampe haute résolution

Le flux de données



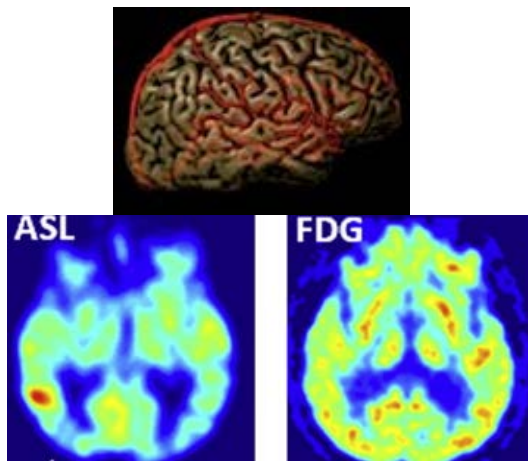
Protocole IRM CATI (V1)

- 3DT1
- T2 FLAIR
- T2*
- T2 SE
- IRMf repos
- DTI

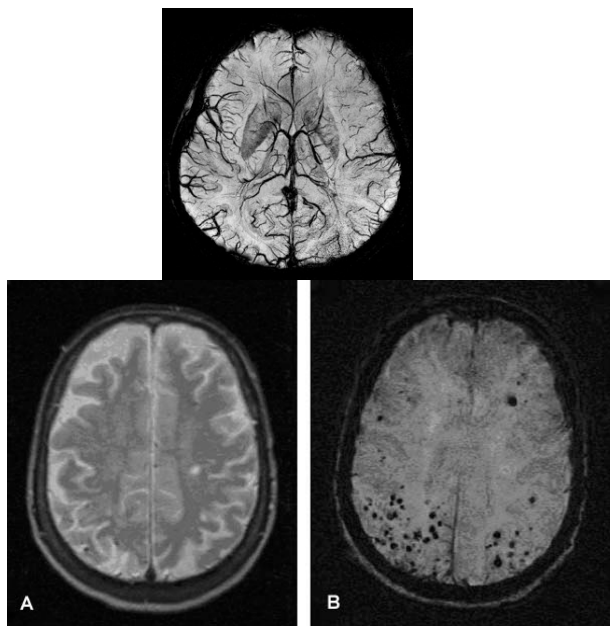


Increase spatial resolution / ADNI2

Nouvelles séquences (2014)

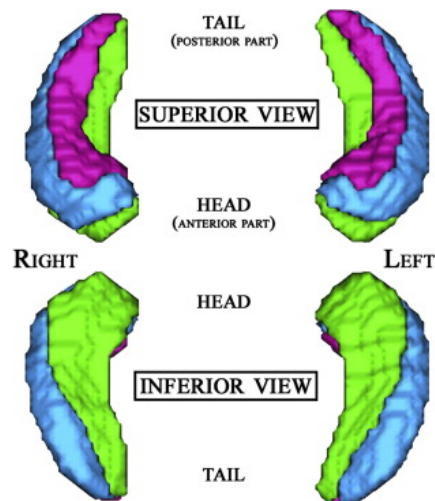
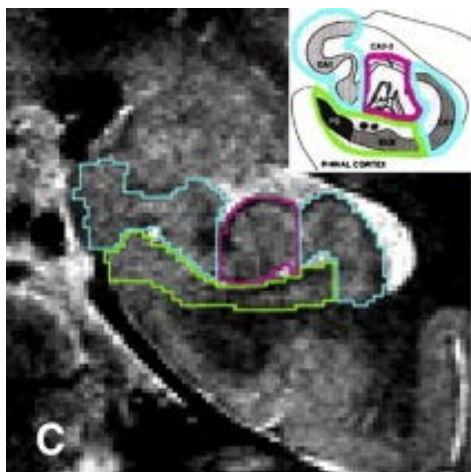


ASL: Quantitative measure of blood flow
(collaboration with the French network:
Rennes, Lille, Grenoble)

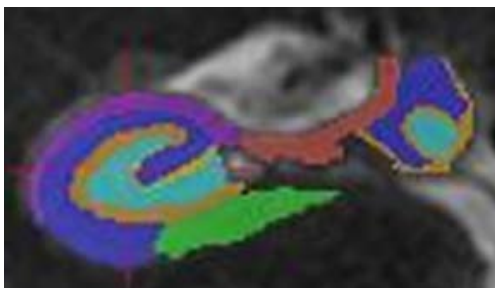


Cartes T2* and Susceptibility-weighted imaging
Microhemorrhages, microbleeds

Zoom sur l'hippocampe



3T High resolution Proton density (G. Chételat, La Joie et al., 2010)



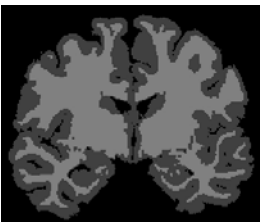
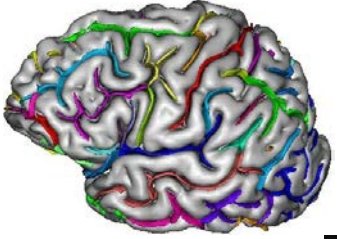
7T, in vivo
M. Chupin, S. Lehéricy et al.



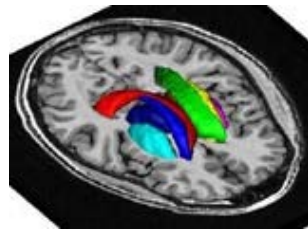
7T, postmortem
C. Poupon

T1 MRI

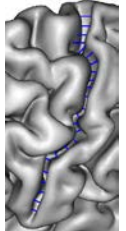
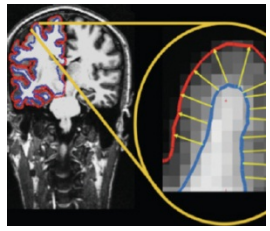
Volumetry

Sulci



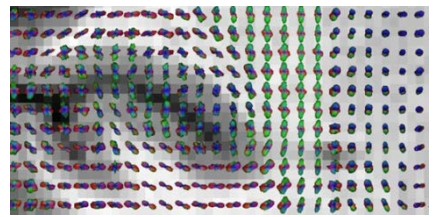
Atrophy

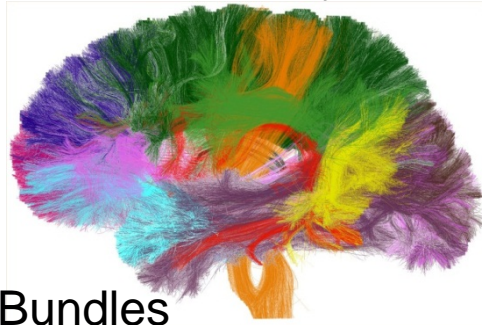
Hippocampus **Deep nuclei**

Cortical thickness

Diffusion MRI



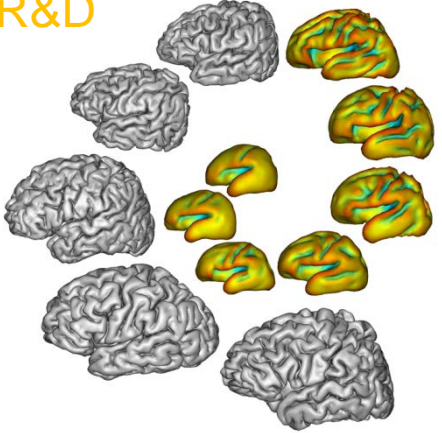
Anisotropy



Bundles

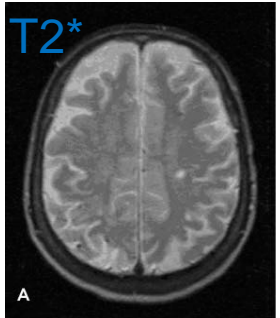
Longitudinal measurements

R&D

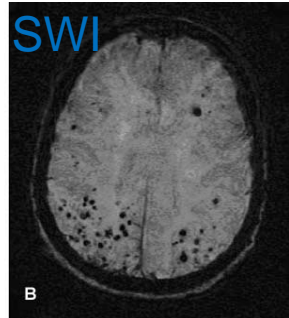


R&D **Microbleeds**

T2*

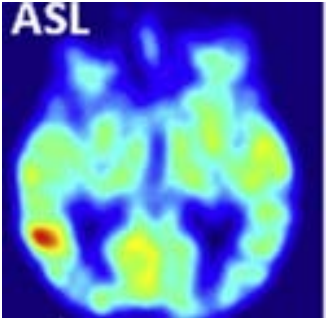


SWI



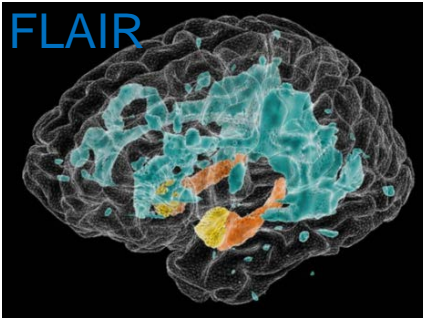
R&D **Perfusion**

ASL




Lesions (WMH)

FLAIR

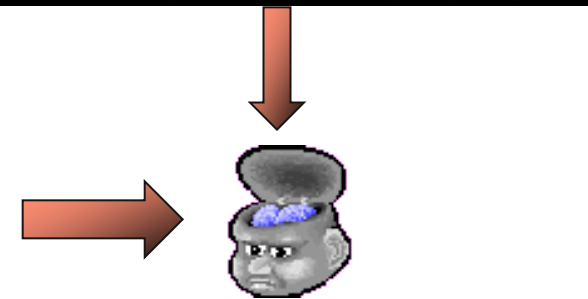
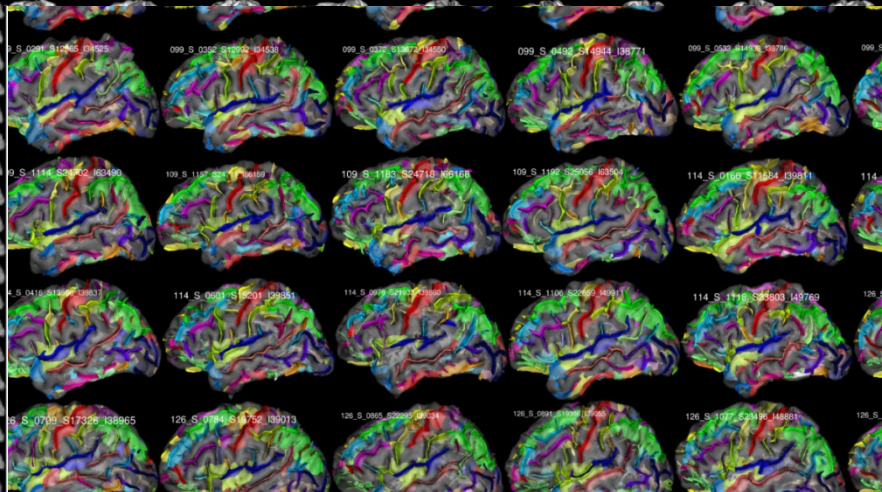
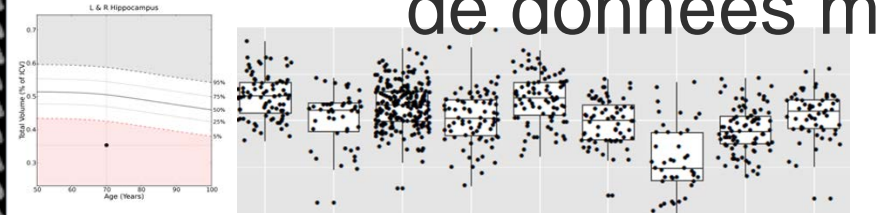


fMRI



Functional Networks

Contrôle qualité automatique et analyses de données massives



Anatomist

Operto, Fischer, Rivière et al.

