

Coma traumatique: IRMf de repos

Stein SILVA



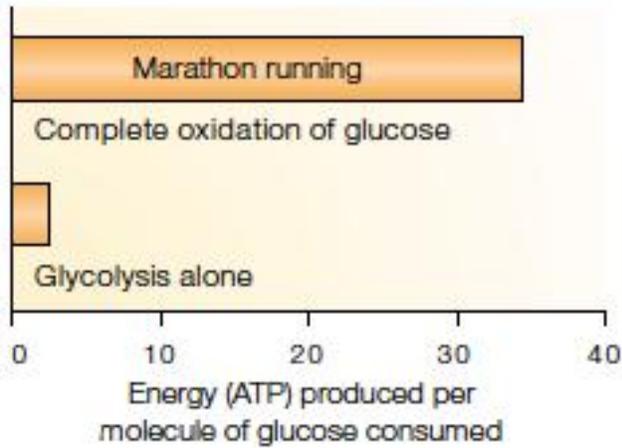


TRAUMATIC BRAIN INJURY IN 2014

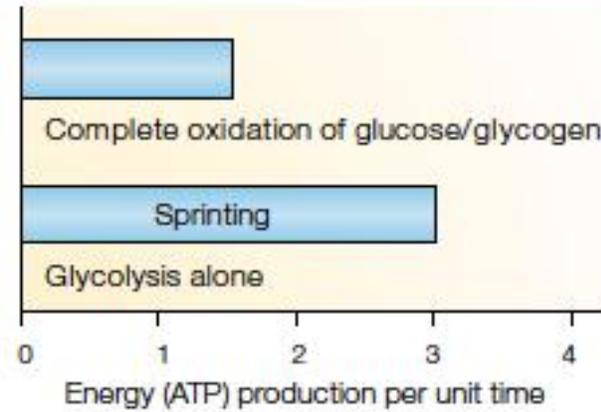
Progress, failures and new approaches for TBI research

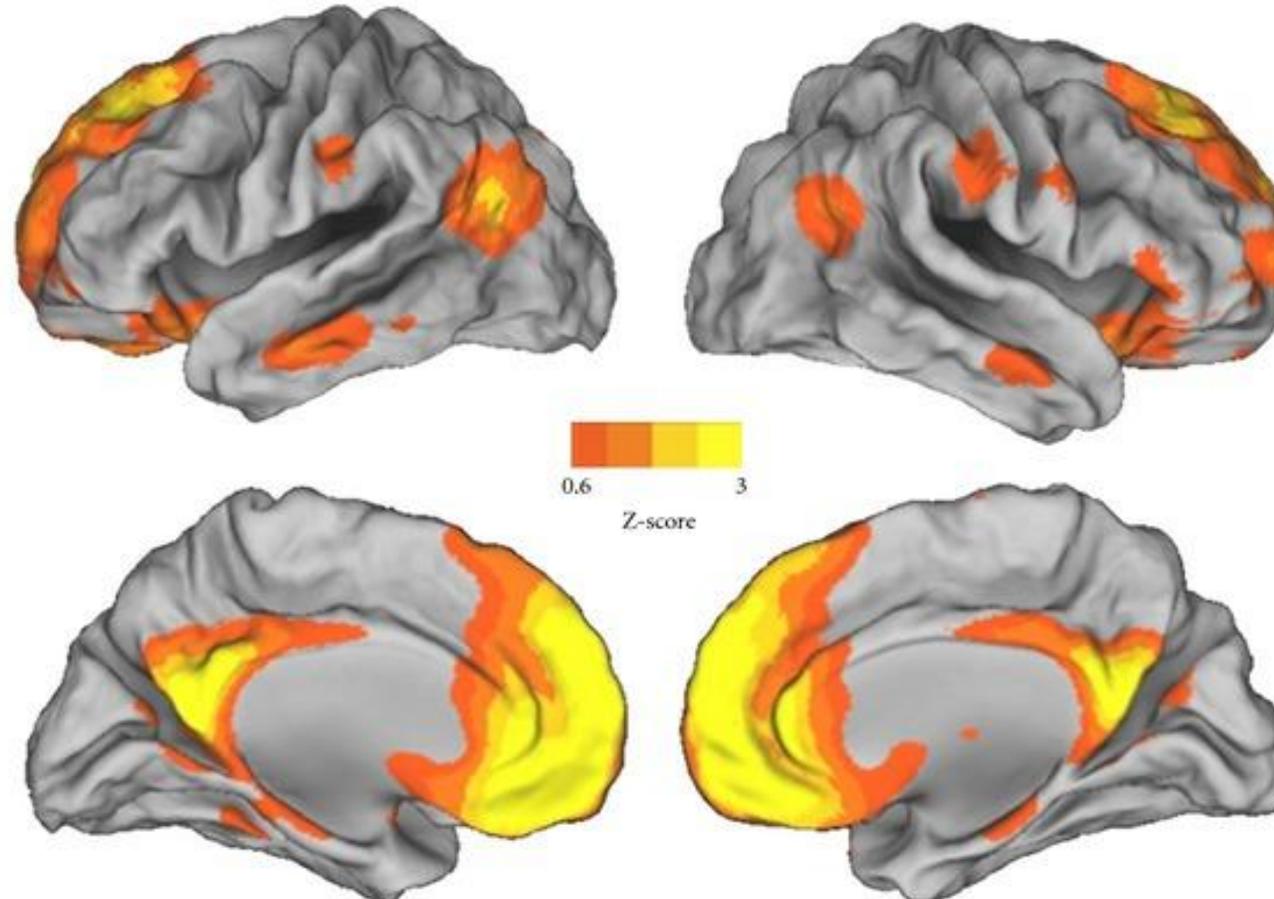
David K. Menon and Andrew I. R. Maas

c Baseline

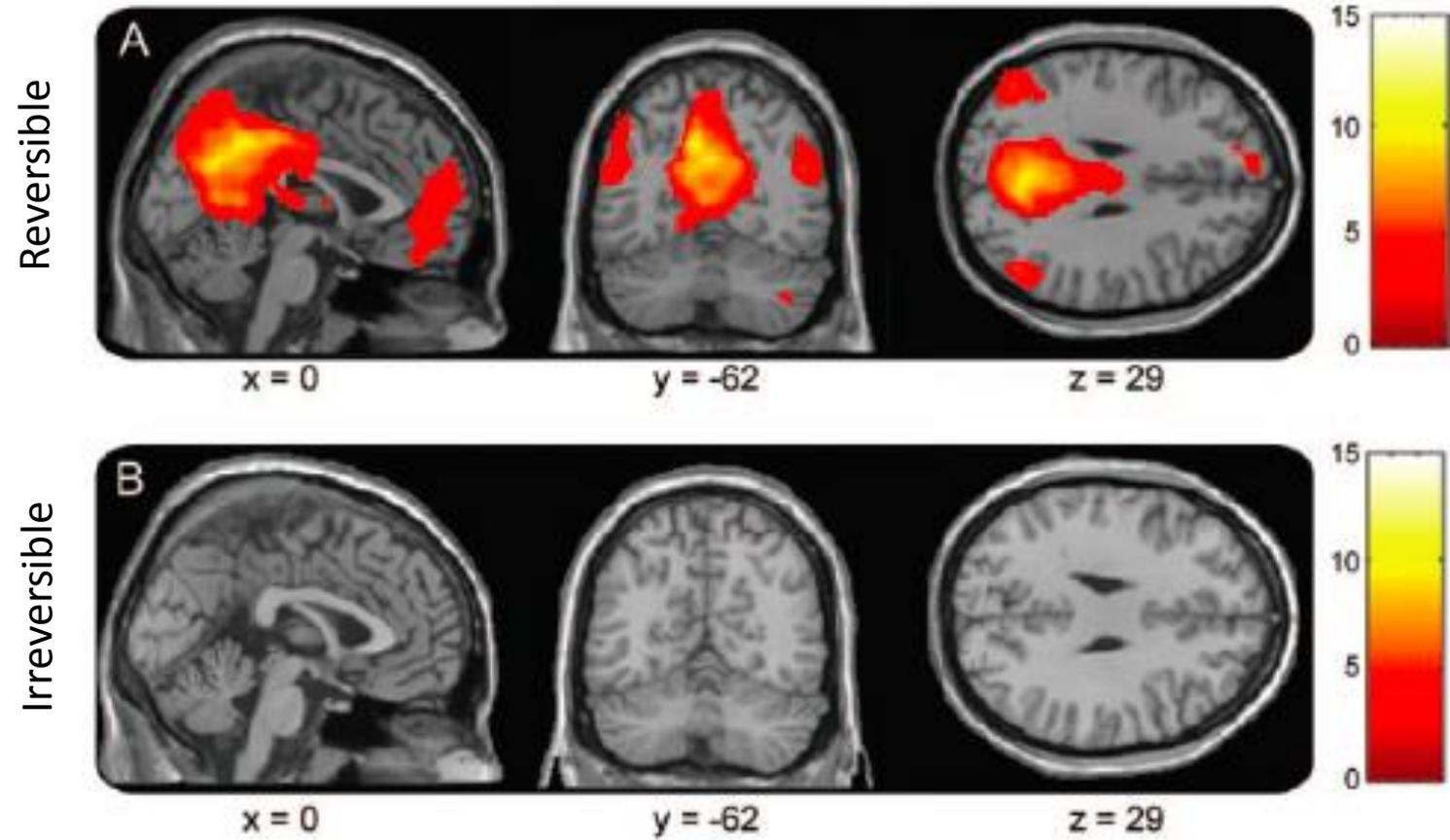


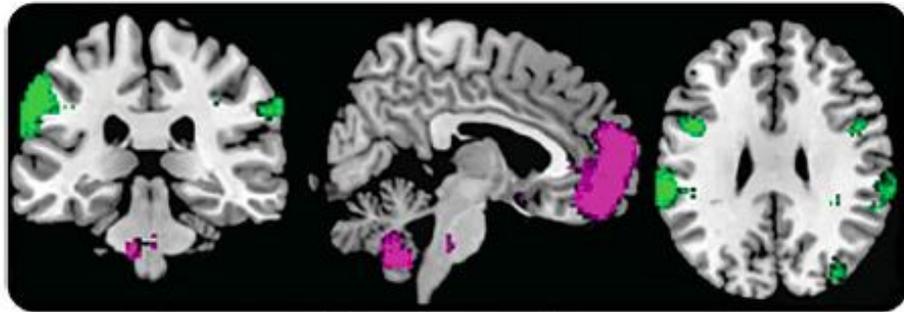
d Activation



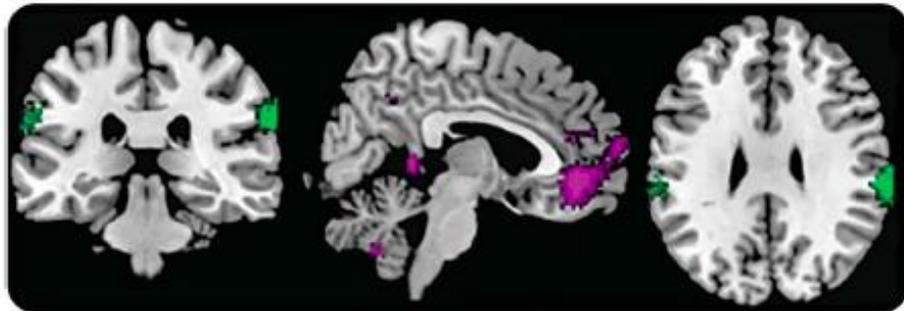


Architecture fonctionnelle intrinsèque

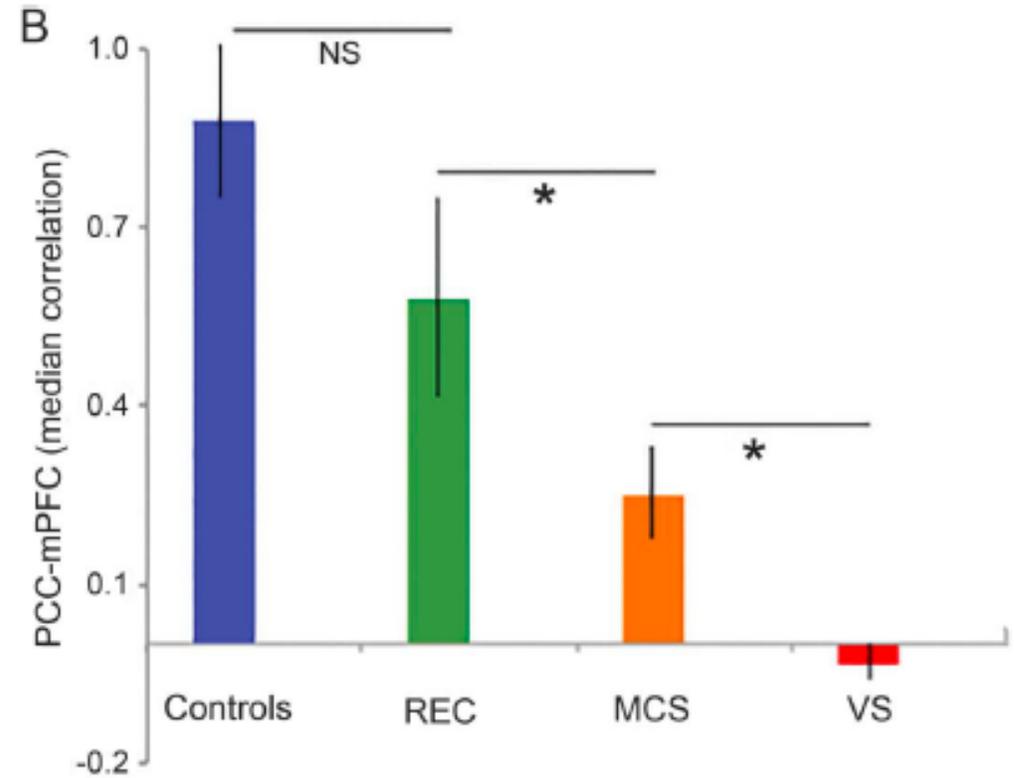




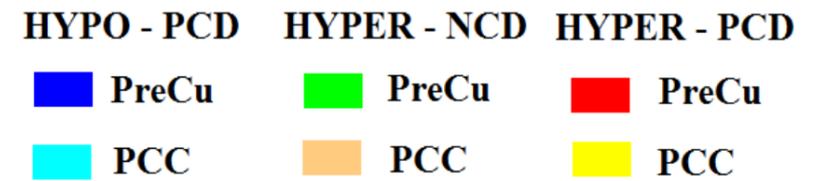
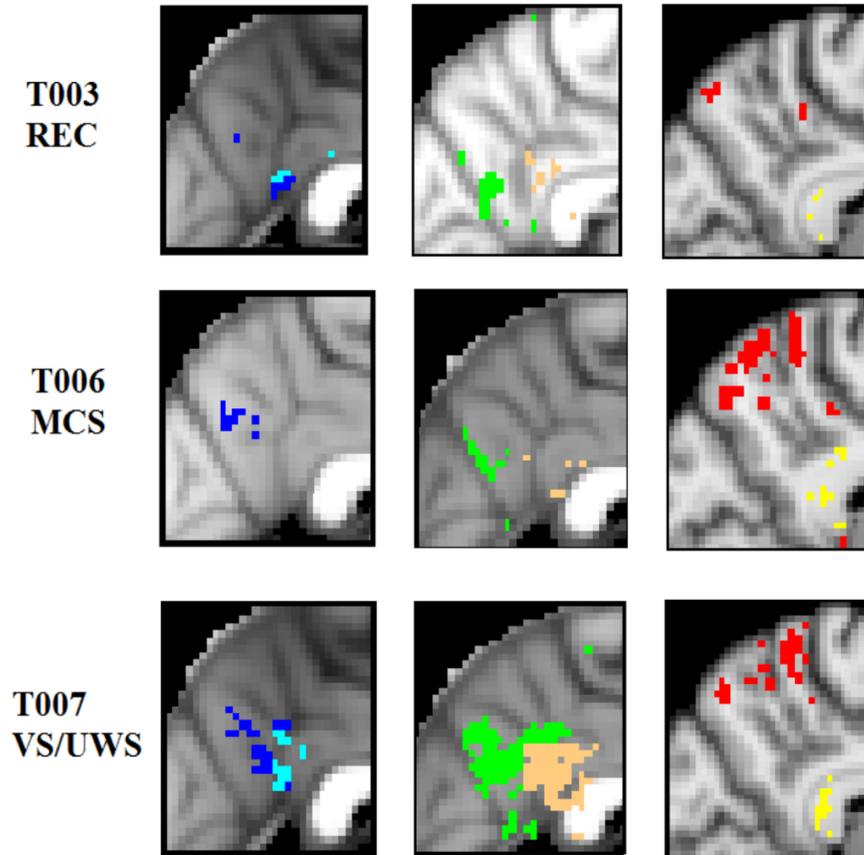
Traumatic vs control



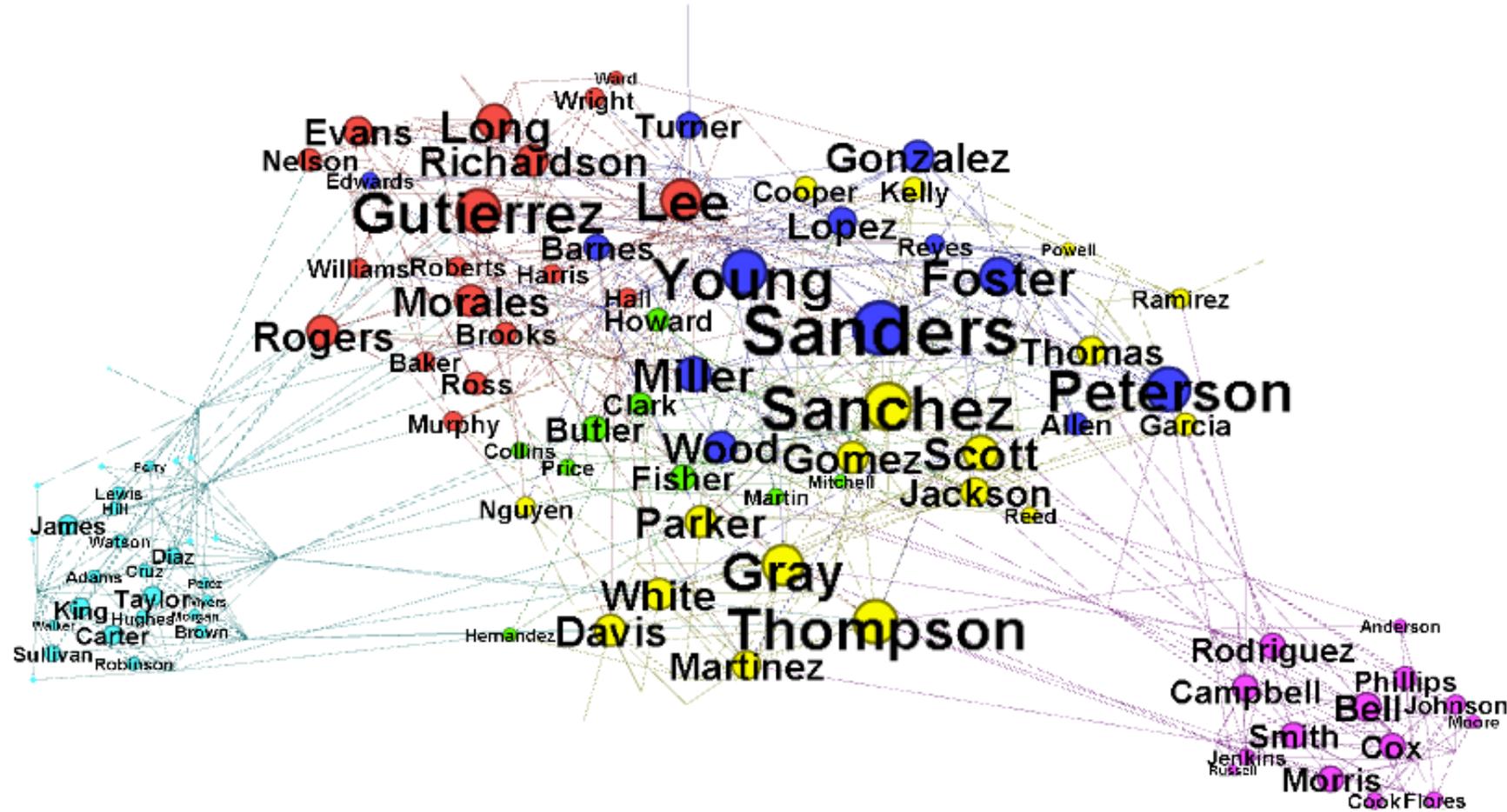
Anoxic vs control



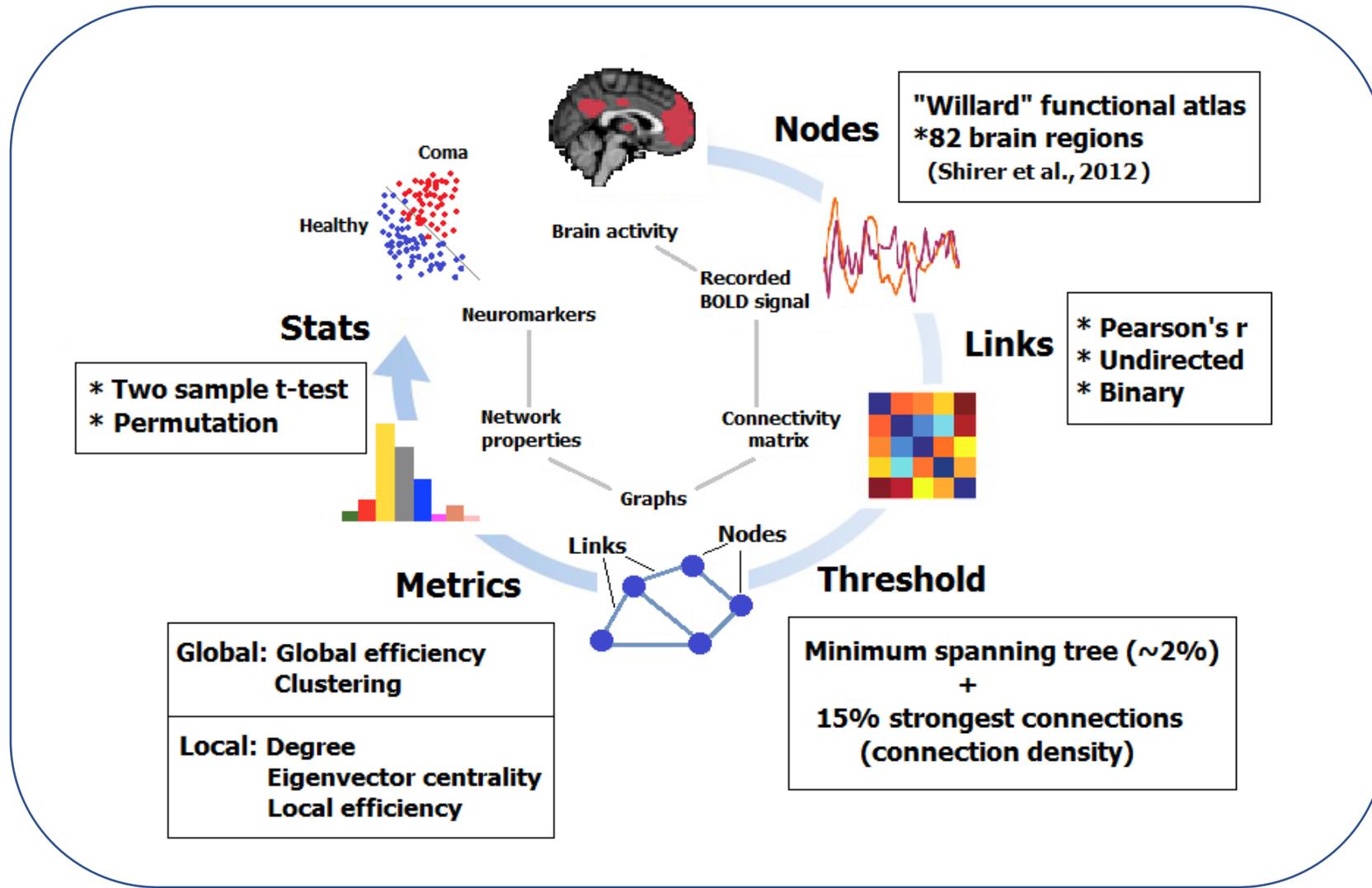
Régions candidates

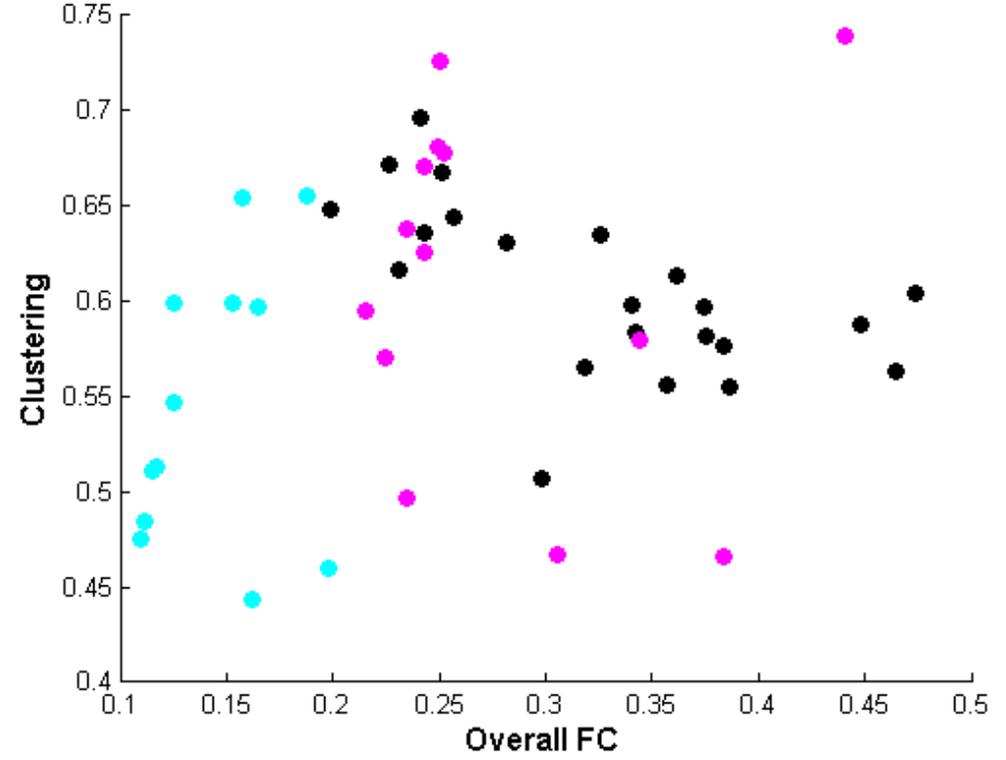
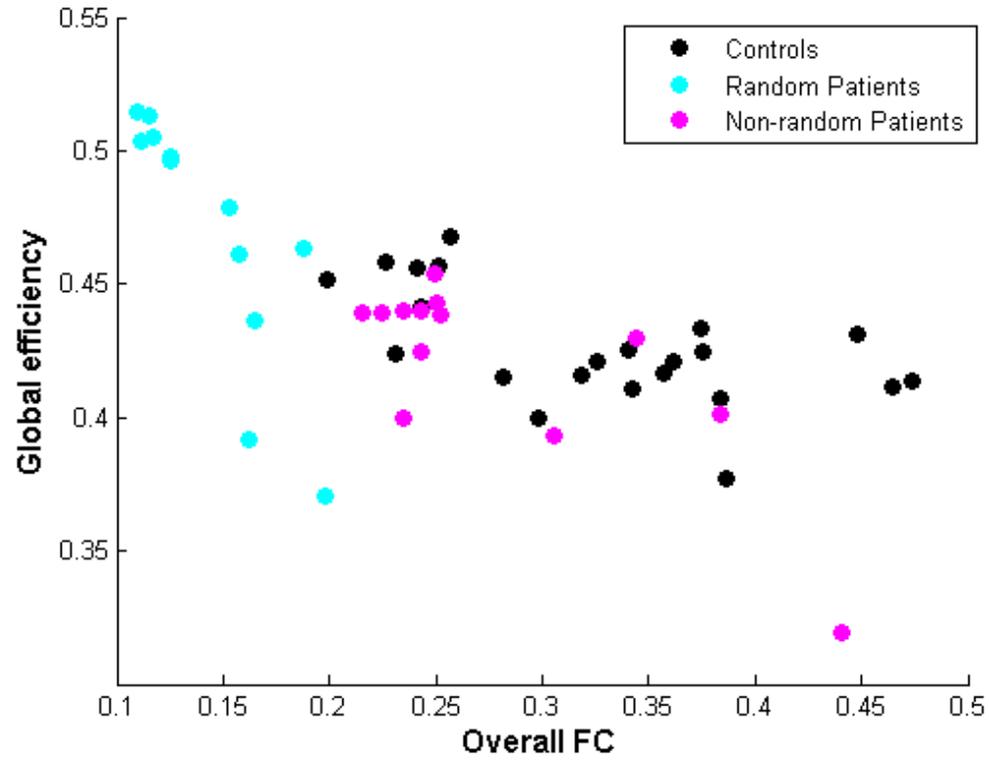


Densité des connexions

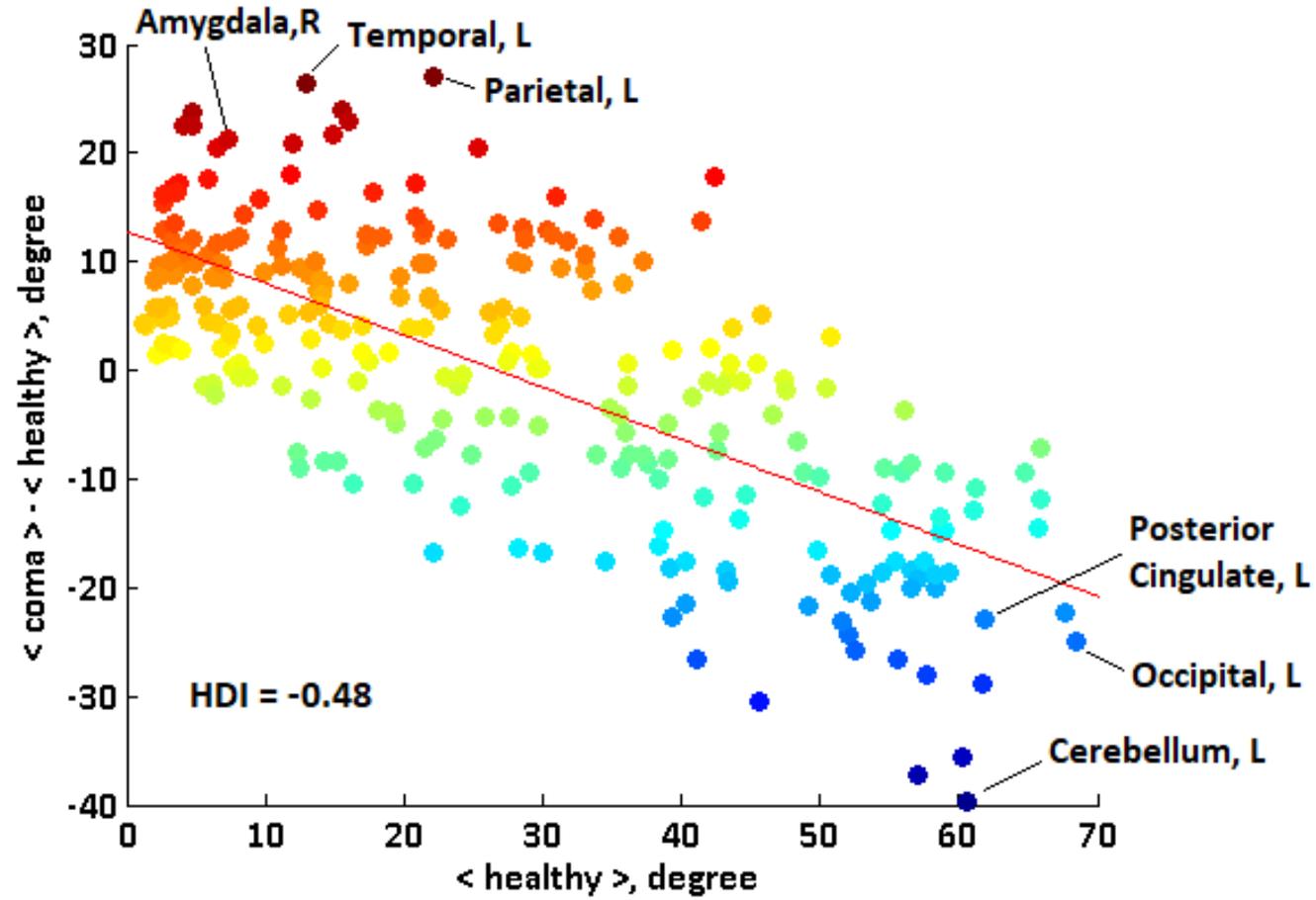


Topologie: théorie des graphes

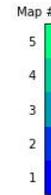
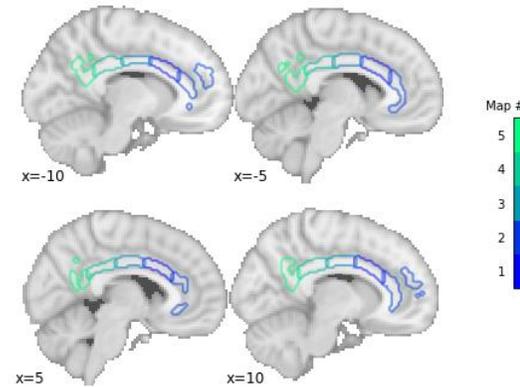
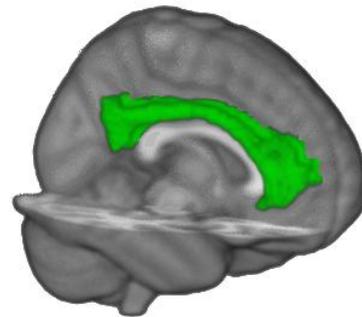
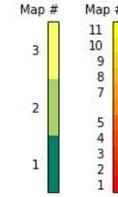
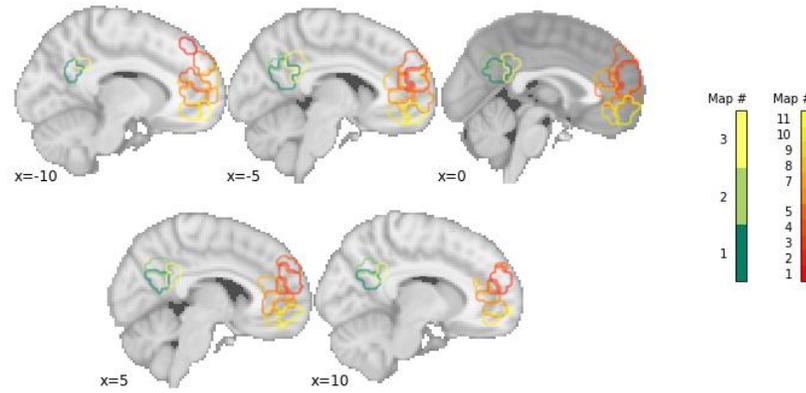
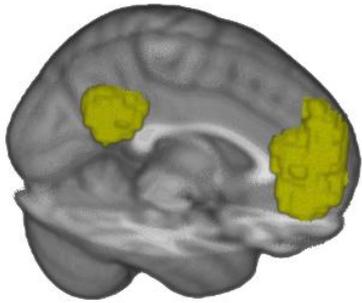




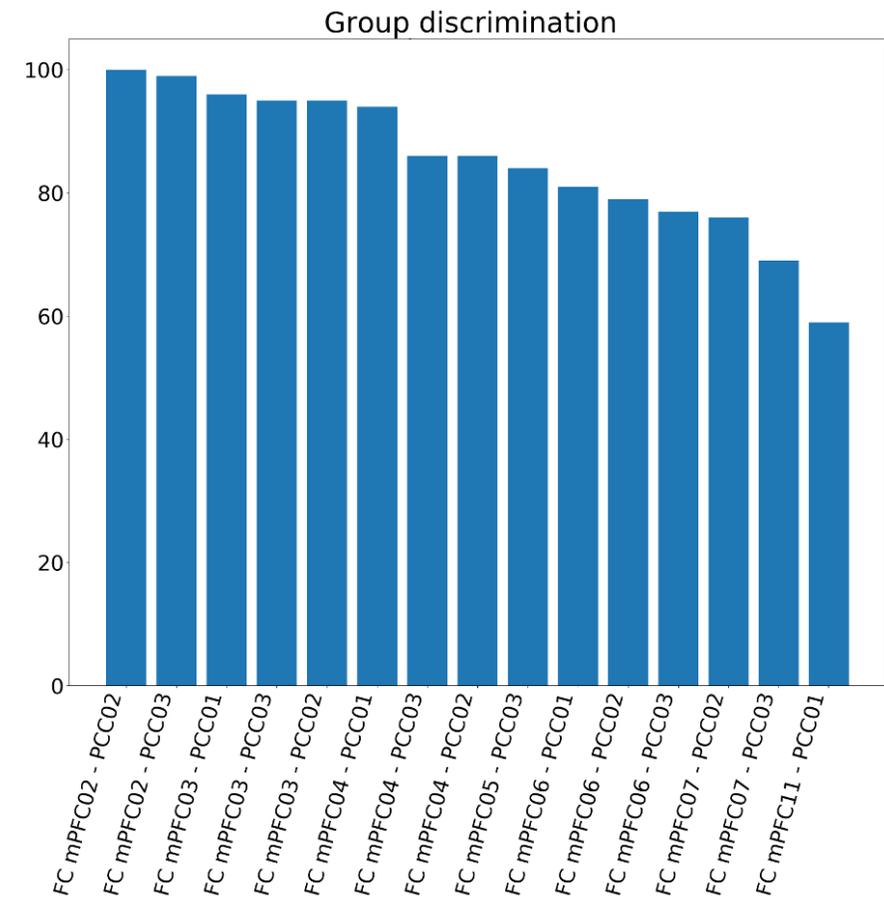
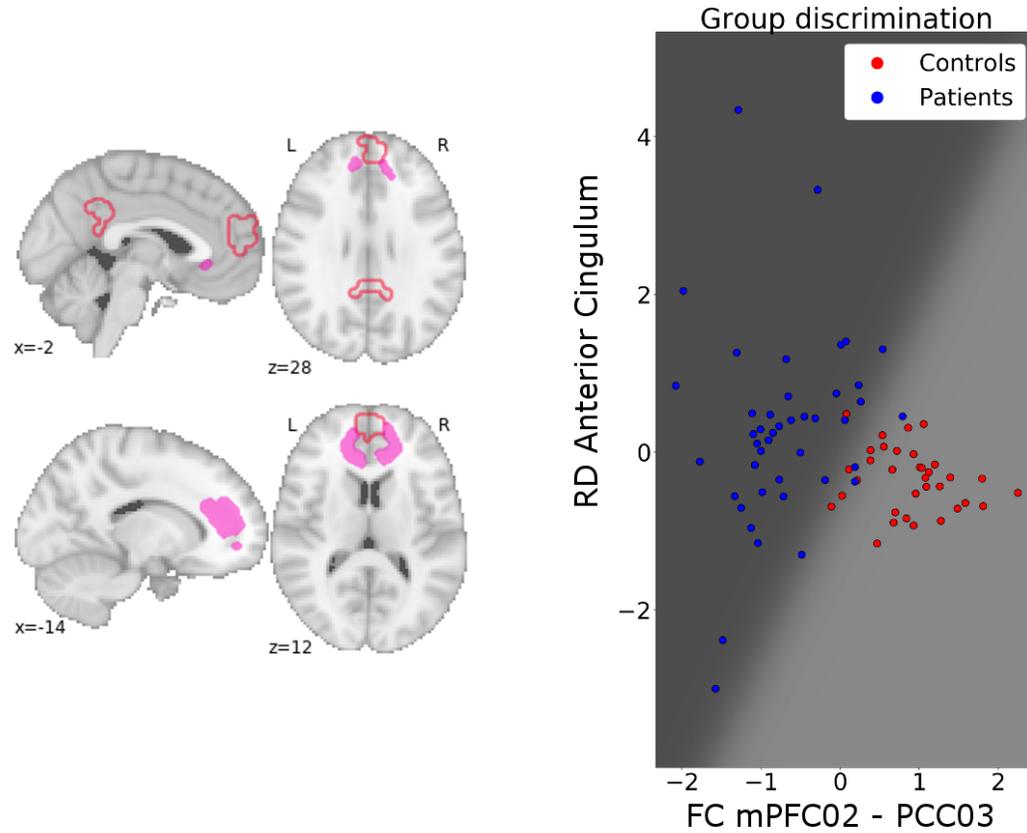
Randomisation



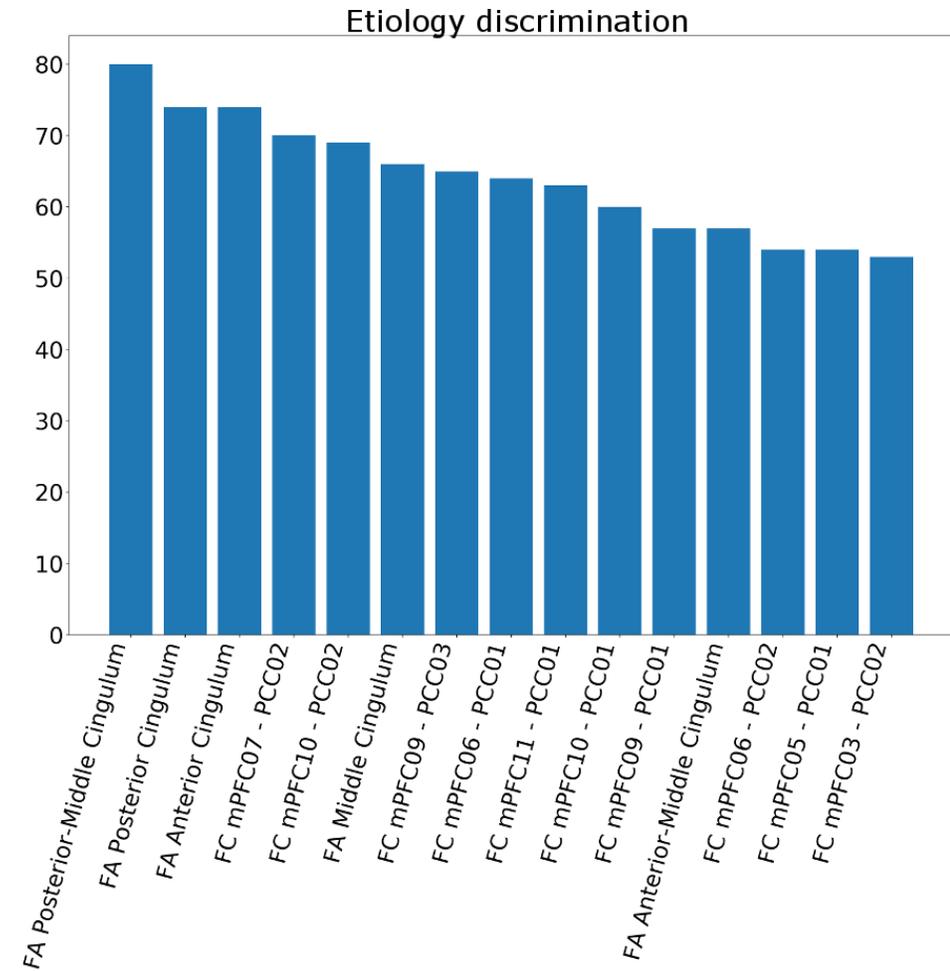
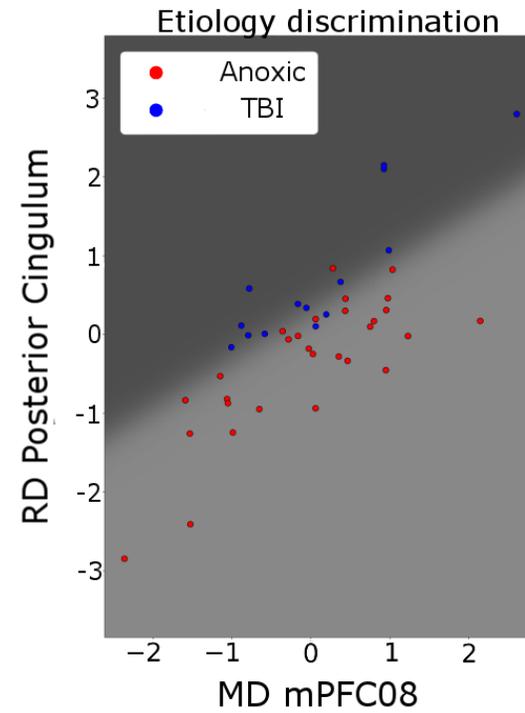
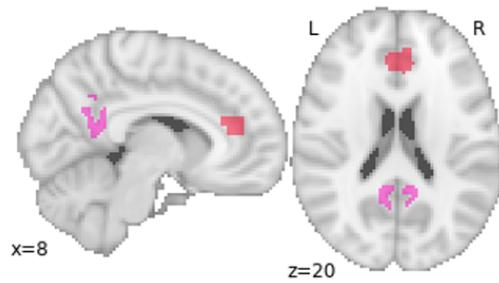
Réorganisation



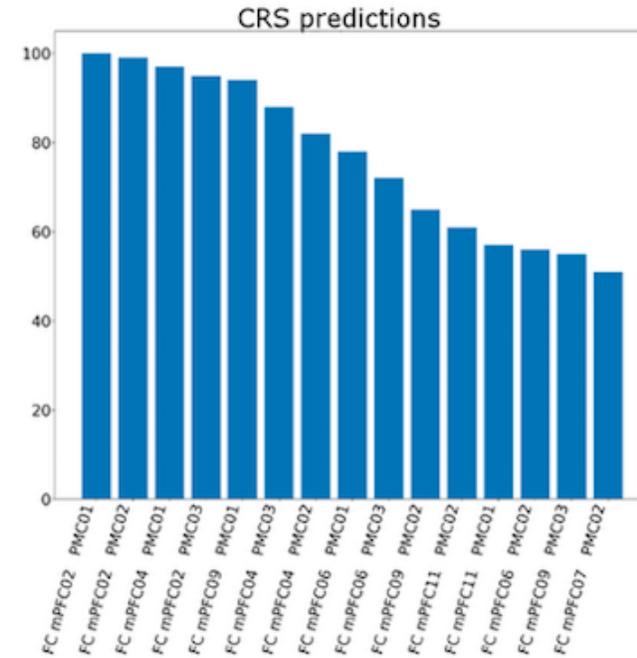
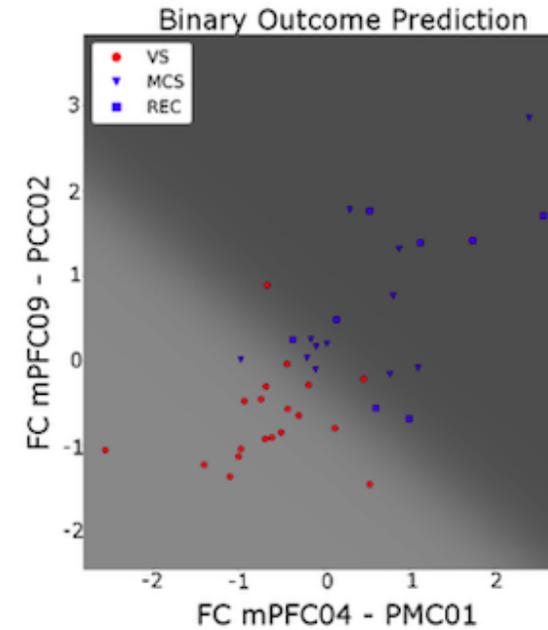
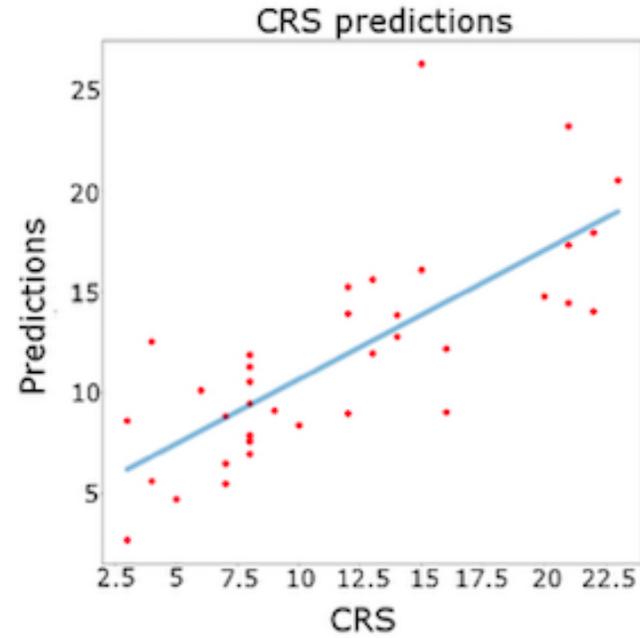
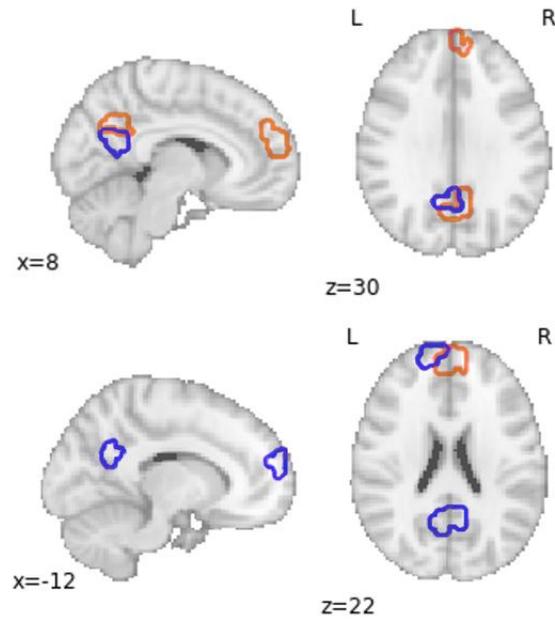
- Connectivité fonctionnelle
- Substance grise (GD)
- Substance blanche (FA, MD, RD)



Diagnostic: contrôles vs coma



Etiologie: anoxique vs traumatisme



Pronostic: CRS-R à 3 mois

- Paradigmes passifs et actifs.
- Approches multimodales.
- Résilience & Plasticité.
- Accessibilité & Innocuité.

IRM fonctionnel

- Suivi à long terme.
- Hétérogénéité.
- Raisonnement circulaire.
- Facteurs confondants.

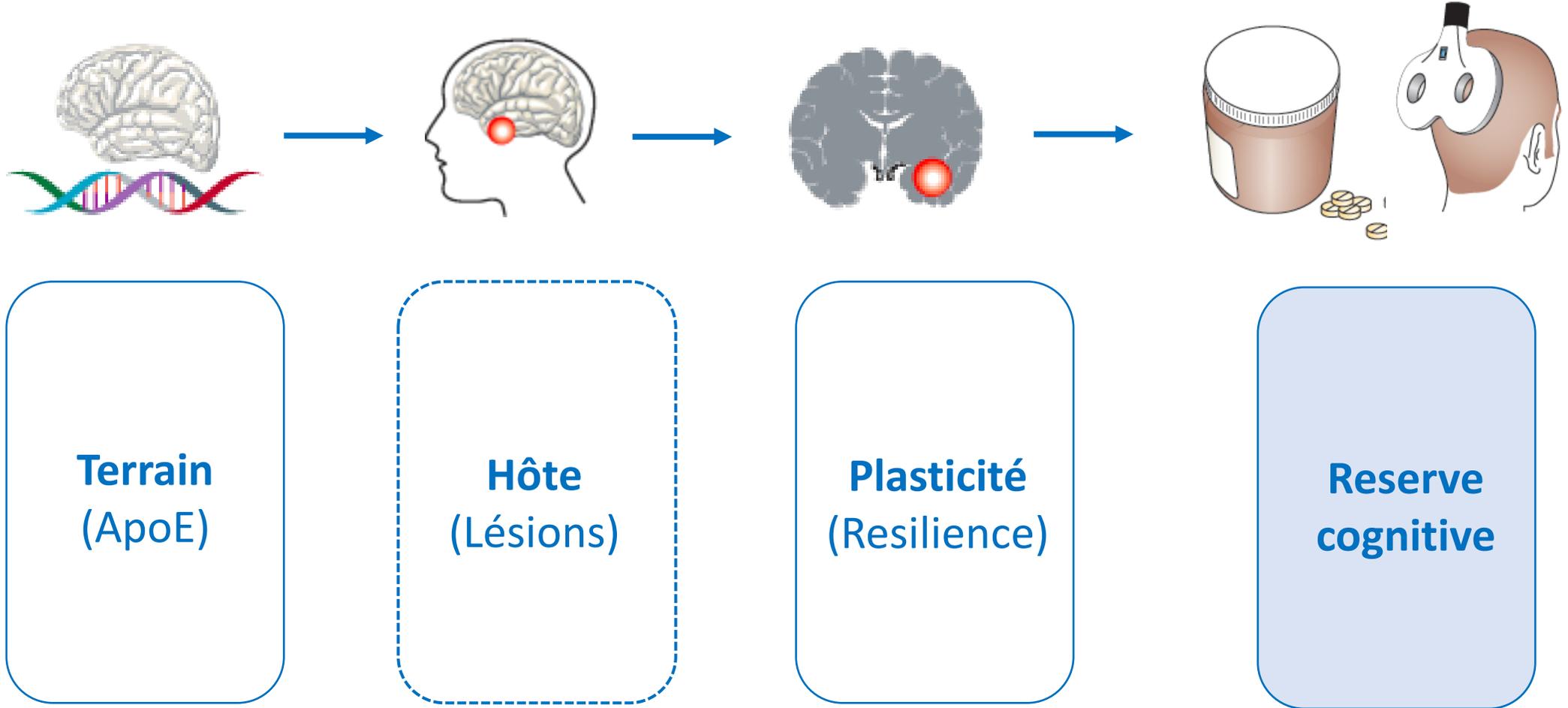
Neuroimagerie

- Connectivité fonctionnelle.
- Conditions d'acquisition.
- Homogénéisation des séquences.
- Bénéfices /Risques.

fMRI

Weijer et al, *Brain* 2016

Giacino, *Nature Rev Neurol* 2014



Remerciements

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L Naccache

L Puybasset

Grenoble

CNRS:

S Achard

Lyon

HPHL:

J Luauté

CNRS:

F Perrin

Lausanne

Leenaards Memory Center

JF Demonet

Rome

Santa Lucia Foundation

F de Pasquale

Cambridge

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D Menon

MRC Neuroscience

T Bekinschtein