



## MOLECULAR AND CELLULAR NEUROBIOLOGY

12h15 A.M

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# Christophe Heinrich

Stem Cell and Brain Research Institute  
Bron, France



## Reprogramming cell identity within the central nervous system: A new avenue for brain repair

The adult mammalian central nervous system lacks intrinsic regenerative capacity to replace lost neurons and induce functional recovery. An emerging approach towards brain repair is to instruct fate conversion of brain-resident glial cells into induced neurons (iNs) by direct lineage reprogramming (Vignoles et al, Trends Mol Med, 2019). A fundamental question is whether iNs can promote functional recovery in pathological contexts. Using a mouse model of intractable epilepsy, we show that reactive glial cells can be converted into interneurons which functionally integrate into epileptic networks and significantly reduce spontaneous recurrent seizures. Our data uncover glia-to-neuron reprogramming as a potential disease-modifying strategy to reduce seizures in therapy-resistant epilepsy (Lentini et al, Cell Stem Cell, 2021).

**Salle de Conférence du CBI – Onsite only**  
118 route de Narbonne  
31400 Toulouse