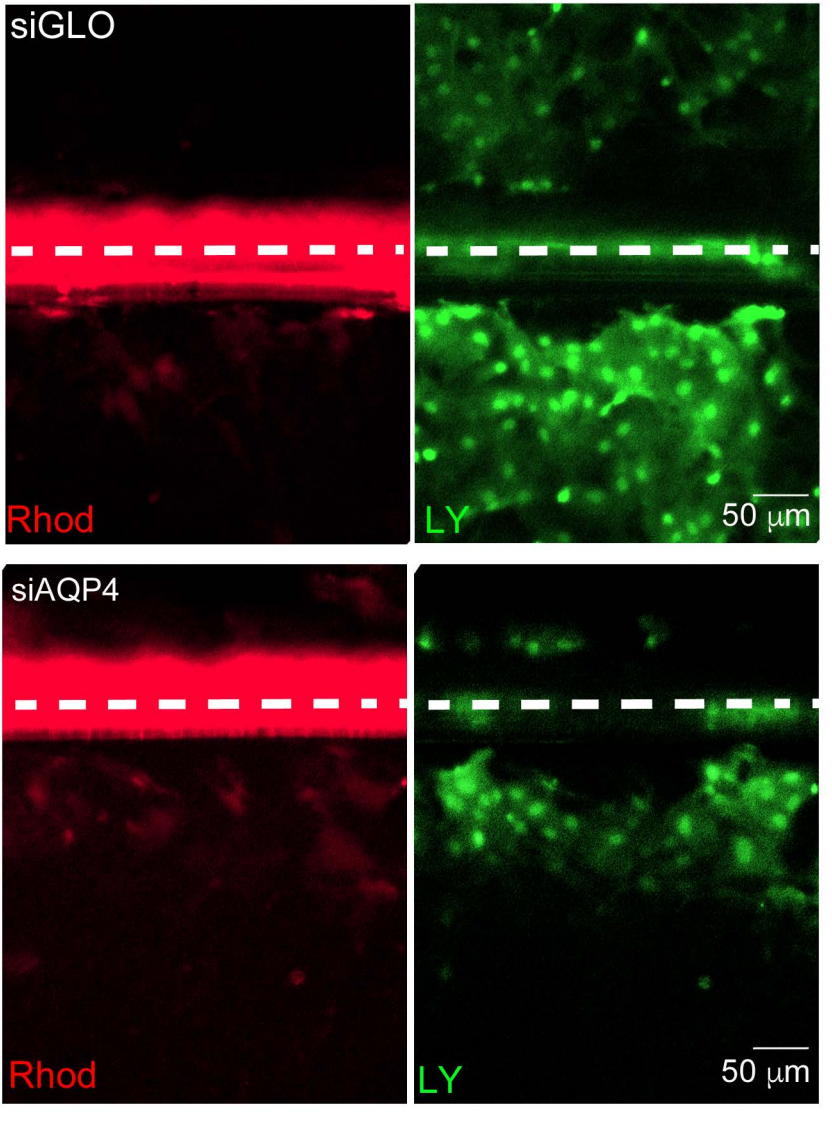
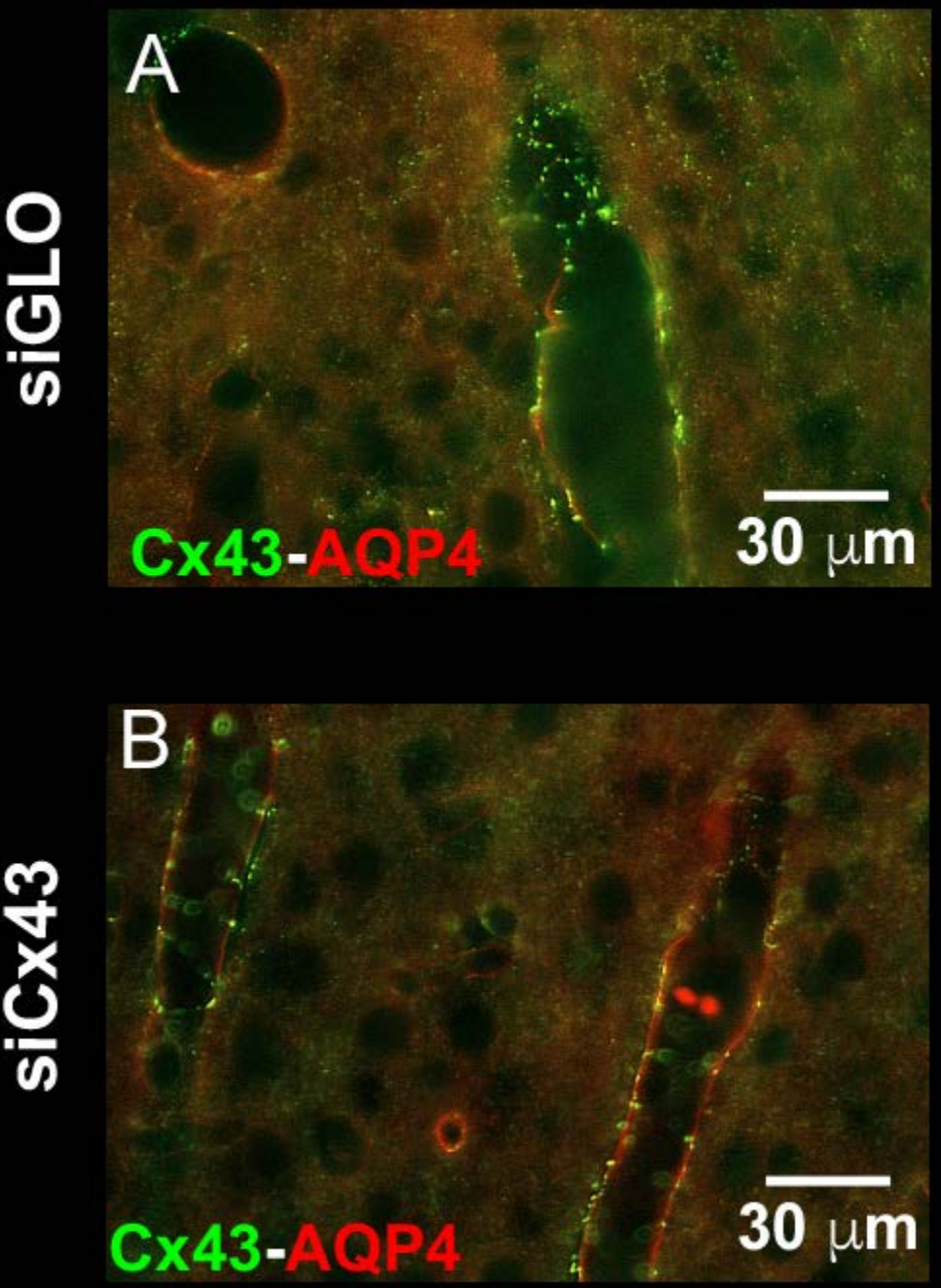
**Modulating the water channel AQP4 alters miRNA expression, astrocyte connectivity and water diffusion in the rodent brain**

Amandine Jullienne[1,2#], Andrew M Fukuda[1,2#], Aleksandra Ichkova[3], Nina Nishiyama[2], Justine Aussudre[3], André Obenaus[1,4], Jérôme Badaut[1,2,3*]

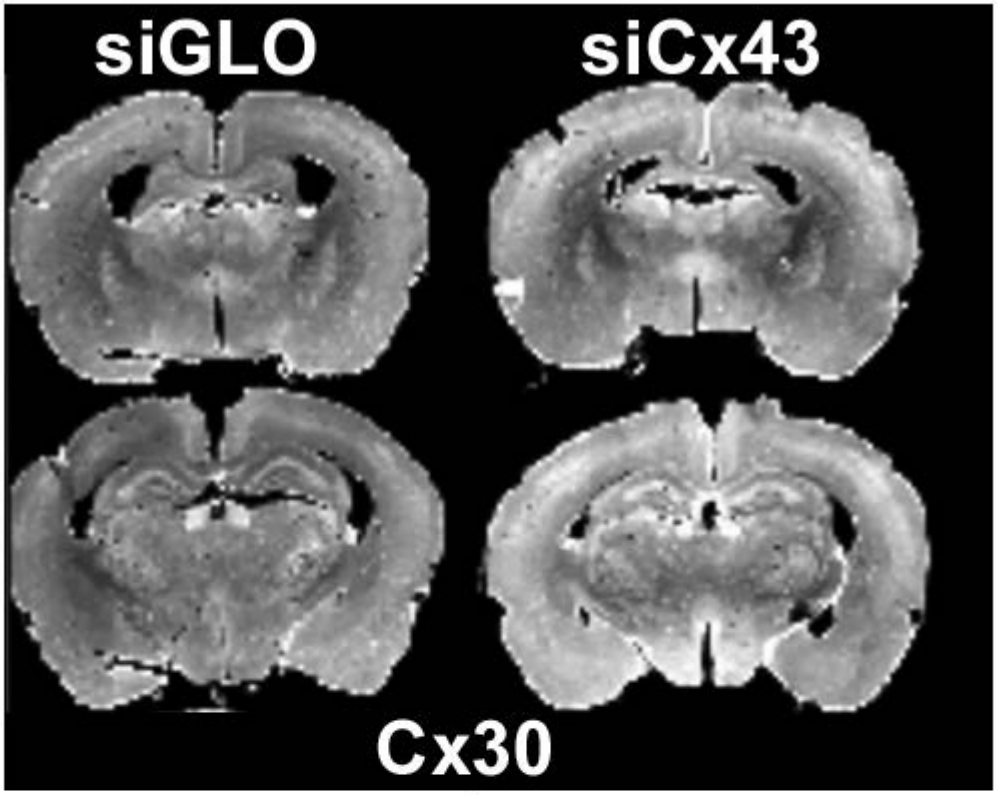

siGLO
Rhod
LY
50 μm
siAQP4
Rhod
LY
50 μm

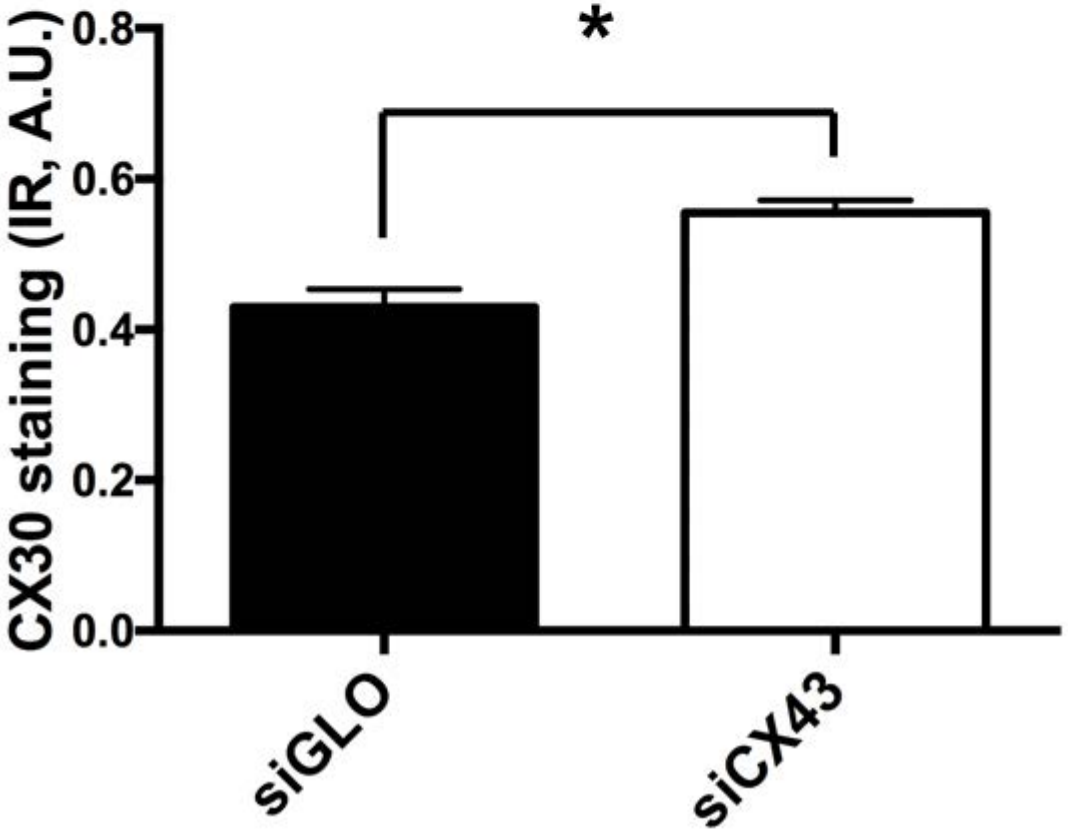
**Supplementary Figure 5**: “Scrape loading experiments (white dotted line) on astrocyte cultures revealed the effect of siAQP4 on astrocyte connectivity. Lucifer yellow (LY) spreading was decreased in the siAQP4-transfected astrocytes. Rhodamine B-Dextran (rhod) loading was similar and did not diffuse at distance from the site of scrape loading in both conditions. Scale bars: 50 μm


siGLO
A
Cx43-AQP4
30 μm
siCx43
B
Cx43-AQP4
30 μm

**Supplementary Figure 6. Effects of siCx43 on AQP4 and Cx43 expression.**

Double immunolabeling of AQP4 (red) and Cx43 (green) after intracortical injection of siGLO (A) and siCx43 (B) showed a decreased of Cx43 staining (green) and no major change in AQP4 expression (red). Scale bars: 30μm.


siGLO
siCx43
Cx30


*
CX30 staining (IR, A.U.)
0.8
0.6
0.4
0.2
0.0
siGLO
siCX43

**Supplementary Figure 7. Effects of siCx43 on Cx30 expression.**

Intracortical injection of siCx43 induced an increased expression of Cx30 as shown by infra-red immunohistochemistry (top of the figure) and on the quantification.