Study finds non-immune brain cells can acquire immune memory, may drive CNS pathologies like multiple sclerosis

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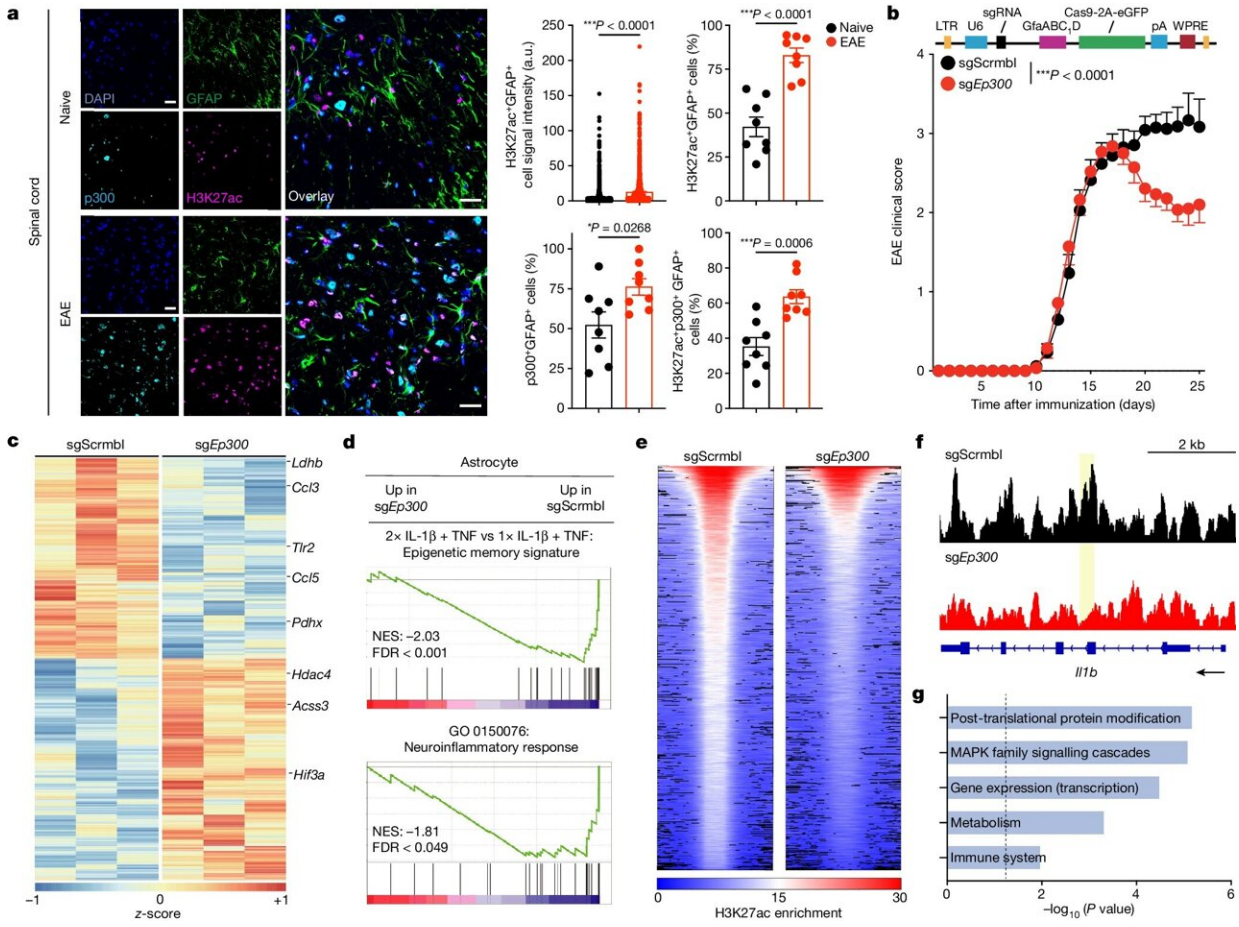

p300 promotes astrocyte epigenetic memory in EAE. **a**, Immunostaining (left) and quantification (right) of H3K27ac$^+$ and p300$^+$ astrocytes in mice with or without EAE (n = 8 spinal cord sections; n = 3 mice per group). Astrocyte H3K27ac levels were calculated as the mean signal intensity (arbitrary units) per

GFAP$^+$ cell using automated unbiased quantification. Unpaired two-sided *t*-test. Scale bars, 25 μm. **b**, EAE curves in mice treated with non-targeting single guide RNA (sgScrmbl) (n = 17) or single guide RNA (sgRNA) targeting *Ep300* (sg*Ep300*) (n = 14) mice. Representative data of three independent experiments. Two-way repeated measures of ANOVA. **c**, Differential gene expression determined by RNA-seq in astrocytes from sgScrmbl- and sg*Ep300*-transduced mice 23 days after EAE induction (n = 3 per group). **d**, GSEA comparing sgScrmbl- and sg*Ep300*-transduced astrocytes. **e**,**f**, ChIP–seq analysis of sgScrmbl- and sg*Ep300*-transduced astrocytes (n = 3 per group). **e**, Heat map showing dynamic H3K27 acetylation marks. **f**, Genome browser snapshots showing the *Il1b* locus. Regions showing a significant decrease (*P*