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Supplemental Information

Remarkable Stability of Myelinating

Oligodendrocytes in Mice

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SUPPLEMENTAL INFORMATION inventory:

Figure S1. Characterization of *Opalin-iCreER^{T2}* transgenic mice. Related to Figures 1 and 2.

Figure S2. Myelinating OLs persist in older mice. Related to Figures 1 and 2.

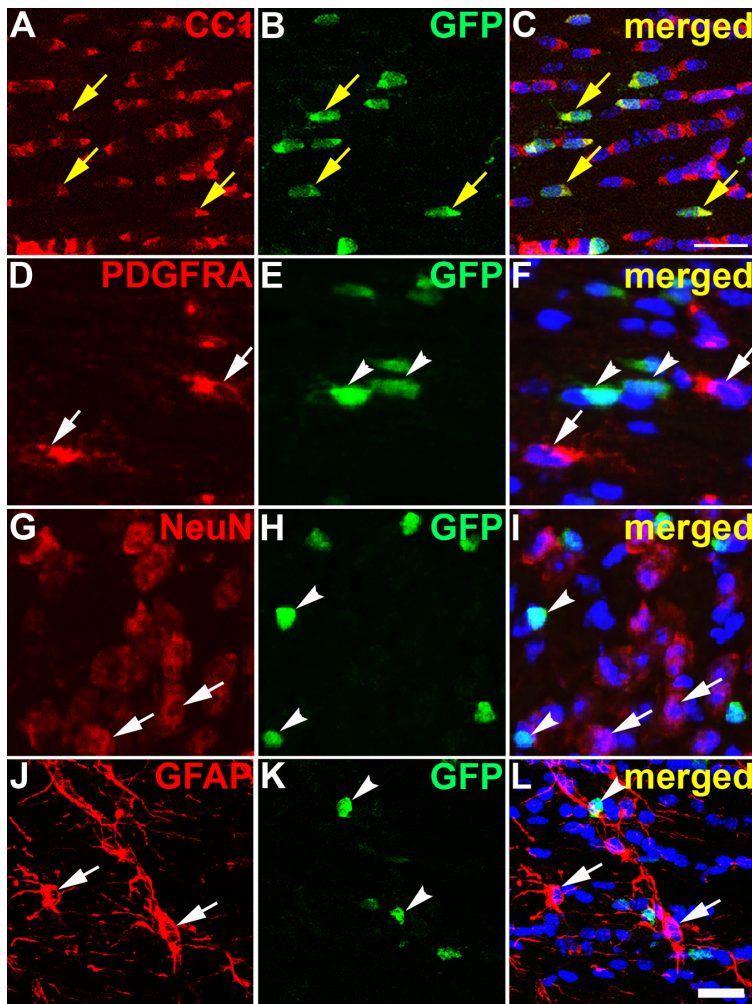


Figure S1. Characterization of *Opalin-iCreER^{T2}* transgenic mice. Related to Figures 1 and 2. (A–C) Tamoxifen (55 mg/kg) was injected into *Opalin-iCreER^{T2}: Rosa-YFP* mice on four consecutive days starting at P60, causing mature OLs (CC1⁺) to become YFP-labelled. No overlap was seen between YFP and PDGFRA (OPs; D–F), NEUN (neurons; G–I) or GFAP (astrocytes; J–L). All images are of corpus callosum except G–I, which are of cerebral cortex. Cell nuclei are labelled with Hoechst 33258 (blue). ~97.5% (346/355) of YFP⁺ cells in the corpus callosum were CC1⁺ OLs, while the fraction of CC1⁺ OLs that was also YFP⁺ (i.e. the *Rosa-YFP* recombination efficiency) was 7.8% ± 1.5% (mean ± s.e.m., n=4). With the *Tau-mGFP* reporter the recombination efficiency was 2.8% ± 1.3% (n=6) after tamoxifen injection at 55 mg/kg. With 120 mg/kg tamoxifen the recombination efficiency with *Tau-mGFP* was 12.9% ± 1.6% (n=6). *White arrows* indicate cell-type specific labelling, *arrowheads* indicate GFP-labelled cells and *yellow arrows* indicate double-labelled cells. *Scale bars*, 20 μm.

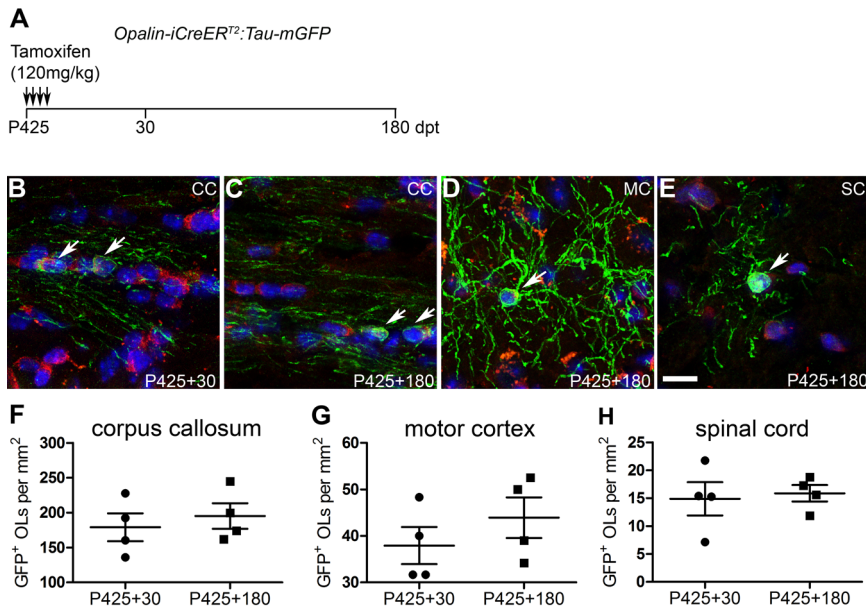


Figure S2. Myelinating OLs persist in older mice. Related to Figures 1 and 2. **(A)** Experimental protocol. Tamoxifen (120 mg/kg) was injected at P425 (14 months) on four consecutive days and mGFP⁺ OLs were counted at P425+30 and P425+180. **(B–E)** Sections of the regions indicated were immunolabelled with monoclonal CC1 (red), anti-GFP (green) and counter-stained with Hoechst 33258 (blue). In all regions the OL labelling efficiency at P425 was less than at P60. *CC*, corpus callosum; *MC*, motor cortex; *SC*, spinal cord. *Scale bar* 10 μ m. **(F–H)** No significant loss of OLs was detected up to P425+180 (20 months of age) in any of the CNS regions analyzed (Student's t-test, n=4 at each age). Data are mean \pm s.e.m.