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Deciphering human-specific properties of neural stem cells and neurons

The human brain, in particular the cerebral cortex has undergone rapid expansion and increased complexity during recent evolution.

One striking feature of human corticogenesis is that it is highly protracted in time, from prenatal steps of neurogenesis to postnatal stages of neuronal maturation. This prolonged development is thought to contribute in an important fashion to increased cortical size but also enhanced circuit complexity and plasticity.

Here we show that the species-specific temporal patterning of corticogenesis is largely intrinsic to cortical cells, and involve human-specific genes and cell properties that underlie human brain evolution.