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How do planarians regenerate their brains?

Planarians are aquatic worms that can regrow their body parts after injury. I want to know which genes help them make new dopamine neurons.

What are planarians?

Why do we study planarians?

What does their brain look like?

How do they make new neurons?

What genes are important?

I discovered knocking down a gene, LMO3, causes a reduction in TH+ neurons!

What's next?

How are they maintained?

What else is affected?

Images courtesy of Francesc Cebria, Chris Petersen, Rachel Roberts-Galbraith, Bryan Pugh, Getty, Kendall Clay