

Adult brain constantly rearranges itself in response to smell

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Scientists from the Institut Pasteur and the CNRS were able to make real-time observations over a period of several months that reveal how new adult-born neurons are formed and evolve in the olfactory bulb of mice.

A team led by CNRS scientist Pierre-Marie Lledo made the surprising discovery that the connections between these new neurons and neighboring cells are significantly rearranged throughout their lifetime. The scientists were surprised by this observation.

“We expected to see the synapses gradually stabilizing. But astonishingly, these synapses proved to be highly dynamic throughout the life of the new neurons,” explained first author, Kurt Sailor. The scientists showed that this neuronal dynamism can enable optimal processing of sensory information by the olfactory bulb.

“This structural plasticity reveals a unique dynamic mechanism that is vital for the regeneration and integration of new neurons within the adult brain circuit,” concluded the scientists. More generally, this study suggests a universal plasticity mechanism in brain regions that are closely associated with memory and learning.

Read full, original post: [The relentless dynamism of the adult brain](#)