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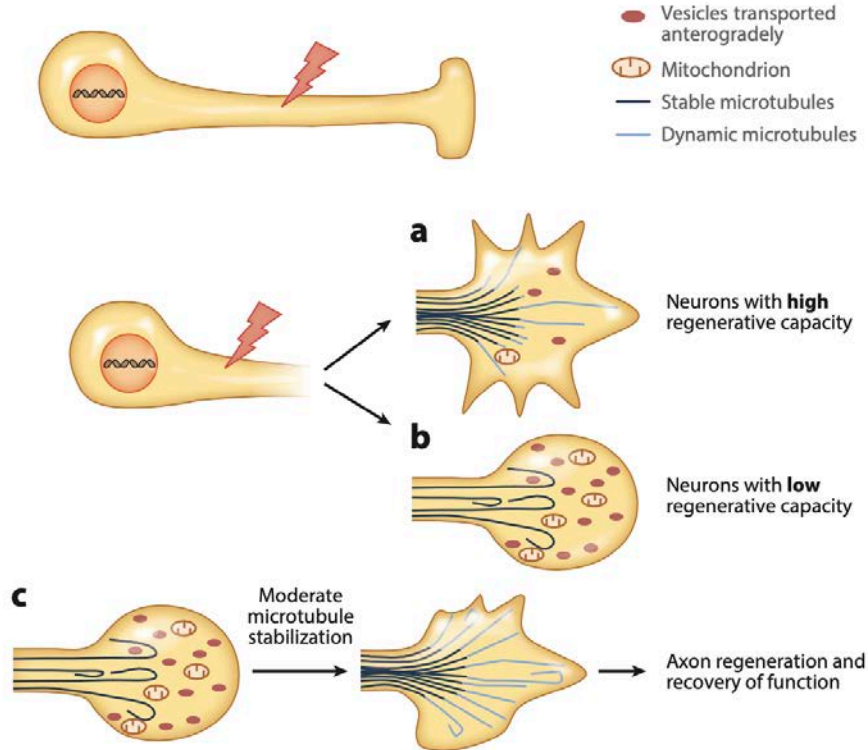
Methods in Neurobiology

Regeneration in the CNS



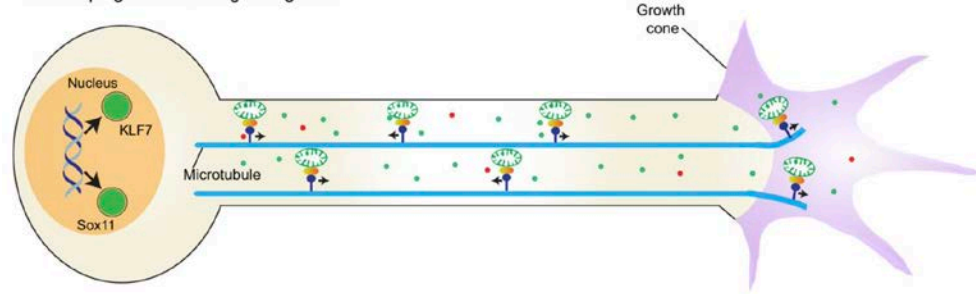
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Different regenerative capacity in the PNS and CNS

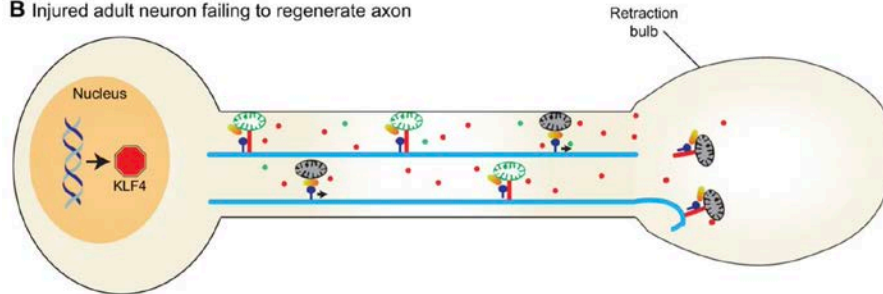


Development and regeneration

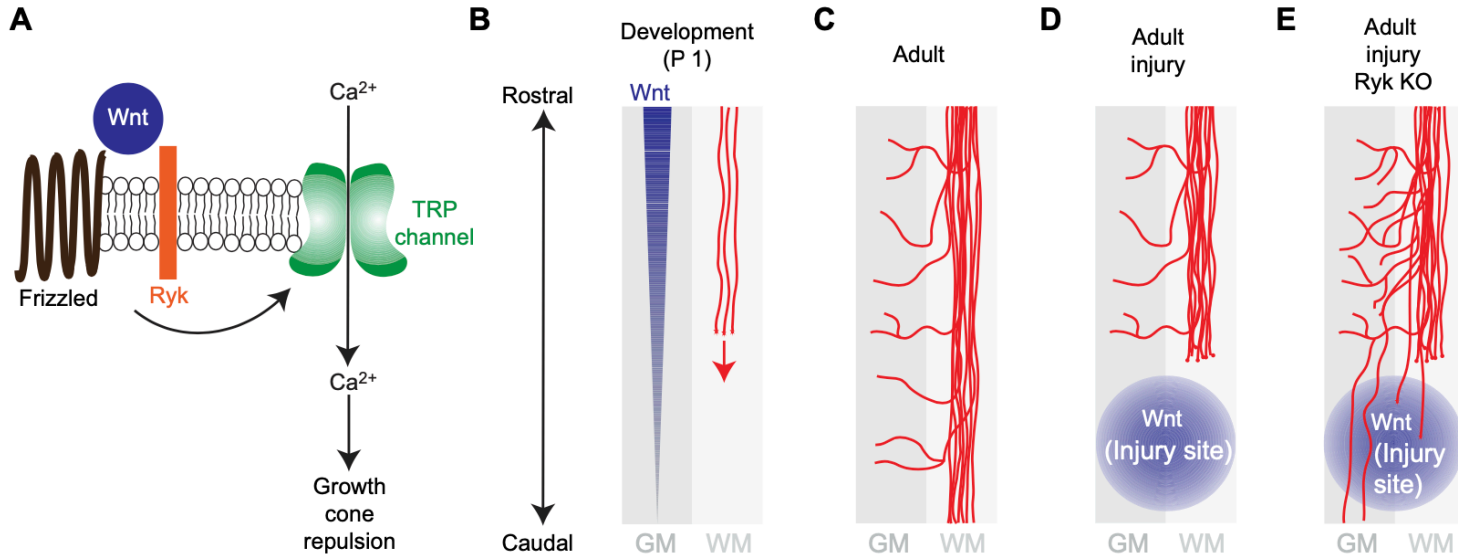
A Developing neuron with growing axon



B Injured adult neuron failing to regenerate axon

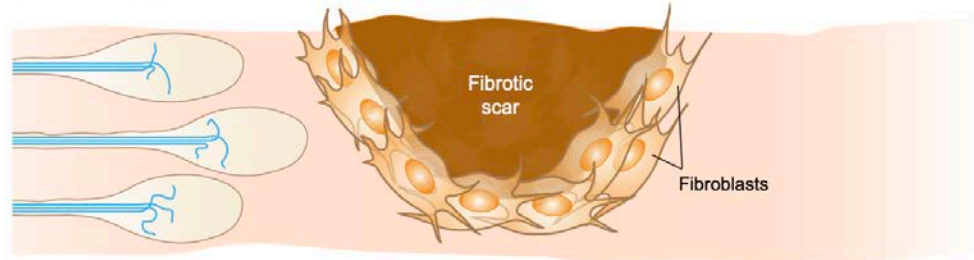


Development and regeneration: WNT pathway

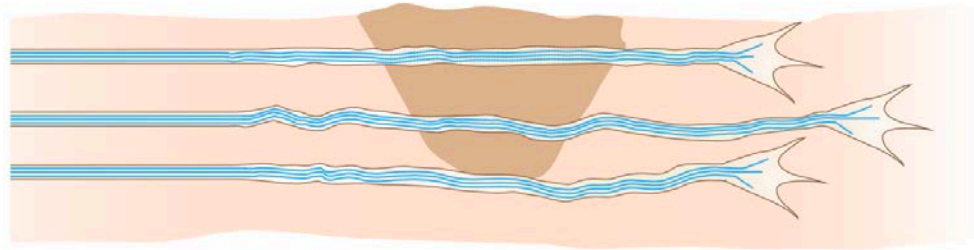


Development and regeneration: other extracellular cues

B Spinal cord injury



C Spinal cord injury with microtubule stabilization (epothilone B or taxol treatment)



Exceptions to CNS lack of regeneration

Spinal Interneuron Axons Spontaneously Regenerate after Spinal Cord Injury in the Adult Feline

Keith K. Fenrich and P. Ken Rose

Journal of Neuroscience 30 September 2009, 29 (39) 12145-12158; DOI: <https://doi.org/10.1523/JNEUROSCI.0897-09.2009>

> [Neuron](#). 2016 Aug 17;91(4):748-762. doi: 10.1016/j.neuron.2016.07.024. Epub 2016 Aug 4.

Regrowth of Serotonin Axons in the Adult Mouse Brain Following Injury

Yunju Jin ¹, Sarah E Dougherty ¹, Kevin Wood ², Landy Sun ¹, Robert H Cudmore ¹, Aya Abdalla ², Geetha Kannan ³, Mikhail Pletnikov ³, Parastoo Hashemi ², David J Linden ⁴

References

Slide	Reference
2	Curcio M, Bradke F. 2018 Axon Regeneration in the Central Nervous System: Facing the Challenges from the Inside. <i>Annu Rev Cell Dev Biol.</i> 34:495-521.
3-5	Hilton, B.J., Bradke, F. 2017 Can injured adult CNS axons regenerate by recapitulating development? <i>Development</i> 144: 3417-3429.



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