
2024 POSTDOCTORAL SYMPOSIUM

Lightning Talk - Final

Preventing Sudden Unexpected Death in Epilepsy
by understanding impairments on breathing function

Irene Sanchez Brualla (she/her)
Department of Anesthesiology



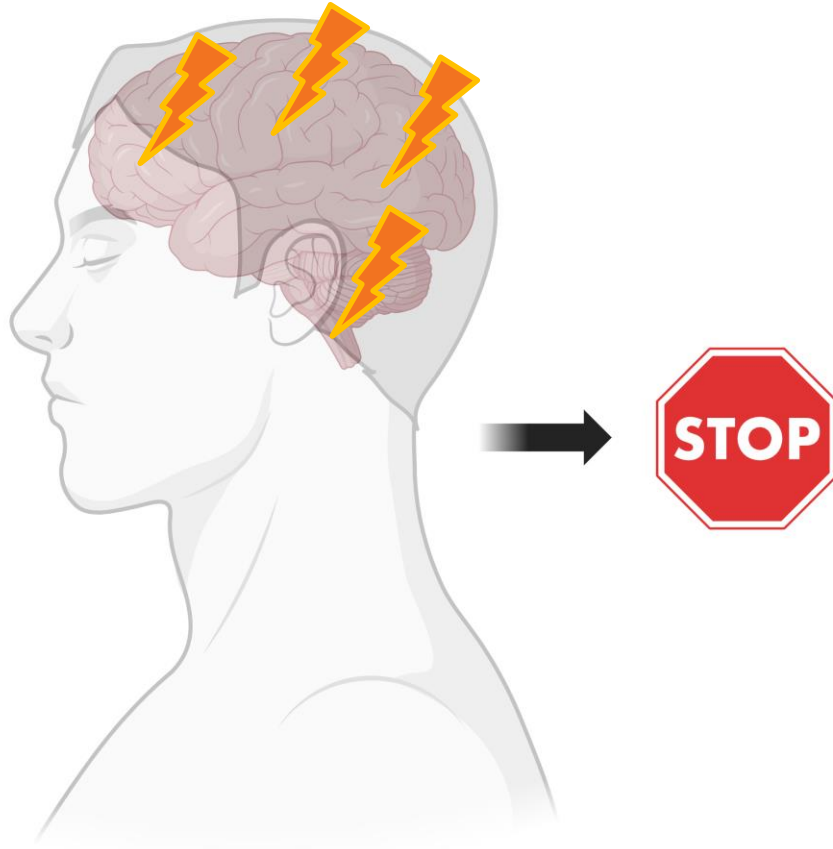
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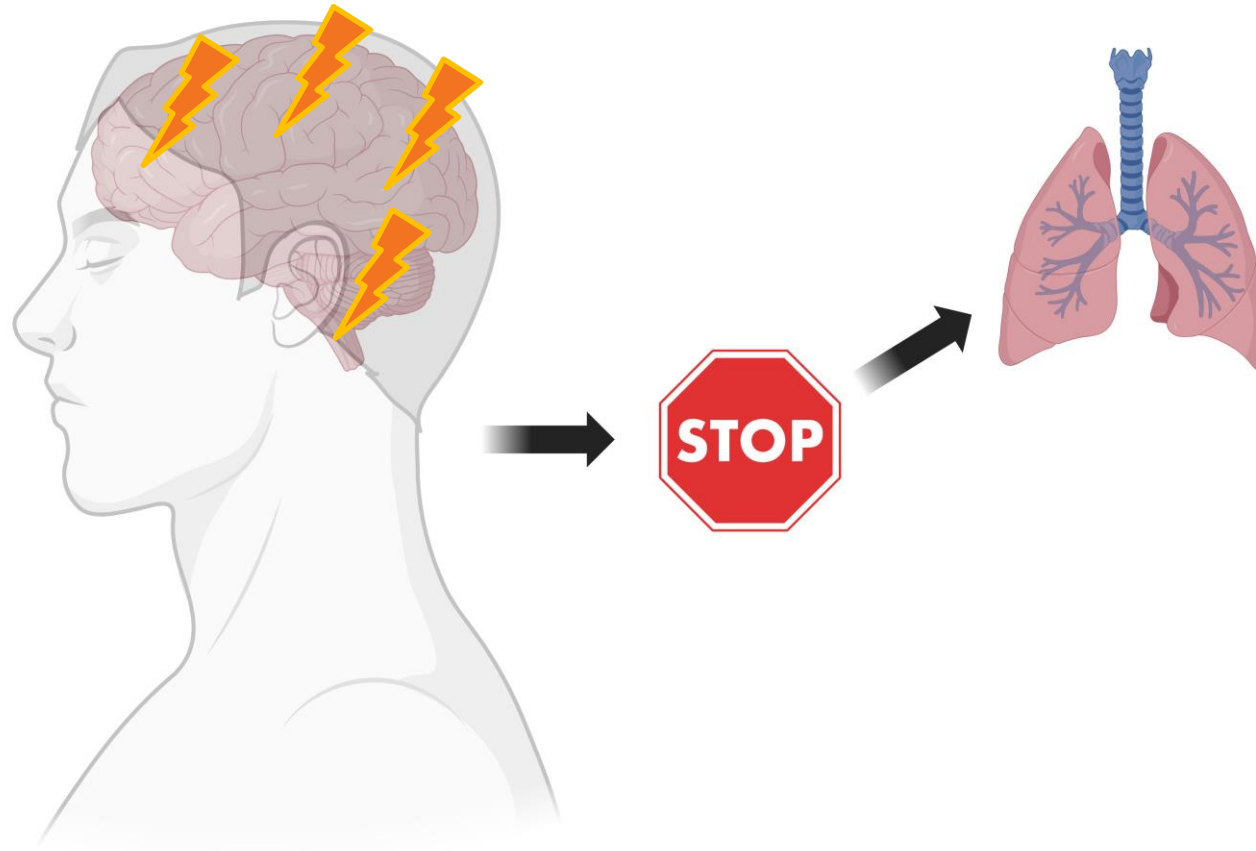
Epileptic seizures can stop breathing



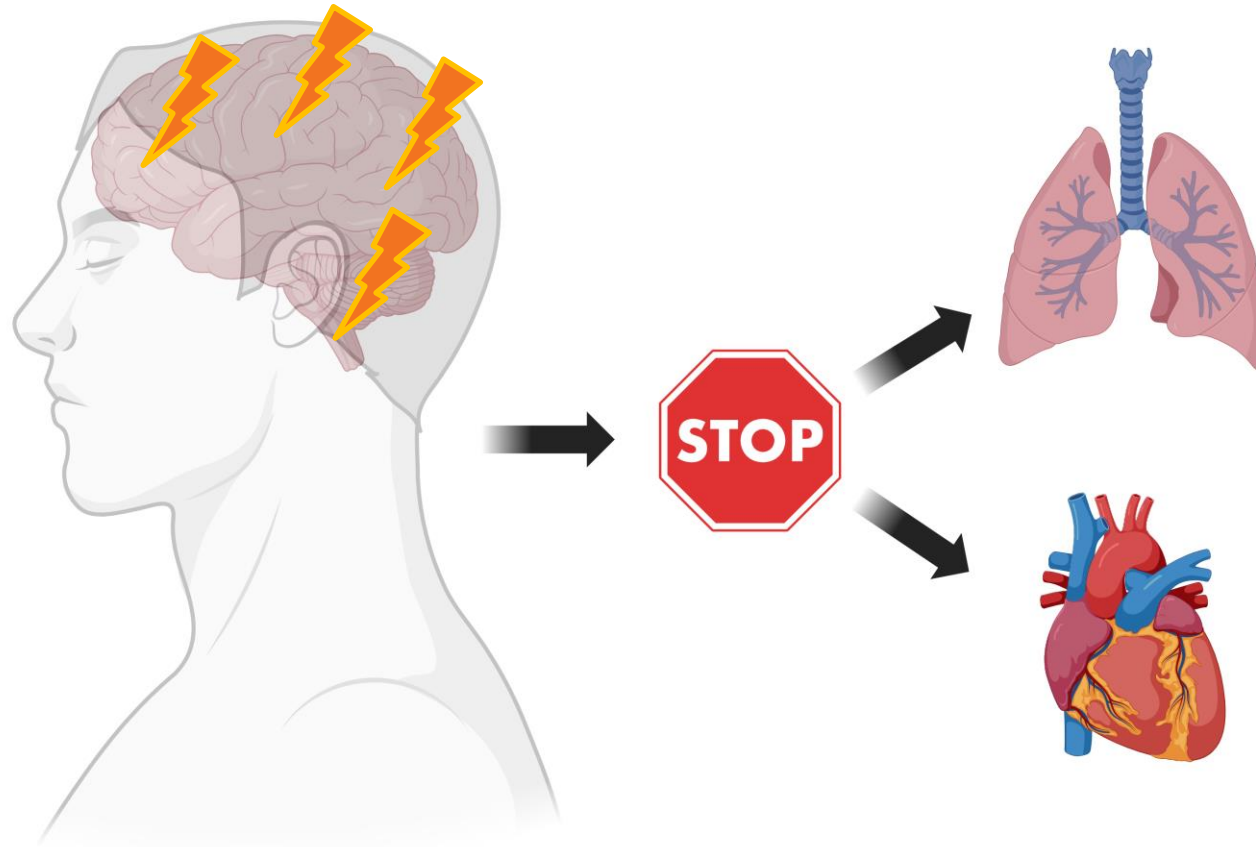
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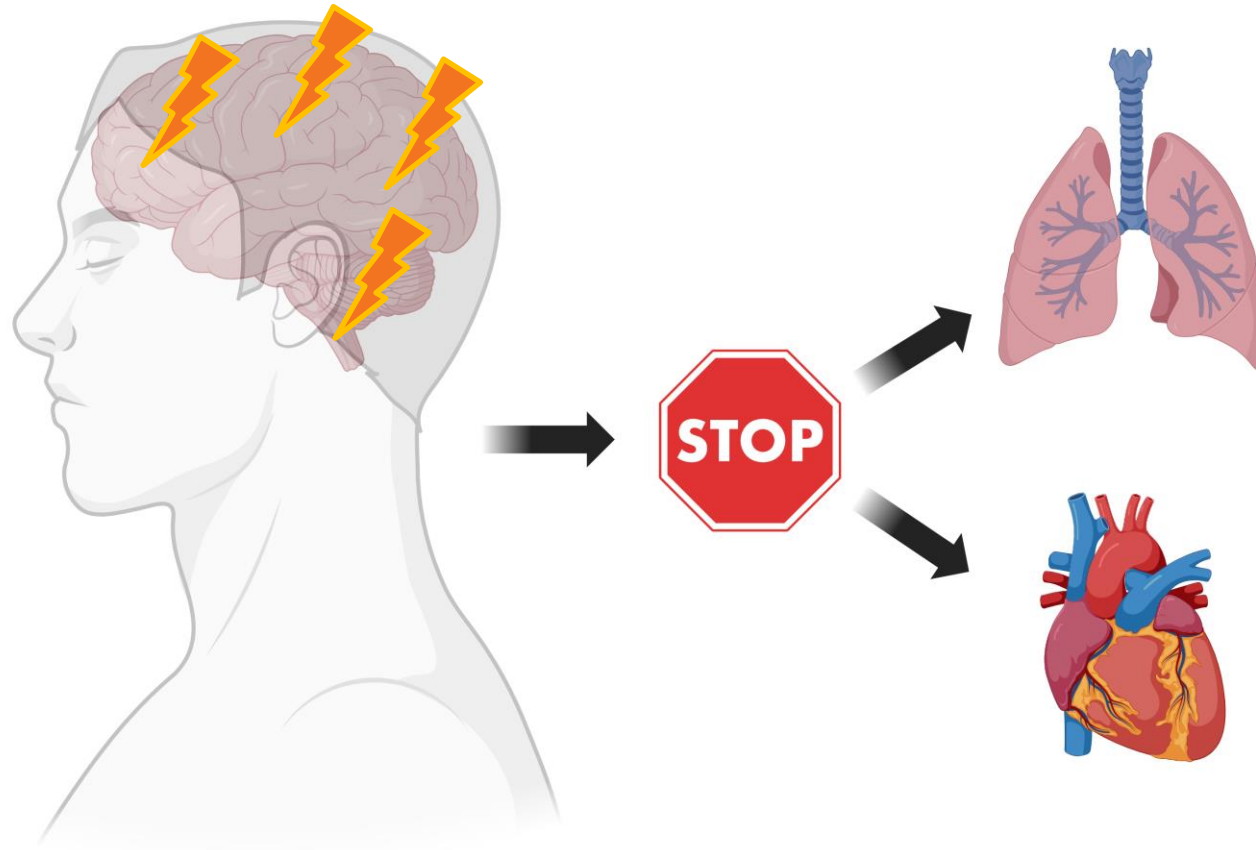
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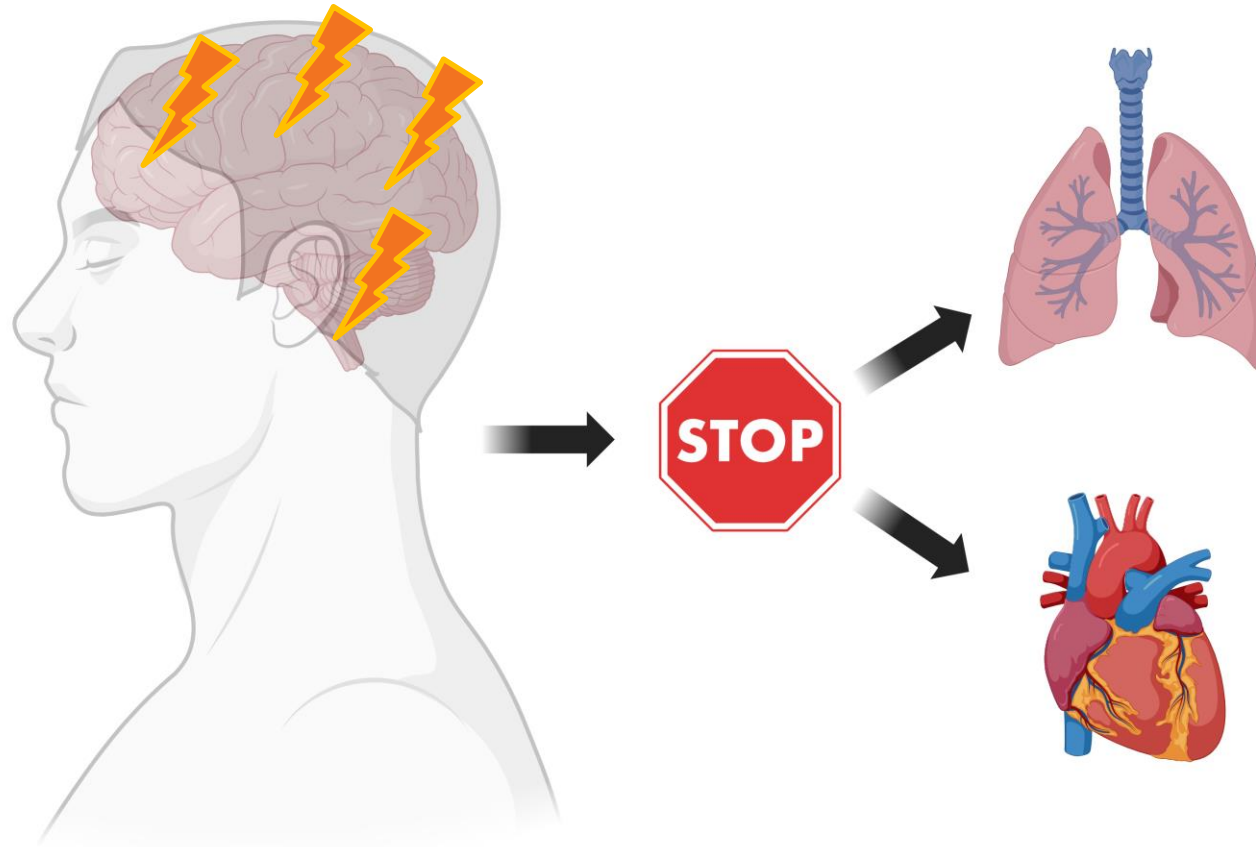


Epileptic seizures can stop breathing



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3,000 people per year across the USA

In most cases, SUDEP starts by an apnea

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But we don't know how seizures affect the breathing network...

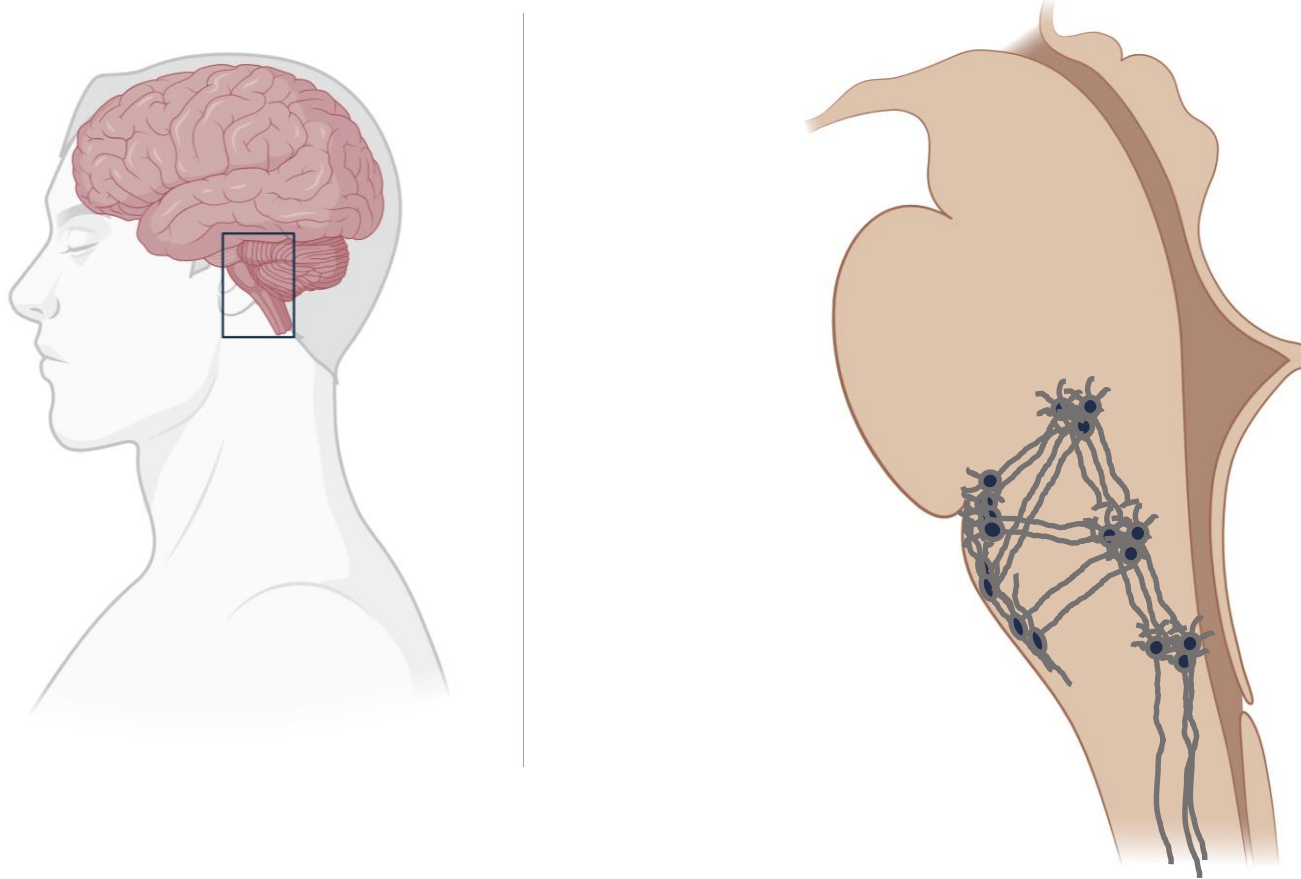
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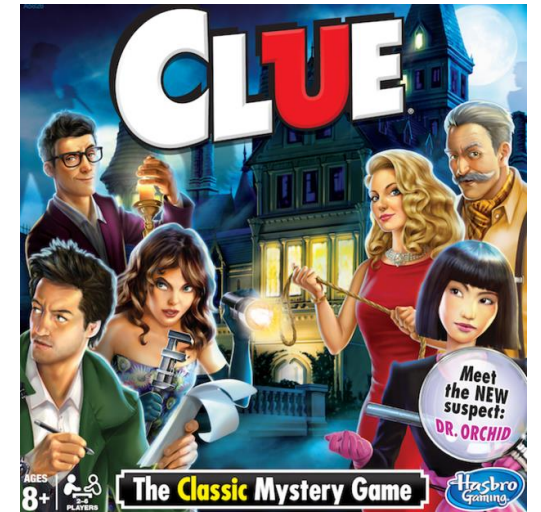
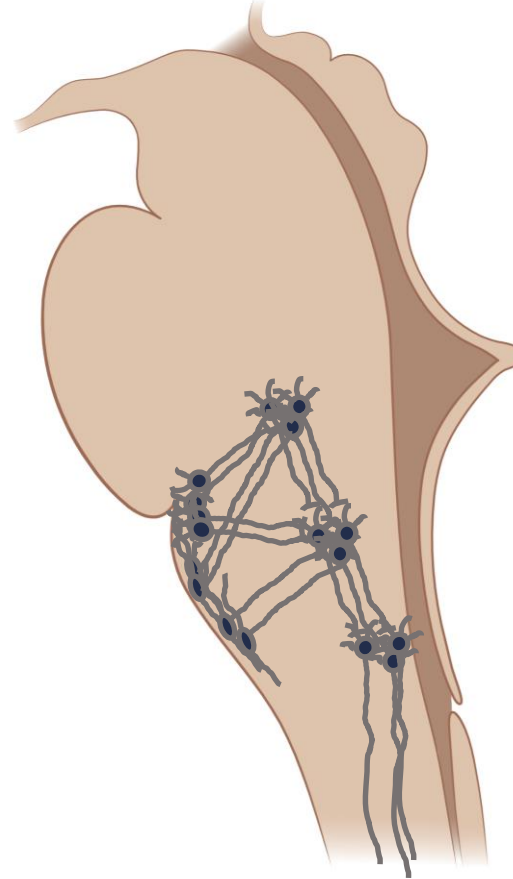
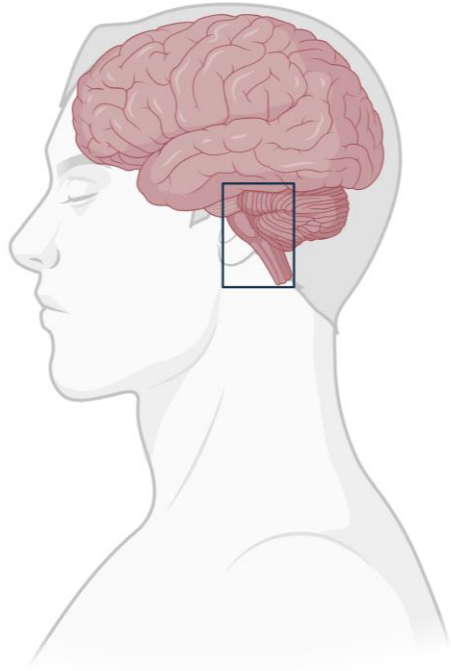
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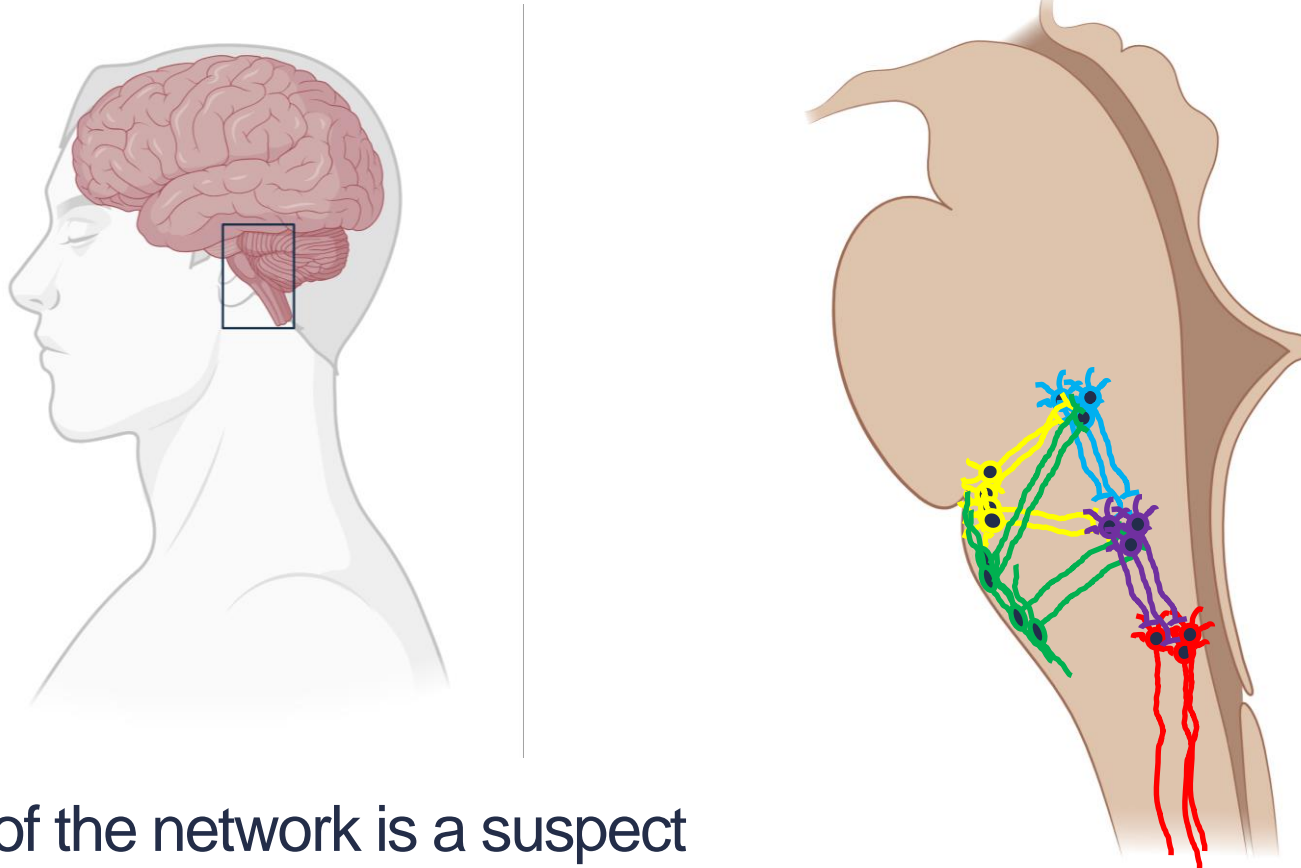
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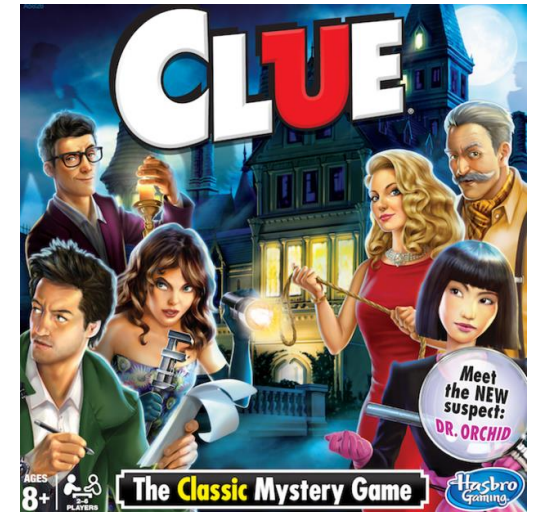
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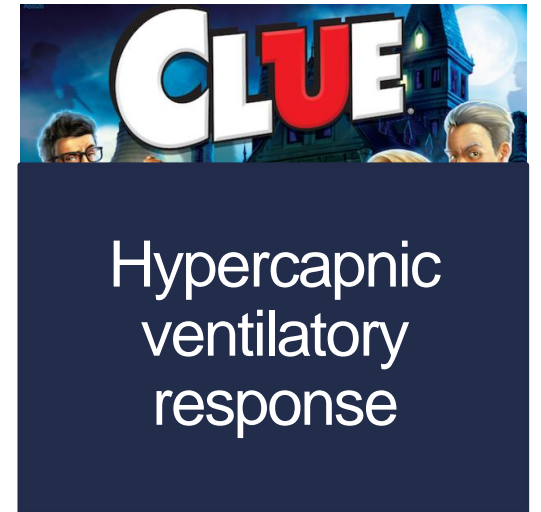
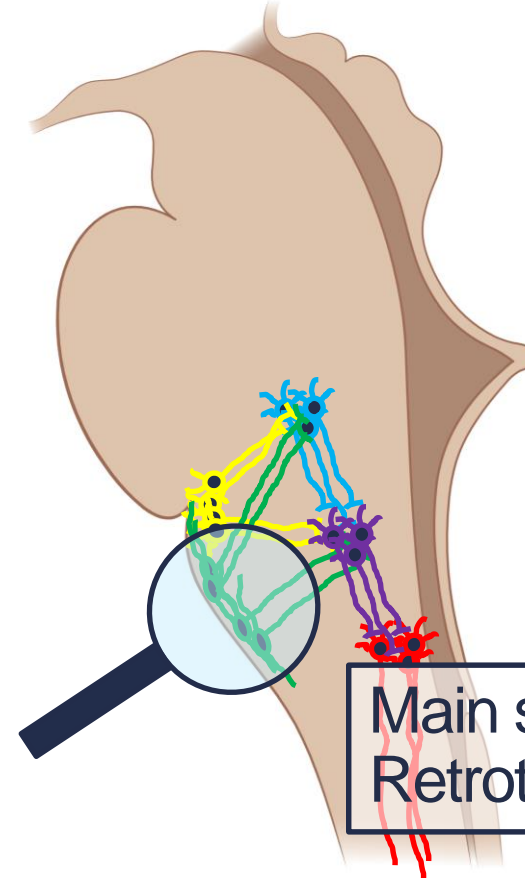
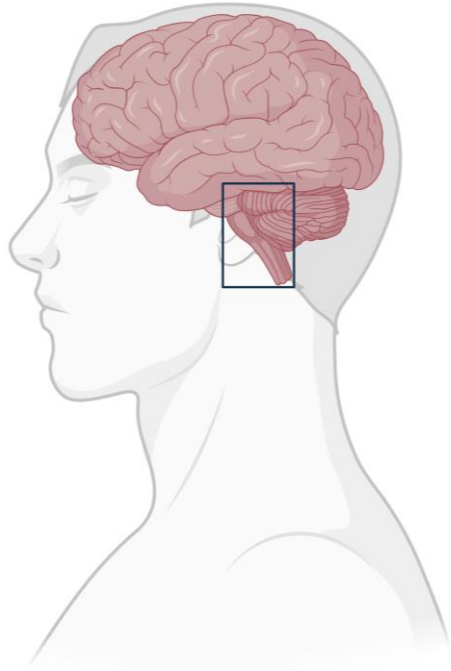
H y P E r C A p n I C

v e N t I L a t O r Y

r E S p o n S E

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Main suspect: green neurons,
Retrotrapezoid Nucleus

Every element of the network is a suspect

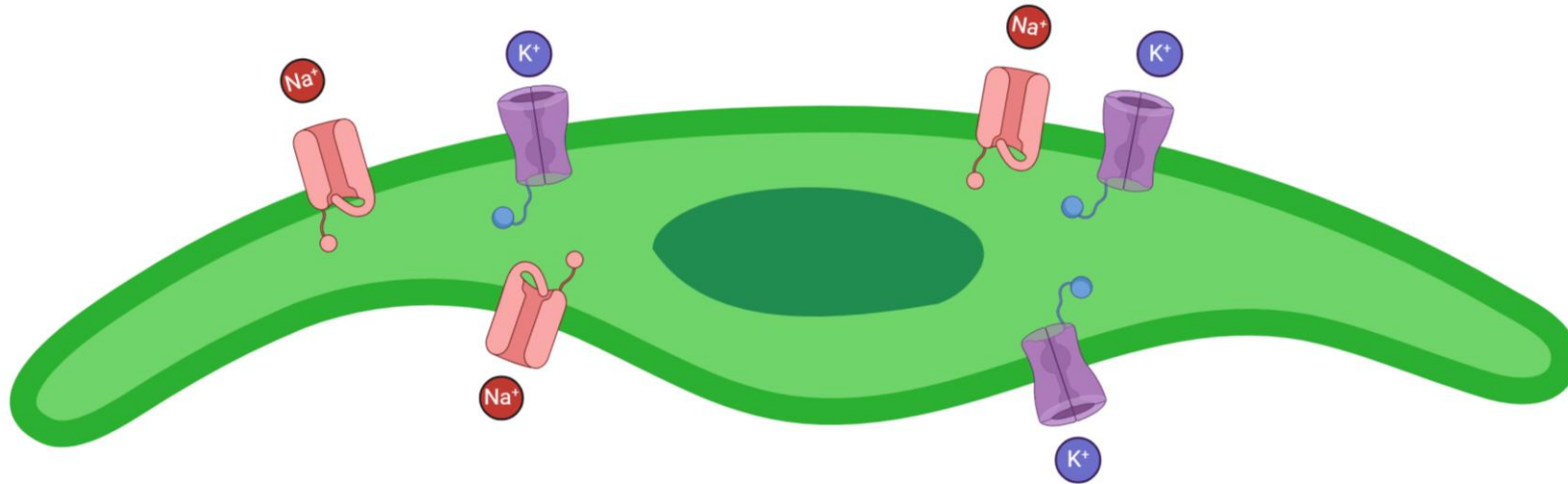
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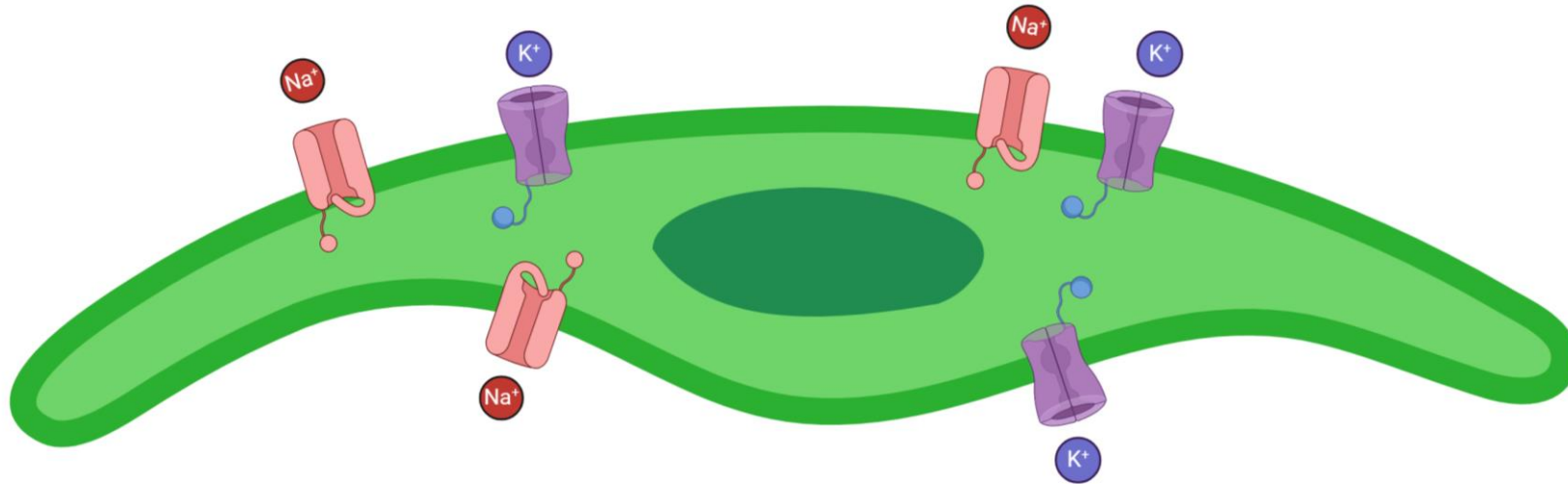
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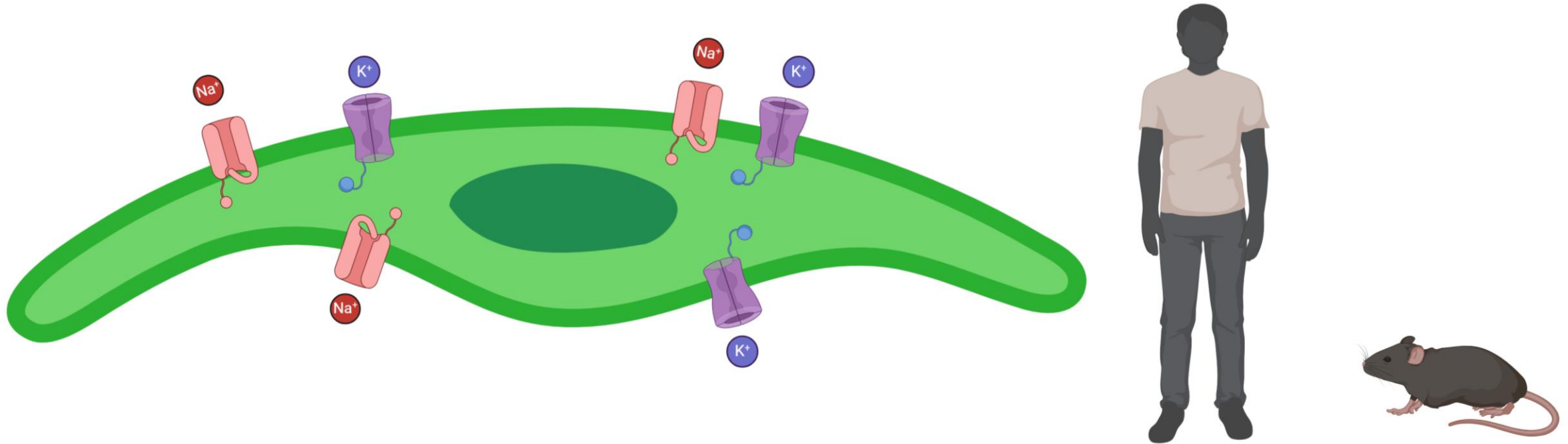
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Mutations in voltage-activated sodium channel type 1.6 (NaV1.6) cause SUDEP

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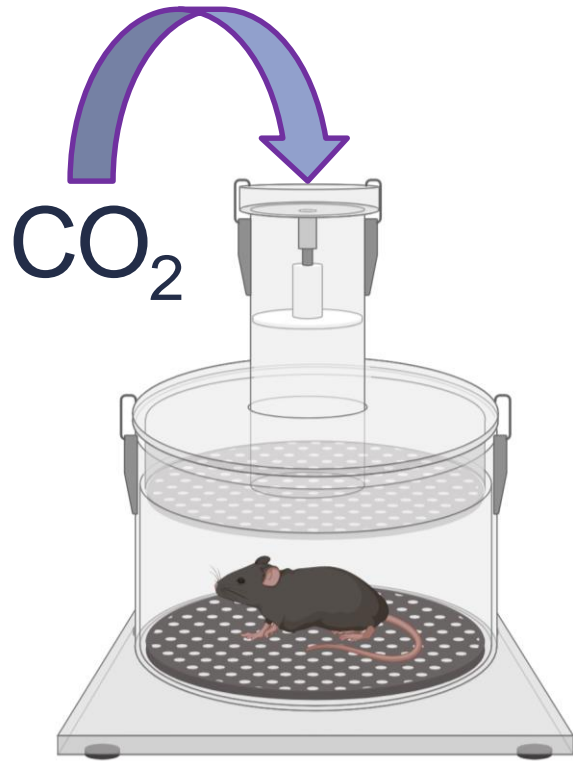
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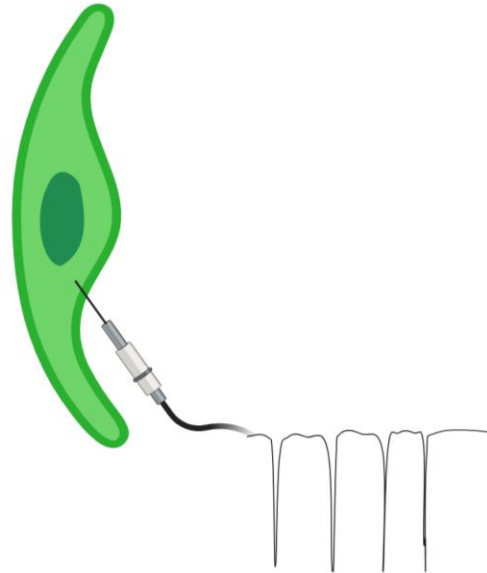
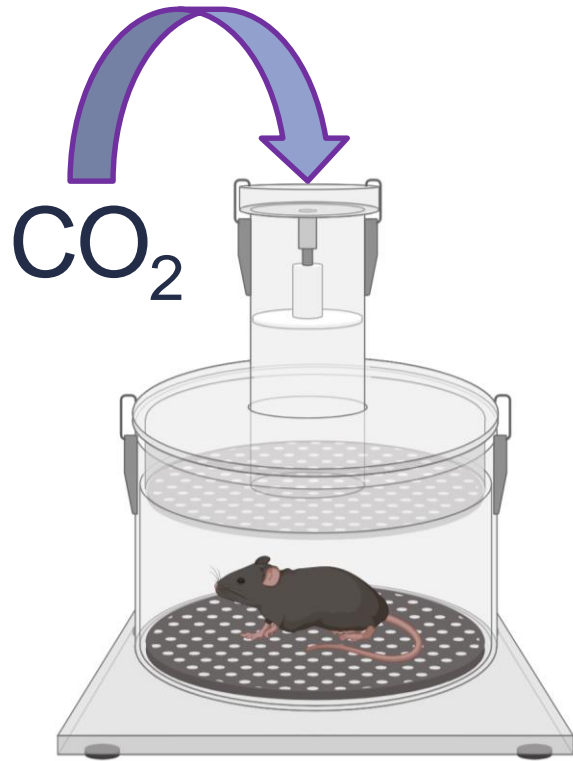
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I am studying mice breathing and RTN neuronal activity

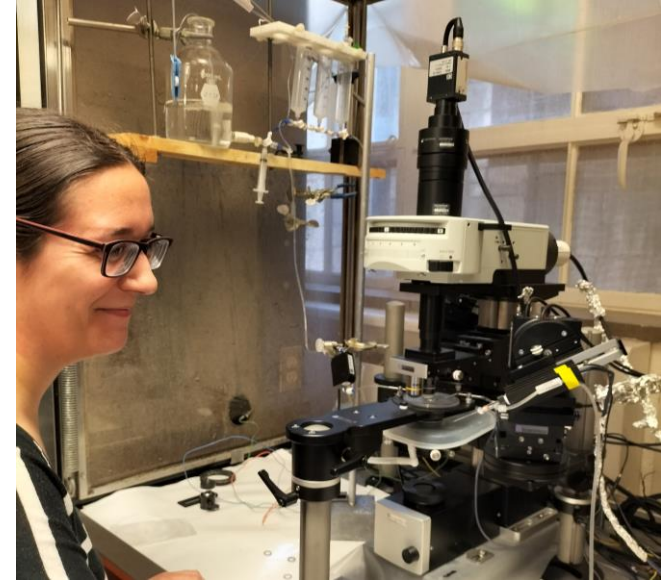
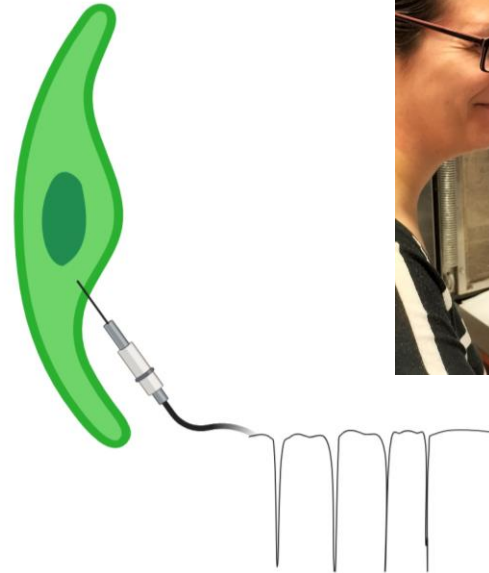
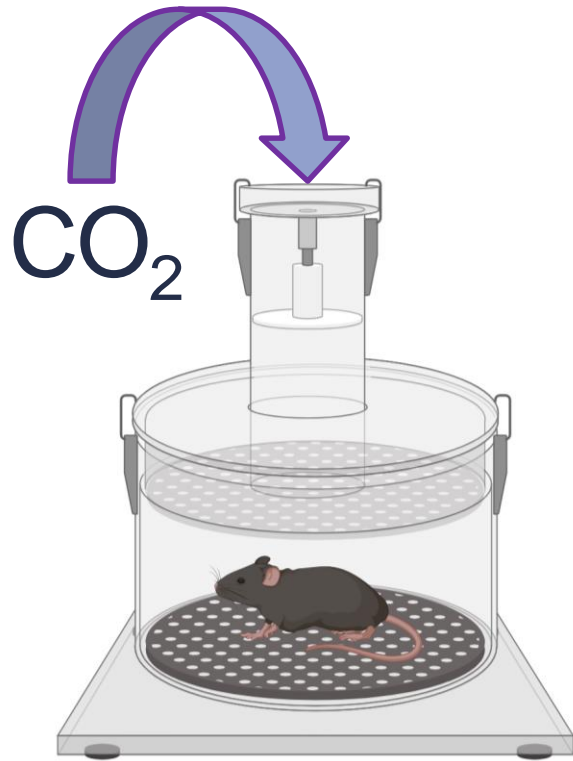
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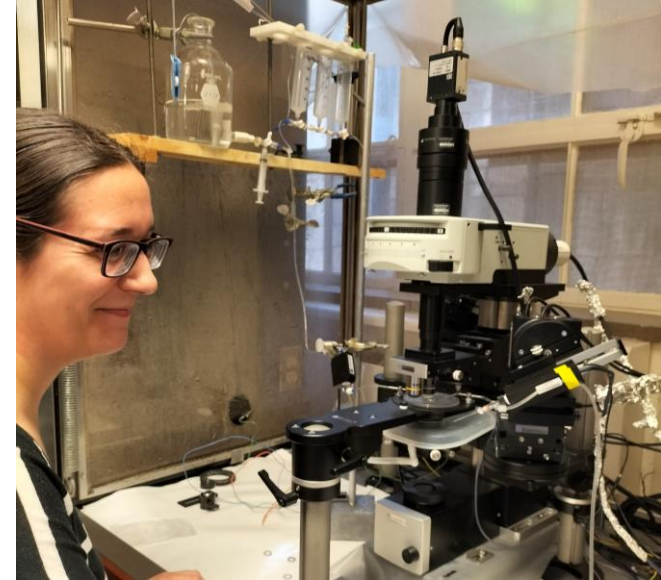
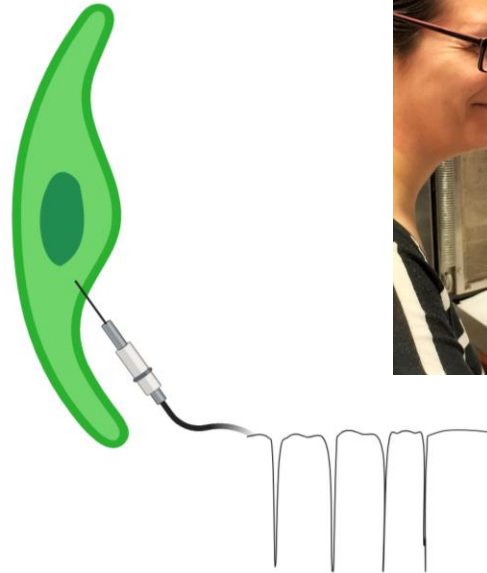
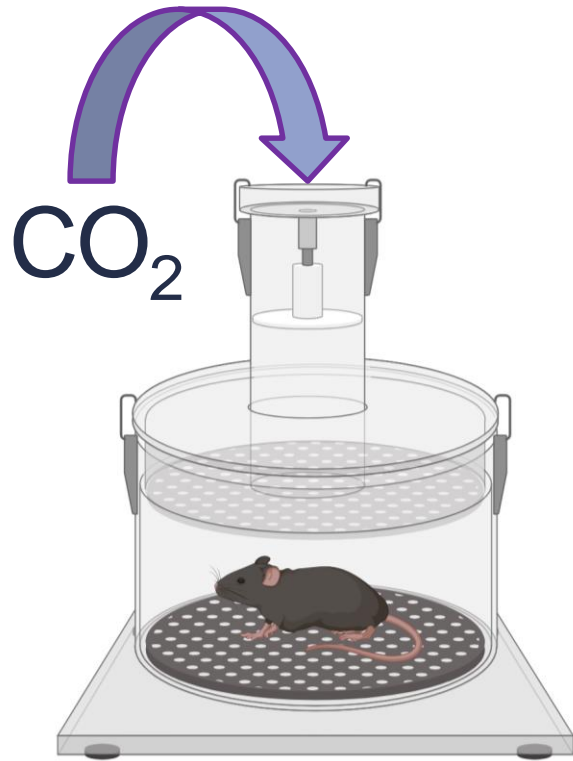
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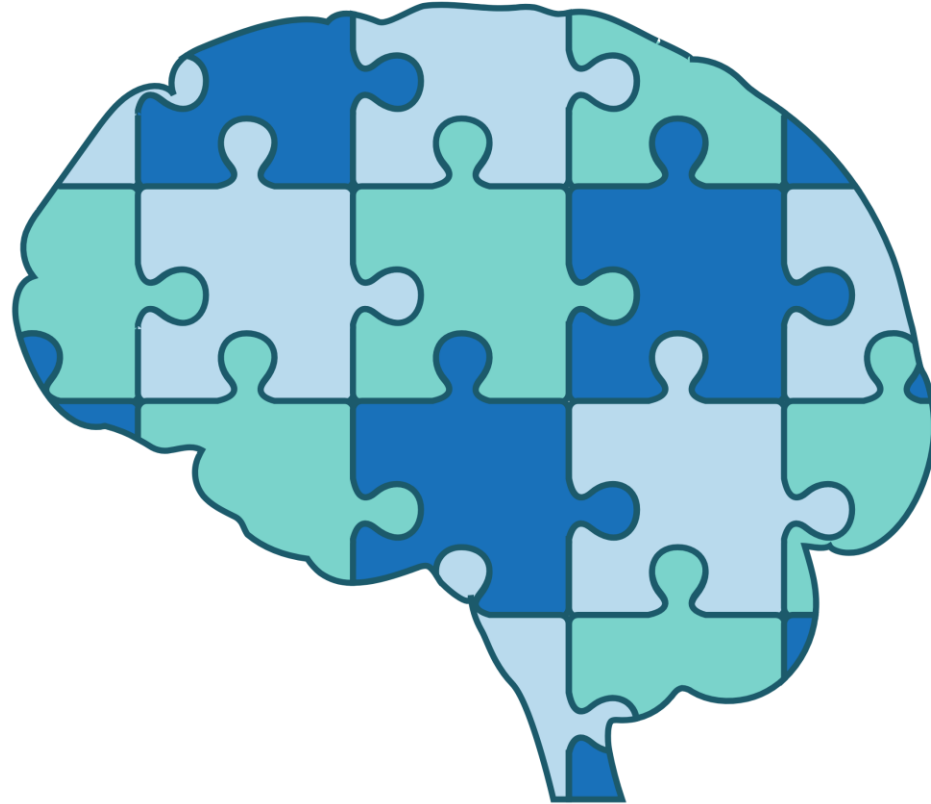
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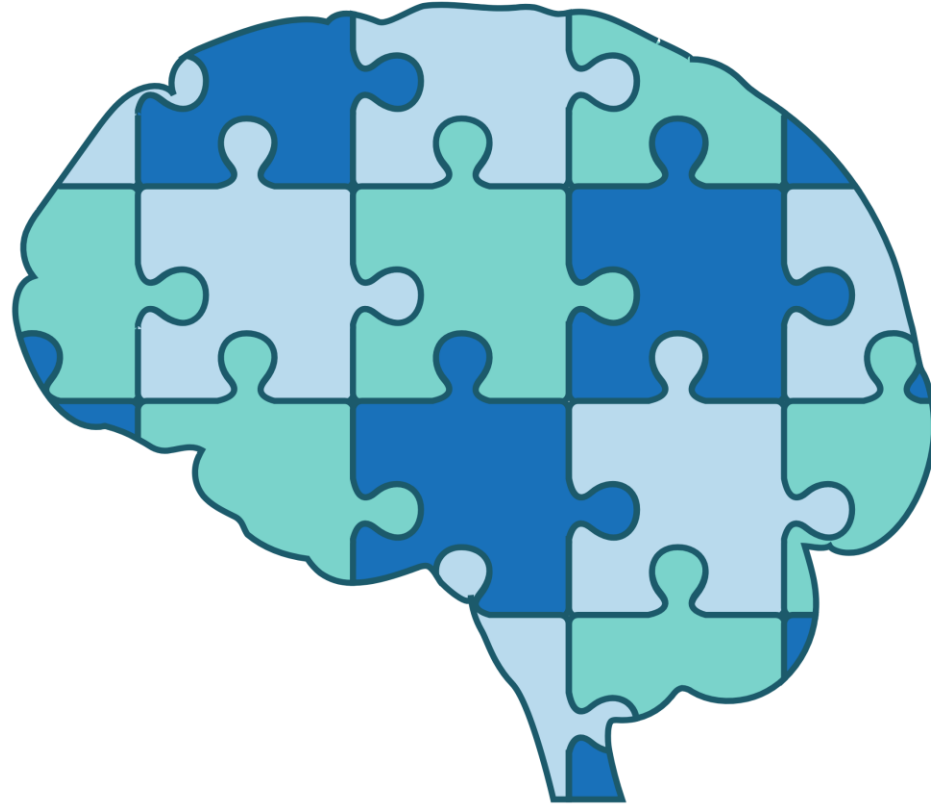
To find out if mutations on NaV1.6 cause SUDEP by impairing RTN neurons

Our final goal

Our final goal



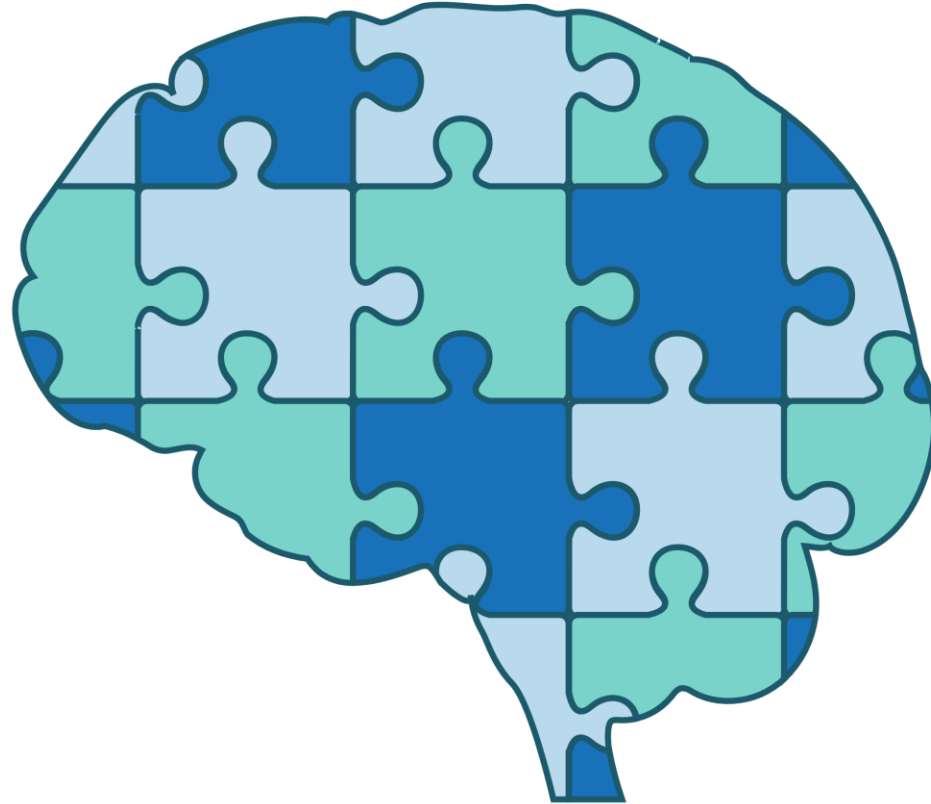
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To be able to completely avoid SUDEP one day

Our final goal

**Looking for
Collaborators**



**We are
HIRING**

To be able to completely avoid SUDEP one day