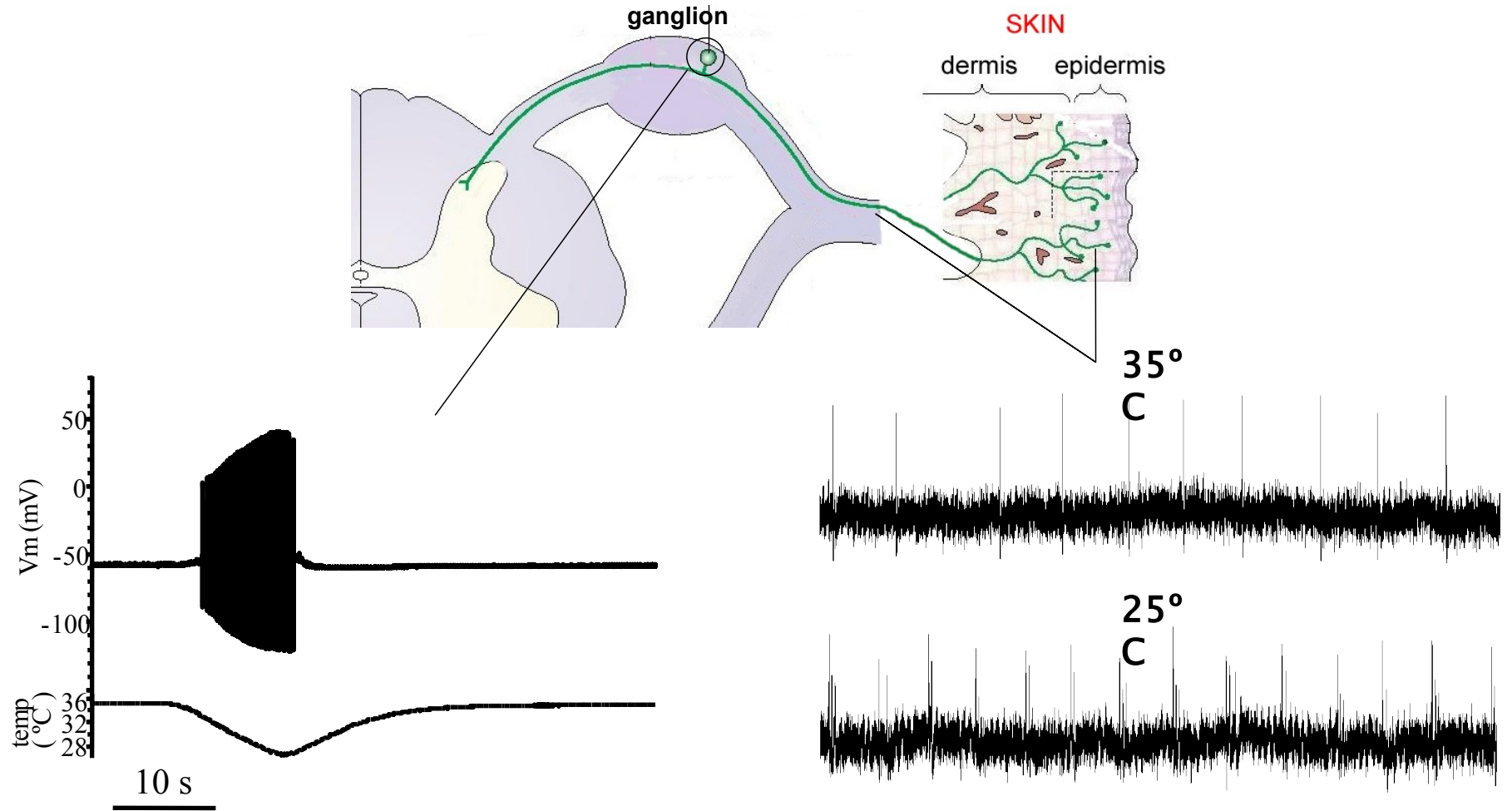


A Model for Cold Transduction in Sensory Neurons

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Objective: Build and analyse a model based on real conductances, both for the soma and the terminal.

- Model to be built with neuron (already advanced)
- Lots of recordings and pharmacological data.
- Conductances:
 - $\text{Na}_{\text{TTX-S}}$, $\text{Na}_{\text{TTX-R}}$, K , K_{dr} , BK_{Ca} , $\text{HCN (I}_h)$, Ca_T , Ca_L , TRPM8, TREK-1
- To do now:
 - Parameter optimization
 - Introduce terminal and axon geometry
- Questions to ask to the model:
 - Spontaneous firing in terminals but not in soma. Why?
 - Cold sensor: TRPM8 or TREK-1? (or both)?
 - Effect of K_{dr} on excitability and temperature threshold
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