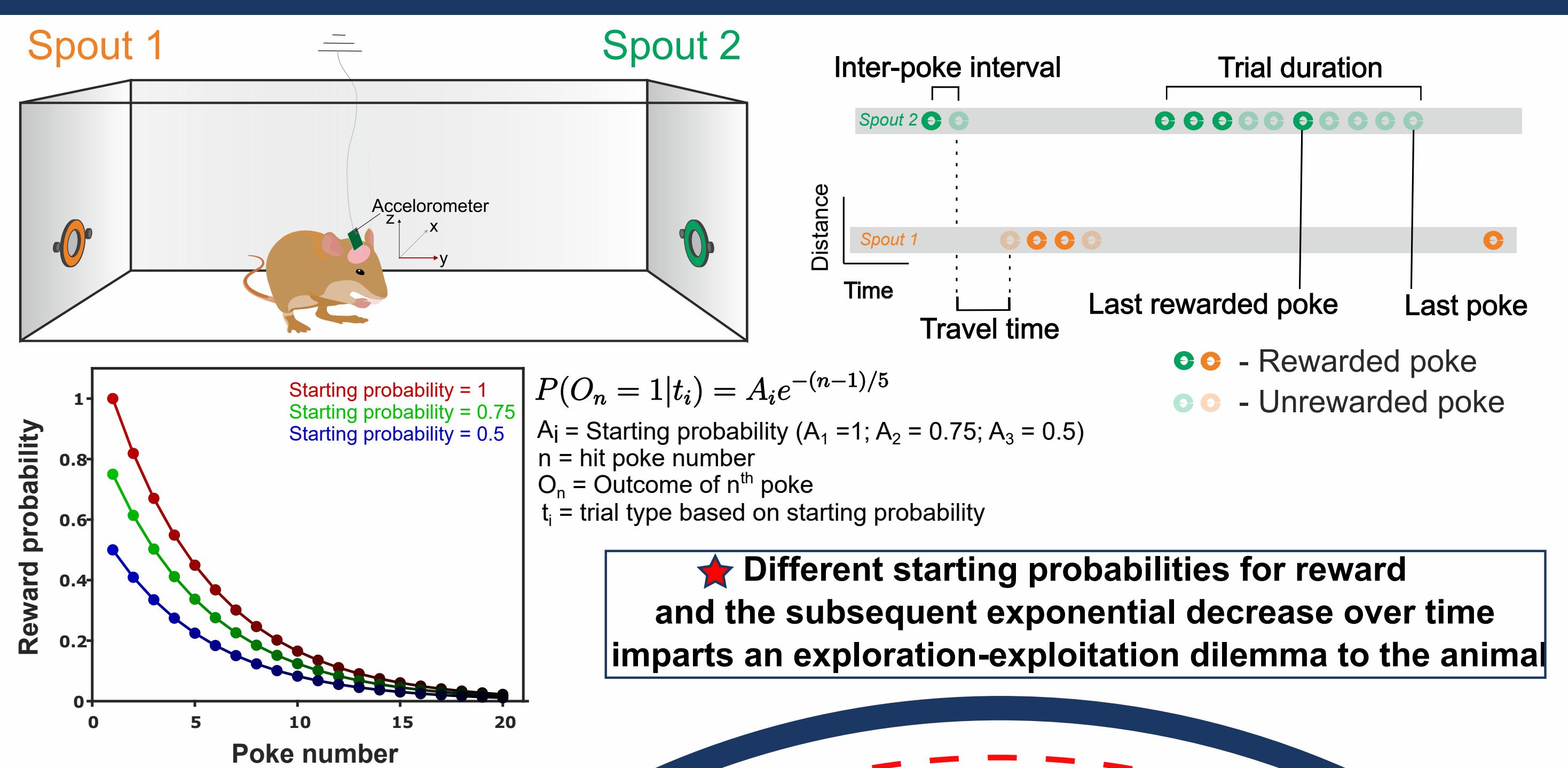


Unraveling the Neural Mechanisms of Decision-Making in Uncertain Environments: Insights from a Probabilistic Foraging Task in Mongolian Gerbils

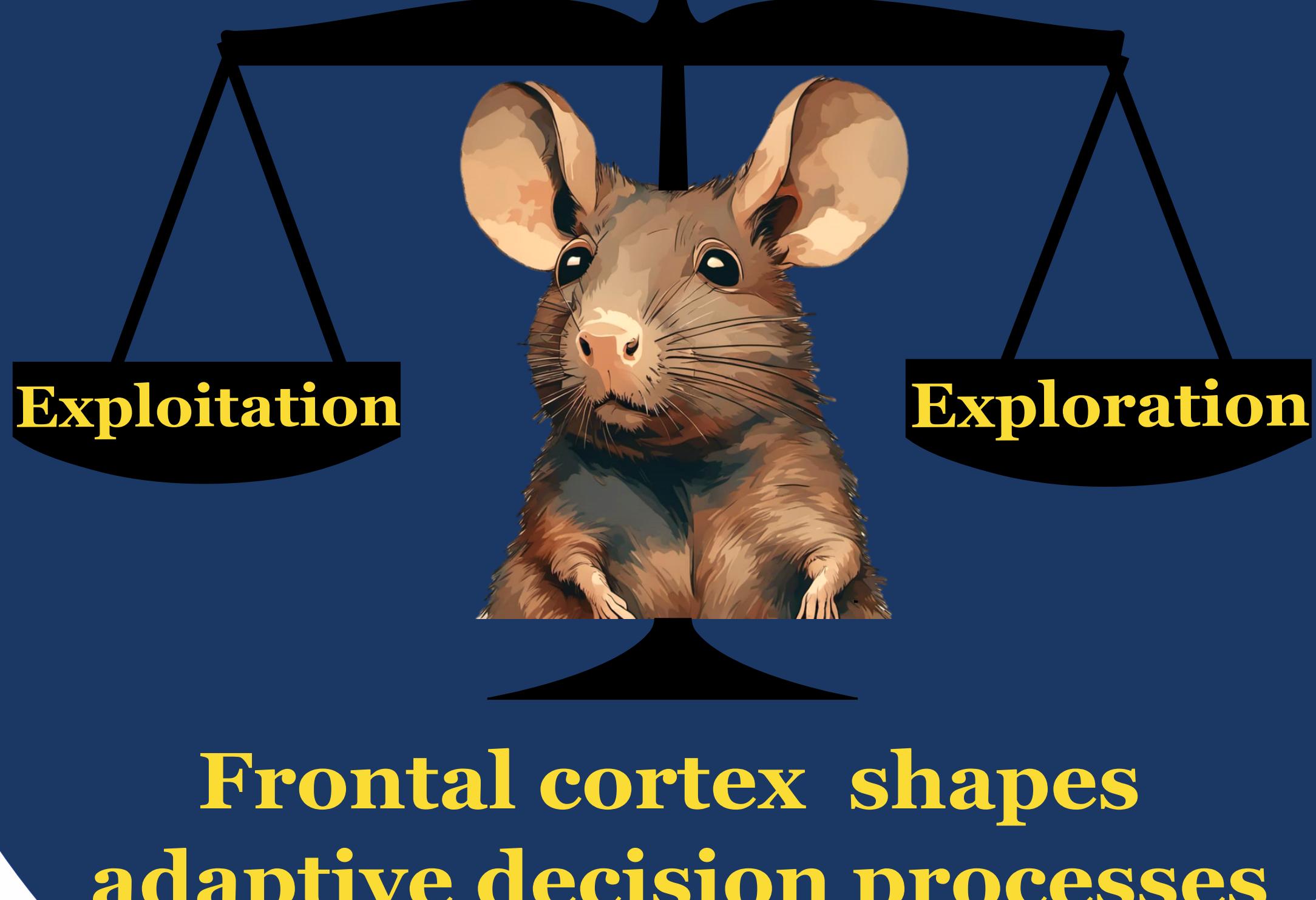
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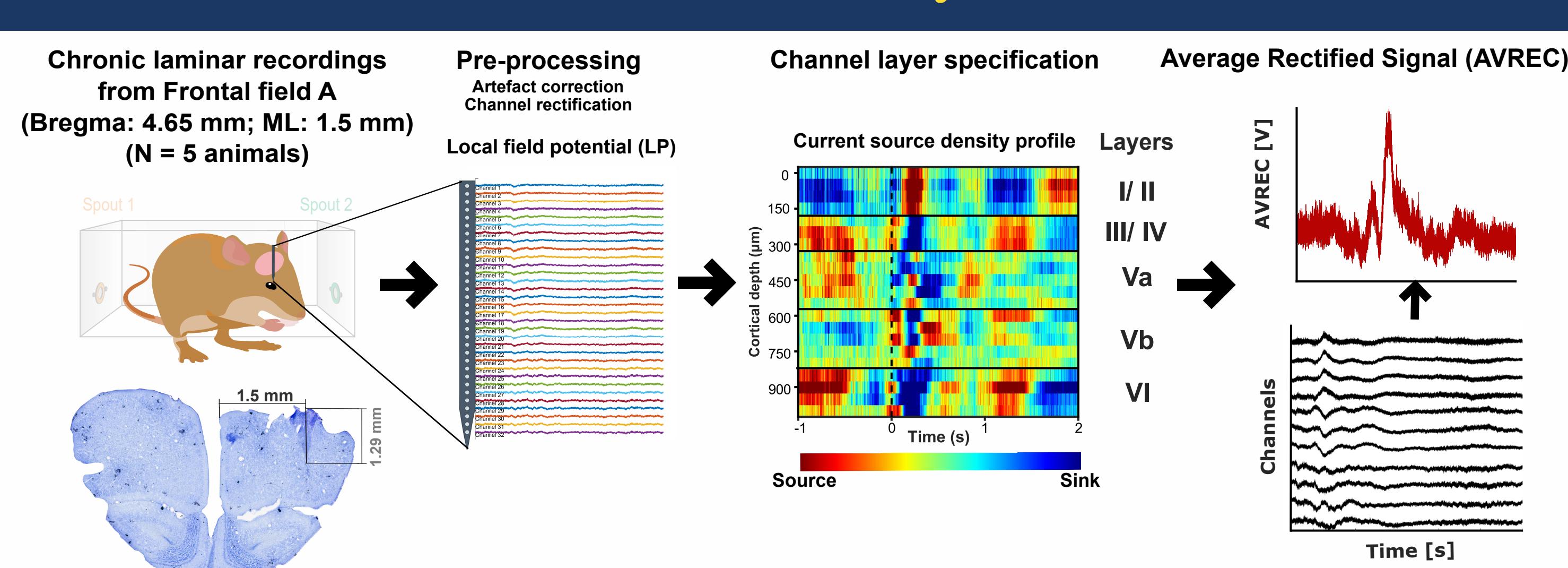
The situation - probabilistic foraging task



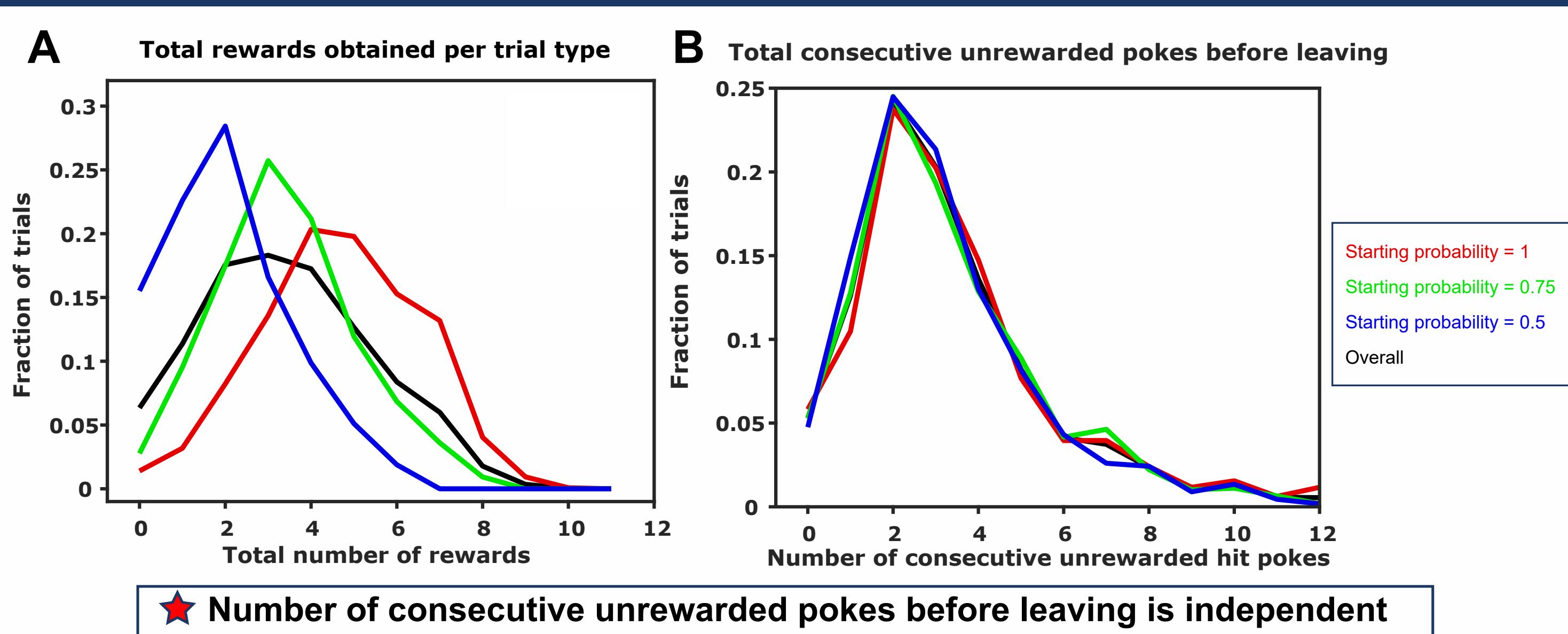
Should I stay or should I go?



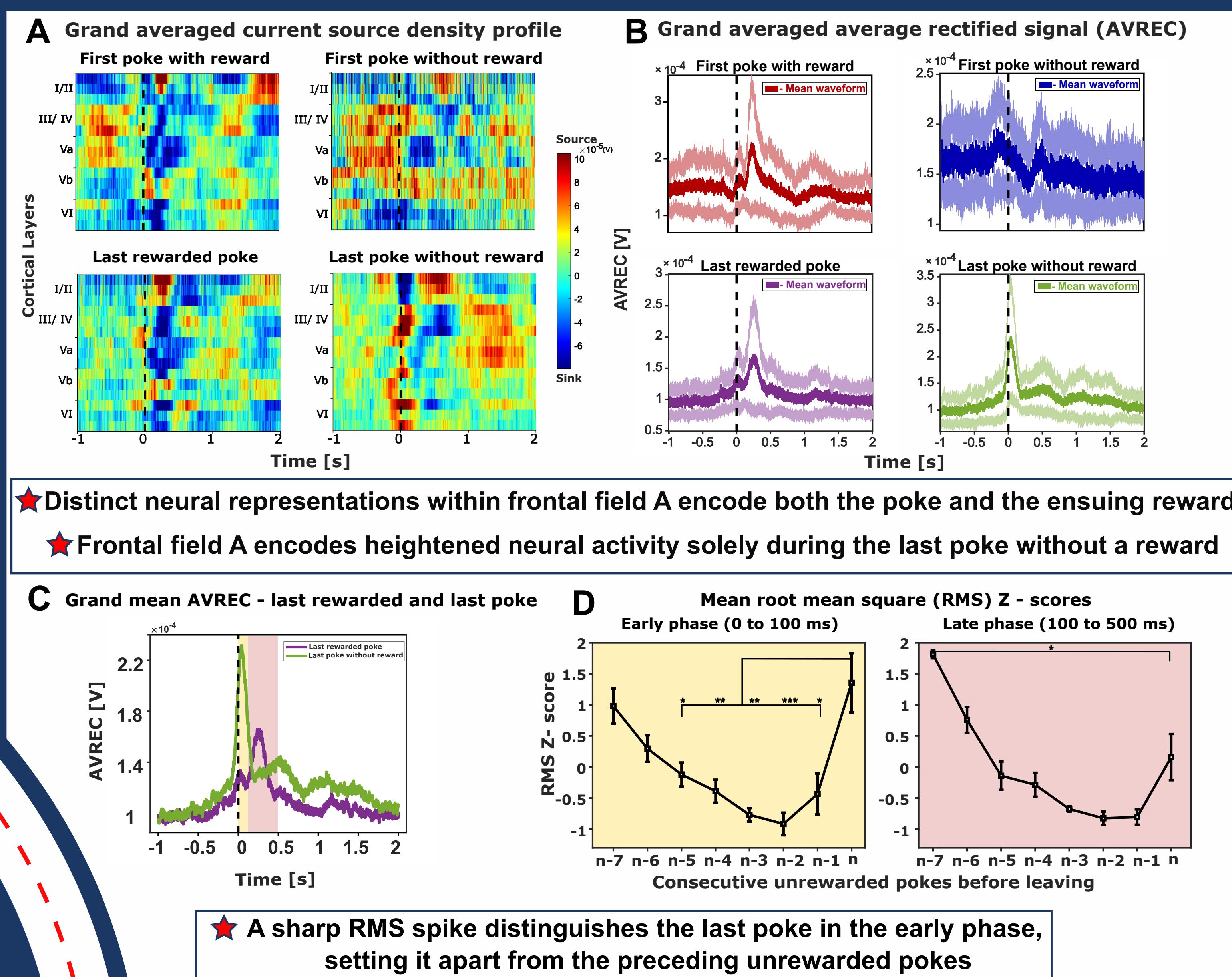
How did we study this?



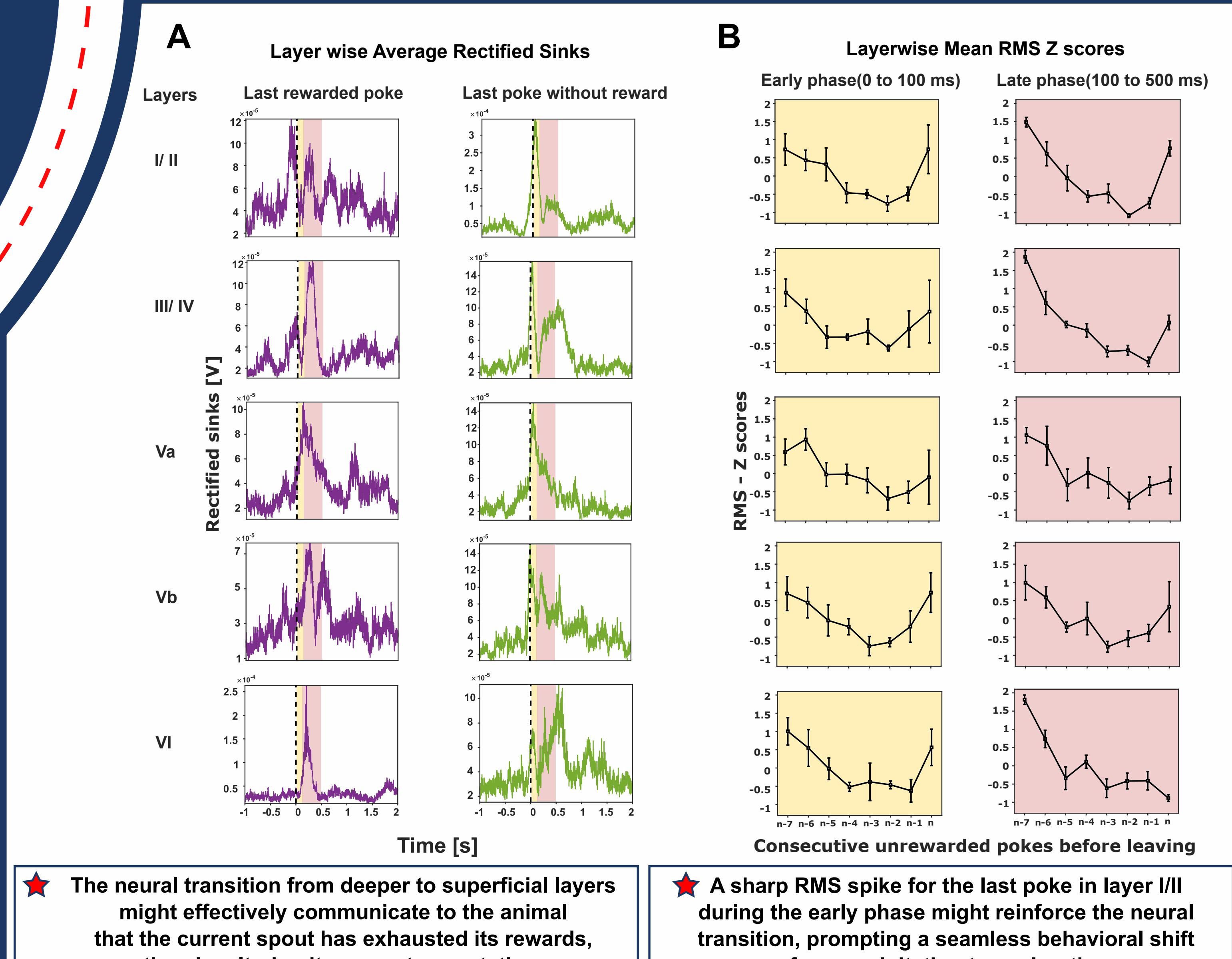
Animals make inference-based decisions



Distinct motor- and reward-related frontal activity



Layer-specific frontal motor- and reward-related activity



Concluding insights & perspectives

Conclusions

- ◆ **Probabilistic foraging** in the Mongolian gerbil can be used to investigate the **role of frontal cortex** in **exploration/exploitation dilemma** and **attentional resource allocation**
- ◆ **Cortical layers** in frontal cortex seem to play a **decisive role** to integrate current reward expectation and adequate search strategies
- ◆ **Reinforcement Learning Modeling** can help to investigate the trial-by-trial parameters, that underlie animal's **inference-bound adaptive decision-making behavior**, providing insights into the neural circuitry of attentional resource allocation

Perspectives

Acknowledgements

- ◆ This work is supported by the DFG-funded SFB1436 „Neural Resources of Cognition“ (Project C02)
- ◆ We would like to thank Dr. Maike Vollmer for her support in building the foraging setup
- ◆ We would like to thank Ms. Anja Gürke and Ms. Kathrin Ohl for their support during surgery and histology
- ◆ We would like to thank our collaborators Prof.Dr. Stefan Pollmann and Lasse Güldener