



EXAMINATION COMMITTEE – INTEGRATIVE NEUROSCIENCE

Proposal of research topic for Master's thesis

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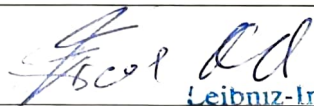
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Proposed title:	
Navigating Uncertainty: Neural Mechanisms of Probabilistic Foraging in Mongolian Gerbils	

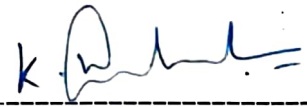
Proposed research objectives:	
<p>My research endeavors to unravel the neural mechanisms of decision-making in gerbils under conditions of uncertainty, particularly focusing on how attentional resources are allocated in the frontal cortex during the exploration-exploitation dilemma. This will be studied using a probabilistic foraging paradigm, where gerbils are presented with varying reward probabilities to simulate real-world foraging scenarios. The primary objectives include:</p> <ol style="list-style-type: none"> <li>1. Analyzing gerbil's decision-making behavior during the foraging task to understand their responses to uncertainty.</li> <li>2. Investigating the role of the frontal region A (FrA) — analogous to human frontopolar cortex — in modulating decision boundaries shaped by reward probabilities.</li> <li>3. Examining whether the FrA employs layer-dependent processing for adapting search strategies under different resource availability scenarios.</li> </ol>	

Date of assignment (dd/mm/yyyy):	0	9	/	0	1	/	2	4
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First examiner/ thesis supervisor	Second examiner
 <b>Leibniz-Institut für Neurobiologie</b> Stiftung des öffentlichen Rechts Brenneckestraße 6 39118 Magdeburg	 <b>Leibniz-Institut für Neurobiologie</b> Stiftung des öffentlichen Rechts Brenneckestraße 6 39118 Magdeburg
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- A confirmed topic can be declined only once and only within 6 weeks of the date of assignment.
- The written Master's thesis must be completed and filed within 6 months of the date of assignment.
- Upon well-founded application and with the agreement of the thesis advisor, the Examination Committee may extend the filing deadline by a further 6 months.

– I declare that I have neither submitted, nor received, nor are being examined in, a Master's thesis on the same or a similar topic at another university.

Date/Signature (Proposer): 09.01.2024 / 

Action of Examination Committee:

O – The proposed thesis topic is confirmed.      O – The proposed thesis topic is NOT confirmed.

Date/Signature (Chair of Examination Committee):

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