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POSTER ABSTRACT

A Novel Sensory Discrimination Task Using Rodent Whiskers

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The whisker system is the most well developed sensory system in the rodent, offering an unparalleled model for studying sensory discrimination. To assess sensory discrimination in this animal model, rats were trained in a novel Y-maze task, pairing a behavioral choice with whisker discrimination of smooth versus rough textures. Rats were placed in the start alley of the Y-maze, whereby they oscillated their whiskers—a motion called whisking—against two discriminanda positioned on the left and right walls. The wall marked by the rough texture corresponded to the choice-alley containing a water reward. As animals learned to discriminate between textures, and associate the rougher texture with the reward, the task became increasingly difficult by minimizing the textural difference between the rough and smooth discriminanda. The goal of this study is to develop a novel task for studying the limits of sensory discrimination using the rat whisker system.