# USE OF A SPATIAL T-MAZE TEST AND AN OBJECT RECOGNITION TEST TO ASSESS LEARNING AND MEMORY IN A PIGLET MODEL

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## ABSTRACT

Due to similarities between piglet and human toddler brains in structure, composition and development, piglets have become increasingly relevant subjects in neural and cognitive research. The current study uses two behavior tests to evaluate varying aspects of cognition in a piglet model. The spatial T-maze test assesses learning and spatial memories, and the object recognition test assesses object memory. In the spatial T-maze test, piglets will learn to locate a milk reward within a plus-shaped maze. This will test allocentric memory as piglets will have to use extra-visual cues to locate the milk reward, despite starting at alternating north and south start arms. We will measure latency to choice and proportion of trials correct. We expect that piglets will acquire the ability to use extra-visual cues to locate the milk reward, demonstrated by decreased latency to choice and increased proportion trials correct. In the object recognition test, piglets will be exposed to two similar objects, wait for a ten-minute interphase interval, and then be exposed to one familiar and one novel object. Time spent interacting with each of the objects will be measured, and memory involved in distinguishing between familiar and novel objects will be tested. We expect that piglets will spend more time with the novel object over the familiar object. Together with the social recognition test and the open field test, these two behavioral tests will contribute to further understanding piglet learning, memory, and overall cognitive abilities.