Rhinal cortex

The rhinal cortex is the cortex surrounding the rhinal fissure, including the entorhinal cortex and the perirhinal cortex. It is a cortical region in the medial temporal lobe that is made up of Brodmann areas 28, 34, 35 and 36.

Input from all sensory cortexes flows to the perirhinal and parahippocampal cortexes, from where it continues to the entorhinal cortex, and proceeds to the hippocampus. After feedback from the hippocampus it then returns the same way back to the sensory cortexes.

The rhinal cortex is proposed to be part of the neural circuit for explicit memory. Studies comparing the results of selective lesions to the hippocampus and to the rhinal cortex, found that lesions to the hippocampus only did not cause impairment on object recognitions tests, but lesions to the rhinal cortex only, caused severe anterograde and retrograde impairments on object recognition tests. The conclusion was that object recognition (semantic memory) depends on the rhinal cortex.