



a,b | The prefrontal cortex (PFC) can be divided into anterior (APFC, Brodmann area (BA) 10), dorsolateral (DLPFC, BA 46 and 9), ventrolateral (VLPFC, BA 44, 45 and 47) and medial (MPFC, BA 25 and 32) regions. BAs 11, 12 and 14 are commonly referred to as orbitofrontal cortex. The medial temporal lobe comprises the hippocampus and amygdala, as well as the entorhinal, perirhinal and parahippocampal neocortical regions. The hippocampus includes fields CA1–CA3 of the hippocampus proper, the dentate gyrus and the subicular complex. c | Connections. There are large cortico-cortical direct reciprocal connections between the PFC and the medial temporal lobe, passing through the uncinate fascicle, anterior temporal stem and anterior corpus callosum. The orbitofrontal and dorsolateral cortices have strong reciprocal connections with the perirhinal and entorhinal cortices¹²⁵. There are more connections from the PFC to the perirhinal cortex than vice versa¹²⁶. Unidirectional projections exist from the CA1 field to the caudal region of MPFC^{127, 128}. The subicular complex and neocortical medial temporal regions have reciprocal connections with caudal MPFC^{129, 130}. In addition, the medial temporal lobe receives information from a range of unimodal and polymodal sensory association areas. This information predominantly enters through the perirhinal and parahippocampal cortices, which project back to these regions¹³¹. The PFC has reciprocal connections with sensory association cortices including temporal and parietal regions¹³⁰ and many subcortical structures¹³². Anatomical images adapted, with permission, from Ref. 133 © (1996) Appleton & Lange.

FIGURE 1 | Anatomy of the medial temporal lobe and prefrontal cortex.
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