Distinct characteristics of CA1 place cells correlated with medial or lateral entorhinal cortex layer III input.

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RESULTS

INTRODUCTION

Neurons with bidirectional (Bi) place fields are more numerous in proximal CA1, whereas neurons with multiple place fields (MPF) are more prominent in distal CA1.

METHODS

Subjects: Four adult male Brown Norway/Fischer 344 hybrid rats (350-400g) were used. Animals were stereotaxically implanted with a hyperdrive consisting of a bilinear bundles of 6 independently movable tetrodes in the proximal CA1 and CA2/CA3 regions of both hemispheres. Recorded tracks were recorded simultaneously. The position of the tip of each tetrode was determined by Nissl staining.

Data analyses: Spatial and firing rate correlations were computed as in Luebke et al. (2005).

RESULTS

Histological reconstruction of the electrode positions.

RESULTS

Proximal CA1 neurons show more remapping in an environment with two visually identical regions.

CONCLUSIONS

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