Supplementary Figure 4

Orientation of grids in each rat. The orientations of all grids used in the analysis were identified from their baseline spatial autocorrelograms. A single cell with an orientation greater than 60° was excluded.

For each rat the orientation of the cells is shown on a circular plot representing angles between 0° and 59° such that 0° = 60°. A cell is represented by a line of length 1, additional cells with the same orientation extend that line. Grids that differed in spacing by less than 20% were grouped; each group is coloured differently. The number of cells, number of distinct spacing-groups and, angular distance (spread) between the most disparately oriented cells is shown. P values are for the Rayleigh test of circular non-uniformity; the first four rats show significant clustering of orientations.

Grids with similar spacing may be part of a local recurrent circuit and so would not represent independent data points. To mitigate this, the mean orientation of each spacing-group was found and the spread between groups in the same rat calculated. Spread, pooled across rats, was found to depart significantly from circularity (Rayleigh test, P = 0.002), suggesting that in the same rat even grids with different wavelengths share similar orientations.