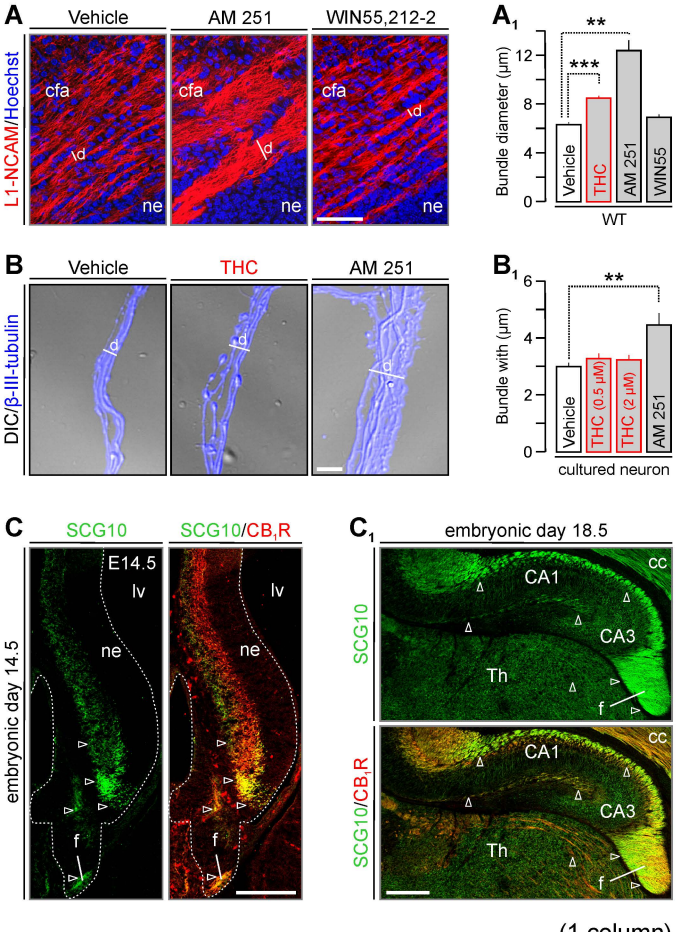
A
Vehicle
AM 251
WIN55,212-2
L1-NCAM/Hoechst
cfa
td
ne
A1
Bundle diameter (μm)
Vehicle
THC
AM 251
WIN55
WT
B
Vehicle
THC
AM 251
DIC/β-III-tubulin
B1
Bundle with (μm)
THC (0.5 μM)
THC (2 μM)
cultured neuron
C
SCG10
SCG10/CB1R
E14.5
lv
ne
embryonic day 14.5
f
C1
embryonic day 18.5
CA1
CA3
Th
cc

(1 column)

Fig. S2 **Pharmacological dissection of CB_1R function evoking corticofugal axon bundling and SCG10 localization in hippocampus.** (**A**) AM 251 (5 mg/kg) and WIN55,212-2 (5 mg/kg) were administered daily from E5.5-E17.5, fetuses harvested one day later and processed (Keimpema *et al*, 2010). Corticofugal axon fasciculation was assessed by quantitative L1-NCAM histochemistry. The cross-section thickness ("diameter" (d)) of primary fascicles was determined in n = 4-7 *male* fetuses/group from independent pregnancies (> 300 measurements/group). AM 251 but not WIN55,212-2 induced the coalescing of axons into enlarged fascicles. (**A_1**) Quantitative morphometry including data on THC effects shown in Fig. $2A_1$. (**B**) Cortical neurons exposed to THC or AM 251 recapitulated the *in vivo* axonal phenotype when cultured in the presence of the drugs indicated for 24h. (**B_1**) Note that AM 251 was particularly efficacious in promoting the alignment of multiple neurites (n = 9-13 observations/ group from $n > 2$ simultaneously processed samples in duplicate experiments). (**C,C_1**) SCG10 co-localized with CB_1Rs in the primordial hippocampus including migrating neurons (*open arrowheads*, c) on E14.5, and axons (*open arrowheads* in e.g. fimbria (f)) on E18.5. *Abbreviations*: Supplementary Information text. Data were expressed as means ± s.e.m.; ***$p < 0.001$, **$p < 0.01$. *Scale bars* = 350 µm (C,C_1), 50 µm (A), 5 µm (B).

Keimpema E, Barabas K, Morozov YM, Tortoriello G, Torii M, Cameron G, Yanagawa Y, Watanabe M, Mackie K, and Harkany T (2010) Differential subcellular recruitment of monoacylglycerol lipase generates spatial specificity of 2-arachidonoyl glycerol signaling during axonal pathfinding. *J Neurosci* **30:** 13992-14007