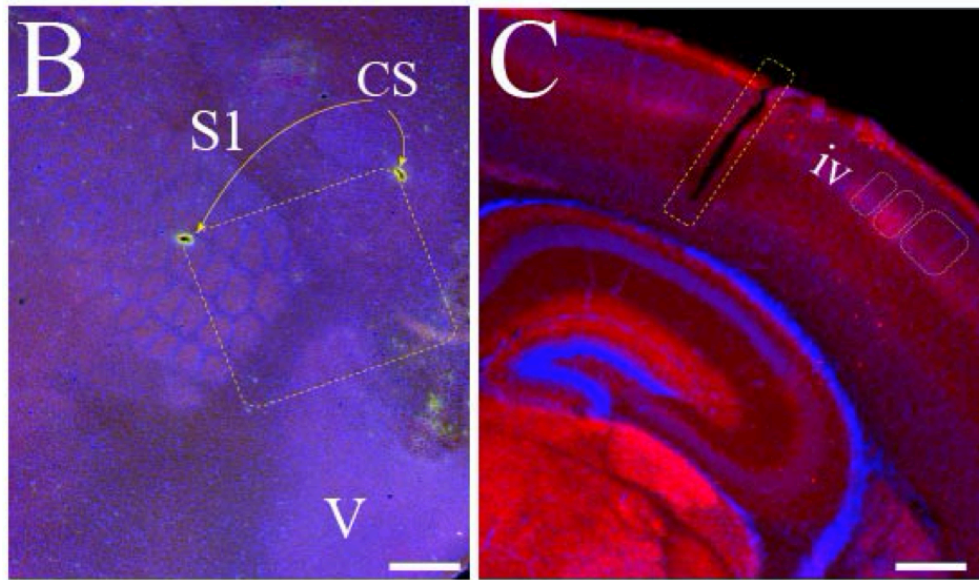




B) Fluorescence microscopy of flattened brain slice from P14 mouse pup demonstrating location of NeuroGrid during recording (yellow dashed lines). vGlut2 immunohistochemistry enables identification of visual and somatosensory cortices. S1 = primary somatosensory; V = visual; CS = chitosan marking corners of NeuroGrid (upper; scale bar 200 μm). Spatial distribution of spindle band power across a NeuroGrid array in a P7 mouse pup. Warmer colors signify higher power (lower; scale bar 500 ms).

C) Fluorescence microscopy of coronal brain slice from P7 mouse pup demonstrating location of implantable silicon probe (yellow dashed lines). vGlut2 immunohistochemistry enables identification of barrels in granular layer of cortex (IV) (upper; scale bar 200 μm). Raw traces across a sample of silicon probe electrodes demonstrating localized neural spiking activity in a P13 mouse pup (lower; scale bar 200 ms).