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(54) Title: IMAGING INDIVIDUAL HIPPOCAMPAL SEIZURES AND THE LONG-TERM IMPACT OF REPEATED SEIZURES

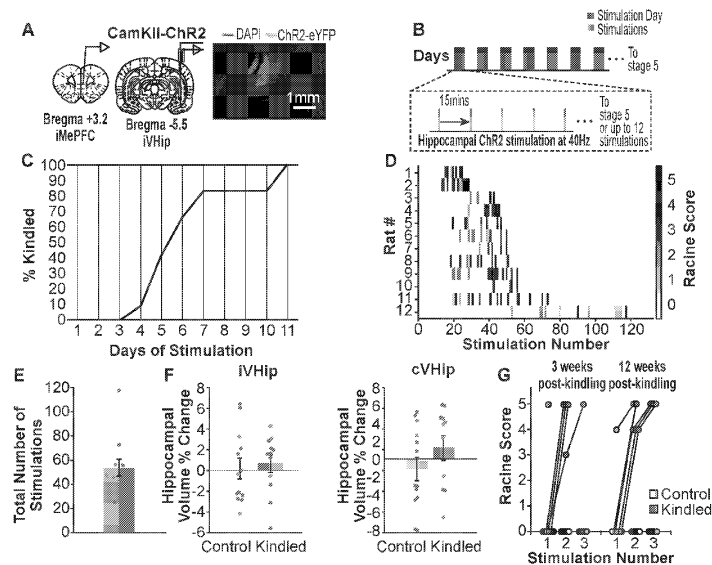


FIG. 1

(57) Abstract: It is shown that ventral hippocampal kindling results in functional reorganization of the ventral hippocampal excitatory circuits. Most pronounced is the connectivity to the medial prefrontal cortex, with increased volume of activation on fMRI and increased amplitude of activation on electrophysiology. There is evidence of increased anxiety following kindling. Methods are provided for simultaneous LFP-fMRI to image single seizures. Imaging the spatiotemporal dynamics of individual seizures enables characterization of propagation patterns of focal and secondary-generalized seizures, that provide for targeted intervention.

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