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(54) Title: SOLVING BRAIN CIRCUIT FUNCTION AND DYSFUNCTION WITH COMPUTATIONAL MODELING AND OPTOGENETIC FUNCTIONAL MAGNETIC RESONANCE IMAGING

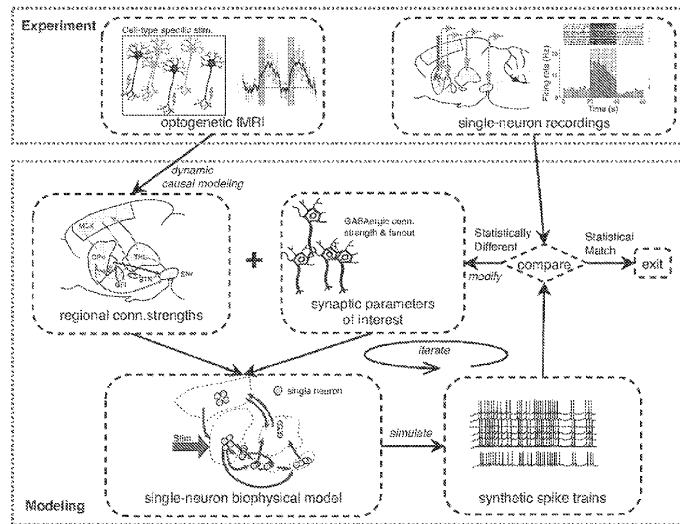


FIG. 3C

(57) Abstract: Methods, systems, and devices, including computer programs encoded on a computer storage medium are provided for optimizing neurostimulation therapy for treatment of neurological and neurodegenerative diseases. Joint dynamic causal modeling and biophysics modeling are used for optimization of the stimulation targets and parameters. In particular, methods of performing neuromodulation to suppress b-band oscillations in the brain of a subject are provided.

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