

CELL ELECTROPHYSIOLOGY

BRAIN SLICE ELECTROPHYSIOLOGY

IN VIVO BRAIN ELECTROPHYSIOLOGY

IN VIVO SC & DRG ELECTROPHYSIOLOGY

FREELY MOVING ELECTROPHYSIOLOGY

PHARMACOLOGY & OPTOGENETICS

In vivo brain Electrophysiology



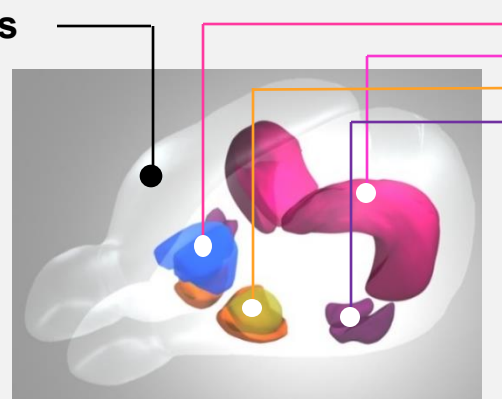
OptoPath™ Facility and Skills

5 Recording systems

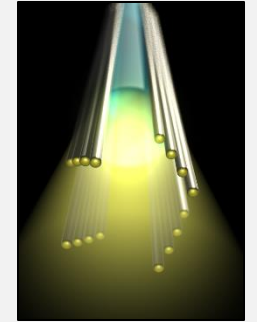
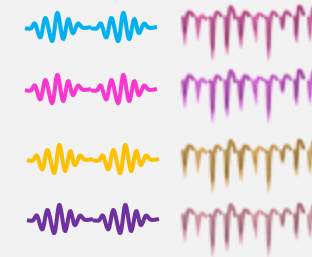


128 Channels - Dedicated Space

Surface Electrodes EEG-EECoG

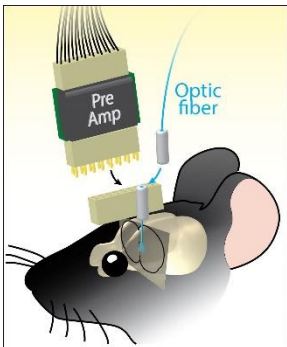


Deep Electrodes LFP & Single Units

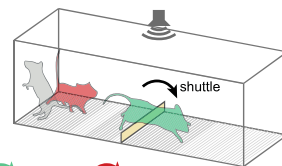


Electrodes, Tetraodes,
Polytrodes, Optrodes

Freely moving Electrophysiology

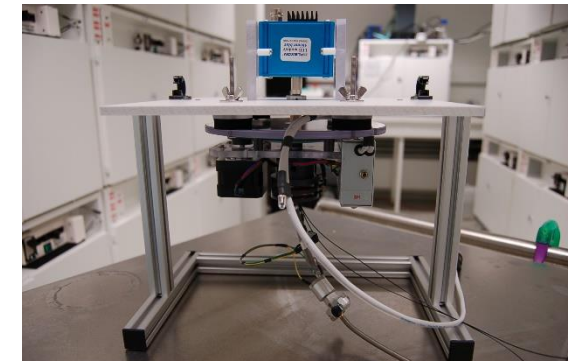
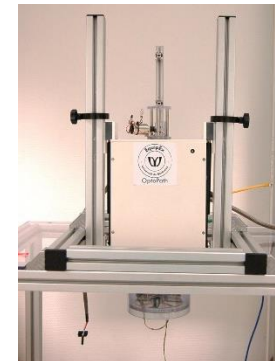


Pavlovian Conditioning

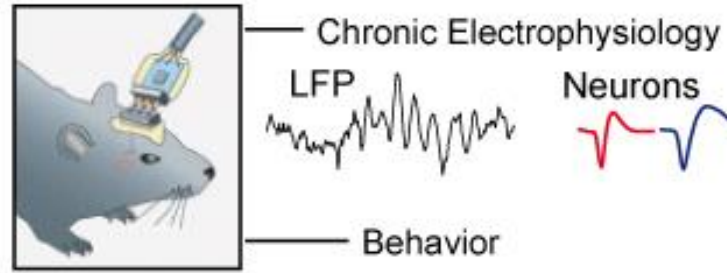


Avoidance Paradigm

Pharmacology & Optogenetic coupling



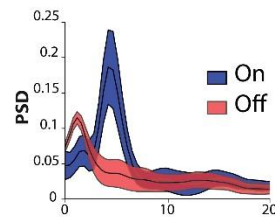
EEG/ECoG/LFP



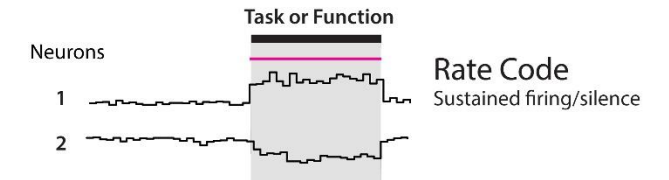
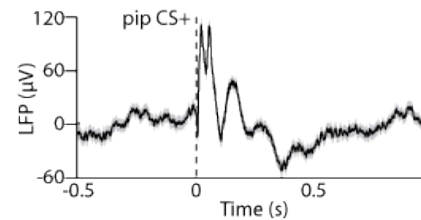
SINGLE UNITS

Static Approach

Power Spectrum

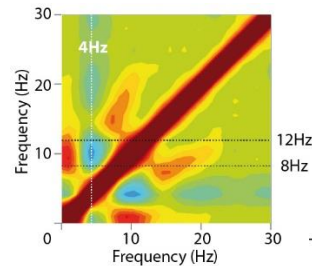


Evoked Potentials

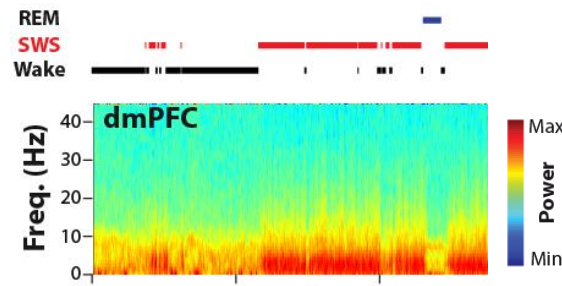


Dynamic Approach

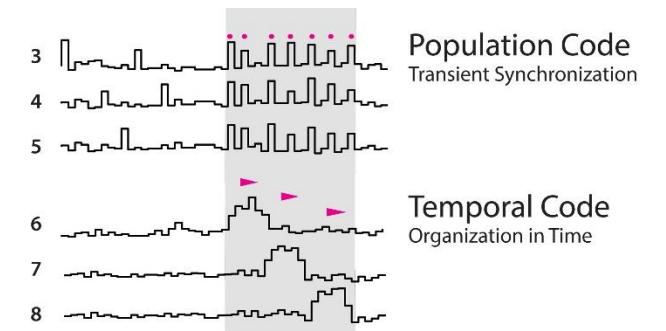
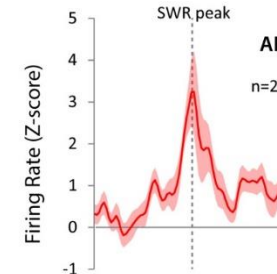
Synchronization



Brain states

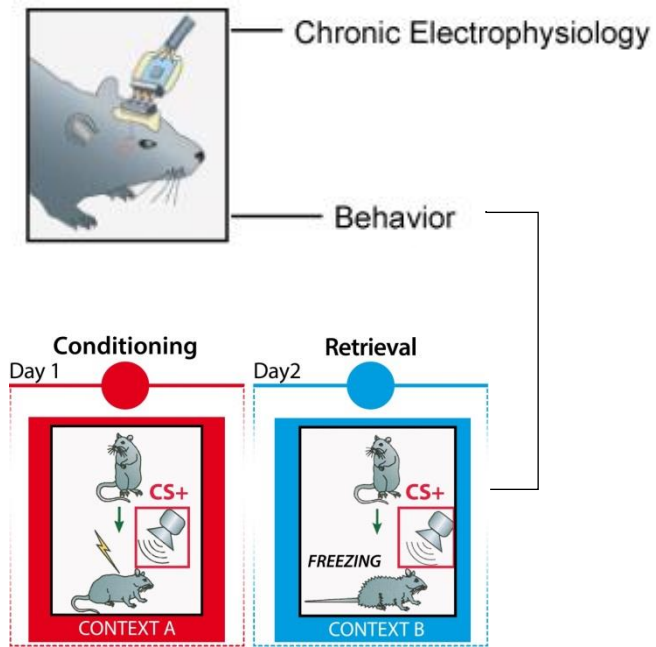


Neuron-LFP Coupling

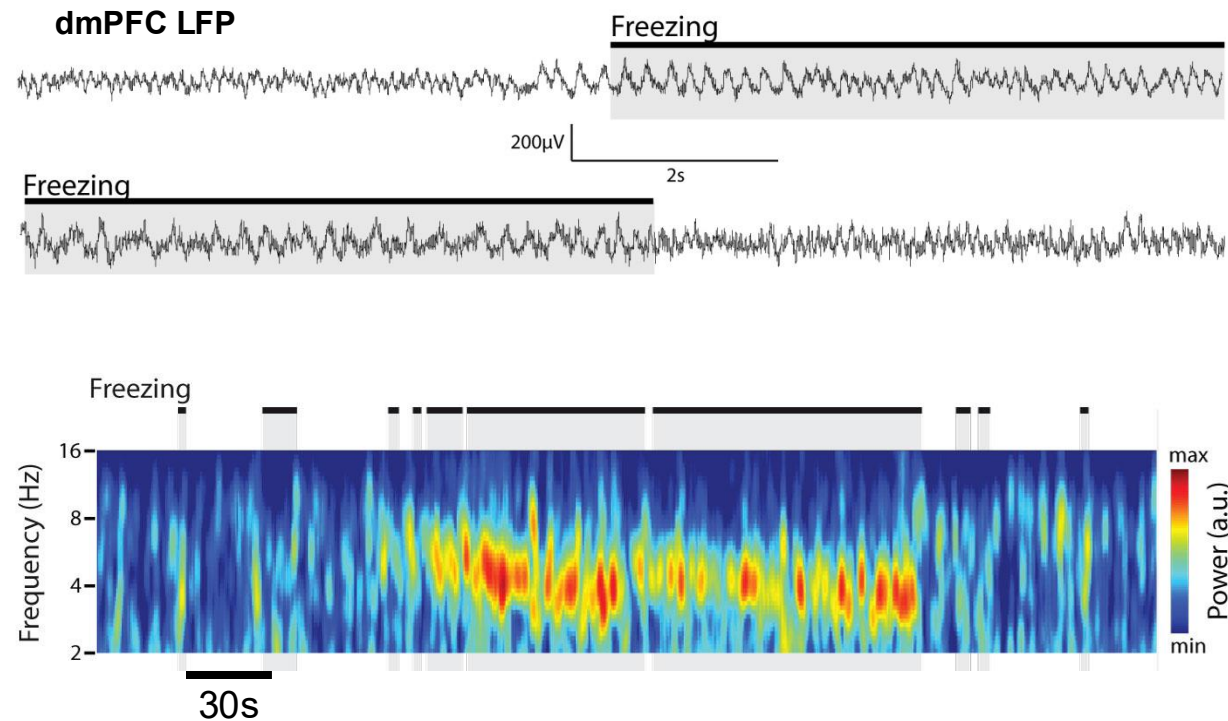


4Hz: a Biomarker of Fear

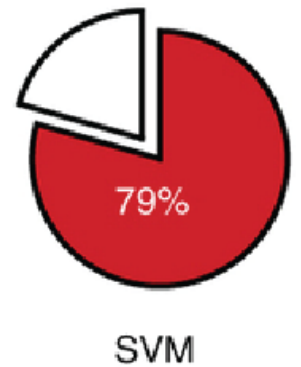
MODEL



OSCILLATIONS & FREEZING

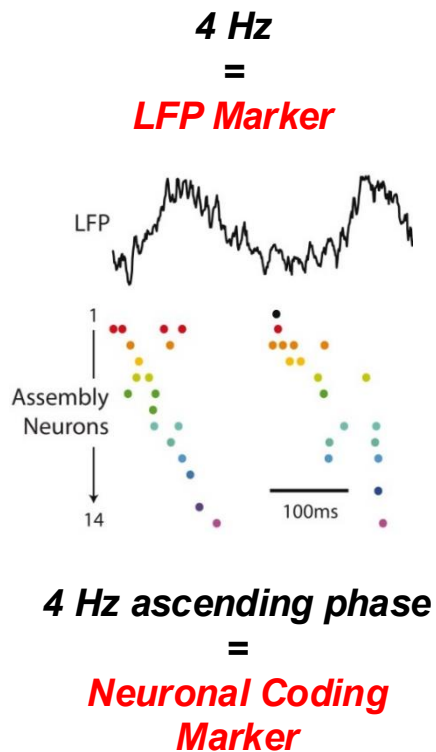


MARKER



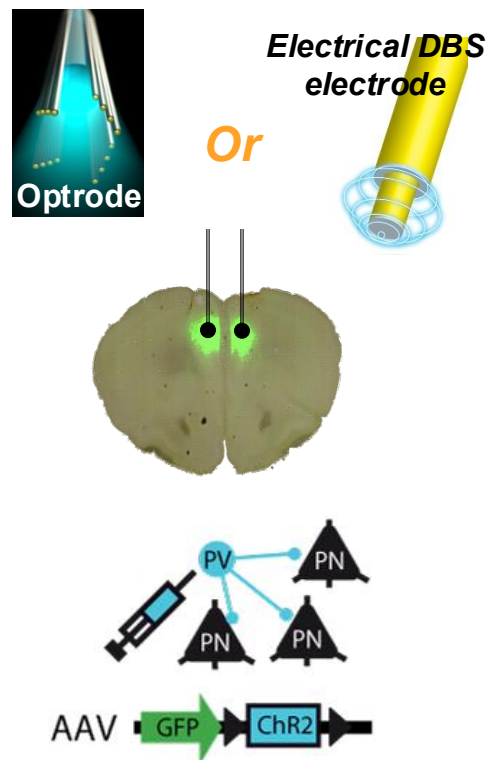
Karalis ... Herry 2016 Nature Neuroscience

4Hz: Manipulating fear

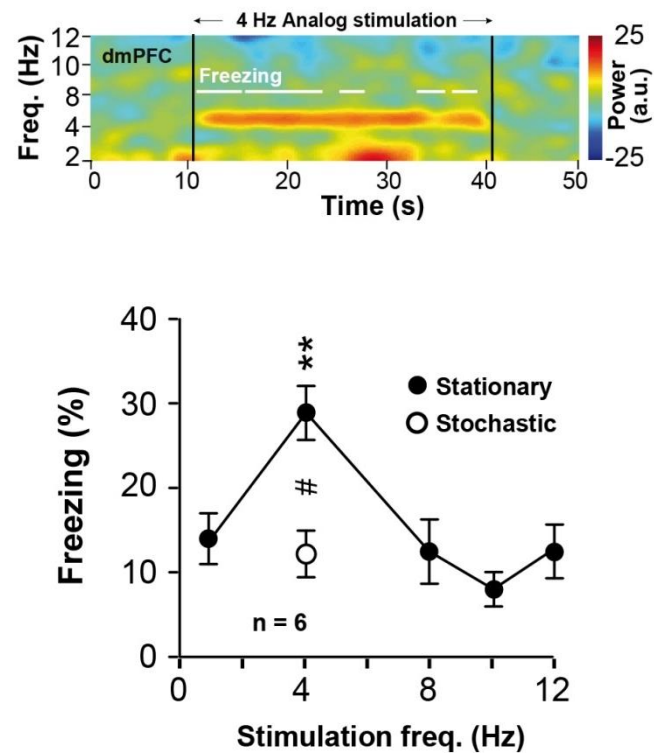


Dejean... Herry 2016 Nature

TECHNIQUE

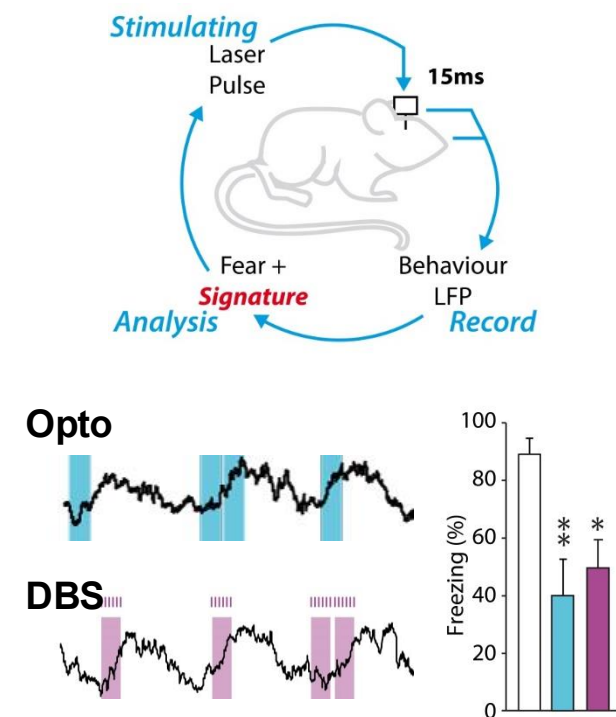


MIMICK



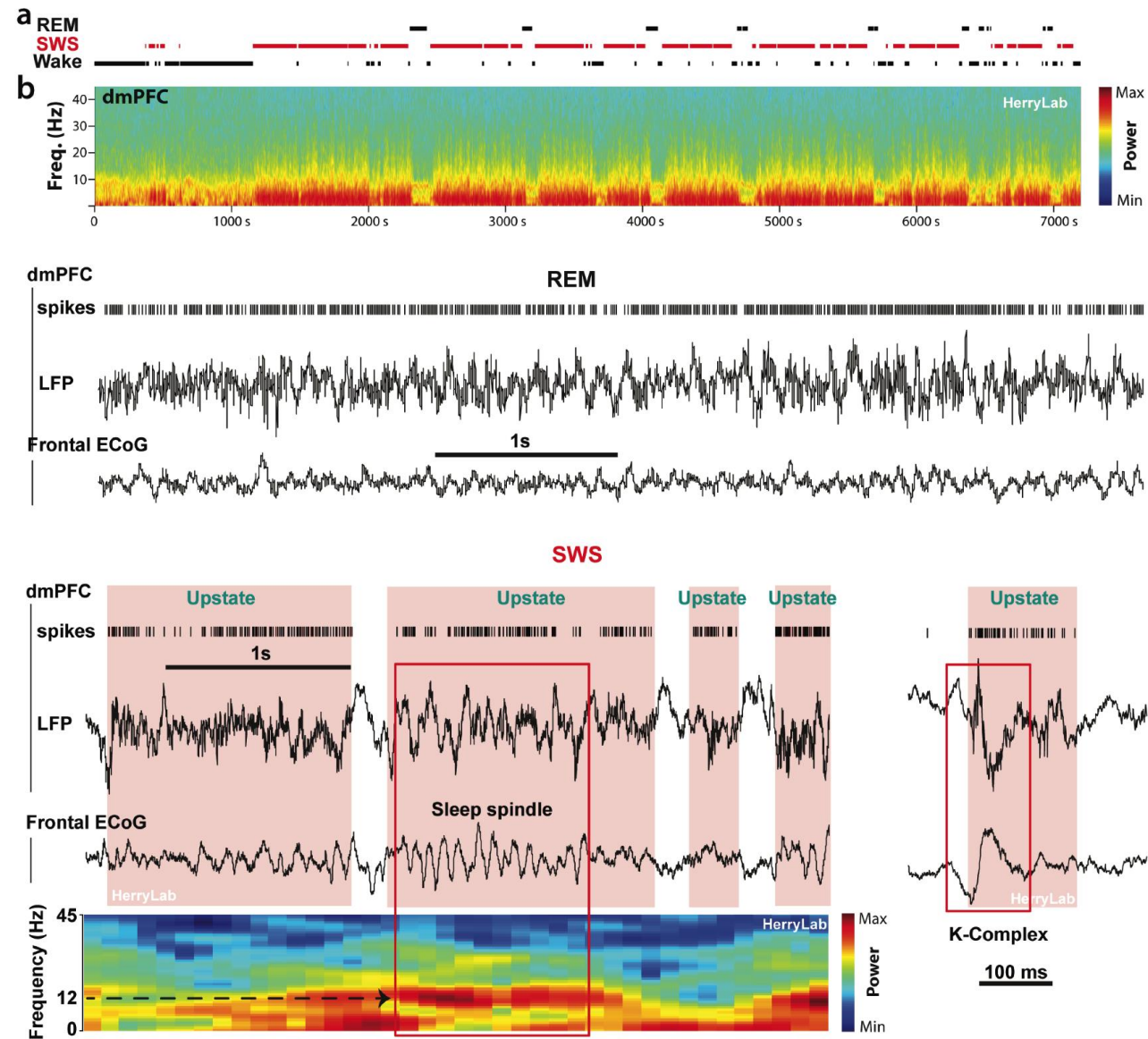
Karalis ... Herry 2016 Nature Neuroscience

COUNTERACT



Dejean, Herry, Patent

Spindle recordings during SWS





Pre-Ictal spikes analyses during SWS

