



## **TEST FEAR 1**

Evaluation of the potential of new psychoactive compounds in normalizing neurobiological markers of pathological fear memories in rodents

**Background** 

Exposure to extreme traumatic events (e.g. genocides, terrorist attacks, military fights, rapes...) can induce anxiety disorders such as Post-Traumatic Stress Disorder (PTSD) which is notably characterized by long-lasting and recurrent traumatic memories and a high propensity to relapse after exposure therapies. Our assay is based on the fact that persistent fear memories in humans and rodents are associated with specific oscillations in the medial prefrontal cortex and amygdala.

**Assay principle** 

The method consist in recording the prefrontal local field potential in mice submitted to auditory fear conditioning and extinction learning to monitor the changes of a specific electrophysiological markers or fear memories upon the administration (systemic, intraventricular, intracerebral) of specific compounds. The test we specifically developed allows 1)Testing the ability of compounds to reduce fear at the behavioral level; 2) Testing the ability of compounds to alter the neurobiological markers of pathological fear memories

**Assay** Information

Biological models	Mice
Methods	Extracellular recordings in vivo and behavior
Readouts	Ability to reduce :  • biological markers of fear memory  • long-lasting fear memories
Turn around time	8-10 weeks per test

Person in charge

Dr. Cyril Herry, PhD

Contact : optopath « at » u-bordeaux.fr







