

## Treating Fear and Stress Disorders (Carmel)

Pharma/Drug Delivery

Developing a first-in-class drug candidate to prevent debilitating consequences of fear-related diseases such as posttraumatic stress disorder (PTSD).

**Researchers:** Prof. Rafi Lamprecht, Dr. Monica Dines

### Background

The human brain develops fear memory to help adapt behavior and avoid danger in potential future fearful events. When fear memory becomes disproportionate to cope with stimulus or is invoked in inappropriate situations, an individual develops fear-related disorders, such as post-traumatic stress disorder (PTSD).

Based on fear-memory triggers, PTSD patients may experience flashbacks, distressing dreams, mentally re-experiencing the event, or intense negative psychological or physiological responses to stimuli recalling it.

According to the National Center for PTSD in USA about 7 out of every 100 people will experience PTSD at some point in their lives. These individuals experience excessive and debilitating fear that significantly impairs their ability to maintain a normal life.

### Drug Development for Inhibition of Harmful Fear Memory

Prof. Rafi Lamprecht and Dr. Monica Dines from the University of Haifa are in the advanced stages of developing and evaluating a drug for the treatment of fear and stress-related disorders, aimed at reducing or preventing the debilitating consequences of fearful memories. The drug, pep-EphrinA4, is intended to inhibit the development of fear memory following traumatic event.

### Research Status

The researchers have achieved excellent preliminary results with pep-EphrinA4, showing the effectiveness of this drug in impairing the formation of long-term fear memory in a useful animal model. Results show that the drug is specific, impairs fear memory formation in amygdala and importantly impairs the formation of long-term fear memory when subcutaneously injected acutely and systemically one hour after fear conditioning.

Pep-EphrinA4 has the potential to serve as a first-in-class PTSD drug candidate to prevent some of the debilitating consequences of fear-related diseases such as PTSD.

Investment & partnership opportunities

Carmel established [MemoDero Ltd](#) to advance and commercialize this technology, with a seed investment from the [Carmel Innovations Fund](#).

[Contact us for further information.](#)

[Rafi Lamprecht, Dr.](#) - Researcher page

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