



Press release

## **Endosane explores new compounds for the treatment of PTSD**

# **Endosane Pharmaceuticals and the University of California Irvine agree to conduct a set of studies to investigate the efficacy of new compounds for the treatment of Post Traumatic Stress Disorder (PTSD)**

Berlin/Irvine, January 18, 2022 – Endosane Pharmaceuticals, a Berlin-based pharmaceutical company specialising in the systematic exploration and use of the endocannabinoid system for the treatment of neurological, neuropsychiatric, and psychiatric disorders, and the University of California Irvine (UCI) have agreed to investigate the efficacy of two innovative compounds for the treatment of post-traumatic stress disorder through a series of preclinical studies. The studies will be conducted in the laboratory of the internationally renowned neuropharmacologist and leading endocannabinoid system researcher, Professor Daniele Piomelli, who played a crucial role in developing the drug class to be investigated. Due to the specific mode of action of the compounds, a significantly more effective treatment of PTSD with fewer side effects could be possible. Results are expected as early as the first half of 2022.

Endosane is taking an essential step towards realising its vision for the future: In addition to the already advanced development of the cannabinoid-based compound for the treatment of schizophrenia, Endosane is vigorously investigating further compounds in its own portfolio for the treatment of other mental disorders. Unlike the potential schizophrenia drug, the development of these compounds are still in the so-called preclinical phase, but existing data on related molecules strongly indicate the potential clinical efficacy. If successful, the imminent studies will constitute a solid basis for rapid further development. Endosane is aiming to start clinical trials within 2022.

Post-traumatic stress disorders are a group of mental disorders that are widespread and all characterised by the experience of significant trauma. Those affected are permanently restricted in their way of life. There are often considerable impairments of sleep and the re-experiencing of traumatic life situations. According to the current research, PTSD is caused by an overload of the brain's processing capacities for dealing with the negative memories created by the trauma, which can resurface in an uncontrolled manner. Currently, available medications are primarily aimed at helping people cope with the symptoms they are experiencing, particularly anxiety, panic attacks, and sleep disorders.

### **Support for processing the trauma**

Like all the other active pharmaceuticals in Endosane's portfolio, the molecules in question act via the body's own endocannabinoid system. However, unlike other active ingredients, these are not cannabinoids but synthetic molecules that alter the concentration of the body's own endocannabinoids by inhibiting certain enzymes. The development of these molecules was based on various basic research studies in memory research, which showed a connection between changes in the balance of the body's endocannabinoid system and the ability to process memories. The results suggest that it is possible to influence the processing of trauma by targeting this system. Therefore, the new compounds would not primarily treat the visible symptoms of PTSD, such as anxiety, panic attacks and insomnia, but the root cause, which is the processing of negative memories.

"We see the endocannabinoid system, as with our active substance for the treatment of schizophrenia, as a modulator of the neurophysiological balance that is offering the possibility of addressing not only the visible symptoms, but the cause itself," says Prof. Dr. Leweke, Medical Director of Endosane Pharmaceuticals. Even more importantly, the use of the endocannabinoid system would intervene much more 'gently' in the neurophysiological structure of the patient than currently available drugs. The chance of considerably reduced side effects is therefore significant.

### **Collaboration with UCI**

It is no coincidence that the upcoming studies are being carried out at UCI. Prof. Dr. Daniele Piomelli is responsible for research in this field. Like Prof. Leweke, Prof. Piomelli is a pioneer in the field of study into the endocannabinoid system. In particular, the drug class being researched – so-called FAAH-inhibitors – was co-developed by him. "We are very pleased to be able to explore these compounds together with Prof. Piomelli at UCI," said Max Narr, Managing Director of Endosane Pharmaceuticals. "We are very optimistic that the preclinical studies will provide a clear indication regarding efficacy. If this assumption is confirmed, we will aim to conduct a Phase I clinical trial within the next year."

### **About Endosane Pharmaceuticals**

Endosane Pharmaceuticals GmbH is a pharmaceutical company based in Berlin aiming to develop and commercialise new finished drugs to treat neurological, neuropsychiatric, and psychiatric conditions. Therefore, Endosane is systematically exploring the endocannabinoid system for its potential to modulate neurophysiological balance. The current compound portfolio contains compounds for treating several indications, including schizophrenia, social anxiety disorder, and post-traumatic stress disorder. More information at [www.endosane.com](http://www.endosane.com).

### **About Prof. Dr. Daniele Piomelli**

Prof. Dr. Piomelli is a Professor of Anatomy and Neurobiology at the School of Medicine. He holds the Louise Turner Arnold Chair in Neurosciences and joint appointments at the Biological Chemistry and Pharmacology departments. He is also a director at the Institute for the Study of Cannabis and Editor-in-Chief of "Cannabis and Cannabinoid Research".

### **About Prof. Dr. F. Markus Leweke**

Prof. Dr. Leweke is a Professor at the University of Sydney and Head of the Department of Youth Depression Studies at the Brain and Mind Centre. For many years, he was head of the Centre of Excellence for Psychiatry and Psychotherapy Research at the Central Institute for Mental Health Mannheim at the Ruprecht-Karls-University Heidelberg. As a practising psychiatrist and psychotherapist, Prof. Dr. Leweke has over 25 years of experience in treating psychiatric disorders. In the mid-1990s, he was one of the first to focus on research into the endocannabinoid system and its role and potential in treating psychiatric disorders. He is an Associate Editor of the journal Cannabis and Cannabinoid Research.