

## Personalized Mental Medicine

### --- Towards Better Treatments for PTSD, Depression, and Anxiety



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#### Research Focus

Why do psychiatric drugs work for some people but not others? Despite a range of treatments for depression, PTSD, and anxiety, up to two-thirds of patients don't respond to the first medication prescribed. This "trial and error" process can take months, often worsening emotional distress and delaying recovery.

At the Laboratory for Behavioral Neuroscience, Prof. Richter-Levin and his team are developing a breakthrough approach to bring psychiatry into the era of personalized medicine.

**Paving a New Path: Biomarkers for Mental Health:** Unlike earlier methods that focused on static genetic markers, the Laboratory for Behavioral Neuroscience is pioneering a new approach using epigenetic biomarkers – signals in the blood that reveal how life experiences shape gene activity. This offers a more dynamic and personalized view of how individuals respond to stress, trauma, and treatment. Alongside this, the team has developed a "behavioral profiling" system to identify who is likely to respond to specific medications. Together, these tools offer a roadmap for psychiatrists to match patients with the right treatments most from the start. A successful pilot study has already shown the feasibility of this innovative approach.

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#### For Your Consideration

The team is launching a two-phase project to bring this personalized psychiatry approach closer to clinical use. In the first phase (pre-clinical), they will conduct large-scale screenings to identify key biomarkers and refinement of the profiling system. Phase two (clinical) will establish a consortium to carry out human trials.

**An initial investment of \$400,000 will support manpower, lab resources, and testing in the first stage.** Your support can bring this transformative work closer to patients – reducing suffering, improving recovery, and saving lives.

#### About the Principal Investigator

**Prof. Gal Richter-Levin** is an internationally recognized expert in behavioral neuroscience and a leader in the study of stress-related mental health disorders. He has served as President of both the Israeli Society for Biological Psychiatry and the Israel Society for Neuroscience. He is a three-time recipient of the **Chinese Academy of Sciences' President's International Distinguished Scientist Fellowship**, and has served on major scientific advisory boards in Israel, Germany, and the UK.