

**Technology**

# Brain-Computer Startup Aims to Treat Depression Without Opening a Skull

Inner Cosmos expects to begin human trials later this year.



Meron Gribetz *Photographer: Liz Hafalia/The San Francisco Chronicle/Getty Images*

By Sarah McBride

30 March 2022, 13:00 BST

Many neurosurgeons have dreamed for years of ending depression with a jolt

from brain-implanted electrodes. A startup called Inner Cosmos Inc. says it can do just that without needing to drill deeply into a person's skull.

The Scotts Valley, California-based company is developing a machine that would send tiny electrical currents into the far reaches of the brain to target imbalanced networks that contribute to depression. Such a process ordinarily requires invasive cranial surgery, but Inner Cosmos said its brain-computer interface, or BCI, can be placed by shaving a millimeters-thin layer from the top of the skull and installing the implant in the resulting indentation.

“We believe that BCI has grown up,” said Meron Gribetz, the company's chief executive officer and co-founder. “It's matured to be able to treat a drug-resistant disease like depression.”



Gribetz with his team overseeing a production process for Inner Cosmos components. *Source: Inner Cosmos Inc.*

Gribetz, a longtime technology entrepreneur who previously ran a failed augmented-reality startup, has support from some respected experts in biomedicine. His co-founders include neurosurgeon Eric Leuthardt and primatologist Dan Moran, both at Washington University in St. Louis.

On Wednesday, Inner Cosmos plans to announce it raised \$10.25 million in equity led by Lool Ventures, with participation from seed-stage investors KittyHawk Ventures LLC and Loup Funds LLC. Gribetz said he couldn't immediately provide the company's valuation.

Before starting Inner Cosmos in 2019, Gribetz served in a unit of the Israeli military and founded a startup called Meta Co., years before Facebook adopted the name. His Meta introduced the concept of AR technology to attendees of the TED conference in 2016 where Gribetz wore a computerized headset. The company became insolvent in 2019 and sold its assets after funds promised by a Chinese investor failed to come through.

Gribetz, who suffered from attention deficit disorder as a child, said he was drawn to depression treatment after enduring a poor experience with prescription drugs that he says affected his social skills. He joins a rush of entrepreneurs seeking to develop BCIs, including Paradromics, Precision Neuroscience and Synchron. The best known is Neuralink, Elon Musk's Austin, Texas-based company working on a brain computer to help people with paralysis communicate. Neuralink accounted for most of the \$362 million invested in brain-computer startups last year, according to the research firm PitchBook.

Inner Cosmos calls its system a digital pill. The idea is that tiny pulses of electricity will normalize the connections among neurons and improve people's moods. The implant, the size of two stacked pennies, will at first interact with the brain's cognitive control network and perhaps more parts

in the future. Once a day for about 15 minutes, the patient activates the system by placing a second device, a magnetic power pod, on top of the area with the implant. Then the implant sends pulses into the brain as the system measures neuronal activity emitting from the brain in order to gauge the correct amount of stimulation.

The company has received an exemption from the U.S. Food and Drug Administration to accelerate the timeline for testing on people. While that is still a long way from approval, Gribetz said human trials could start later this year.

---

[Terms of Service](#) [Manage Cookies](#) [Trademarks](#) [Privacy Policy](#)

©2022 Bloomberg L.P. All Rights Reserved

[Careers](#) [Made in NYC](#) [Advertise](#) [Ad Choices](#) [Help](#)