

# From Labs to Lives

## How Research Funding Solves Real-World Problems

### NIH-Funded Research Helps Restore Speech for People With ALS

In the UC Davis Neuroprosthetics Lab, Assistant Professor Sergey Stavisky studies the neuroscience of essential human functions such as speaking. With the help of federal funds, his lab runs clinical trials in which a small brain implant records neural signals from people who have lost speaking abilities due to neurological diseases such as ALS. A computer decodes those signals into words and even recreates the person's voice in real time, allowing them to communicate through a computer.

### Helping Humanity

This technology gives people who have lost the ability to speak a way to communicate again, restoring independence and connection with others. Early results show the system can render intended words with about 99% accuracy, allowing users to speak and even sing via a synthesized version of their own voice.

**// Everything from brain implants to treat depression and memory loss to restoring senses, the ability to move the whole body — all of these things are relying on fundamental and translational research that is coming out of academic labs.” — Sergey Stavisky, Ph.D.**



**Sergey Stavisky, Ph.D.**

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