



WINNING PROPOSAL

Exploring Novel Targeted Vagus Nerve Signaling to Enhance Human Learning in Adverse Conditions

DARPA Grant
Awarded in Spring 2020

GRANT WINNER

Immanuel Lerman, MD MSc

Electrical and Computer Engineering

UC San Diego Health

“Polyplexus is an open window where you can explore innovative thinking in different domains that inherently cultivates a novel multidisciplinary approach. Access to organic, real-time evolution of these streaming ideas is extraordinary, enabling the user to ultimately foster new symbiotic ideation.”

HOW

Collaborating Across Areas of Expertise and Institutions

Involved 27 Plexors who contributed more than 70 Evidence and Conjecture μ Pubs to the discussion

Featured 19 Evidence and Conjecture μ Pubs spanning diverse fields of engineering, neuroscience, microbiology, linguistics and immunology



WHAT

Disrupting the Status Quo

- Advances learning paradigms to provide a significant sleep-based performance advantage for the US warfighter
- Creates an augmented memory platform to improve learning and cultivate creative problem solving
- Explores novel targeted vagus nerve signaling to enhance human learning in the face of adverse conditions

WHY

Powering Research Sponsors

Benefits DARPA research in:

- Warfighter lethality
- Cognitive command and control
- Learning and creativity