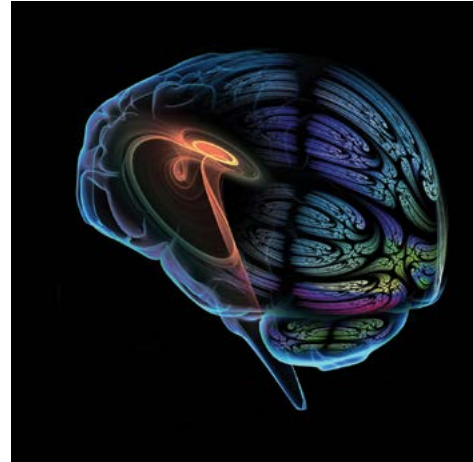


## fMRI Dynamic Phantom: Improved Neuroimaging

Visualizing and understanding the functions, or dysfunctions of the human brain may be what allows researchers to decode the mysteries of brain disorders such as Alzheimer's and Autism. A key tool in neuroimaging is functional magnetic resonance imaging or functional MRI (fMRI). fMRI measures brain activity by detecting changes associated with blood flow in the brain and may detect abnormalities within the brain that cannot be found with other imaging techniques.

According to Dr. Lilianne Mujica-Parodi at Stony Brook University, current fMRI technologies can be improved, and she believes her research will lead to a potentially game-changing tool for the detection and treatment of numerous brain diseases. Dr. Mujica-Parodi is developing the Stony Brook Dynamic Phantom, a small device that would provide for tighter calibration and quality assurance for optimal fMRI function and ultimately, cutting-edge diagnostic tools for brain diseases.



Lilianne R. Mujica-Parodi, PhD

Dr. Mujica-Parodi was awarded a "Proof-of-Concept" award by the Long Island Bioscience Hub (LIBH) to drive product development and solidify commercialization strategies. The research project was co-sponsored by Farmingdale, New York-based ALA Scientific Instruments. ALA Scientific Instruments is a small Long Island company that manufactures and distributes sophisticated research equipment in the neuroscience, electrophysiology and cell biology fields.

Building on the research conducted with the LIBH award, Dr. Mujica-Parodi and ALA Scientific Instruments were jointly awarded a \$225,000 Small Business Technology Transfer grant by the NSF. This Phase I grant will facilitate further research and development of the fMRI-centered "Dynamic Phantom". ALA Scientific Instruments President Alan Kriegstein, serves as the grant's Principal Investigator with Dr. Mujica-Parodi as Co-Principal Investigator.

"We look forward to the day when fMRI will be used as a diagnostic tool for a variety of brain diseases such as stroke, traumatic brain injury and even autism." ALA Scientific Instruments President Alan Kriegstein.



Dr. Mujica-Parodi and ALA Scientific Instruments have also submitted an NIH Phase I-II Fast Track application for further development of the technology which is still under review.