



**The Australian Society for Medical Research**  
**ASMR Medical Research Week® June 2 - 10 2016**  
**MEDIA RELEASE - EMBARGOED UNTIL 05:00pm, 7<sup>th</sup> of JUNE , 2016**

**ENGINEERING MEMORIES**

Professor Theodore Berger at the National Press Club today

***“A Neural Prosthesis for Repairing Memory Function”***

Theodore Berger is a Californian based neuroscientist employing interdisciplinary and convergent science to correct for neurological disorders previously considered incurable.

Developing a microchip-based neural prosthesis which can replace damaged tissue and do the work of neurons is extraordinary science! Imagine a neural prosthesis which is capable of reversing memory loss associated with dementia, stroke, epilepsy and trauma. *The device implanted into the brain has performed well in animal tests and is currently being evaluated in human patients.*

Professor Berger's laboratory, over the last 25 years, has been dedicated to understanding the mechanisms underlying neuronal integration, and has applied its findings to generate many applications of the discoveries.

He said, *“from the earliest moments in proposing a cognitive neural prosthesis, I can recall others responding that we were “crazy,” and that we would never be able to reach our goal!. If your goal is to accomplish something extraordinary in science, then you need to be unrelentingly courageous.”*

The innovation and vision of Professor Berger's work is recognized by his 15 year contribution to the external advisory committee of the National Space Biomedical Research Institute (NSBRI).

*“Developing and implementing medical technologies that can be used in outer space to counter the physiological effects of low-gravity conditions are highly similar to those imposed by use as a neural prosthesis, i.e., low-power, small footprint, smart analytical technologies. Thus, meeting the needs of smart medical technologies for space requires designs that overlap substantially with those required to meet the needs of medical neural prostheses of the future, on earth or in space”, Professor Berger said..*

Memory prosthetics have come under the scrutiny of ethicists who accept that helping those with brain injuries is a noble cause but worry about misuse of the technology. Berger said, *The goal is to improve the quality of life for somebody who has a severe memory deficit. If I can give them the ability to form new long-term memories for half the conditions that most people live in, I'll be happy as hell, and so will be most patients”.*

Professor Berger's work has led to the formation of eight biotechnology companies, four from within his own laboratory and funded by private foundations belonging to Elon Musk (SpaceX, Tesla Motors, PayPal) and Bryan Johnson (Braintree, OS Fund).

**News Editors/Chiefs of Staff, please note:**

**WHAT:** National Press Club Address

**WHEN:** 5pm – 7pm, Tuesday 7<sup>th</sup> of June 2016

**WHERE:** 16 National Court, Barton, Canberra.

**WHO:** ASMR Medallist 2016, Professor Theodore

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