Illawarra scientists attract American funding to tackle MND

The American Department of Defense (DoD) has awarded two Illawarra-based researchers US$500,000 to develop a new treatment strategy for Motor Neurone Disease (MND), a devastating illness with no known cure and only one drug available to alleviate symptoms.

Also known as amyotrophic lateral sclerosis (ALS) or Lou Gehrig's disease, MND attacks the nerve cells found in the brain and spinal cord, leading to progressive muscle weakness and death within two to five years of diagnosis.

With military veterans being diagnosed at twice the rate of the general public, the ALS Association (which received almost US$80 million in donations through the viral Ice Bucket Challenge), worked with Congress and the Department of Defense to support innovative, high-impact research through the establishment of the ALS Research Program.

Illawarra Health and Medical Research Institute (IHMRI) researchers Dr Justin Yerbury and Dr Kara Perrow, in collaboration with Dr Darren Saunders from the UNSW Australia, won the DoD’s Therapeutic Idea Award for proposing that the cell's main “garbage disposal machinery”, the Ubiquitin Proteasome System, is severely compromised in ALS patients and that by restoring the capacity of the system through gene therapy, motor neurons could be protected.

Over the next two years, the talented mid-career researchers, who are based in IHMRI’s headquarters on the University of Wollongong campus, will develop a sophisticated targeted, drug delivery system to deliver one of the fundamental components of the system to motor neurons in the brain.

“This is an exciting project for us, taking our molecular understanding of the underpinnings of disease and moving that forward towards a possible therapeutic; something that we can move more quickly on, thanks to the DoD grant,” said Dr Yerbury, who won a National Health and Medical Research Council Career Development Fellowship in 2015 and has, with Dr Perrow and other IHMRI researchers, attracted several significant Australian grants over the past year, including an MND Research Institute of Australia grant and a $1.65 million government grant to investigate the genetic link between a common type of dementia and MND.

“We are building significant capacity here in the Illawarra for research into neurodegenerative diseases, including Alzheimer’s disease and MND,” said IHMRI Executive Director, Professor David Adams.

“More than 40 senior scientists and students are working in our laboratories to understand these diseases and develop new therapeutics. Dr Yerbury and Dr Perrow are representatives of a talented cohort of committed researchers who, I believe, stand to make internationally significant breakthroughs in coming years.”
About IHMRI

The Illawarra Health and Medical Research Institute is a joint initiative of the University of Wollongong and Illawarra Shoalhaven Local Health District.

IHMRI’s goal is to foster, support and grow health and medical research in the Illawarra by connecting and supporting academic and clinician researchers around research problems of relevance to the region and the world. IHMRI provides research leadership, coordination, infrastructure and facilities to more than 600 academic and clinical researchers throughout the region.