VivaZome to collaborate with UQ Traumatic Brain Injury experts to develop exosome-based therapies

19th May 2022; Melbourne, Australia: VivaZome Therapeutics Pty Ltd (VivaZome) today announced that it has entered into a Memorandum of Understanding (MoU) with The University of Queensland (UQ) focussing on improved therapies for Traumatic Brain Injury (TBI) and post-traumatic epileptogenesis (PTE). TBI afflicts close to 69 million people globally.

Under the MoU, VivaZome will collaborate with Professor David Reutens - Director of the Centre for Advanced Imaging (CAI) at UQ – and his colleagues to investigate exosomes for the treatment of TBI and PTE. VivaZome will provide exosomes from different cells types and culture conditions to the Reutens laboratory for testing in mouse models of TBI. In addition, VivaZome and UQ will engineer exosomes to enable enhanced targeting to the brain and to increase their anti-inflammatory properties. The aim is to modulate the inflammatory response in TBI using bioengineered exosomes to modify or prevent susceptibility to PTE, reduce brain damage, and improve recovery of motor and cognitive functions.

Research activities through to in vivo proof-of-concept have been agreed and initiated. The parties have also agreed to jointly apply for grants and other forms of funding to support the project.

David Haylock, CEO of VivaZome, said: "We are excited and honoured to be working with the team at UQ in this area of highly significant medical need. Professor Reutens and his team at UQ are internationally recognised for their work in TBI and post-TBI epilepsy, including previous grant funding from the US Department of Defence. VivaZome will supply its proprietary exosomes and provide its expertise in exosome biology and analytics."

Professor David Reutens of UQ said: "Patients with severe TBI are at highest risk of developing post-TBI epilepsy, as well as being the group with the poorest prognosis for functional recovery. They also incur the highest costs for rehabilitation and care.

"An exosome therapeutic that reverses the inflammation arising from TBI would provide a profound improvement in outcome for both individual patients and the healthcare system. We are delighted to be working with VivaZome as industry leaders to advance this work."

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About VivaZome:

VivaZome Therapeutics Pty Ltd is a privately-held Australian biotech company, with operational headquarters at the La Trobe University Technology Enterprise Centre in Melbourne, Australia. VivaZome aims to develop and commercialise exosome-based therapies for debilitating and/or life-threatening disorders, with an initial focus on neurological disorders, ischaemia, and fibrotic diseases.

For more information, please visit www.vivazome.com

About Traumatic Brain Injury (TBI) and Post TBI Epilepsy (PTE):

Globally, TBI affects 69 million individuals and causes 8.1 million years of life lived in disability each year. Post TBI epilepsy is the leading cause of acquired epilepsy in young adults, with most patients developing PTE in the first year after injury.

Inflammatory mechanisms exert a profound influence on the outcome of TBI. They are implicated in secondary damage, the spread of pathology into initially uninjured brain tissue, and in impaired repair processes. Inflammation is also thought to play an important role in epileptogenesis, the pathological process that leads to the development and progression of spontaneous recurrent seizures, a serious complication of TBI. Patients with moderate to severe brain injury are at particularly high risk of developing post-traumatic epilepsy (PTE), which accounts for 10-20% of patients with symptomatic epilepsy.

About Centre for Advanced Imaging – The University of Queensland:

The Centre for Advanced Imaging (CAI) brings together the skills of a critical mass of researchers and 'state-of-the-art' research imaging instruments. It is the only facility of its type in Australia, one of only a handful in the world. The 5,500 m^2, $55m CAI building was funded by the Federal Education Investment Fund in 2010 and contains over $50m of imaging and spectroscopy equipment, putting UQ's researchers at the forefront of a field that is advancing swiftly.

CAI's researchers work on innovations in spectroscopic and imaging technology, imaging biomarker development and in biomedical research disciplines. Work is frequently in collaboration with clinical research sites and other local, national, and international research institutes. For more details Centre for Advanced Imaging - The University of Queensland