Date: 11th March 2021
ASX Announcement (ASX: IHL)

Incannex Partners with the Monash Trauma Group to assess IHL-216A in a model of sports concussion

Highlights

- Incannex partners with the Monash Trauma Group at the Department of Neuroscience, Monash University to conduct an extensive *in vivo* study on the protective effect of IHL-216A in sports concussion
- The model of traumatic brain injury to be used in this study was developed in collaboration with the US National Football League ('NFL')
- The study will be conducted according to Good Laboratory Practices
- The study is a precursor to pivotal in-human trials required for drug registration, negating the previous requirement to complete an in-human proof-of-concept study; saving time and expense to the development program.

Clinical stage cannabinoid development company, Incannex Healthcare Limited (ASX: IHL, 'Incannex' or the 'Company'), is pleased to announce that it has partnered with the Monash Trauma Group at the Department of Neuroscience to conduct an extensive *in vivo* study in relation to the neuroprotective capability of IHL-216A; a proprietary combination pharmacotherapy (drug) comprising cannabidiol ('CBD') and isoflurane.

The study will use a unique model of traumatic brain injury ('TBI') that was developed in collaboration with the US National Football League ('NFL') to accurately represent the type of brain injury that occurs in sports related concussion (1, 2).

In this model, concussions experienced by NFL players have been scaled to Sprague Dawley rats, according to known biological relationships, to mimic the collision mechanics including high velocity impact and head acceleration. The injury is induced using a custom-built device, which provides the best-known simulation of sports concussion currently available in a rodent model.

This NFL concussion model study will expand upon the initial *in vivo* study undertaken by Incannex in 2020, the results of which were announced on the 15th of December 2020 in the announcement titled, "Positive results from IHL-216A TBI/concussion study". The protective effect of IHL-216A will again be compared to CBD, isoflurane, and vehicle across a range of behavioural, physiological, and molecular analyses that assess the damage caused by TBI.

The study has been designed according to Good Laboratory Practices; a framework within which laboratory studies are planned, performed, monitored, and reported. Should the Company receive positive results, the

thoroughness of this study means that Incannex will be able to proceed directly to a pivotal Phase 2 clinical trial, eliminating the need to run a preliminary proof of concept clinical trial as originally planned.

CEO and Managing Director of Incannex Healthcare, Mr Joel Latham said; "Undertaking this extensive and well-recognised animal model study, instead of the in-human proof of concept study, has the effect of reducing the overall development time and expense associated with our drug registration plan. Furthermore, the Company will collect additional data from an animal study that it would not be able to compile in human studies. This additional data will inform the design and end points of our pivotal clinical trials".

The Monash Trauma Group

The Monash Trauma Group consists of a team of Principal Investigators, each of whom are leading scientists within their respective fields. Their research focuses on the effects, underlying pathophysiological mechanisms, biomarkers, and treatments of trauma related conditions including TBI and concussion as well as other types of trauma and neurological diseases, including CTE.

TBI is a major focus of the group as it is a leading cause of death and morbidity worldwide, and there is no intervention to improve long-term outcomes. The Monash Trauma Group aims to improve the understanding and treatment of TBI by utilizing a translational research approach that incorporates both animal model and patient studies.

The study will be coordinated by Dr Stuart McDonald, an expert in fluid biomarker development for monitoring TBI, Associate Professor Richelle Mychasiuk, an expert in animal models of TBI and their clinical relevance, and Associate Professor Sandy Shultz, an expert in the pathological mechanisms, biomarkers and treatments of TBI and related conditions.

About IHL-216A

IHL-216A is a combination drug that combines CBD with any volatile anaesthetic agent, including isoflurane. IHL-216A has been designed to be administered soon after head trauma to reduce secondary brain injuries that lead to neurological deficits. Due to the product's potential therapeutic utility in contact sports, IHL-216A is designed to satisfy the World Anti-doping Authority (WADA) and Australian Anti-Doping Authority's (ASADA) specifications for use by athletes at risk of TBI and Chronic Traumatic Encephalopathy, otherwise known as CTE.

IHL-216A components, CBD and isoflurane, have previously been found by Incannex to act synergistically to reduce neuronal damage, neuroinflammation and behavioural deficits that are consequences of TBI. In experiments, IHL-216A outperformed CBD in reducing neuronal damage in post-mortem Nissl staining analysis of brain tissue by 53% for CA1 and 60% for CA2 in the hippocampal region of the brain. IHL-216A reduced the Iba1 neuroinflammation marker by 35% more than CBD alone and 123% more than isoflurane administered alone. An International Patent Application entitled "Compositions and methods for the

treatment or prevention of traumatic brain injury" has been filed as part of the IHL-216A development program.

About Traumatic Brain Injury and Concussion

TBI accounts for approximately 10 million deaths and/or hospitalization annually in the world (Schuman et al., 2017). There are currently no registered pharmaceutical agents approved for the treatment of TBI. Current treatment of major TBI is primarily managed through surgical intervention by decompressive craniotomy (Bullock et al., 2006) which involves the removal of skull segments to reduce intracranial pressure.

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The release of this announcement has been approved for issue by IHL's Board of Directors. For further details on the announcement, interested parties should contact:

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About Incannex Healthcare Limited (ASX: IHL)

Incannex Healthcare Limited (IHL.ASX) is a clinical stage pharmaceutical development company developing unique medicinal cannabis pharmaceutical products and psychedelic medicine therapies for the treatment of Generalised Anxiety Disorder (GAD), Obstructive Sleep Apnoea (OSA), Traumatic Brain Injury (TBI)/Concussion and Acute Respiratory Distress Syndrome (ARDS). FDA registration, subject to ongoing clinical success, is being pursued for each product and therapy under development.

Each indication represents major global markets and currently have no, or limited, existing registered pharmacotherapy (drug) treatments available to the public, raising the possibility of patients receiving Government subsidies for products that demonstrate suitable safety and efficacy profiles in clinical trials.

IHL has a strong patent filing strategy (as announced "IHL files cannabinoid patent over IHL-216A for TBI" 04th October 2019 and "IHL Files Patent over IHL-42X for OSA" 06th of December 2019) as it develops its products and therapies in conjunction with its medical advisory board.

Further to its clinical programs, Incannex has its Australian license to import, export and distribute medicinal cannabis products and has launched a line of cannabinoid oil products. The cannabis-based oils are sold under Incannex's product supply and distribution agreement with Cannvalate Pty Ltd, which is the largest network of cannabis medicine prescribers in Australia and a major shareholder of Incannex.

Website: www.incannex.com.au

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References:

1. Viano DC, Hamberger A, Bolouri H, Säljö A. 2009. Concussion in professional football: animal model of brain injury—part 15. Neurosurgery 64:1162–1173.

2. Mychasiuk R, Hehar H, Candy S, Ma I, Esser MJ. 2016. The direction of the acceleration and rotational forces associated with mild traumatic brain injury in rodents effect behavioural and molecular outcomes. J Neurosci Methods 257:168–178.