

## Impression Files Patent over IHL-216A Cannabidiol Drug for Patient Administration Post Traumatic Brain Injury

### Highlights:

- IHL has filed a patent application covering IHL-216A to be used as a neuroprotective agent administered post-head trauma
- The IHL drug discovery team believes that an optimal fixed dose of APIs within IHL-216A will result in the provision of neuroprotection, defined as reduced neuronal cell death and damage
- TBI accounts for approximately 10 million deaths and/or hospitalization annually in the world (Schuman et al., 2017) and there are currently no pharmaceutical agents approved for the treatment of Traumatic Brain Injury
- IHL-216A is intended to be a first line of defence against TBI to be administered by health professionals including paramedics, ER doctors and ring-side health professionals

Impression Healthcare Limited ('Impression', 'IHL' or the 'Company'), developer of four unique medicinal cannabis products, owner of INCANNEX™ cannabis oils and oral devices manufacturer, today announces that it has filed a patent application covering IHL-216A to be used as a neuroprotective agent following concussion to reduce Traumatic Brain Injury ('TBI').

After head trauma resulting in loss of consciousness, the patient has likely incurred a moderate to significant brain injury. There is likely to be contusions, swelling and commencement of intracranial inflammatory processes.

It is the belief of the drug discovery team that early intervention of synthetic Cannabidiol in conjunction with a halogenated volatile anaesthetic agent in a format which can rapidly cross the blood-brain barrier can shield the brain from secondary immune-mediated damage. This hypothesis is supported by existing in-vitro, in-vivo and some in-human studies, as outlined in the patent filing submission.

The drug discovery team hypothesise that there is an optimal fixed dose of APIs within IHL-216A which, given soon after head trauma, will:

- Reduce neuro-excitation
- Reduce neuro-inflammation
- Reduce Cerebral Blood Flow
- Reduce Cerebral Oxygen Consumption

With the result of providing Neuroprotection, defined as reduced neuronal cell death and damage.

Both Cannabidiol and halogenated volatile anaesthetic agents are known to cause a reduction in neuro-excitation, which is thought to be a key step in the pathway resulting in the reduction of neuro-cellular damage and TBI. Co-administration of Cannabidiol with a halogenated volatile anaesthetic

agent is thought to create synergism whereby the concentrations of both agents can be reduced to safe, non-toxic levels whilst also achieving efficacy.

**Impression's Chief Medical Officer and Non-Executive Director, Dr Sud Agarwal said;** "There is a clear need for a post injury treatment as the personal and societal costs of TBI are enormous. IHL-216A is intended to be a first line of defence against TBI to be administered by health professionals including paramedics, ER doctors and ring-side health professionals."

**Specialist Neurosurgeon and IHL Medical Advisory Board Member, Dr Ron Jithoo said;** "There are historically no significant pharmaceutical interventions in the traumatic brain injury field. Patients are at risk of post-injury soft tissue swelling, concussive states and significant neurological complications. Volatile anaesthetics help reduce cerebral irritability and cortical depolarisation as well as decrease cerebral blood flow. Cannabidiol is postulated to reduce neuro-inflammation. As a neurosurgeon of 16 years standing, I am hopeful that IHL – 216A will be a game changer in the pharmacological treatment of traumatic brain injury which is a ubiquitous world problem."

- TBI accounts for approximately 10 million deaths and/or hospitalization annually in the world (Schuman et al., 2017)
- There are currently no 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.

Further patents related to IHL-216A are likely to be filed following clinical testing, which is due to commence shortly. IHL expects that further patent filings will occur soon for the Sleep Apnoea and TMJ Dysfunction programs.

**ENDS**

**About Impression Healthcare Limited (ASX: IHL)**

Impression Healthcare Limited (IHL.ASX) is undertaking four clinical trials investigating the use of uniquely formulated medicinal cannabis products for the treatment of Obstructive Sleep Apnoea, Traumatic Brain Injury/Concussion, Periodontitis (Gum Disease) and Temporomandibular Joint Disorder. Each indication represents major global markets.

IHL has its Australian licenses in place to import, export and distribute cannabis products and has launched a line of EU GMP-approved CBD oil products under the brand, "Incannex™". Incannex™ oils may be sold under IHL's product supply and distribution agreement with Cannvalate Pty Ltd – the largest network of cannabis medicine prescribers in Australia.

Impression also has a collaboration and "first right of refusal" agreement with leading US Cannabinoid therapeutics Company, AXIM Biotechnologies Incorporated and a license agreement with Resolution Chemicals for the production and distribution of Dronabinol in the USA, Canada, Australia and New Zealand.

Providing growing revenues to the Company; Impression continues to build its customised oral devices manufacturing business both direct-to-the-consumer and via the Company's growing B2B preferred practitioner network.

**Investors:** [investors@impression.healthcare](mailto:investors@impression.healthcare)

**Website:** [www.impression.healthcare](http://www.impression.healthcare)

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