

ASX ANNOUNCEMENT

NeuroScientific to Present at Westar Capital Investor Evening

Perth, Australia; 26 August 2020. NeuroScientific Biopharmaceuticals Ltd ASX: NSB ("NeuroScientific" or "the Company") is pleased to announce that the Company's Chairman, Mr Brian Leedman will be making an investor presentation at the Westar Capital Investor Evening on Thursday, 27 August 2020 at the Melbourne Hotel in Perth. An updated investor slidedeck follows this announcement.

About Neuroscientific Biopharmaceuticals Limited

NeuroScientific Biopharmaceuticals (ASX:NSB) is a company developing peptide-based pharmaceutical drugs that target a number of neurodegenerative conditions with high unmet medical demand. The company's product portfolio includes EmtinB, a therapeutic peptide initially targeting Alzheimer's disease and glaucoma, as well as other Emtin peptides (EmtinAc, EmtinAn, and EmtinBn) which have demonstrated similar therapeutic potential as EmtinB. For more information, please visit www.neuroscientific.com

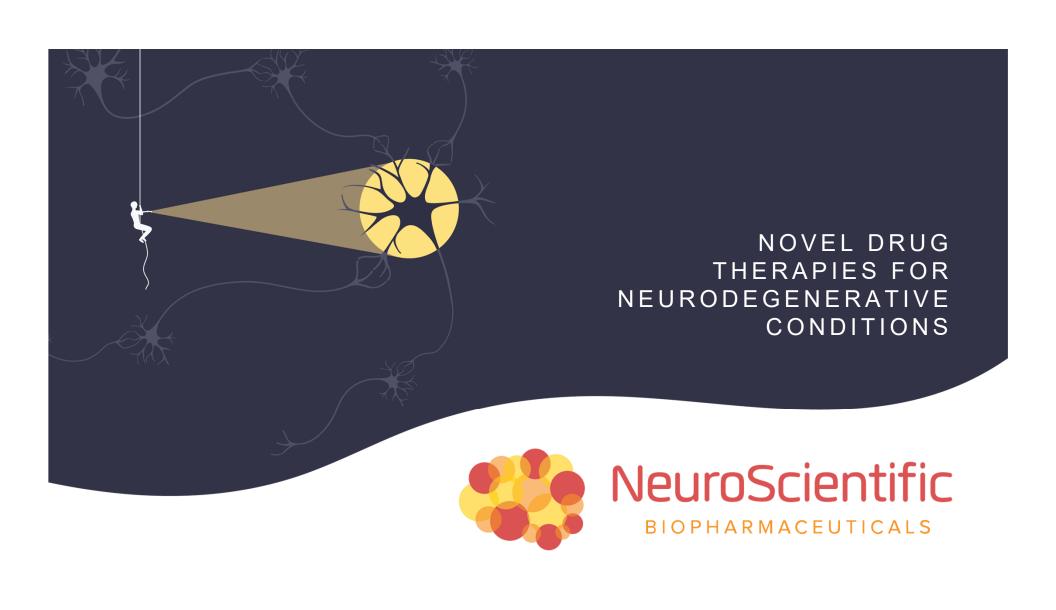
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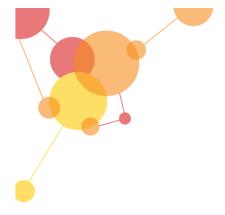
Announcement authorised by the Board of Directors of NeuroScientific Biopharmaceuticals

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Brian Leedman Non-executive Chairman bl@neuroscientific.com +61 412 281 780





DISCLAIMER

The purpose of the presentation is to provide an update of the business of NeuroScientific Biopharmaceuticals Ltd ("NeuroScientific", or "the Company"). These slides have been prepared as a presentation aid only and the information they contain may require further explanation and/or clarification. Further information is available upon request.

The views expressed in this presentation contain information derived from publicly available sources that have not been independently verified. No representation or warranty is made as to the accuracy, completeness or reliability of the information. Any forward looking statements in this presentation have been prepared on the basis of a number of assumptions which may prove incorrect and the current intentions, plans, expectations and beliefs about future events are subject to risks, uncertainties and other factors, many of which are outside NeuroScientific's control. Important factors that could cause actual results to differ materially from assumptions or expectations expressed or implied in this presentation include known and unknown risks. Because actual results could differ materially to assumptions made and NeuroScientific's current intentions, plans, expectations and beliefs about the future, you are urged to view all forward looking statements contained in this presentation with caution.

This presentation should not be relied on as a recommendation or forecast by NeuroScientific. Nothing in this presentation should be construed as either an offer to sell or a solicitation of an offer to buy or sell shares in any jurisdiction.



CORPORATE OVERVIEW

- Completed IPO listing on the ASX July 2018
- Lead candidate funded through to completion of Phase I in primary indication
- Core strategy: "pipeline in a product"
 (a) Neurodegenerative indication CNS; most advanced in Alzheimer's disease
 (b) Degenerative condition of the optic nerve
 - (c) Supporting preclinical studies in other neurodegenerative conditions

CAPITAL STRUCTURE

ASX code NSB

Shares on issue 78.38M

Price (close 19/08/2020) \$0.25

Market cap \$20M

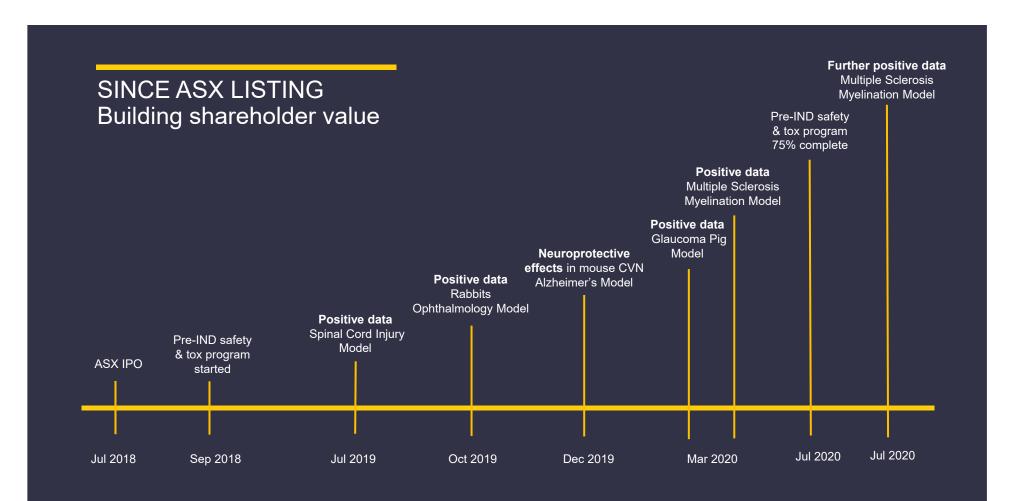
McRae Technology Pty Ltd

McRae Investments Pty Ltd

18,543,954 (24%)

5,800,000 (7.4%)







LEADERSHIP TEAM



Brian Leedman, MBA NON-EXECUTIVE CHAIRMAN

Co-founder of ResApp Health Ltd (ASX.RAP), Imugene Ltd (ASX:IMU) and Oncosil Ltd (ASX.OSL). Formerly Director of Alcidion (ASX: ALC) and Chairman of Ausbiotech (WA)



Matt Liddelow, MPharm
MD + CEO

14+ years experience commercialising medical devices and pharmaceuticals for multi-national companies including AstraZeneca



Anton Uvarov, PhD

EXECUTIVE DIRECTOR

Founding director of Actinogen Medical (ASX:ACW) an advanced Alzheimer's biotechnology company. Former Equities Analyst with Citigroup, US



Stephen Quantrill, MBA
NON-EXECUTIVE
DIRECTOR

20 years' experience in corporate advisory and company directorship, Executive Chairman of McRae Investments

TREATMENT MARKETS WITH UNMET NEED



ALZHEIMER'S DISEASE

48M people globally
have dementia
70% of dementias
Alzheimer's disease
US \$818B global
economic burden
US\$5B drug sales pa



OPTIC NERVE CONDITIONS

5% of population suffer vision loss due to damaged optic nerve 60M people affected by Glaucoma US\$3B sales pa



LEAD CANDIDATE: EMTINB



NOVEL

- Modeled on Metallothionein (MT-II) a well known neuroprotective and neurogenerative compound, with EmtinB showing superior drug properties
- Binds LRP-1 receptors novel Mechanism of Action (MOA)
- Stops cell death & stimulates regeneration



VALIDATED

- Preclinical in vitro models successfully repeated
- Animal models demonstrated efficacy and unique properties

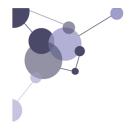


MULTIPLE INDICATIONS

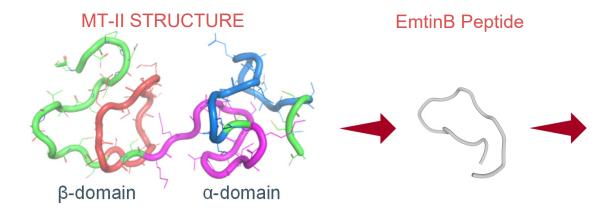
- MOA: LRP-1 receptor ubiquitous
- Not directly targeting a process of disease



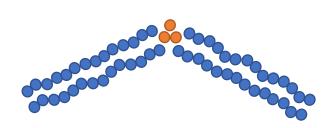
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EVOLUTION OF EMTINB



EmtinB Peptide Dendrimer



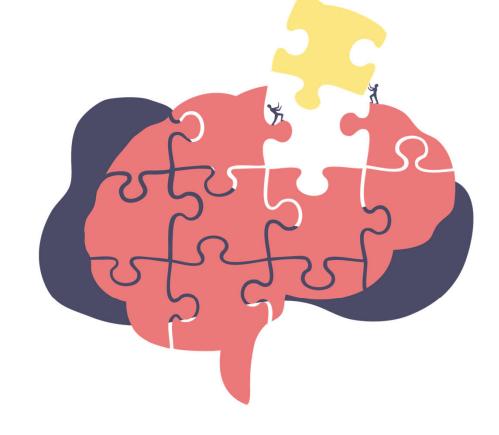
- 61 amino acid lengthBinds divalent metal ions
- Difficult to manufacture

- 14 amino acid length
- Isolated from the β -domain of MT-II protein
- Synthesised as a tetrameric dendrimer
- Increased potency and stability

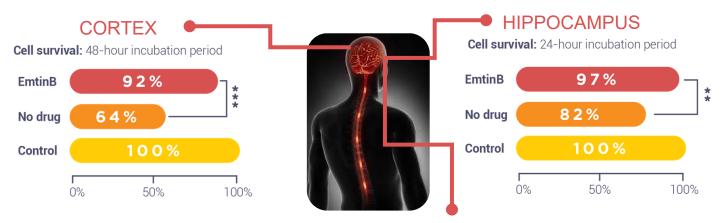


PRECLINICAL DATA

Consistent pro-survival and regeneration effect in multiple neurodegeneration models

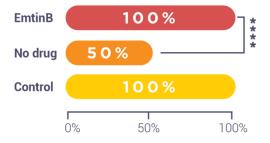


Increases survival of damaged neurons in various regions of **c**entral **n**ervous **s**ystem



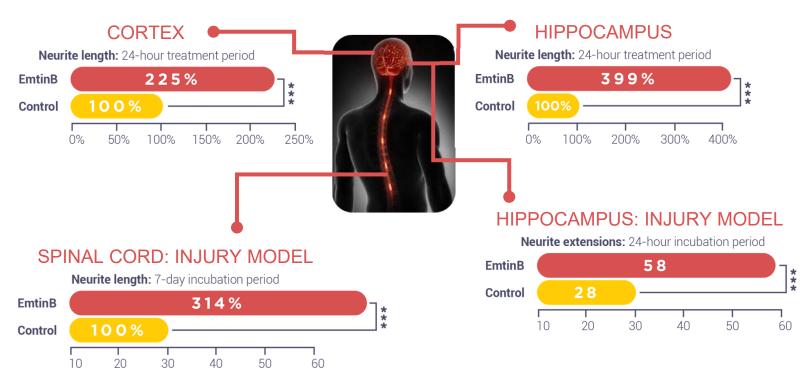
HIPPOCAMPUS: ALZHEIMER'S MODEL

Cell survival: 24-hour incubation period





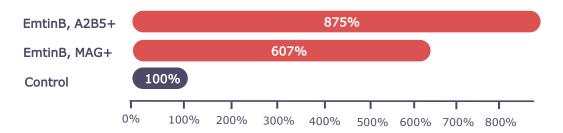
Increases axonal regeneration in various regions of central nervous system

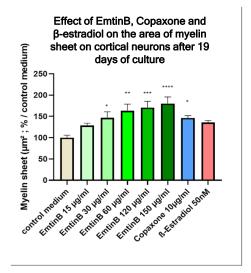




Preclinical functional studies

Myelination: Increased the number of oligodendrocytes





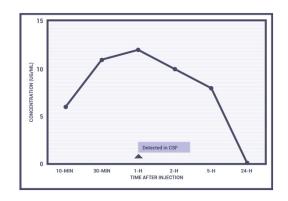


MULTIPLE SCLEROSIS MODEL

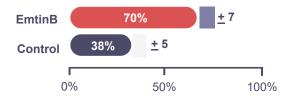
- Oligodendrocytes are support cells that create the myelin sheath that insulate axons; demyelination results in neurological conditions such as MS
- Increased the number of oligodendrocyte precursor cells (OPCs; A2B5+) by ~7x (+607% vs control p<0.001) and mature oligodendrocytes (MAG+) by ~10x (+875% vs control p<0.001)
- Increased myelin >30% (150ug/ml EmtinB) and >25% (120ug/ml EmtinB) vs marketed MS drug Copaxone®
- Significantly increased cell survival at concentrations 120μg/ml (p<0.001) and 150μg/ml (p<0.0001); Copaxone® had no effect
- Significantly increased axonal regeneration at a concentration of 150µg/ml (p<0.05); Copaxone® had no effect

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Preclinical functional studies



Cognition: treatment for 48 days



ALZHEIMER'S ANIMAL MODEL

- Crosses the blood brain barrier within 1-hour of being administered
- Plasma profile: detected over 24-hours
- Slowed progression of Alzheimer's disease (memory impairment) by >80% in Alzheimer's animal model
- Efficacy established at 5mg/kg per day administered via subcutaneous injection



PRECLINICAL DATA

Ophthalmology



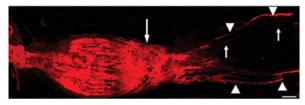
SUPPORTING OCULAR DATA

Regenerating the optic nerve

No Treatment



Treatment



RAT TRANSECTION MODEL

EmtinB precursor compound (metallothionein-II):

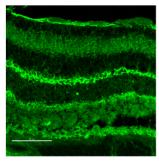
- Stimulated regeneration of the optic nerve by up to 1000um (>250% vs non-treated)
- Axonal regeneration was evident well beyond the transection site



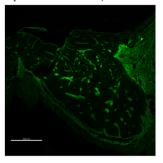
EMTINB OCULAR DATA

Preclinical tissue penetration

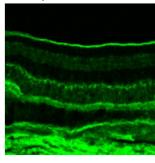
Retina, 6-hours



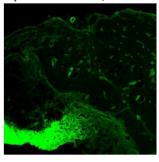
Optic nerve head, 6-hours



Retina, 9-hours



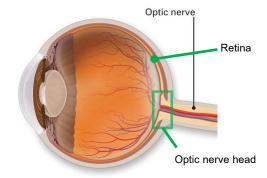
Optic nerve head, 9-hours



NeuroScientific BIOPHARMACEUTICALS

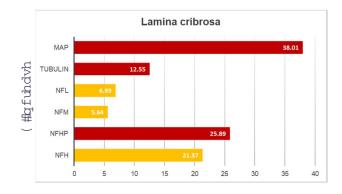
OCULAR TISSUE PENETRATION IN RABBITS

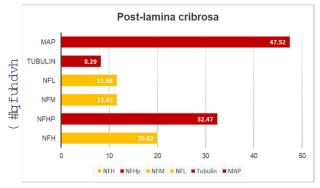
- Significant concentrations of EmtinB (fluoro-labelled) detected at 3-h, 6-h, and 9-h after single dose
- EmtinB passed through the ocular membranes to the back of eye, indicating good potential for alternative delivery method



EMTINB OCULAR DATA

Neuroprotection and regeneration of the optic nerve

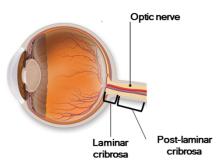




NeuroScientific BIOPHARMACEUTICALS

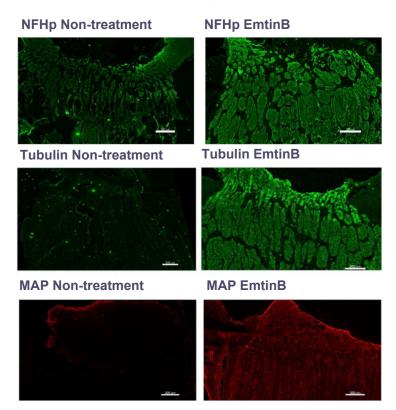
GLAUCOMA PIG MODEL

- EmtinB demonstrated neuroprotection in glaucoma IOP pig model
- High intraocular pressure pig model is the closest experiment to replicate severe human glaucoma pathology; positive results in this model indicate disease modifying potential of EmtinB
- EmtinB treatment showed statistically significant positive increases (in red) in the expression levels of all neurofilaments and cytoskeleton components



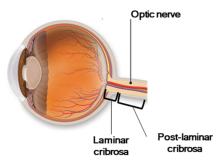
EMTINB OCULAR DATA

Neuroprotection and regeneration of the optic nerve



GLAUCOMA PIG MODEL

- Disruption of cytoskeleton proteins and neurofilaments in neuronal tissue are used as markers for axonal damage
- EmtinB treatment significantly increased **NFHp**, **Tubulin** and **MAP** biomarkers of the optic nerve
- Indicates significant protection of the optic nerve during severe glaucoma-induced damage



PARTNERSHIPS & COLLABORATIONS

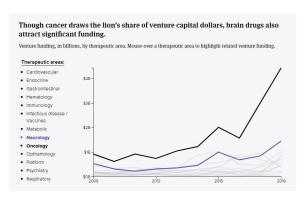
Research & Manufacturing Partners

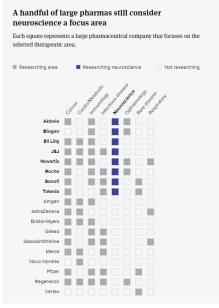


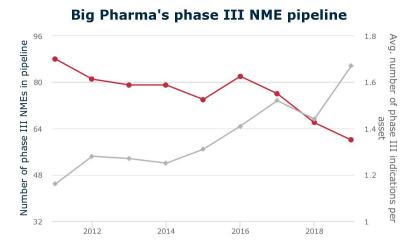


BUSINESS MODEL - OUTLICENSING AT CLINICAL STAGE

- Neuroscience and Neurodegenerative Diseases hold the most promise for **medical breakthroughs** in the next decade
- Drug candidates with multiple treatment indications, such as EmtinB, are in-demand assets for Big Pharma



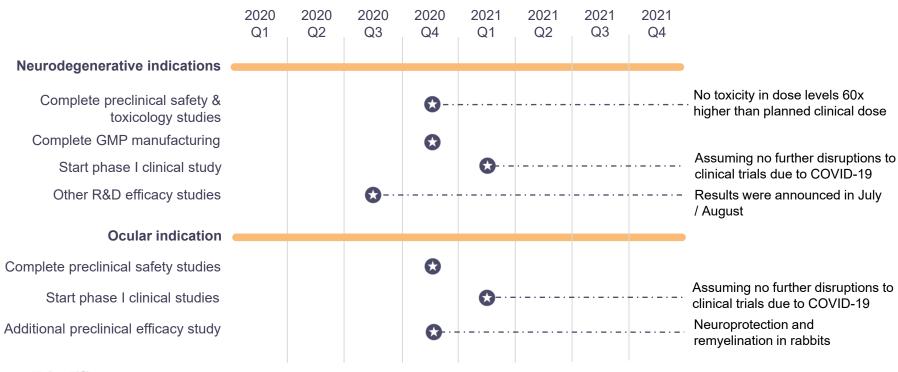




- Number of Phase III drugs in pipeline
- Avg indication per new drug



EMTINB DEVELOPMENT SCHEDULE



NeuroScientific BIOPHARMACEUTICALS

Indicative schedule only and subject to change

SUMMARY OVERVIEW

NEUROSCIENTIFIC BIOPHARMACEUTICALS LTD (ASX: NSB)

- Drug development company with an advanced preclinical lead drug candidate called EmtinB; funded through to completion of Phase I in primary treatment indication
- EmtinB targets LRP-1 expressed on the outside of neurons and neuroglia; MOA has potential for multiple treatment indications (pipeline in a product) which increases potential for licensing opportunities
- EmtinB preclinical data has demonstrated:
 - Neuroprotection in cell survival models >90%
 - Significant axonal regeneration (including significant results in spinal injury rat model)
 - Proliferation of myelin forming cells (oligodendrocytes) and myelin formation in Multiple sclerosis model
 - Slowed cognitive decline in Alzheimer's disease animal model
 - Slowed glaucoma-induced damage to the optic nerve in animal model
- Strategic research partners with strong track records in drug development
- Transitioning EmtinB to clinical development in 2021



NOVEL DRUG THERAPIES FOR NEURODEGENERATIVE CONDITIONS



