

ASX ANNOUNCEMENT

NeuroScientific to Present at TechKnow Invest Roadshow Webinar

Perth, Australia; 20 May 2020. NeuroScientific Biopharmaceuticals Ltd ASX: NSB ("NeuroScientific" or "the Company") is pleased to advise shareholders and investors that NeuroScientific CEO and Managing Director, Matthew Liddelow, will present at the Techknow Invest Roadshow webinar to be held at 2pm AEST on Thursday, the 21st of May.

Attendees will be required to register in advance for the webinar – using this link: https://us02web.zoom.us/webinar/register/WN_XqG-xbrBTxKl4ur167PMag

After registering you will receive an email with all login details (a website link or phone dial in details).

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

END

Announcement authorised by the Board of Directors of NeuroScientific Biopharmaceuticals

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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
- Pipeline of potential therapeutic candidates with strong IP protection

CAPITAL STRUCTURE

ASX code

NSB

Shares on issue

78.38M

Price (close 19/05/2020)

\$0.185

Market cap

\$14M

McRae Investments Pty Ltd

18,841,670 (24%)



COMPANY HIGHLIGHTS



Advanced preclinical lead drug candidate with multiple treatment indications



Strong strategic partnerships geared towards success



Validated strategy and business model



Experienced board and management team



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

13+ 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

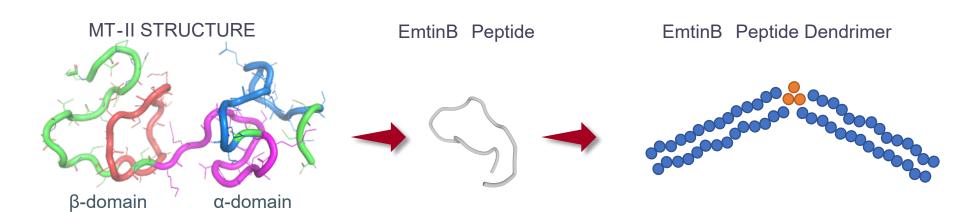


MULTIPLE INDICATIONS

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



EVOLUTION OF EMTINB



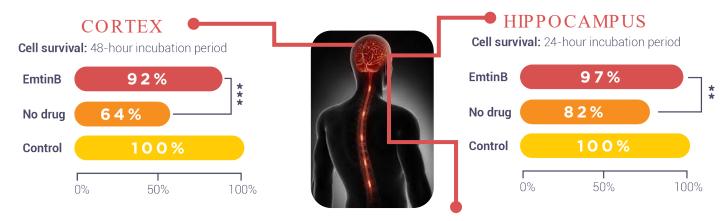
- 61 amino acid length
- Binds divalent metal ions
- Difficult to manufacture

- 14 amino acid length
- Isolated from the β-domain of MT-II protein

- Synthesised as a tetrameric dendrimer
- Increased potency and stability

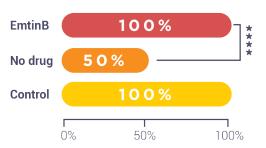


Preclinical survival



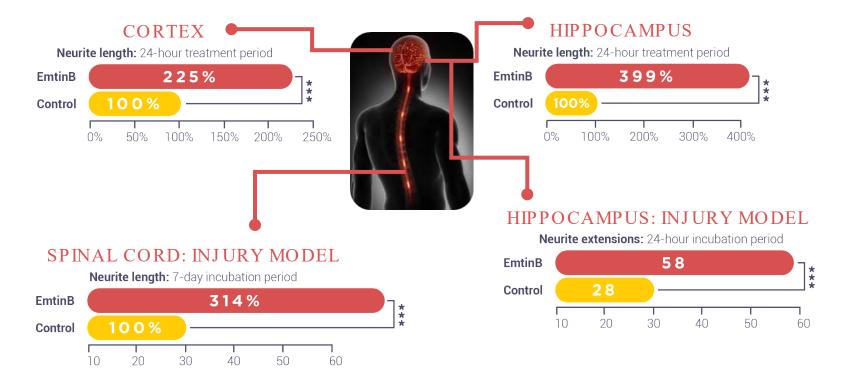
HIPPOCAMPUS: ALZHEIMER'S MODEL

Cell survival: 24-hour incubation period





Preclinical regeneration





Spinal cord injury model

- Primary neurons isolated from spinal cord tissue of adult rats
- EmtinB (30µg/mL) neuron regeneration >300% vs. untreated control
- EmtinB (30µg/mL) neuron regeneration >2x Copaxon®; marketed drug for Multiple Sclerosis
- EmtinB significantly increased synaptic connections (18) vs. control (1.8) and Copaxon® (12)
- EmtinB stimulated longest axon ever recorded in this model

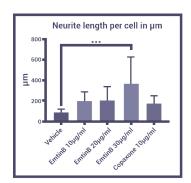


Figure 1: Mean neurite length per cell

***p<0.001 vs. vehicle using one-way ANOVA followed by Tukey test

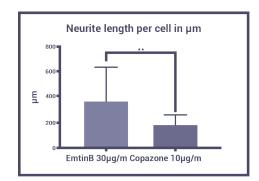
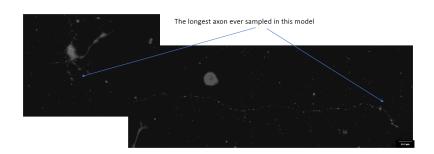


Figure 2: Mean neurite length per cell. EmtinB (30 μg/ml) vs. Copaxone (10 μg/ml).

***p<0.01 vs. Copaxone using T-test.



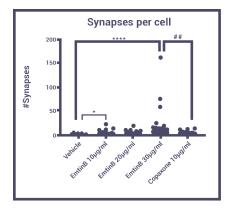


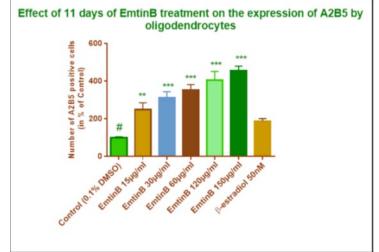
Figure 3: Mean number of synapses per cell

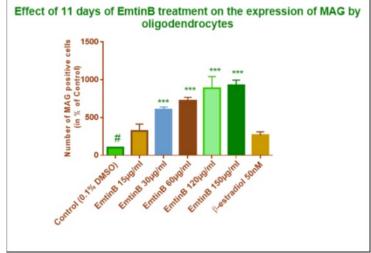
*p<0.05 vs. Vehicle using Kruskal-Wallis test. ##p<0.01 vs. Copaxone 10 µg/ml using Kruskal-Wallis test. ****p<0.0001 vs. Vehicle using Kruskal-Wallis test.



Multiple sclerosis remyelination model

- EmtinB had a significant positive effect on the proliferation and differentiation of oligodendrocytes, indicating a very significant effect on remyelination
- EmtinB significantly increased the number of oligodendrocyte precursor cells (OPCs) by ~7x (+607% vs control p<0.001) after 5 days and ~4.5x (+357% vs control p<0.001) after 11 days
- EmtinB significantly increased the number of mature oligodendrocytes by ~10x (+875% vs control p<0.001) after 5 days and ~9x (+826% vs control p<0.001) after 11 days

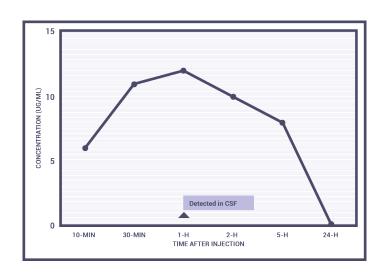






Preclinical studies: animal models

Crosses the blood brain barrier



 Slowed progression of disease (memory impairment) by >80% in Alzheimer's animal model

Cognition: treatment for 48 days



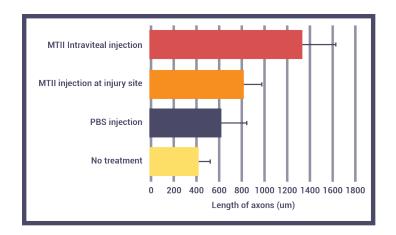


SUPPORTING SCIENTIFIC DATA

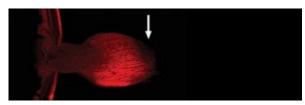
Regenerating the optic nerve

- Precursor to EmtinB (MT-II) stimulated regenerative growth of optic
- Promotes axonal regeneration through an inhibitory environment in vivo

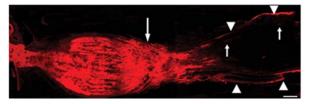
Optic Nerve Growth



No Treatment



Treatment

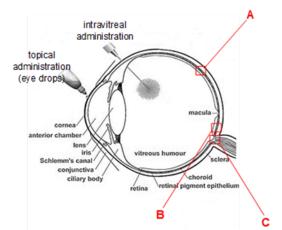


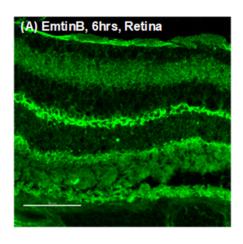


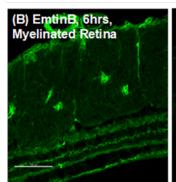
EMTINB OCULAR DATA

Neuroprotection and regeneration of the optic nerve

- Labeled EmtinB significantly penetrated the retina and optic nerve of the rabbit eye with no side effects
- Significant concentrations of EmtinB detected at 3-h, 6-h, and 9-h
- EmtinB passed through the ocular membranes to the back of eye, indicating good potential for alternative delivery method









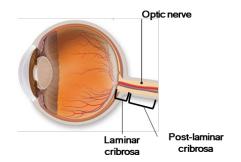


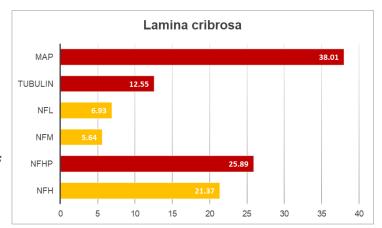


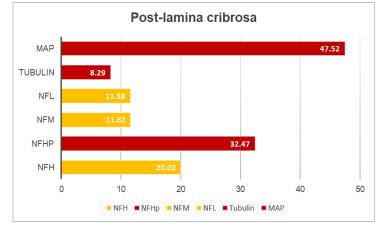
EMTINB OCULAR DATA

Neuroprotection and regeneration of the optic nerve

- EmtinB demonstrated neuroprotection in glaucoma 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 positive increases in the expression levels of all neurofilaments and cytoskeleton components

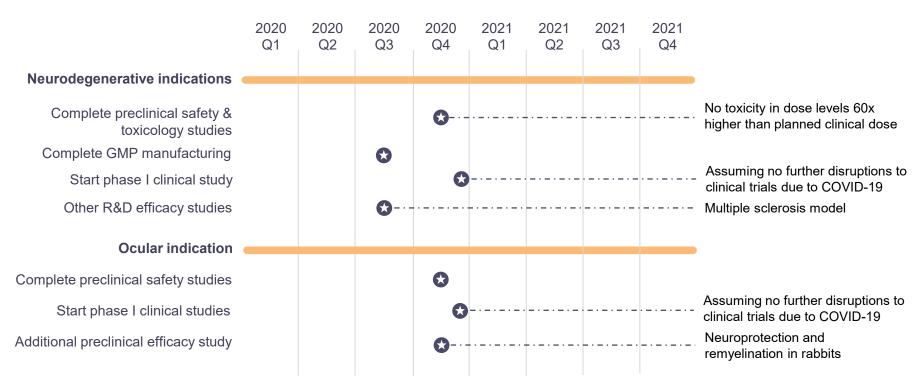








EMTINB DEVELOPMENT SCHEDULE





STRATEGIC PARTNERSHIPS

Research Partners









Manufacturing Partners



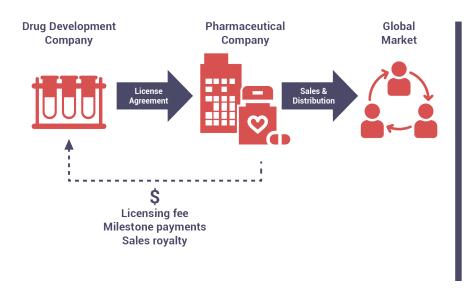


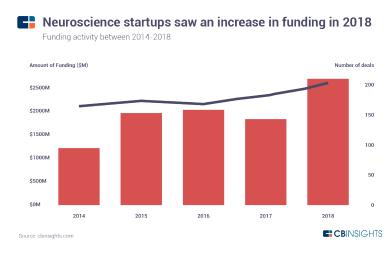




BUSINESS MODEL

- Company will seek to out-license EmtinB for late-stage clinical development
- Potential for multiple treatment indications will be attractive to "big pharma"







NOVEL DRUG THERAPIES FOR NEURODEGENERATIVE CONDITIONS



