ASX ANNOUNCEMENT

NEUROSCIENFITIC BIOPHARMACEUTICALS TO PRESENT AT BIO INVESTOR FORUM DIGITAL 2020 CONFERENCE

Perth, Australia; 13 October 2020. NeuroScientific Biopharmaceuticals Ltd ASX: NSB ("NeuroScientific" or "the Company"), a drug development company working with novel peptide-based technology to develop therapeutic drug candidates for the treatment of neurodegenerative conditions, is pleased to announce that CEO and Managing Director, Matt Liddelow, will present at the BIO Investor Forum Digital 2020 Conference to be held virtually from 13 – 15 October 2020.

The BIO Investor Forum is an international investor conference that has become the premier event where biotech innovators can find investors and strategic partners to advance their company to the next stage in their business life cycle.

The presentation will be available on demand during the conference and a copy of the presentation will follow 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

END

Announcement authorised by the Board of Directors of NeuroScientific Biopharmaceuticals

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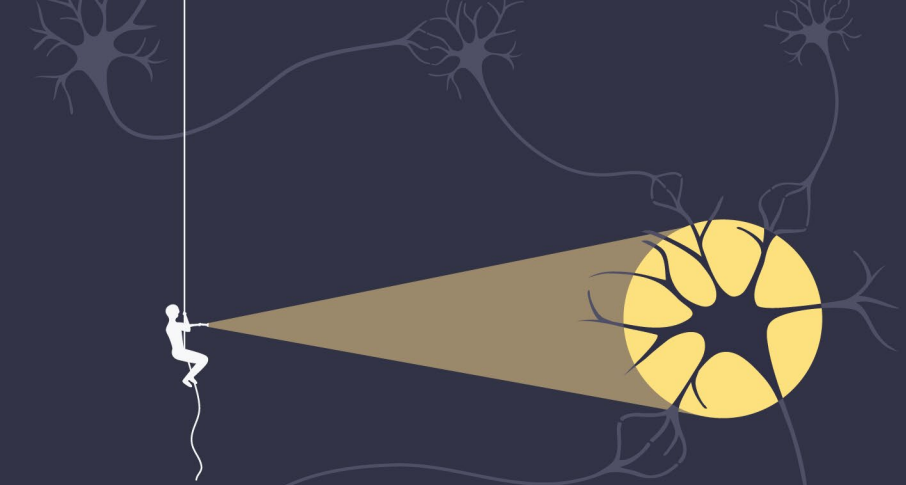

NOVEL DRUG THERAPIES FOR NEURODEGENERATIVE CONDITIONS

BIO Investor Forum 2020

Matt Liddelow, MPharm
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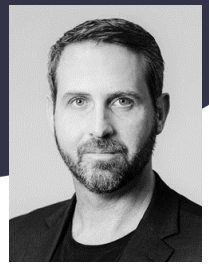

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DISCLAIMER

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.

NEUROSCIENTIFIC BIOPHARMACEUTICALS LTD

NeuroScientific Biopharmaceuticals Ltd (ASX: NSB) is developing peptide-based compounds that prevent neurodegeneration and stimulate neuroregeneration

Targeted peptides with broad therapeutic potential

NEUROLOGY
Alzheimer's disease, Multiple sclerosis, spinal cord injury

OPHTHALMOLOGY
Glaucoma, optic nerve atrophy, optic neuropathies

PARTNER / INVESTMENT OPPORTUNITY

NOVEL LEAD COMPOUND

- EmtinB is modelled on human metallothionein (MT-II) – well known pro survival and regenerative protein
- First in-class therapeutic for neurodegenerative conditions
- Inhibits cell death (apoptosis), induces regeneration, mediates neuroinflammation

NOVEL THERAPEUTIC TARGET

- Low-density lipoprotein receptor related protein (LRP)-1/2 is a novel therapeutic target for neurodegenerative conditions
- Highly expressed in CNS and PNS
- Multifunctional receptor with (1) endocytic activity, and (2) signal transduction

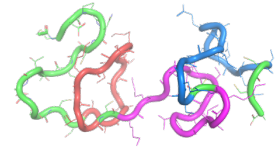
VALIDATED SCIENCE

- Large body of published literature for therapeutic potential of MT and LRP
- EmtinB *in vitro* validation in promoting survival and regeneration of hippocampal, dopaminergic, and cortical neurons
- EmtinB *in vivo* validation in a number of animal models

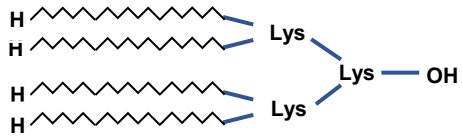
POTENTIAL FOR MULTIPLE INDICATIONS

- Novel MOA; LRP-1 upregulated in numerous diseases; Alzheimer's disease, Multiple sclerosis, proliferative retinopathy
- EmtinB "pipeline in product"

EMTINB: LRP-1 AGONIST THAT PROMOTES NEURONAL SURVIVAL & REGENERATION



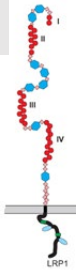
Metallothionein-II



EmtinB

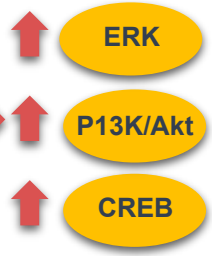
- Modelled on β-domain of MT-II
- Monomer peptides linked via poly-lysine backbone
- Structure increase stability and potency

Binding activity



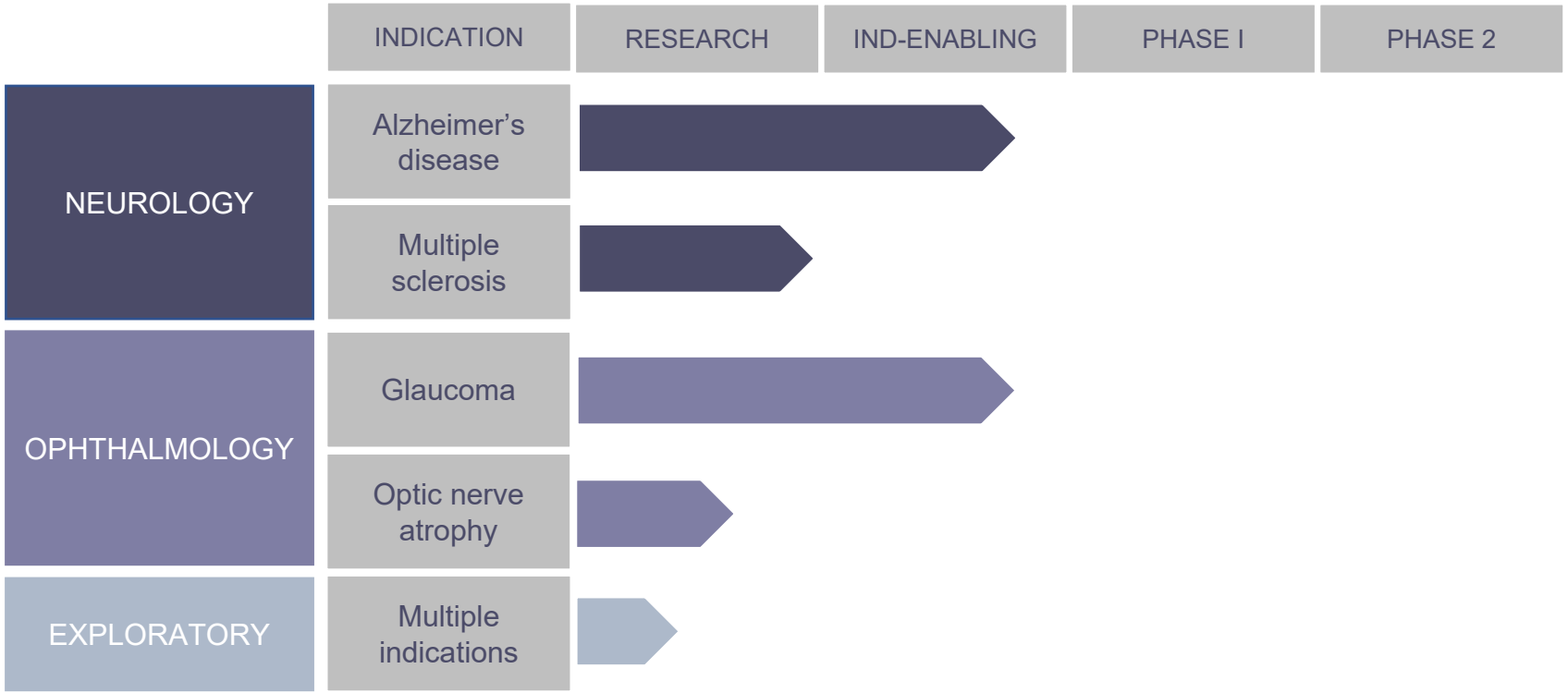
LRP-1

Intracellular signalling



- Neuronal differentiation
- Neuronal survival
- Axonal regeneration
- Neuronal plasticity

EMTINB – PIPELINE IN A PRODUCT



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NEUROLOGY

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NEURODEGENERATIVE CONDITIONS SIGNIFICANTLY CONTRIBUTE TO GLOBAL BURDEN OF DISEASE

Neurodegeneration involves the progressive loss of neurons, the building blocks of the nervous system

DEMENTIA & ALZHEIMER'S DISEASE

50M people globally have dementia

70% dementias Alzheimer's disease

Global prevalence driven by aging population

US$818B global economic burden

MULTIPLE SCLEROSIS

2.5M global prevalence

20-50y age range of diagnosis

Progressive onset with increasing neurological disability

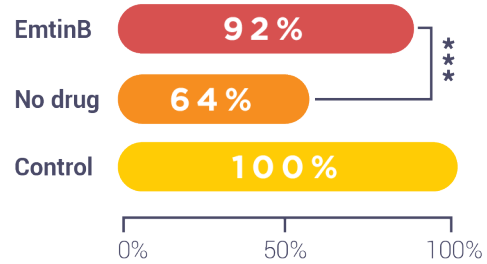
USA has one of highest rates of MS

EMTINB PROMOTES NEURONAL SURVIVAL

Increases *in vitro* survival of damaged neurons from different regions of CNS

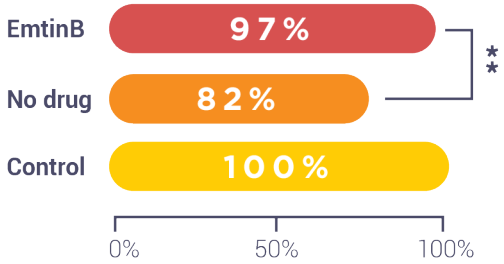
CORTEX

Cell survival: 48-hour incubation period



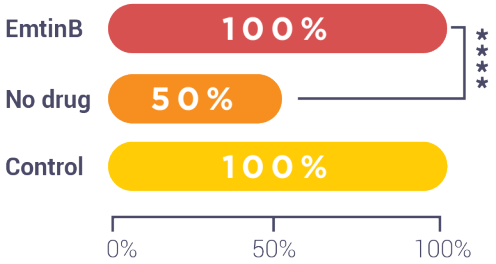
HIPPOCAMPUS

Cell survival: 24-hour incubation period



HIPPOCAMPUS: ALZHEIMER'S MODEL

Cell survival: 24-hour incubation period

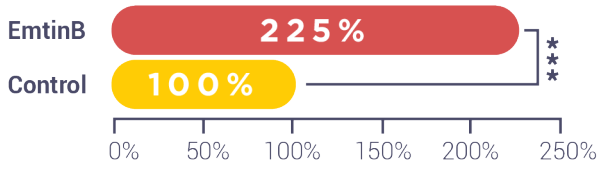


EMTINB PROMOTES NEURONAL REGENERATION

Increases *in vitro* axonal regeneration in neurons from different regions of CNS

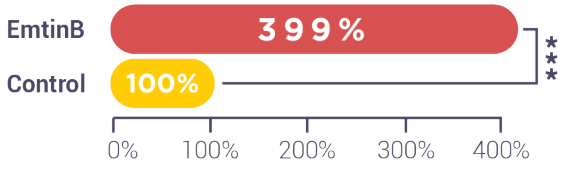
CORTEX

Neurite length: 24-hour treatment period



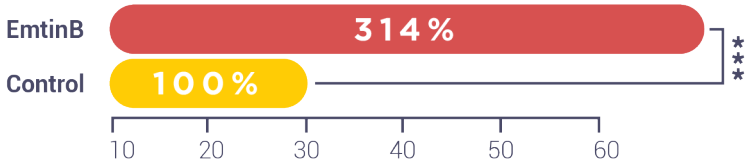
HIPPOCAMPUS

Neurite length: 24-hour treatment period



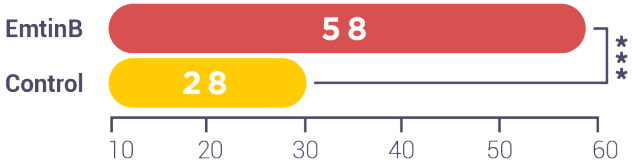
SPINAL CORD: INJURY MODEL

Neurite length: 7-day incubation period



HIPPOCAMPUS: INJURY MODEL

Neurite extensions: 24-hour incubation period



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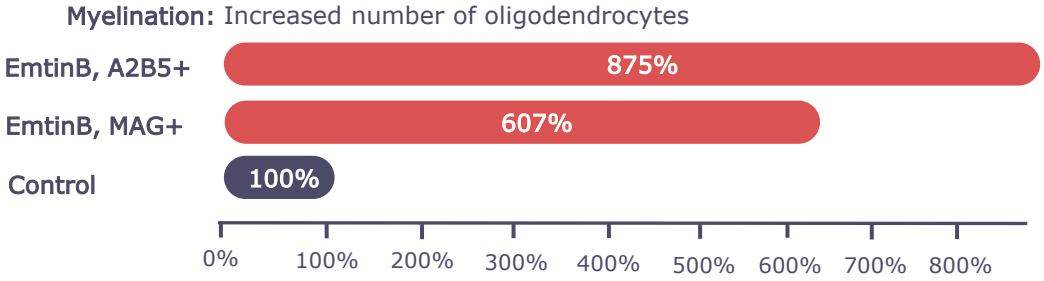
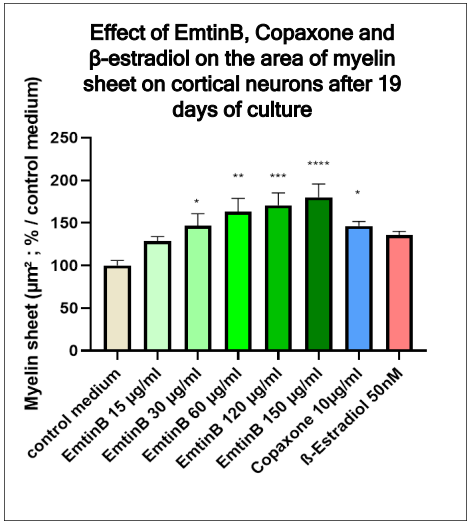
EMTINB PROMOTES REMYELINATION IN MULTIPLE SCLEROSIS MODEL





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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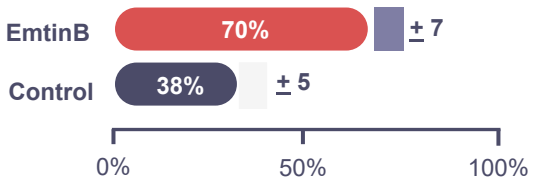
EMTINB SLOWED COGNITIVE DECLINE IN ALZHEIMERS MODEL

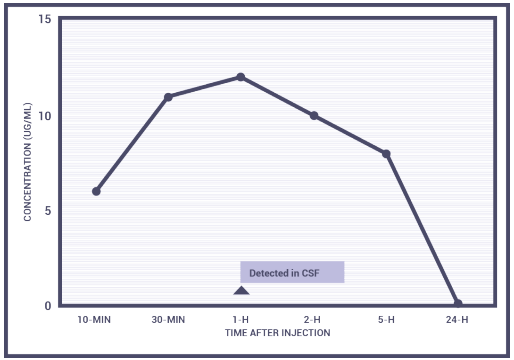
Significantly slowed progression of AD in gold standard mouse model (APPswe/PS1)

AD MOUSE MODEL

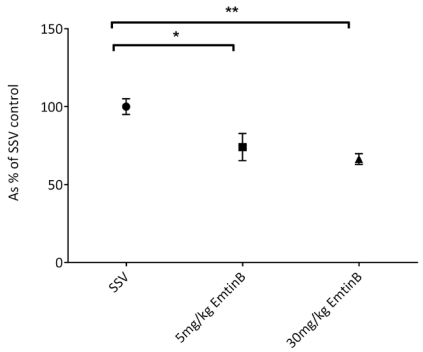
Cognition: treatment for 48 days



PLASMA PROFILE



EFFECT ON ASTROGLIOSIS



ALZHEIMER'S ANIMAL MODEL

- 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
- Crosses the blood brain barrier within 1-hour of being administered
- Plasma profile: detected over 24-hours
- Significantly decreased GFAP; modulating inflammatory response by down – regulating astrogliosis

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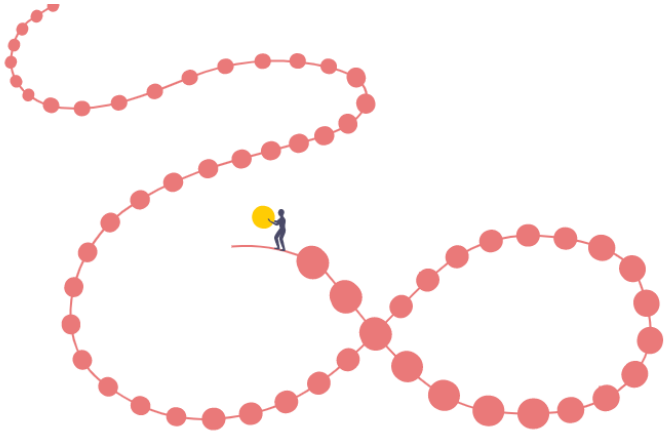
OPHTHALAMOLOGY



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>5% OF GLOBAL POPULATION SUFFER VISION LOSS DUE TO DAMAGED OPTIC NERVE

Optic nerve transmits visual information from the eye to the brain and is composed of 1.7 million nerve fibres

GLAUCOMA

76M global prevalence

2nd leading cause of blindness

Irreversible damage to the optic nerve results in permanent vision loss

OPTIC NEURITIS

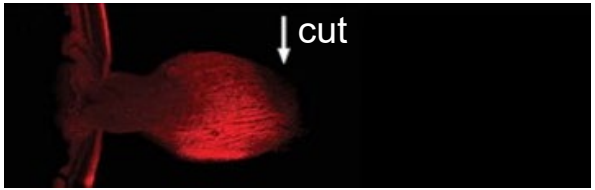
10M global prevalence

50% MS patients affected

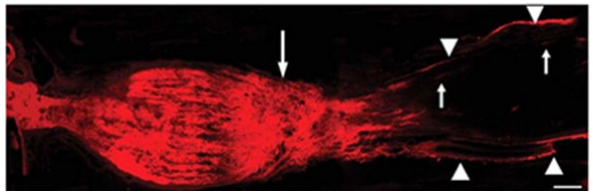
Leads to partial or complete loss of vision

REGENERATING THE OPTIC NERVE

No Treatment



Treatment



RAT TRANSECTION MODEL

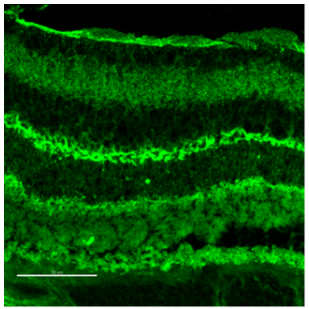
EmtinB precursor compound (MT-II):

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

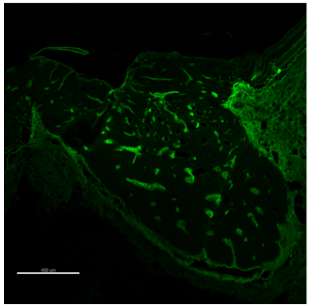
EMTINB OCULAR TISSUE PENETRATION

Intravitreal delivery demonstrated penetration of the retina and optic nerve head with no cytoxicity

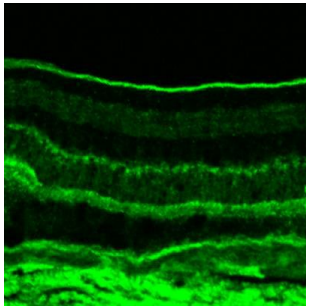
Retina, 6-hours



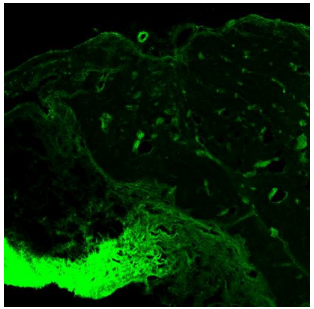
Optic nerve head, 6-hours



Retina, 9-hours

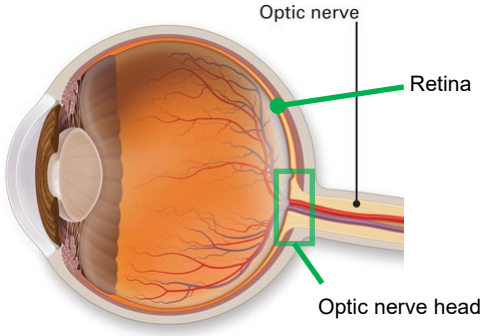


Optic nerve head, 9-hours



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



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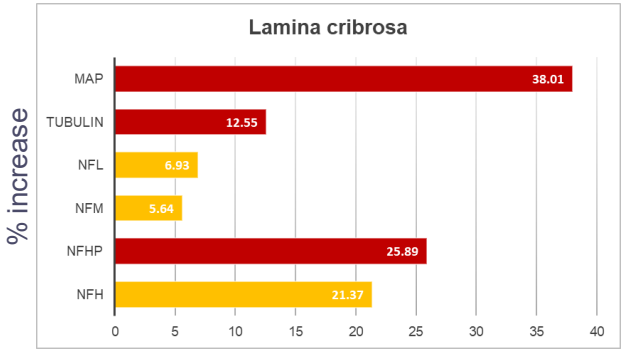
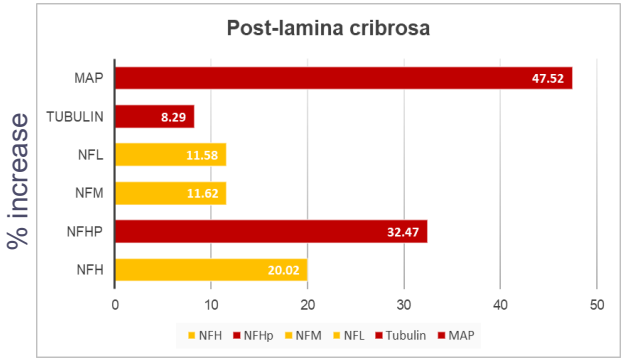
EMTINB IS NEUROPROTECTIVE IN GLAUCOMA

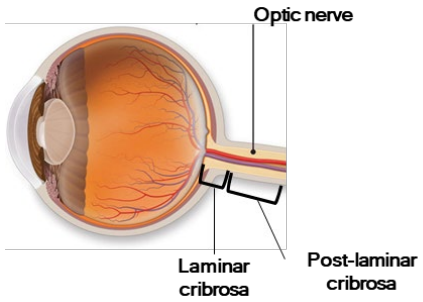
Demonstrated neuroprotection in pig model of IOP glaucoma





GLAUCOMA PIG MODEL

- Increased 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 **neurofilaments** and **cytoskeleton** components



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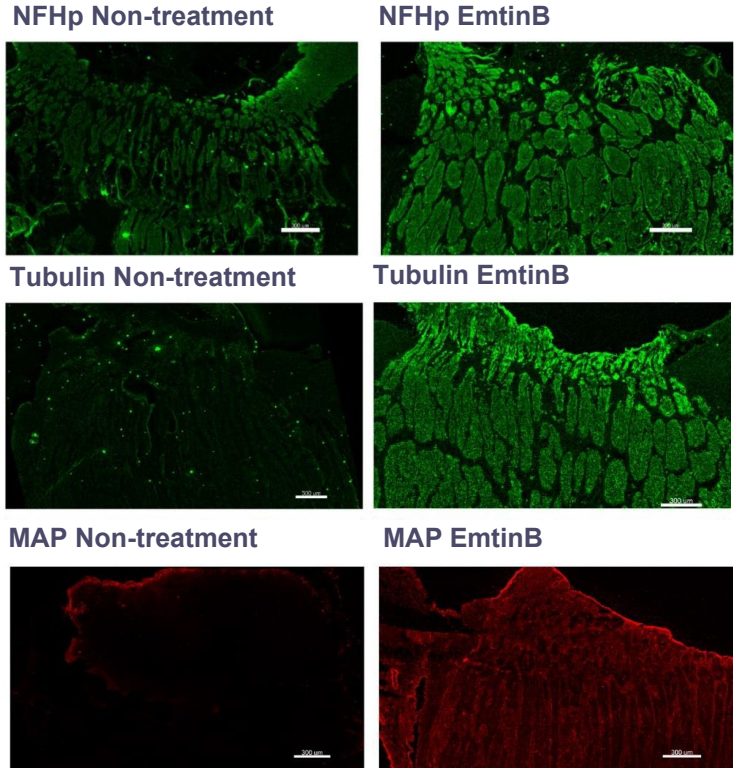
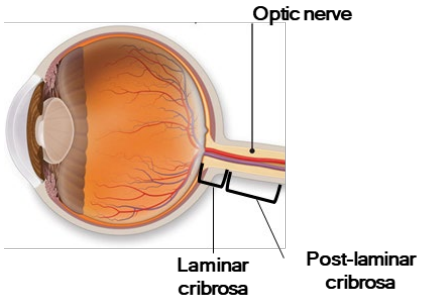


GLAUCOMA PIG MODEL

- 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



FINANCIAL METRICS & MILESTONES

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FINANCIAL METRICS & MILESTONES

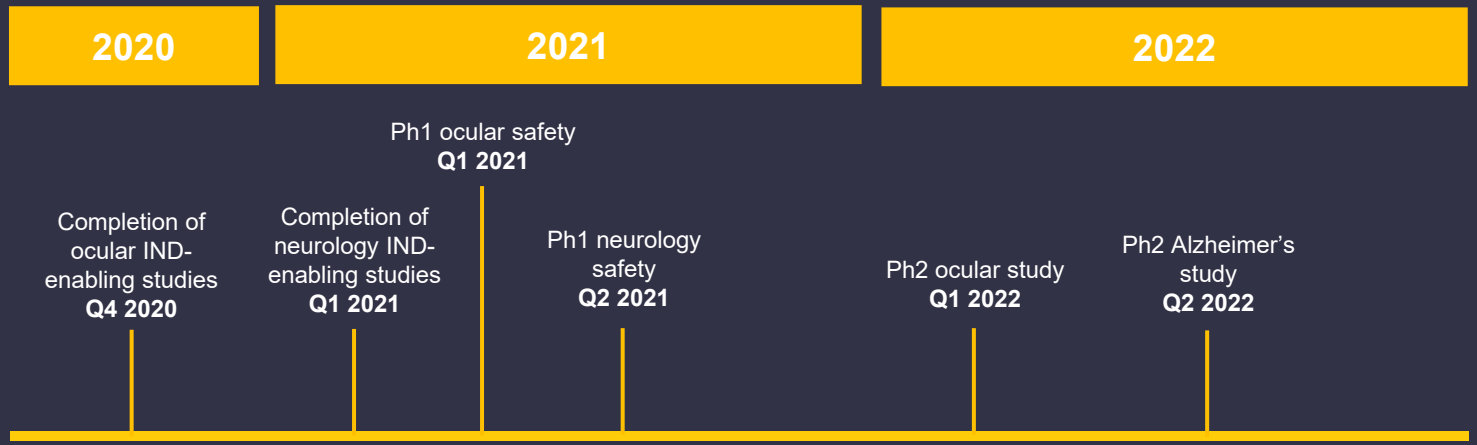
FINANCIALS

- Completed IPO listing on the ASX July 2018 (ASX: NSB)
- >AUS$10 million capital raised since 2016
- Currently funded through to completion of Phase 1 safety and tolerability in primary indication

MILESTONES

- Q4 2020 – Completion of preclinical ocular IND-enabling safety and tox
- Q1 2021 – Completion of preclinical neurology IND-enabling safety and tox
- Q1 2021 – Phase 1 ocular study
- Q2 2021 – Phase 1 safety study to support neurology indications
  - Enable multiple indications

EMTINB DEVELOPMENT PLAN



Please note that while the Company will make every effort to achieve the above milestones within the indicated time frame, these are indicative time frames only and subject to change.

NEUROSCIENTIFIC BIOPHARMACEUTICALS LTD

NeuroScientific Biopharmaceuticals Ltd (ASX: NSB) is developing peptide-based compounds that prevent neurodegeneration and stimulate neuroregeneration

Targeted peptides with broad therapeutic potential

NEUROLOGY
Alzheimer's disease, Multiple sclerosis, spinal cord injury

OPHTHALMOLOGY
Glaucoma, optic nerve atrophy, optic neuropathies

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

- Transitioning EmtinB to clinical development in 2021

FOR MORE INFORMATION:

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