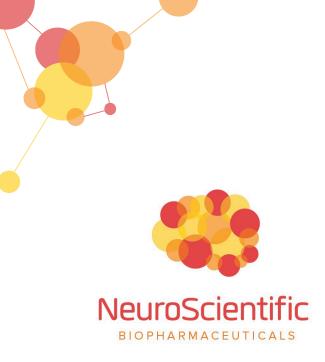


Company Presentation Share Café September 2021





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.

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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.



LEADERSHIP TEAM



Paul Rennie, MBM, MSTC NON-EXECUTIVE CHAIRMAN

Experienced biotechnology executive. Inaugural COO and most recently as Executive VP, New Product Development at Mesoblast (ASX.MSB). Founder and CEO of Paradigm Biopharmaceuticals (ASX.PAR)



Matt Liddelow, Mpharm MD + CEO

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



Dr Anton Uvarov, PhD, MBA **EXECUTIVE DIRECTOR + CSO**

Founding director of Actinogen Medical (ASX.ACW). Former director at Imugene (ASX.IMU) & Dimerix (ASX.DXB). Former Biotechnology Equities Analyst with Citigroup.



Stephen Quantrill,
MBA
NON-EXECUTIVE DIRECTOR

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



Abby Macnish, CFA

Company Secretary & CFO



Dougal Thring, MSc

VP Clinical Development





Head, Neurology & Neurophysiology, SCG Hospital, WA Australia Head, Demyelinating Disease Research, Perron Inst. Australia

Prof. Dao-Yi Yu MD FRANZCO

Head, Physiology & Pharmacology Research, Lions Eye Inst. Australia

Dr Peter Hnik, MD MHSc

Ophthalmologist, President of Cliniscape Consulting, Former Chief Medial Officer of ICO Therapeutics Inc. Canada

Dr Frank Bonner, PhD FBTS

Former Director, Non-clinical R&D, Novartis



Dr Alexandra Heaton, PhD Director of Operations



NEUROSCIENTIFIC BIOPHARMACEUTICALS LTD

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

TARGETED PEPTIDES
WITH BROAD
THERAPEUTIC
APPLICATION

NEUROLOGY

Alzheimer's disease, Multiple sclerosis, spinal cord injury



OPHTHALMOLOGY

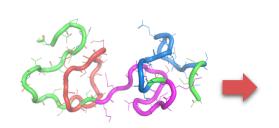
Glaucoma, optic nerve atrophy, optic neuropathies





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

METALLOTHIONEIN-IIA



Expressed post damage in different tissues



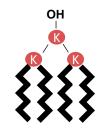








EMTINB

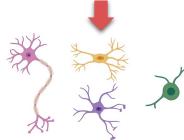


Modelled on β-domain of MTIIA, monomers linked via poly-lysine

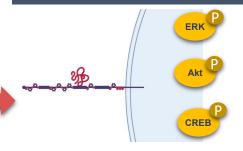
LRP-1 TARGET



Expressed by neurons, glial cells, OPCs



INTRACELLULAR SIGNALLING

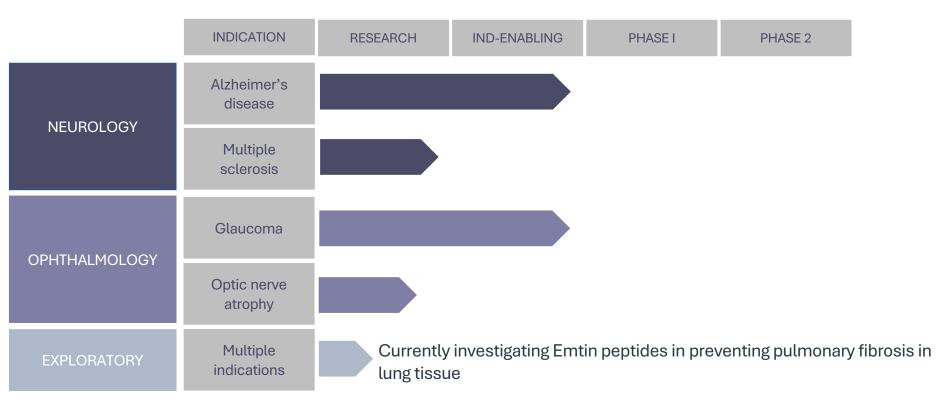


Activation of LRP1 stimulates downstream signalling promoting:

- Neuronal survival
- Axonal regeneration
- Neuronal plasticity
- Modulation of neuroinflammation
- Cell-specific proliferation and differentiation



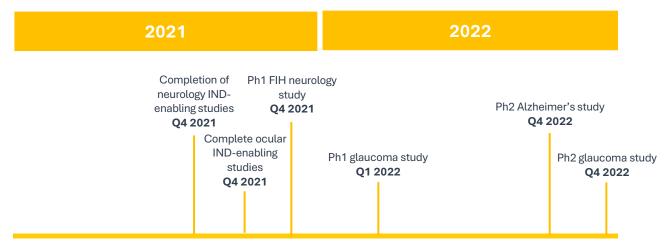
EMTINB™ – PIPELINE IN A PRODUCT







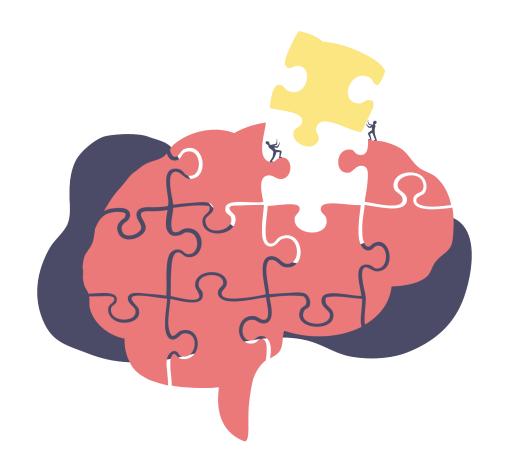
EMTINB™ DEVELOPMENT PLAN





NEUROLOGY







NEURODEGENERATIVE CONDITIONS SIGNIFICANTLY CONTRIBUTE TO GLOBAL BURDEN OF DISEASE

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

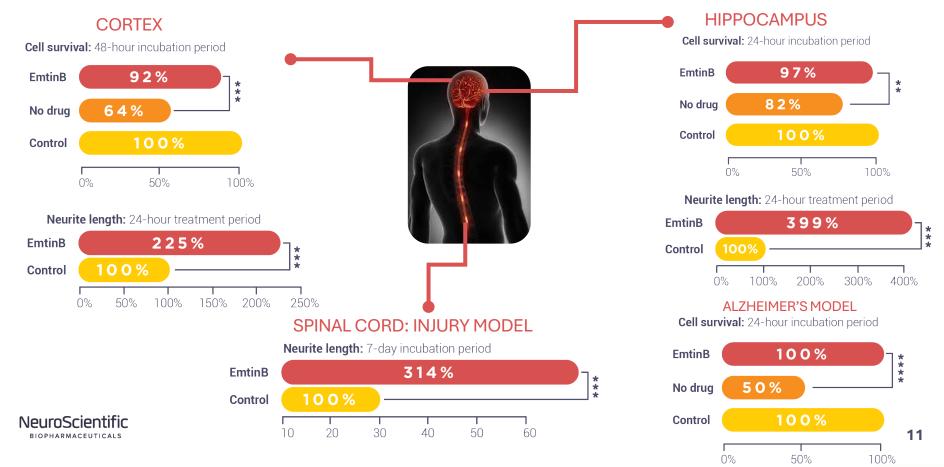
Progressive onset with increasing neurological disability

USA has one of highest rates of MS

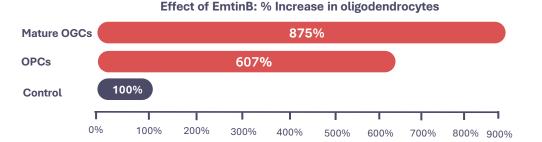


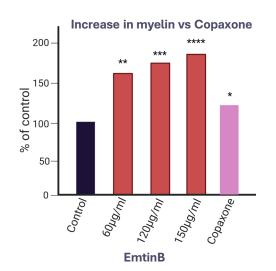
EMTINB™ PROMOTES NEURONAL SURVIVAL & REGENERATION

Increases in vitro survival and regeneration of damaged neurons from different regions of CNS



EMTINB™ PROMOTES REMYELINATION IN MULTIPLE SCLEROSIS MODEL





MULTIPLE SCLEROSIS MODEL

- Increased the number of OPCs (A2B5+) by ~7x (+607% vs control p<0.001) and mature oligodendrocytes (MAG+) by ~10x (+875% vs control p<0.001)
- Increased myelin by >30% vs marketed MS drug Copaxone®
- Significantly increased cell survival and regeneration



EMTINB™ SLOWED COGNITIVE DECLINE IN ALZHEIMERS MODEL

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

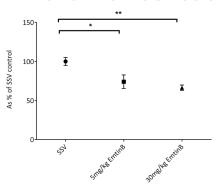
AD MOUSE MODEL

Cognition: treatment for 48 days



- Slowed progression of Alzheimer's disease (memory impairment) by >80%
- Efficacy established at 5mg/kg per day administered via subcutaneous injection

EFFECT ON ASTROGLIOSIS

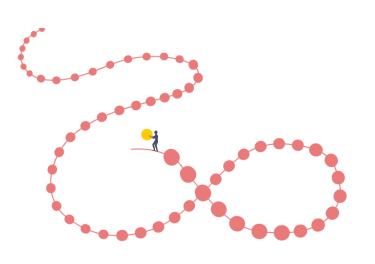


 Significantly decreased GFAP; modulating inflammatory response by down – regulating astrogliosis



OPHTHALAMOLOGY







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

GLAUCOMA

76M global prevalence

2nd leading cause of blindness

Irreversible damage to the optic nerve results in permanent vision loss

Optic nerve

OPTIC NEURITIS

10M global prevalence

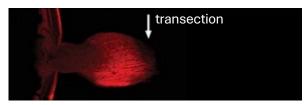
50% MS patients affected

Leads to partial or complete loss of vision

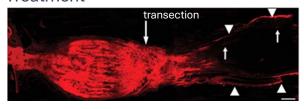


REGENERATING THE OPTIC NERVE

No Treatment



Treatment



RAT TRANSECTION MODEL

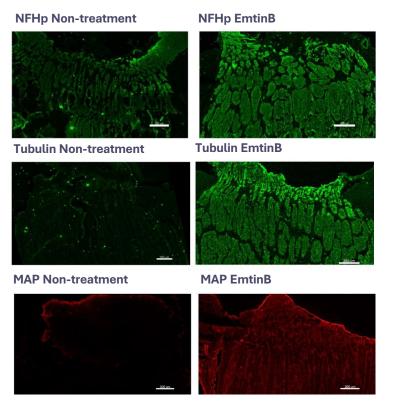
EmtinB precursor compound (MT-II):

- Stimulated regeneration of fully severed optic nerve by up to 1000um (>250% vs non-treated) from 1 dose
- Axonal regeneration was evident well beyond the transection site at 4-weeks post treatment



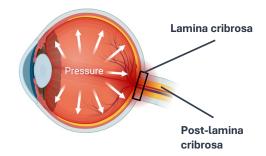
EMTINB™ IS NEUROPROTECTIVE IN GLAUCOMA

Demonstrated neuroprotection in pig model of IOP glaucoma



GLAUCOMA PIG MODEL

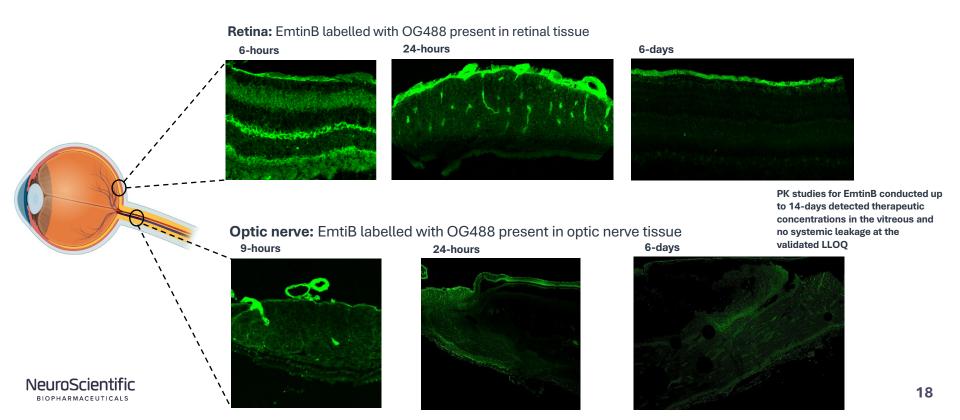
- Increased intraocular pressure pig model replicates severe human glaucoma pathology; positive results in this model indicate disease modifying potential of EmtinB
- Disruption of cytoskeleton proteins and neurofilaments in neuronal tissue are used as markers for axonal damage;
 EmtinB treatment significantly increased NFHp, Tubulin and MAP biomarkers of the optic nerve (lamina and post-lamina cribrosa regions)





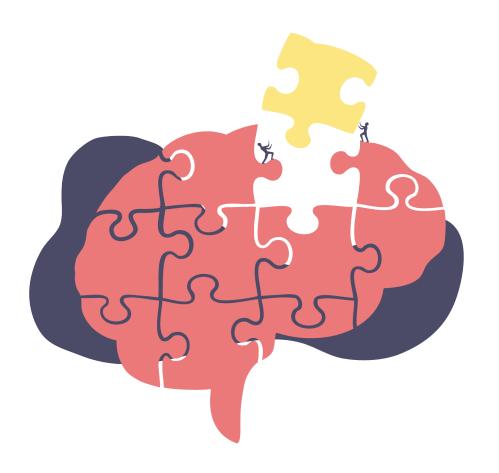
EMTINB™ OCULAR TISSUE PENETRATION

PK and tissue distribution in rabbits administered EmtinB via intravitreal delivery



FINANCIAL METRICS & MILESTONES





FINANCIAL METRICS & MILESTONES

FINANCIALS

- IPO on ASX July 2018 (ASX: NSB)
- ~\$13.5M cash on hand
- Funded through to completion of current Phase I clinical program
- McRae Investments and AlphaSwiss significant shareholders

MILESTONES

- Q4 2021 Completion of neurology IND-enabling safety studies
- Q4 2021 Completion of ocular IND-enabling safety studies
- Q4 2021 Phase I "first-in-human" clinical study
- Q1 2022 Phase I glaucoma study

CAPITAL STRUCTURE

ASX code	NSB
Shares on issue	143M
Price (23/08/2021)	\$0.31
Market cap	\$44M
McRae Investments Pty Ltd	18%
AlphaSwiss Partners	8.0%
Executive Management	5.0%

SUMMARY OVERVIEW

NEUROSCIENTIFIC BIOPHARMACEUTICALS LTD (ASX: NSB)

- Drug development company with an advanced preclinical lead candidate called EmtinB; funded through to completion of Phase I program
- EmtinB targets LRP-1 expressed on the outside of neurons and neuroglia; MOA has potential for multiple treatment indications (pipeline in a product)
- 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 models
 - Slowed glaucoma-induced damage to the optic nerve in animal model
 - Advanced safety program in animals, including non-human primates
- Transitioning EmtinB to clinical development in 2021



FOR MORE INFORMATION:

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