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BIOPHARMACEUTICALS

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Final Data Received from Spinal Cord Injury Model - EmtinB Demonstrated Statistically Significant Improvement over Copaxone®

- **EmtinB showed statistically significant increased potency compared to Copaxon®, the leading marketed drug for Multiple Sclerosis, in spinal cord injury model on both end points (neurite length and number of active synaptic connections)**
- **Company plans to test EmtinB in primary neurons-based models of Parkinson's disease, Huntington's disease, Motor neuron disease, and Multiple Sclerosis. These studies will be conducted in partnership with one of the leading European Contract Research organizations specializing in studying neuro-active compounds**
- **Primary data from CVN mouse model of Alzheimer's Disease and ophthalmology model in rabbits is expected during the month of August**

Perth, Australia; 31 July 2019: Drug development company Neuroscientific Biopharmaceuticals Ltd (ASX:NSB, "NSB" or the "Company") is pleased to announce that it has received a final report from the Company's spinal cord injury model study. Data has now demonstrated that EmtinB provides statistically significant improvement in both neurite outgrowth and synaptic density when compared to the market leading drug Copaxone.

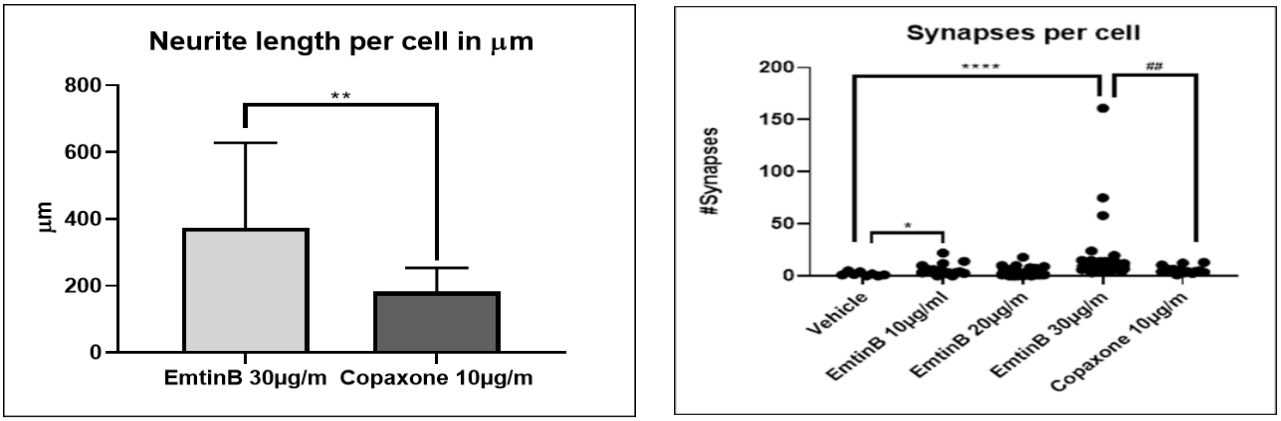

Figure 1. Data showing statistically significant improvement after treatment with EmtinB, comparing to Copaxone in the length of neurites and number of new synapses per cell.

Neurite outgrowth refers to the ability of neuronal cells to project and extend cellular structures, like axons and dendrites, from their body. This process occurs via cytoskeletal reorganization and is an important step during normal neuronal development. Through this process, neurons organize themselves into highly complex functional networks connected synaptically to one another. Modulation of this neurite outgrowth process has been implicated in a wide range of Central Nervous System ("CNS") diseases. Synaptic density is the measure of active connections between neuronal cells. Reduced synaptic density has been found in many brain disorders including Alzheimer's, Multiple Sclerosis and Traumatic Brain Injury.

Given the strength of the data, the Company is now considering a study of EmtinB and its neuro activity in primary neurons-based models of Parkinson's disease, Huntington's disease, Motor Neuron disease, and Multiple Sclerosis. The Company's view is that additional data in these disease sets could position EmtinB as the leading neuro-active compound with a broad pipeline of neurodegenerative treatment indications. Such a diverse therapeutic portfolio of EmtinB would be strategically beneficial during early stage commercial and in-licensing discussions with industry partners that the Company is preparing to start early next calendar year.

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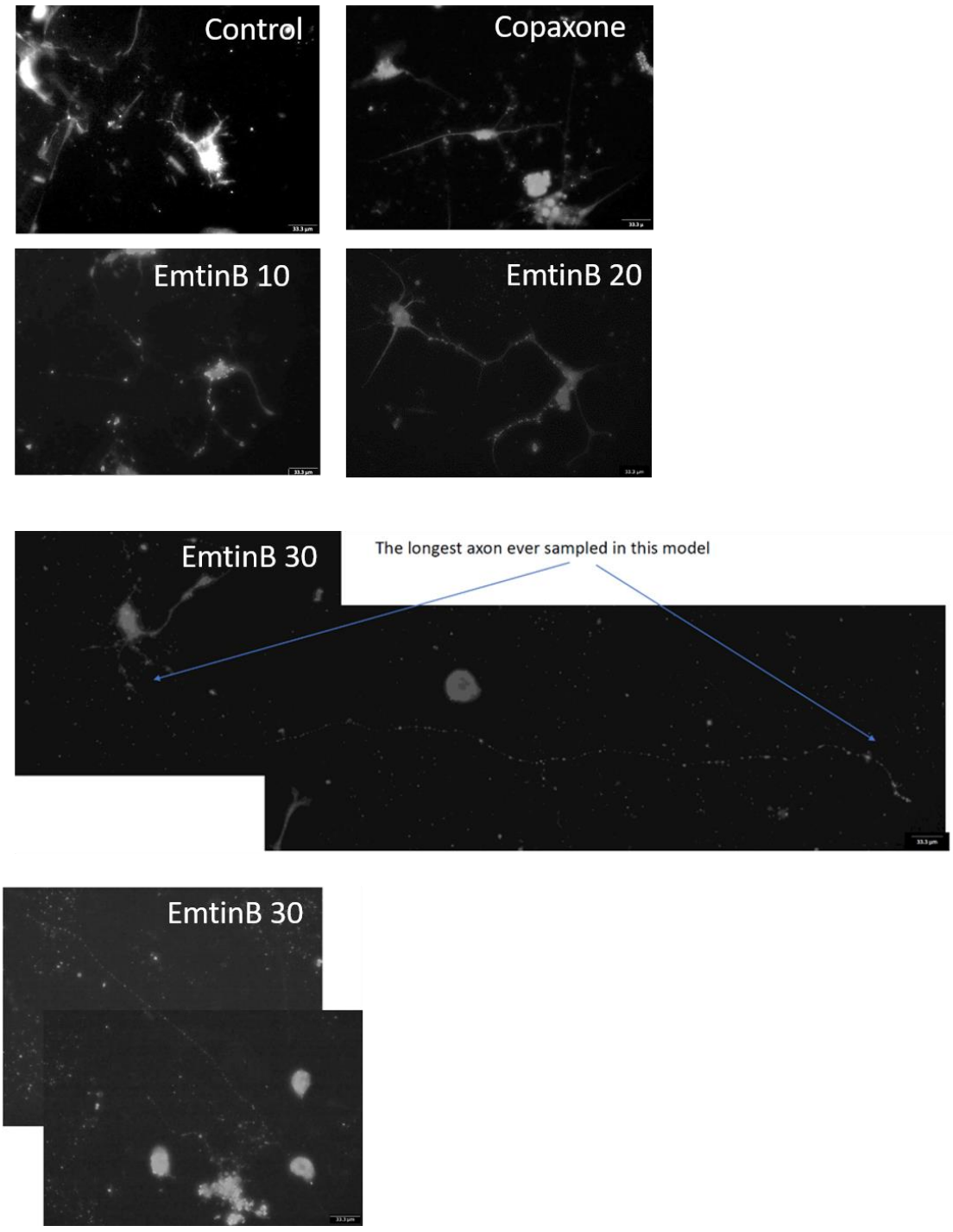

Figure 2. Representative experimental images of neurite growth after treatment with control solution, Copaxone and different doses of EmtinB. The dotted "hairlines" are growing neurites with dots representing active synaptic connections. Each neuron connects to only a small subset of the other neurons in the nervous system, and the selection of the appropriate target neurons is crucial. Once the neurite (i.e. axon in the images above) has reached its target destination, it will connect with other neurons in the target area by forming two types of connections - synapses). The axon can form terminal synapses, which are the synapses at the very ends of axons, and which are shown above at the very tips of the axon branches, or the axon can form "en passant" synapses, which are the bud-like bright spots along the axon.

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Outside of the Company's work in spinal cord injury model, the Company is progressing well to report the data from the CVN Alzheimer's mouse model study that we are conducting with Charles River Laboratories. The CVN Alzheimer's mouse model is considered one of the most comprehensive animal models of Alzheimer's disease, exhibiting both behavioural and pathological hallmarks that closely represent the disease as it occurs in humans.

Current industry focus in Alzheimer's disease has shifted from studying and combating amyloid plaque pathology to finding more objective disease traits such as biomarkers of neuroprotection and neuroinflammation, genetic based markers for risk-scores, neuronal loss and neuronal activity in the brains of affected patients. "CVN models offer these new, more objective, data points that could position EmtinB as one of the most promising drugs in the Alzheimer's space due to the data behind it and the novel approach towards understanding and fighting the disease in line with industry trends. We await this new exciting data and will update shareholders accordingly," said Brian Leedman, Chairman, NeuroScientific Biopharmaceuticals.

The Company's ophthalmology program with Lions Eye Institute is examining safety and efficacy of EmtinB as a treatment for conditions of the eye that result in irreversible blindness due to damage to the optic nerve. The parent protein from which EmtinB is modelled has previously demonstrated both protective and regenerative activity post-treatment of damaged optic nerve cells. We expect initial data on the ability of EmtinB to penetrate through eye tissue into the optic nerve in rabbits to be available in the month of August. Given the already demonstrated potency of EmtinB to regenerate nerves in other models, its ability to penetrate through the eye tissue into the optic nerve would be suggestive of EmtinB as a very promising therapy in serious ophthalmological medical conditions such as Glaucoma.

Glaucoma is an eye condition that causes damage to the nerve that connects the eye to the brain (optic nerve). It is one of the leading causes of blindness globally and affects 300,000 Australians. Current treatment options can help by reducing intraocular pressure, but glaucoma cannot presently be cured and vision loss is irreversible. EmtinB could represent a novel therapeutic treatment for glaucoma which has the potential to stop damage to the optic nerve, arrest the on-set of the disease and reverse vision loss.

End

About NeuroScientific Biopharmaceuticals Ltd
NSB (ASX:NSB) is a drug development company focused on developing peptide-based pharmaceutical drugs for the treatment of neurodegenerative conditions with high unmet medical need. The Company's product portfolio includes EmtinB, a novel therapeutic peptide most advanced as a treatment for Alzheimer's disease; and other related 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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