

NurExone Announces Promising Preclinical Results in Restoring Vision After Optic Nerve Damage

Paves way for additional large indications markets

TORONTO and HAIFA, Israel, Dec. 06, 2024 -- NurExone Biologic Inc. (TSXV: NRX), (OTCQB: NRXBF), (Germany: J90) ("**NurExone**" or the "**Company**"), a biopharmaceutical company developing exosome-based regenerative therapies, has announced significant findings from an expanded preclinical study of the potential of its portfolio drug, ExoPTEN, for repairing optic nerve damage. Conducted in collaboration with the Goldschleger Eye Institute at Sheba Medical Center, consistently ranked one of the top ten hospitals in the world¹, the study builds on previously announced [preliminary results](#)² on June 28, 2024 and strengthens the suggestion of a promising treatment pathway for glaucoma, the leading cause of irreversible blindness globally³.

The Optic Nerve Disorders treatment market is expected to grow from 5.54 (USD Billion) in 2023 to 11.5 (USD Billion) by 2032, at a compound annual growth rate (CAGR) of ~8.46% during the forecast period⁴.

Researchers utilized a rodent model of optic nerve crush (ONC) to simulate the damage associated with conditions like glaucoma. After inducing injury, ExoPTEN was administered via direct injection into the eyes. The study expanded on earlier findings which indicated that eyes treated with ExoPTEN regained nearly normal retinal activity, as evidenced by electrical tests.

Expanded analyses of the study data showed clear recovery of signal transmission in treated eyes compared to untreated controls, which showed no significant response. Additionally, imaging results by optical coherence tomography (OCT) scans indicates and validates that in all of treated eyes (naïve exosome treatment or ExoPTEN treatment) a successful ONC procedure has been performed (Figure 1).

The study also showed that ExoPTEN treatment significantly enhanced the survival of retinal ganglion cells - key neurons responsible for transmitting visual information to the brain. Detailed analysis of retinal flat-mounts confirmed this effect, with treated eyes exhibiting substantially higher counts of these cells compared to untreated or control-treated eyes (Figures 2A and 2B).

Dr. Ifat Sher, the lead investigator from the Goldschleger Eye Institute, commented, "the results from this expanded study are extremely encouraging. ExoPTEN demonstrates potential as a treatment that restores functionality and offers neuroprotection. The study shows clear signal recovery, healthier optic nerve structures and preserved retinal ganglion cells. These results suggest that ExoPTEN could fundamentally change how we approach conditions like glaucoma and optic nerve trauma. Encouraged by these results, we are advancing to a larger study with more animals to validate and expand upon these findings."

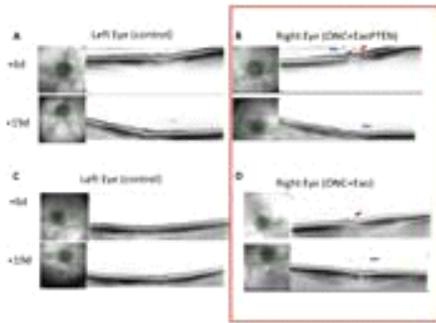
Dr. Lior Shaltiel, CEO of NurExone, added, "these findings are an important step forward in our mission to develop groundbreaking therapies for regenerative medicine in several indications. ExoPTEN's ability to repair both the structure and function of the optic nerve highlights its transformative potential for addressing vision loss and improving tens of millions of patient lives."

About NurExone

NurExone Biologic Inc. is a TSX Venture Exchange ("**TSXV**") and OTCQB listed pharmaceutical company that is developing a platform for biologically guided exosome-based therapies to be delivered, minimally-invasively, to patients who have suffered Central Nervous System injuries. The Company's first product, ExoPTEN for acute spinal cord injury, was proven to recover motor function in 75% of laboratory rats when administered intranasally. ExoPTEN has been granted Orphan Drug Designation by the United States Food and Drug Administration (FDA) and by the European Medicines Agency (EMA). The NurExone platform technology is expected to offer novel solutions to drug companies interested in minimally invasive targeted drug delivery for other indications.

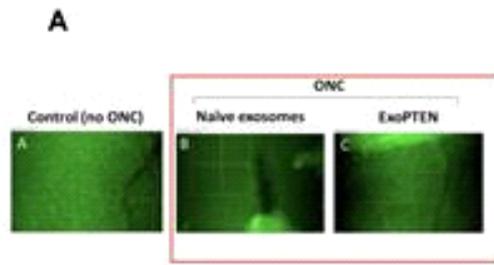
Figures 1-2 (A+B)

Fig 1 - Optical Coherence Tomography (OCT) scans

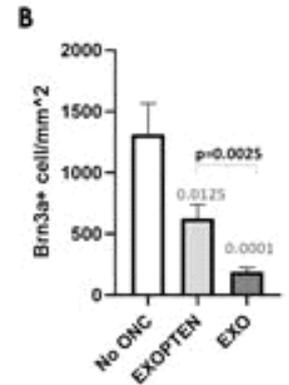


Representative OCT imaging of rats ONC+ExoPTEN (A,B) and ONC+naive exosomes (C,D) after 6 or 19 day post ONC. Vitreal hyper-intense opacities (blue arrows) and bulging of the optic nerve (red arrows) were observed in ONC eyes (B,D).

Fig 2 A+B - Retinal Ganglion Cell Survival (flat mounts)



Representative retinal flat-mounts stained with Brn3a (green nuclei). (A) No ONC; (B) ONC + naive exosome treatment; (C) ONC + ExoPTEN treatment.



The mean number of surviving RGCs in rats treated with ExoPTEN is significantly higher compared to eyes receiving naive exosome treatment ($p=0.0025$).

For additional information and a brief interview, please watch [Who is NurExone?](#), visit www.nurexone.com or follow NurExone on [LinkedIn](#), [X \(formerly Twitter\)](#), [Facebook](#) or [YouTube](#)

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FORWARD-LOOKING STATEMENTS

This press release contains certain “forward-looking statements” that reflect the Company’s current expectations and projections about its future results. Wherever possible, words such as “may”, “will”, “should”, “could”, “expect”, “plan”, “intend”, “anticipate”, “believe”, “estimate”, “predict” or “potential” or the negative or other variations of these words, or similar words or phrases, have been used to identify these forward-looking statements. Forward-looking statements in this press release include, but are not limited to, statements relating to: the results of the Company’s preclinical trials and its suggestion of a promising treatment pathway for glaucoma; the growth of the Optic Nerve Disorders treatment market; the Company expanding to further studies; the Company developing groundbreaking therapies for regenerative medicine in several indications; ExoPTEN having the potential to address vision loss and improve patient lives; and the NurExone platform technology offering novel solutions to drug companies interested in minimally invasive targeted drug delivery for other indications.

These statements reflect management’s current beliefs and are based on information currently available to management as at the date hereof. In developing the forward-looking statements in this press release, we have applied several material assumptions, including: the ability to carry out its pre-clinical trials and realize upon the stated benefits of the pre-clinical trials; the Company’s ability to realize upon the stated potential for exosome-loaded drugs in regenerating or repairing damaged nerves; the Company’s ability to maintain its ongoing commitment to using its ExoTherapy platform to advance the field of regenerative medicine; the Optic Nerve Disorders treatment market continuing to grow as stated; the Company expanding to further studies; the Company developing groundbreaking therapies for regenerative medicine in several indications; ExoPTEN addressing vision loss and improve patient lives; and the NurExone platform technology will offer novel solutions to drug companies interested in minimally invasive targeted drug delivery for other indications.

Forward-looking statements involve significant risk, uncertainties and assumptions. Many factors could cause actual results, performance or achievements to differ materially from the results discussed or implied in the forward-looking statements. These risks and uncertainties include, but are not limited to risks related to: the Company's early stage of development; lack of revenues to date; government regulation; market acceptance for its products; rapid technological change; dependence on key personnel; dependence on the Company's strategic partners; the fact that preclinical drug development is uncertain, and the drug product candidates of the Company may never advance to clinical trials; the fact that results of preclinical studies and early-stage clinical trials may not be predictive of the results of later stage clinical trials; the uncertain outcome, cost, and timing of product development activities, preclinical studies and clinical trials of the Company; the uncertain clinical development process, including the risk that clinical trials may not have an effective design or generate positive results; the potential inability to obtain or maintain regulatory approval of the drug product candidates of the Company; the introduction of competing drugs that are safer, more effective or less expensive than, or otherwise superior to, the drug product candidates of the Company; the initiation, conduct, and completion of preclinical studies and clinical trials may be delayed, adversely affected or impacted by unforeseen issues; the potential inability to obtain adequate financing; the potential inability to obtain or maintain intellectual property protection for the drug product candidates of the Company; risks that the Company's intellectual property and technology won't have the intended impact on the Company and/or its business; the Company's inability to carry out its pre-clinical trials and realize upon the stated benefits of the pre-clinical trials; the Company's inability to realize upon the stated potential for exosome-loaded drugs in regenerating or repairing damaged nerves; the Company's inability to maintain its ongoing commitment to using its ExoTherapy platform to advance the field of regenerative medicine; the Optic Nerve Disorders treatment market decreasing and/or plateauing; the Company's inability to expand into further studies; the NurExone platform technology not offering novel solutions to drug companies interested in minimally invasive targeted drug delivery for other indications; and the risks discussed under the heading "Risk Factors" on pages 44 to 51 of the Company's Annual Information Form dated August 27, 2024, a copy of which is available under the Company's SEDAR+ profile at www.sedarplus.ca. These factors should be considered carefully, and readers should not place undue reliance on the forward-looking statements. Although the forward-looking statements contained in this press release are based upon what management believes to be reasonable assumptions, the Company cannot assure readers that actual results will be consistent with these forward-looking statements. These forward-looking statements are made as of the date of this press release, and the Company assumes no obligation to update or revise them to reflect new events or circumstances, except as required by law.

Neither TSXV nor its Regulation Services Provider (as that term is defined in the policies of the TSXV) accepts responsibility for the adequacy or accuracy of this release.

¹ <https://www.afsmc.org/2024/02/sheba-medical-center-named-a-newsweek-worlds-best-hospital-for-the-6th-consecutive-year/>

² <https://www.globenewswire.com/news-release/2024/06/28/2906122/0/en/NurExone-s-ExoPTEN-Being-Studied-as-Glaucoma-Treatment-for-US-3-4-Billion-Market.html>

³ <https://www.mdpi.com/1424-8247/17/10/1261>

⁴ <https://www.marketresearchfuture.com/reports/optic-nerve-disorders-treatment-market-30051>

A photo accompanying this announcement is available at <https://www.globenewswire.com/NewsRoom/AttachmentNg/5e682a60-3287-44b2-b7da-08ebed8fa807>