

Innovating Spinal Cord Injury Therapy: NurExone's Groundbreaking Exosome-Based siRNA Therapy and Expanding Pathways for Neural Regeneration.

Company name: NurExone Biologic Website: www.nurexone.com

CEO name: Dr. Lior Shaltiel

CATEGORY: Biotech/Pharma

SESSIONS:

- Rewiring the Brain; Breakthroughs in Neurotech and Neuromodulation
- War-Time Innovation, Peace-Time Solutions; Harnessing Crisis-Driven Breakthroughs for the Future of Medicine

Executive Summary:

NurExone Biologic, a biopharmaceutical company, develops the ExoTherapy platform for exosome-loaded nanodrugs. Its leading drug fosters nerve regeneration for spinal cord injuries (SCI) and more, showing remarkable preclinical results. The SCI market is expected to reach \$9.61 billion by 2028. Collaborating with defense agencies in Israel and U.S., NurExone has raised over \$15 million and is led by biotech experts.

Core Technology:

ExoPTEN is an innovative exosome-based therapy for acute and sub-acute spinal cord injuries (SCI). It uses bone marrow MSC-derived exosomes loaded with PTEN siRNA to enhance neural regeneration and reduce apoptosis. ExoPTEN is non-immunogenic, crosses the BBB, and can be produced as an off-the-shelf therapy. NurExone's strong IP portfolio supports its U.S. subsidiary for manufacturing and commercialization.

Product Profile/Pipeline:

NurExone's ExoPTEN targets acute and sub-acute spinal cord injury (SCI) in both civilian and military environments, with an IND submission slated for 2026. The FDA and EMA have granted Orphan Drug Designations. Future targets include traumatic brain injury (TBI) and optic nerve injury (ONI), with promising preclinical results. The market is projected to reach \$5.3 billion by 2031.

Business Strategy:

NurExone plans to complete its First-in-Human (FIH) study for spinal cord injury (SCI) and seeks a pharma partnership for ExoPTEN's late-stage development and commercialization. It aims for expedited approval with regulators. The newly established U.S. subsidiary, Exo-Top Inc, will produce MSC-derived exosomes, targeting regenerative medicine, anti-aging, and cosmeceuticals. Post SCI trials, ExoPTEN for optic nerve injury (ONI) will undergo clinical testing.

What's Next?

NurExone is conducting IND-enabling studies for acute spinal cord injury, targeting an IND submission in Q2 2026 and a First-in-Human trial in Q3 2026 in Israel and the U.S. Scaling CMC activities and collaborating with Sheba Hospital, it also targets TBI and siRNA-based exosome therapies. Plans include a \$20M U.S. fundraising with three investment banks for a NASDAQ uplisting.