



MINERVA LABS

EXOSOMES

Human Umbilical Cord Mesenchymal Stem Cell Derived



Sourced from Wharton's Jelly with a verifiable concentration of OVER 700 Growth Factors

- * The ONLY MSC EXOSOMES that are LEGALLY PERMITTED to be sold and used for research and investigational use.

APPLICATIONS:

- IV Infusion
- Site Injections
- Butterfly Push
- Nebulization
- Topical



WHAT ARE EXOSOMES?

Exosomes are small vesicles that are secreted by stem cells. They contain large amounts of growth factors, cytokines, and other substances with high regenerative potential that can be transferred to other cells due to their unique structure.

This structure allows the exosomes to fuse with other cells in the body and to release their content into other cells. The contents of the exosomes such as cytokines, growth factors, and RNA can then help the cell heal itself due to the actions of the transferred signaling molecules.

OUR PROCESS

- Our Medical-Grade Mesenchymal Stem Cell (MSC) derived exosomes are carefully produced using human umbilical cords sourced from healthy, full-term deliveries. Prior to donation, every mother providing the umbilical cord undergoes thorough testing to ensure safety and purity.
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- We test for all viruses. We ensure not only that our product does not have any viruses but at no point did it ever have anything that might have been destroyed or degraded over time that could have been a risk in the past.
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- We extract the Mesenchymal Stem Cells from the Wharton's Jelly within the umbilical cord. We then put them in a CMP lab setting and start to stimulate them in-house using our proprietary technology that we developed to upregulate the absolute highest concentration of key growth factors and anti-inflammatory factors possible.
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- This allows us to use the newest and most potent stem cells possible. We then screen and culture them in a lab to control the safety and efficacy of the cells. We only use the first 3 passages (generations) because we have found that even after the 4th generation of Stem Cells, they will degrade too much and notice reduced loading and robustness of the exosomes.



CERTIFICATE OF ANALYSIS PROVIDED WITH EVERY ORDER

We must have a consistent product with every batch to meet the regulatory standards for consistency. By the time we get to the 4th generation, the Stem Cells become inconsistent and not potent enough to meet the regulatory standards (Other labs will continue to culture the Stem Cells well past the 4th passage although they have degraded greatly).

Next, we immerse them in the appropriate medium allowing them to secrete exosomes with consistent and high quantities of regenerative factors. Next, we extract the exosomes and analyze them through batch testing by sending them to Eurofins, a 3rd party laboratory approved by the FDA for pharmaceutical drug testing.

**2.0 BILLION
EXOSOMES per ML
OVER 700 GROWTH
FACTORS Verified by a
3rd Party Lab**

They provide us with an extensive report that is inclusive of endotoxin, mycoplasma, sterility, as well as proteomic assays, mRNA sequencing, lipid analysis assays, and surface analysis to make sure we have the right type of exosomes and particle size analysis.

This is all done to make sure our product meets the 351(a) guidelines for purity, potency, consistency, safety, and sterility. Once we receive the test report and have been given the green light to package and make them available for use, we dilute them into saline.

At that time, our product can then be used in any manner for cell-free healing and regeneration. A condensed version of that COA is provided to anyone purchasing the product and is shipped with the order.

It is essential to emphasize that it is **ILLEGAL** to sell or use exosomes from any other manufacturer when administering them by injection or methods such as micro-needling and laser treatments where you break (open) the skin and apply them topically. With the exception of our product, currently, the only legal way to use live stem cells and exosomes would be if they are derived from the patient themselves, are not manipulated in any way, and are used as a tissue transplant.

It's important to note that exosomes are cell-free and cannot carry vaccines, diseases, viruses, or foreign substances. Nevertheless, they have shown remarkable potential in promoting tissue regeneration and repair, reducing inflammation, and accelerating recovery from injuries, and have been associated with significant anti-aging, rejuvenation, and hair regrowth effects.



WHAT MAKES US DIFFERENT

We manufacture the only MSC EXOSOMES LEGALLY permitted to be sold and used for research and investigational use.

Our exosome-based formulations are designed for research and cosmetic applications. They may be evaluated in various investigational delivery models — including intravenous, localized, nebulized, or topical research studies — to explore their roles in cell signaling, tissue science, and aesthetic skin or scalp wellness. These materials are intended for research and educational use only and are not approved for therapeutic or clinical administration.

We prove our product is as potent with EXOSOMES and GROWTH FACTORS as stated by providing a Certificate of Analysis from a 3rd Party Laboratory with every order.

We are partnered with a major U.S. Based University School of Medicine.

We abide by all regulatory guidelines to ensure that we meet the purity, potency, consistency, and safety standards.

Our EXOSOMES contain a high potency of lipids, proteins, and nucleic acids such as RNA, cytokines, and micro RNAs. Furthermore, our exosomes have over 700 Growth Factors.

We are currently performing over 13 clinical studies with our School of Medicine partner and have several more starting soon.

United States Patent on Shelf Stable EXOSOMES for Topical Applications.

Safety Studies performed for Intravenous Administration (I.V.) using 1,000 times the normal potency with no issues. This confirmed that you cannot overdose EXOSOMES.

Our Product is Manufactured in one of (6) ISO 5 Cleanrooms under c.G.M.P. guidelines.

Our EXOSOMES can be used as an Active Product Ingredient (A.P.I.) in other regulated Products.

POTENTIAL BENEFITS

Exosomes have the potential to help manage degenerative conditions, tissue repair, anti-inflammation, and anti-aging because they target aging, injured, or diseased cells, instructing them to regenerate and repair. Exosometherapy delivers exosomes into the body through an IV Infusion, Butterfly Push, Nebulization, Topically, or Site Injection to the target area.

The exosomes, numbering in the billions, attach to target cells in the body, including blood, brain, muscle, skeletal, and organ cells.

- Anti-Aging
- Dark Eye Circles
- Acne Scars
- Even Skin Tone
- Psoriasis
- Rosacea
- Eczema
- Herpes/Cold Sores
- 300% Increase in Elastin
- Tighten Sagging Skin
- 180% Increase in Fibroblasts
- Immune Health
- Improved Brain Health
- Migraines and Cluster Headaches
- Reduction in Redness and Irritation
- Reduction of Scars and Skin Lesions
- Treats a Variety of Skin Conditions
- Improved Skin Texture and Pore Size
- Visible Decrease in Fine Lines, Wrinkles, and Age Spots
- Improvement in Dryness and Better Overall Skin Hydration
- Help Manage Degenerative Conditions
- Liver, Kidney, Cardiovascular and Neurological Disease
- Contribute to the Repair and Regeneration of Cartilage
- Diabetes
- Anti-Inflammation
- Respiratory Issues
- RSD
- Neuropathy
- ALS
- Autism
- Alzheimer's
- Bell's Palsy
- CVID/Long Covid
- Parkinson's Disease
- Supports Metabolic Function
- Boosts Immune Health
- Enhances Tissue Regeneration
- Burns
- Plantar Fasciitis
- Phantom Limb Pain
- Back Pain
- Tennis/Golfer's Elbow
- Erectile Dysfunction
- Reduces Chronic Pain
- Tissue Regeneration
- Improved Joint Function
- Post Herpetic Neuralgia

VISIBLE TRANSFORMATION

MICRONEEDLE + GEL



Before

2 Weeks

MICRONEEDLE + GEL



Before

17days

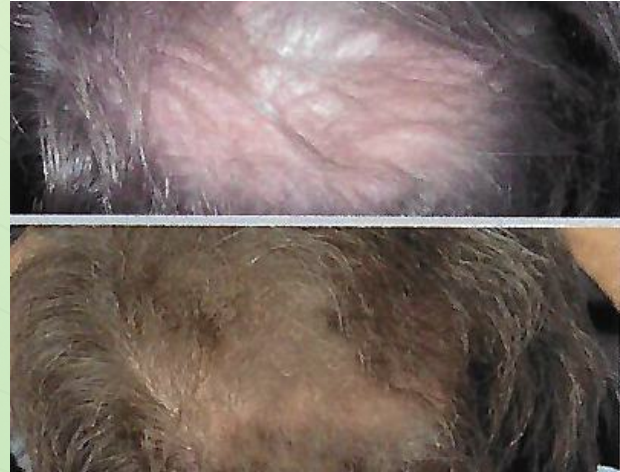
5ML EXOSOME SCALP INJECTION



Before

60 days

BEFORE



8 weeks after 5ml medical grade Exosomes

2 WEEKS AFTER 7.5B EXOSOMES

2 WEEKS AFTER 50B EXOSOMES



BEFORE

MICRONEEDLE + EXOSOMES

MICRONEEDLE + EXOSOMES +GRADE SALINE



BIOLOGICAL FINDINGS OF MESENCHYMAL STEM CELL EXOSOMES

INCREASE ↑

DECREASE ↓



WOUND HEALING

- Angiogenesis
- Collagen I Expression
- Extracellular Matrix Remodeling
- Cellular Migration and Propagation

- Apoptosis
- Inflammation
- Collagen Deposition
- Myofibroblast Accumulation



NEURO PROTECTION

- Angiogenesis
- Neurogenesis
- Axonal Density
- Cell Propagation
- Neurite Remodeling
- Oligodendrogenesis
- Neurological Function
- Neurovascular Plasticity

- Apoptosis
- Microgliosis
- Inflammation
- Reactive Astroglia
- Neural Degeneration
- Intracellular Ss-amyloid Peptides



CARDIO PROTECTION

- Angiogenesis
- Cell Propagation
- Cardiac Function

- Fibrosis
- Apoptosis
- Infarct Size
- Inflammation
- Oxidative Stress
- Vascular Remodeling



HEPATO PROTECTION

- Liver Function
- Eosinophils
- Cell Propagation
- Collagen Maturation

- Fibrosis
- Apoptosis
- Inflammation
- Oxidative Stress
- Alanine Aminotransferase Levels

OTHER DISEASES

Lung Tissue Decrease:

- Fibrosis
- Inflammation
- Vascular Remodeling
- Pulmonary Hypertension
- Bronchopulmonary Dysplasia

Dermatitis Decrease:

- Eosinophils
- Ige

Number of MSC Exosomes per mL (Injectable Saline):	20 Billion
Number of MSC Exosomes (15mL Topical):	100 Billion
Number of MSC Exosomes (30mL Topical)	200 Billion
Legal to Sell and Use for Research	YES
Legal to Administer via IV Infusion, Direct Injection, Nebulization, Topically	YES
Abide by All Regulatory Guidelines	YES
Safety Studies for Intravenous Administration (I.V.)	YES
Number of Active Clinical Studies:	13
Patent on the Stabilization of EXOSOMES at Room Temperature	YES
3rd Party Testing on Every Batch	YES
Tested for Purity, Potency, Consistency, Safety and Sterility	YES
Certificate of Analysis (COA) Provided with Every Order	YES
Legal to Ship Internationally	YES
U.S.P. 85/The United States Pharmacopeia 85 Bacterial Endotoxins:	YES
Aseptic Manufacturing Process by Batch Free from Contamination	YES
Partnered with a Major U.S. Based School of Medicine	YES
Product Manufactured in ISO 5 Cleanroom under cG.M.P. Guidelines	YES
U.S.P. 71/The United States Pharmacopeia 71 Sterility Tests	YES

PRODUCTS**MEDICAL GRADE MSC EXOSOME INJECTABLE SALINE****Applications:**

- IV Infusion
- Butterfly Push
- Nebulization
- Site Injection
- Scalp Injection
- Topically

Concentrations:

- 1 mL: 20 Billion Exosomes
- 2 mL: 40 Billion Exosomes
- 5 mL: 100 Billion Exosomes
- Over 700 Growth Factors

Shelf Life:

- Cryogenic Freezer | 18 Months
- Home Freezer | 4 Months
- Home Refrigerator | 10 Days
- Room Temperature | 24 Hours

PRODUCTS

MSC EXOSOME GEL AND SERUM AND CREAM



Applications:

- Laser + Gel or Serum
- Standalone Topical

Contains:

- Over 700 Growth Factors
- 15mL: 100 Billion Exosomes
- 30mL: 200 Billion Exosomes
- Microneedle + Gel or Serum + Cream

Shelf Life:

- Stable at Room Temperature for 14 Months