ExousiaPRO

Revolutionizing Exosome Based Therapeutics

OTC Markets

ExousiaPRO | OTC: MAJI

www.exousiapro.com

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3 out of 5 people perish from Chronic Disease

Exousia is a biotechnology company that is a leader in the development of exosomes which are next generation therapeutics. The company's mammalian exosomal technology platform has shown in in vitro studies the capability to increase the efficacy of Merck's drug Temozolomide (TMZ) in the treatment of glioblastoma (GBM). The company is also manufacturing plant-based exosomes for the treatment of a variety of commercial applications that range from simple skin conditions to numbing agents used in dentistry. This robust pipeline positions the company to transform the healthcare landscape

1 https://harcourthealth.com/is-inflammation-good-or-bad-a-guide-to-understanding-the-pros-and-cons-of-inflammation/

Untapped Potential of Exosomes

1. Existing drug delivery limitations (e.g., payload capacity, poor bioavailability, inability to cross the blood-brain barrier, immunogenicity)

2. Difficulty targeting specific tissues with existing therapies

3. Translation of biomarker messages encapsulated in exosomes to detect early disease (ie cancer, autoimmune, inflammatory)

Untapped Potential of Exosomes

4. Unmet medical needs in various disease areas (e.g., neurological disorders, cancer, rare diseases).

5. Crucial to tissue regeneration and healing (Regenerative medicine)

6. Tailoring therapeutic cargo for the individual (Personalized medicine)

Continued....

Untapped Potential of Exosomes

GLOBAL STATISTICS

Market Size (2022)	CAGR (2023-2032)	Market Size (2032)
>$250 MN	29.9%	$3.2BN

SEGMENT STATISTICS

>$146 MN
Market Share (2022)

Therapeutic Segment

44.9%
Market Share (2022)

Kits & Reagents Segment

>1.2 BN
Market Share (2022)

Cancer Segment

REGIONAL STATISTICS

North America
Market Share (2022)
55.5%

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Ground Floor Opportunity

A New Class of Therapeutics

- Rapid Market Growth 30% CAGR
- Government support of exosome research
- Pandemic applications to create vaccines and diagnostics ballooned exosomal research capacity, poor bioavailability, inability to cross the blood-brain barrier, immunogenicity)
- New manufacturing advancements like freeze dried exosomes, quantification tests, payload loading, large scale production, microfluids, and Induced Pluripotent Stem Cells (iPSCs)[1]
- Diagnostic markers that can detect early cancer, predict therapeutic outcomes, monitor disease progression, and test effectiveness of regenerative therapies.
- Diverse Applications (Diagnostics, Therapeutics, Tissue Regeneration, Neurological Disorders, Personalized Medicine

9,104 clinical Trials (ph1- 3)

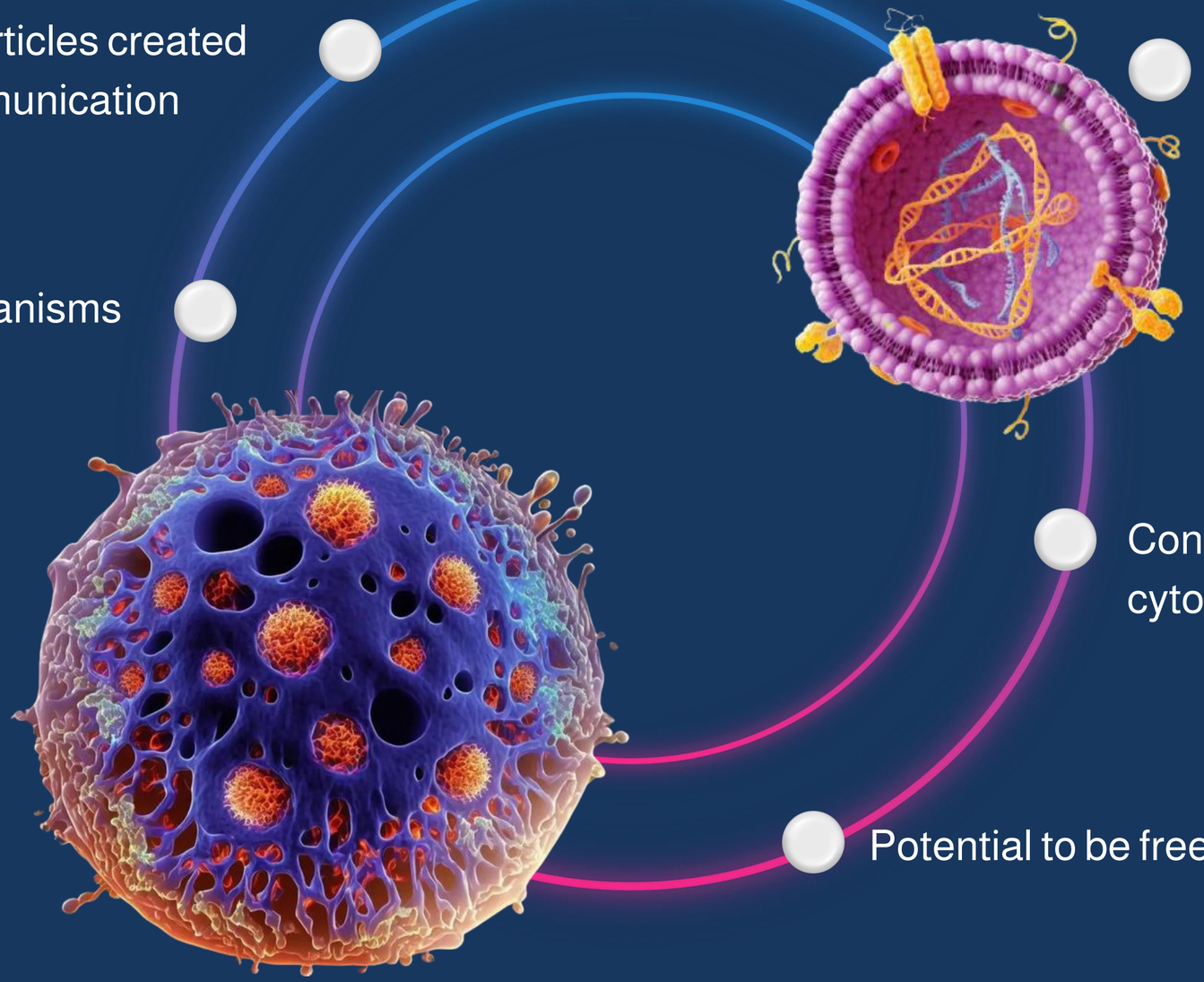
Only 10 are Exosome based therapies

EXOSOMES DEVELOPING AS A NEW CLASS OF THERAPEUTICS

Lipid-Bilayer Nanoparticles created for inter-cellular communication

Contain small fragment nucleic acids & proteins for cellular nutrition

Receptor targeting mechanisms



Contents readily enter cytoplasm

Bioengineered

Potential to be freeze dried

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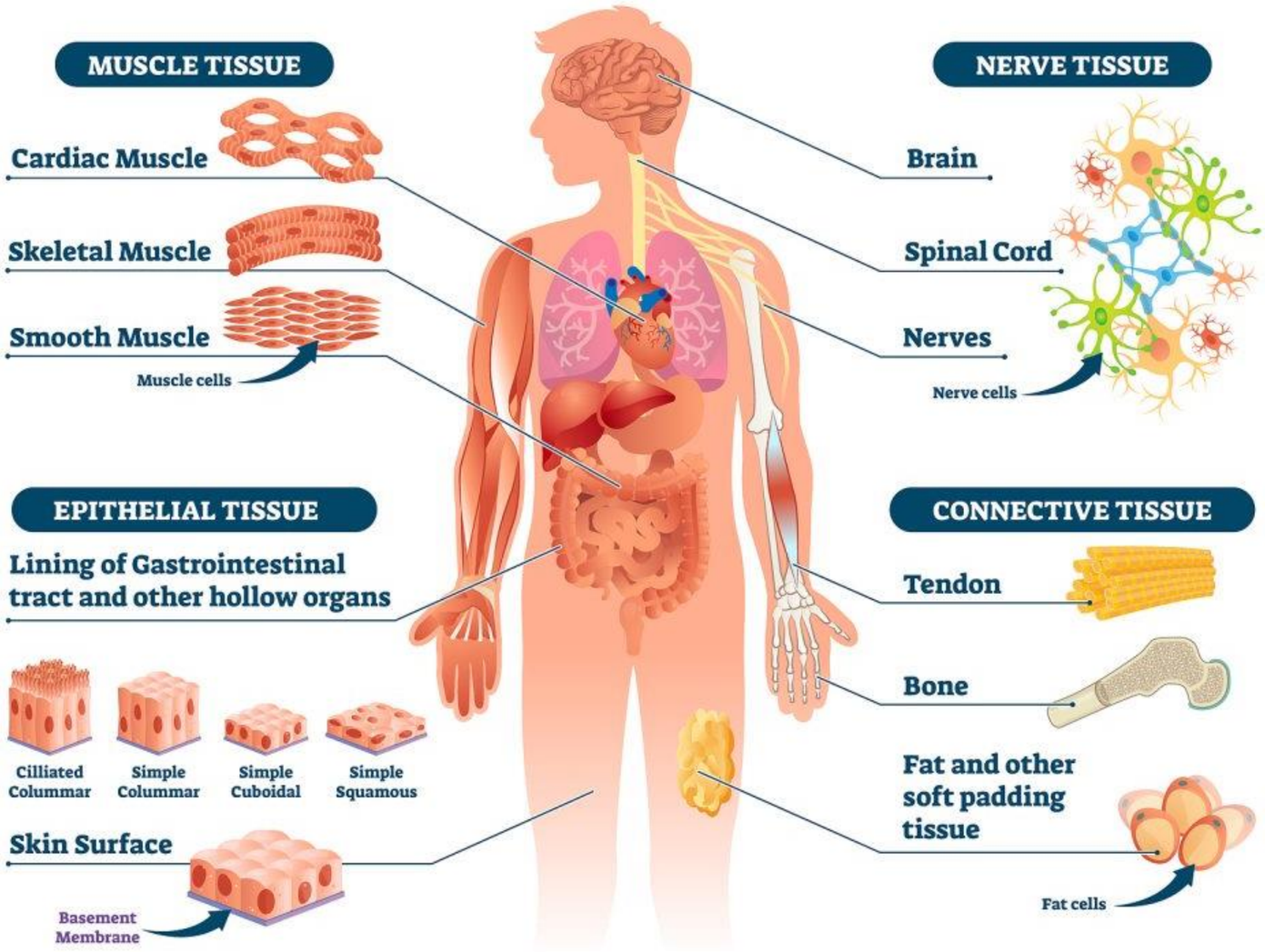
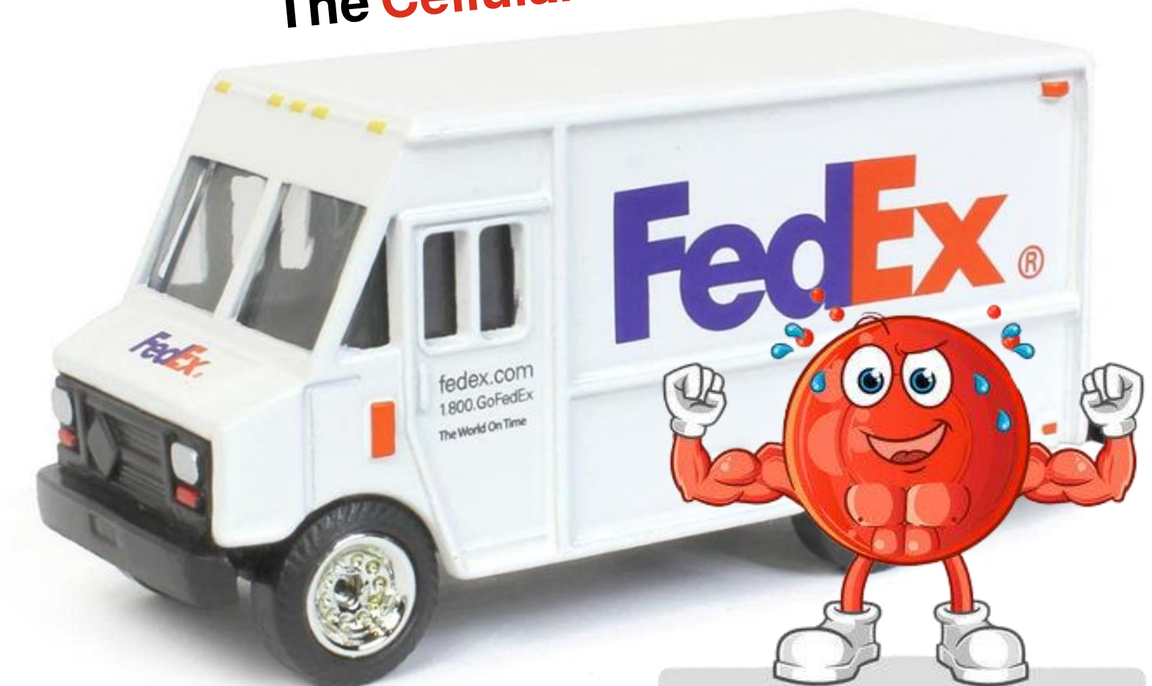
Did you Know?

All tissue types contain cells that make extracellular vesicles called EXOSOMES that are invisible to the immune system.

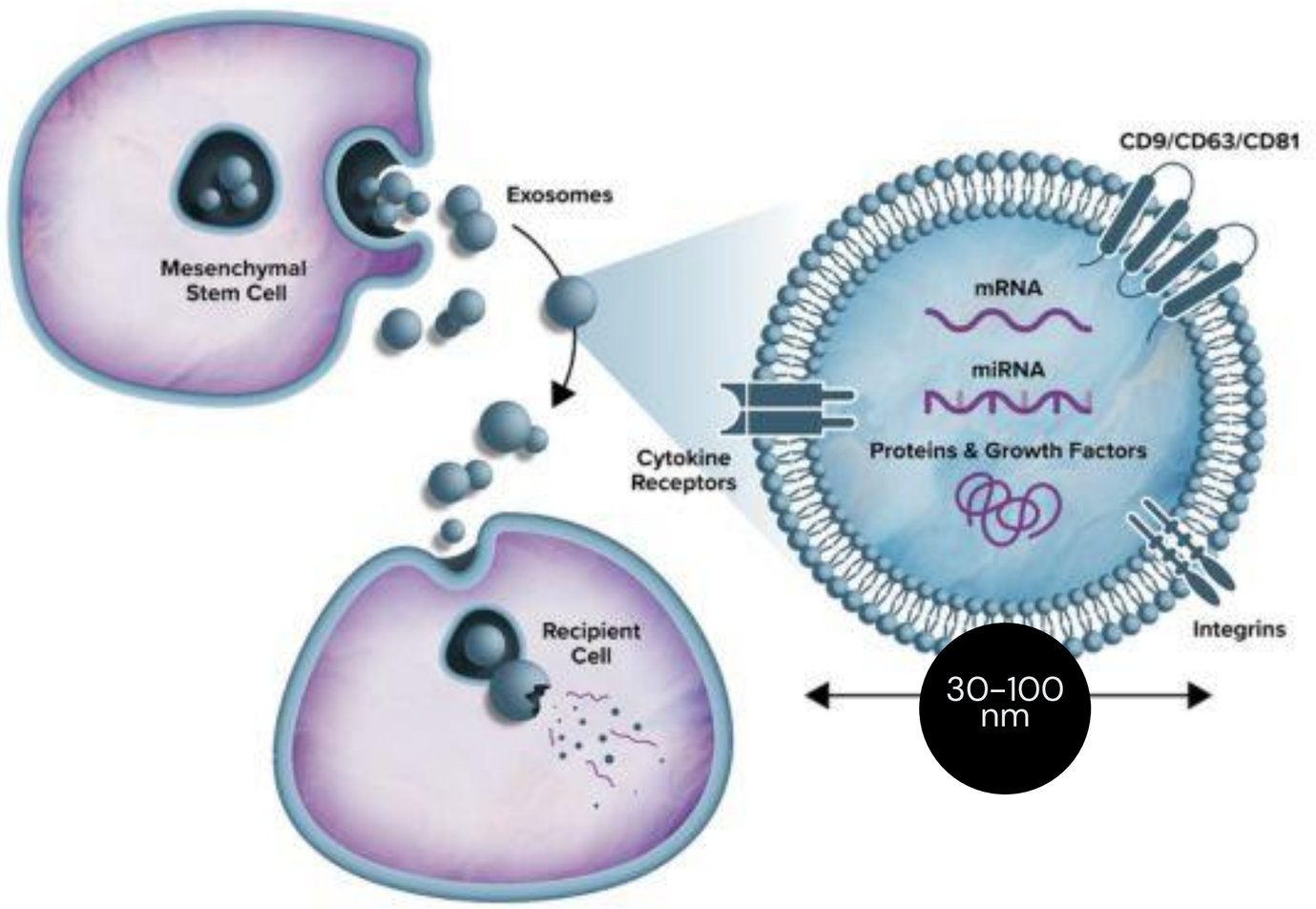


What are Exosomes?

- Microscopic sacs that are secreted by our body's cells
- 1/100th the size of a human cell
- Normal cells use these sacs as garbage dumpsters that contain RNA, proteins, and the remnants of metabolism
- Stem Cell exosomes used these sacs as armored car couriers transporting valuable growth factors, cytokines, and other biomolecules for cell to cell communication.
- Exosomal cargo helps heal the cells and tissue
- Membrane is a clone of the original cell and invisible to the immunes system (contains no antigen)
- Primary role is cell-to-cell signaling.



What are Exosomes?



Exosomes are minuscule extracellular vesicles that are crucial for intercellular communication. They are the 30-100 nanometers (nm) in size. They can carry proteins, lipids, and genetic material from one cell to another.

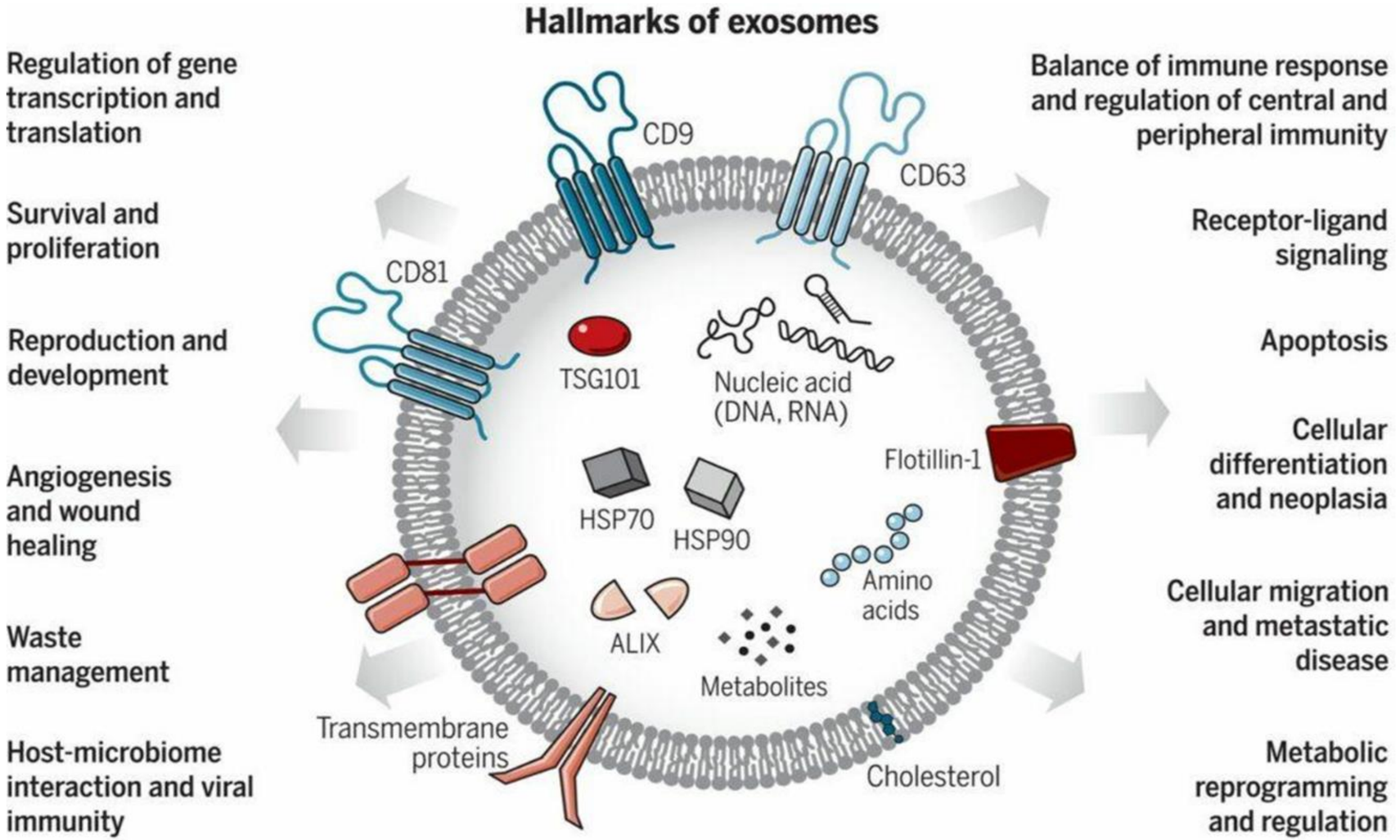
To give perspective an exosome would be a speck of dust on the surface of a basketball.

Continued...

Why are Exosomes Important

- Act as Messenger that Affect Cell function and behavior
- Intracellular communication (local & long distance)
- Crucial role in cellular healing
- Regulation of biological processes
- Major role in diseases - Involved in pathogenesis of diseases like cancer, neurodegeneration, and inflammatory diseases
- Can be used as a diagnostic or treatment
- They can be engineered like antibodies

Why are Exosomes Important



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Exosomes: The Natural Evolution of Monoclonal Antibodies (mAbs)

- Leverage the natural advantages of exosomes for drug delivery.
- Develop engineered exosomes as targeted drug carriers.
- Proprietary platforms developed for exosome production, loading, & targeting.

Key Advantages

Enhanced Delivery

- Larger Payloads
- Stabilizes genetic material (DNA, RNA)

Reduced Side Effects

Improved Efficacy

Cost Effective

Anything mAbs can do Exosomes can do better

Comparison to Monoclonal Antibodies (mAbs)

Aspect	Exosomes	Monoclonal Antibodies (mAbs)
Mechanism of Action	Small vesicles transporting biomolecules for cell-to-cell communication and therapy delivery	Lab-produced molecules that bind specific antigens on cells, marking them for destruction
Specificity	Can be engineered to target specific cells, but naturally broader target range	Highly specific to target antigens, allowing precise targeting of diseased cells
Production	Isolated from cells (mesenchymal stem cells) and purified from biological fluids	Produced using hybridoma technology or recombinant DNA technology
Applications	Small vesicles transporting biomolecules for cell-to-cell communication and therapy delivery	Treating cancers, autoimmune diseases, and infectious diseases.
Immunogenicity	Generally low immunogenicity, reducing risk of adverse reactions	Can sometimes elicit an immune response due to foreign protein origin.

Corporate Overview & Business Strategy

- ✓ Commercialization of Plant-Based Exosomes
  - Research & Cosmetic Focused

- ✓ Clinical Stage Biotech
  - Orphan Drug Application Open (animal data)
  - Glioblastoma Cancer Indication Focus
  - Broad Spectrum Antiviral Discovery Platform

- ✓ Early Screening, Non-Invasive Diagnostic Technology

COMMERCIALIZATION OF PLANT-BASED EXOSOMES

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Plant-Based Exosome Commercialization

- Initial target market (Exosome Research)
- We have established a level 2 laboratory at Orlando medical city close to the international airport
- Anticipates completing first batch of exosomes in February 2025
- Product sales expected in Q2

Expected Customer Base

- Research institutions
- Universities
- Pharma companies
- Biotech firms

Market Expansion

- Our next target will be clinical use of cGMP products
- We are planning to upgrade our level 2 lab to GMP facility
- Currently 2000 SF

Representative Lap pic

Plant-Based Competitors

Creative Biolabs® Exosome — Animal, Plant, Milk or Microbial derived exosomes

Lifeasible — Plant or Insects derived exosomes

FUJIFILM Value from Innovation — Selling products to produce exosomes

Lonza — Post modification of exosomes

EVerZom — Naïve exosomes

CLINICAL STAGE BIOTECH

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Valuable JV Partner

1. Alliance Agreement between ExousiaPro and Progenicyte Japan Co., LTD (PJC).

2. PJC owns a patent-pending transformational drug delivery platform that utilizes exosomes to deliver nucleic acids to tissue and cells.

3. Exousia has an exclusive worldwide license of this patented technology and is partnering with PJC to fully develop the potential of the Exosomal Targeted Delivery Platform and Testing Platform.

Exousia Breakthrough

TURNING CANCER CELLS INTO NORMAL CELLS – SORTA

Our Transformational Exosomal Targeted Cargo Platform is distinct in its patented genetic loading technology and unique in its ability to deliver genetic material to treat disease.

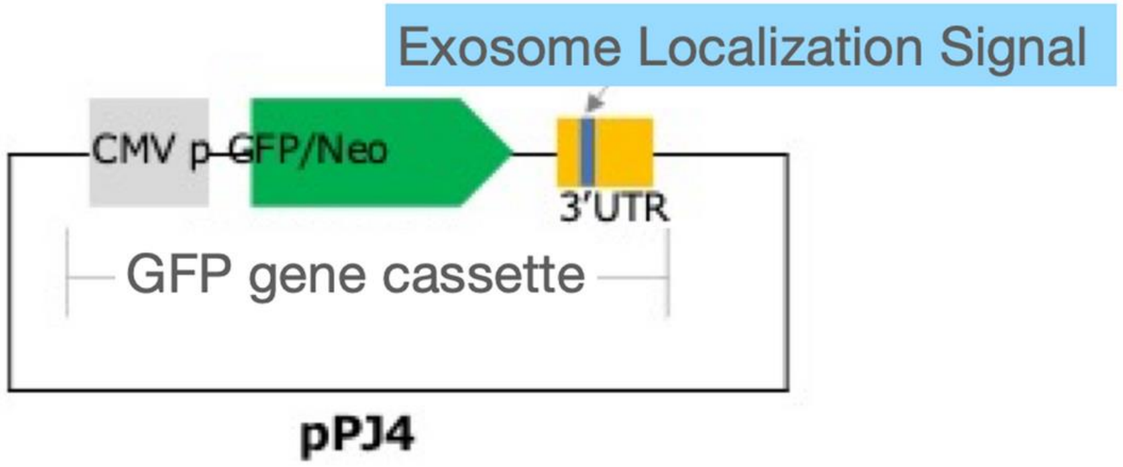
Established research partnerships with leading medical institutions. Access to world-class laboratories, animal models and supportive services to accelerate clinical research and product development.

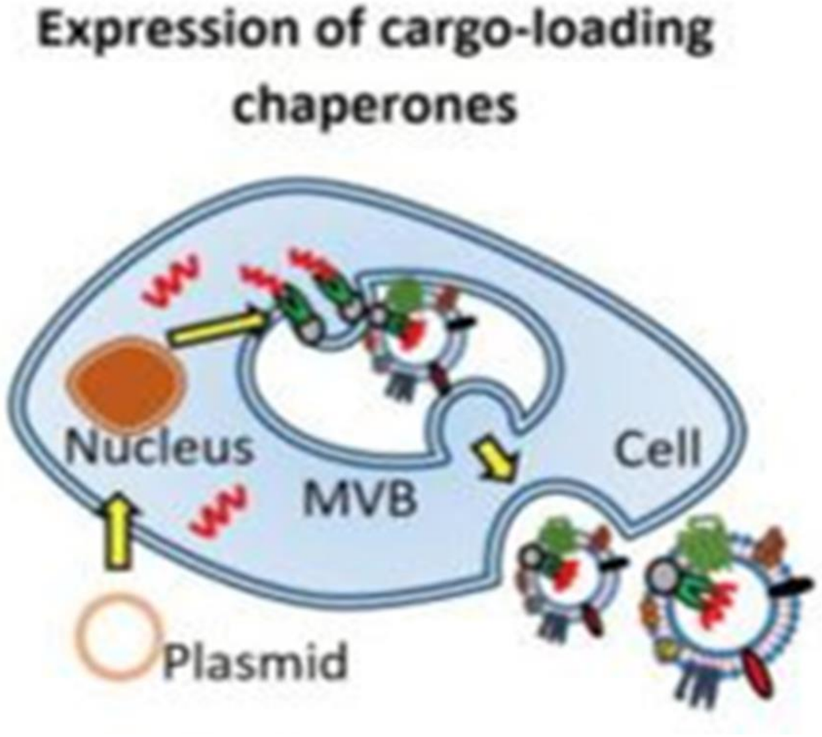
→ **Exousia team of renowned leaders in medical research.**

→ **Exosomal therapy is applicable to anti-cancer and anti-viral therapy.**

Exousia Breakthrough Tech

- **Patent**: A novel method to load the desired nucleic acid into exosomes as a nucleic acid drug Drug Delivery System (DDS) (3/14/2022)

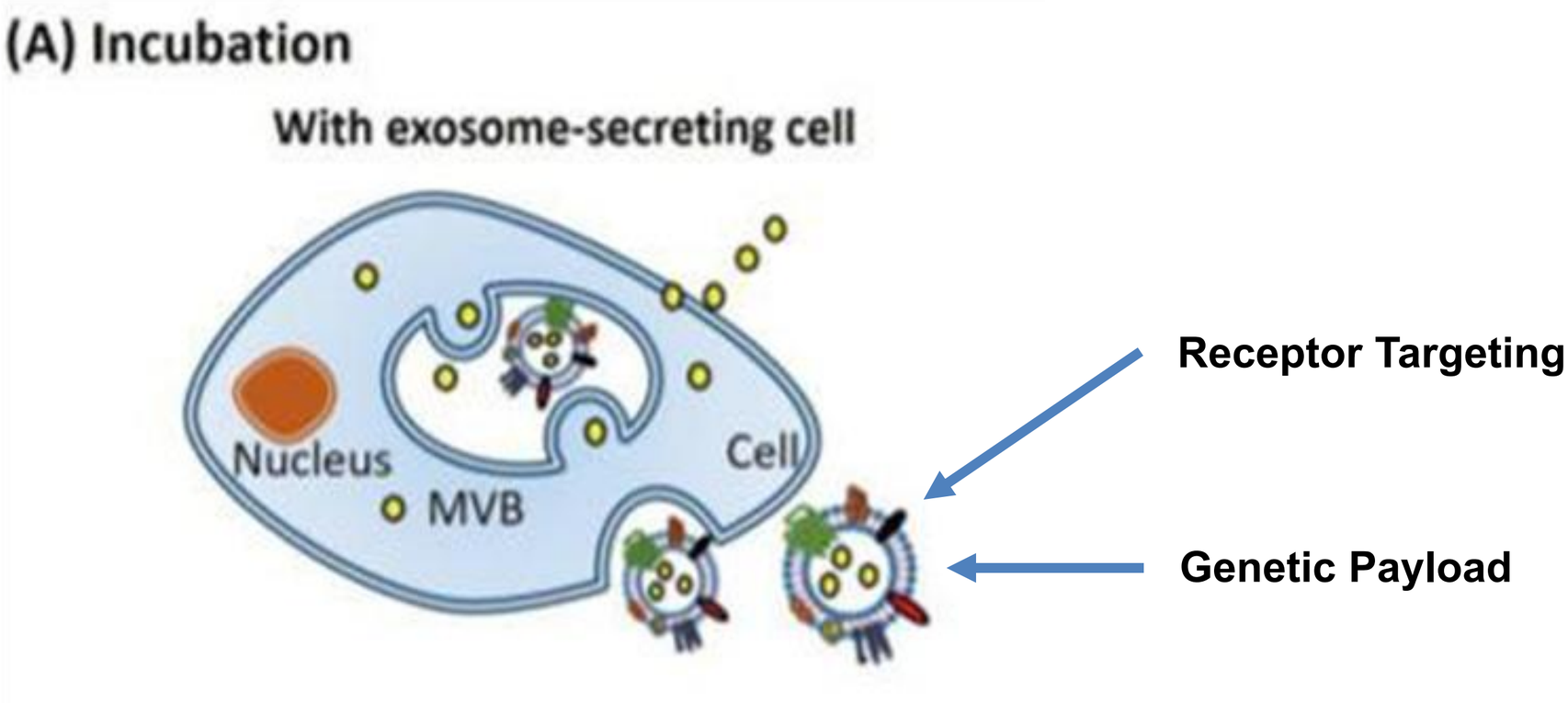




We found a special sequence, exosomal localization signal (ELS), which efficiently introduces DNA to exosomes while the host cells produce them.

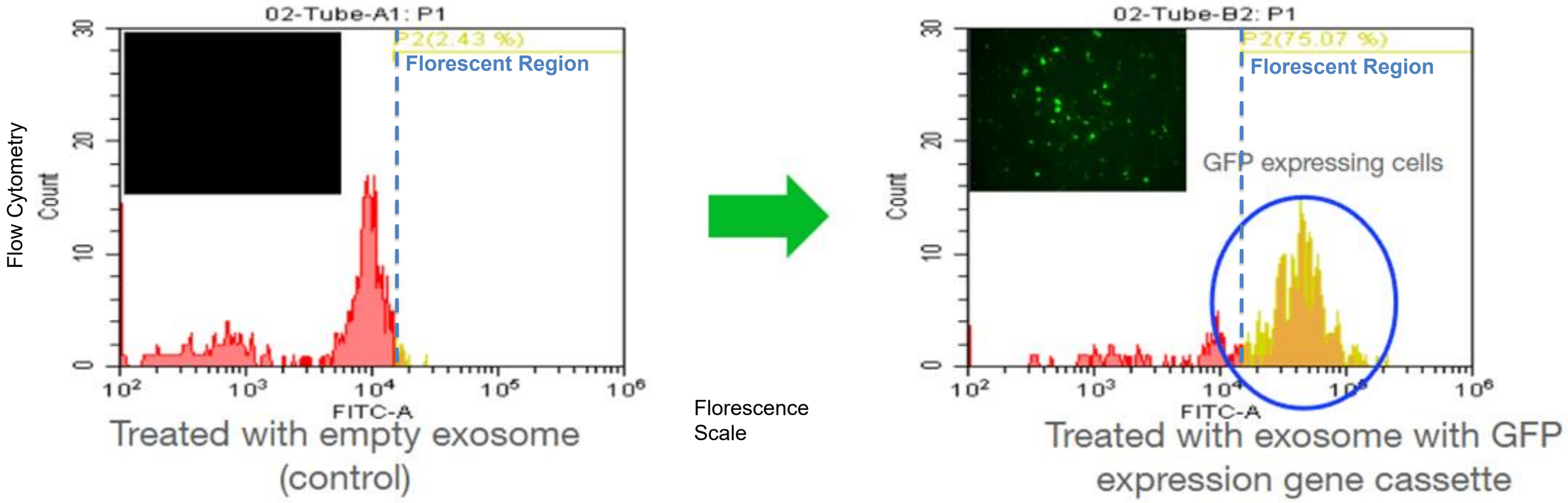
Patented Loading Process of the Exosomes

The Cell Does all the Manufacturing for Us



2 for 1 – Targeting & Cargo Loading Done at the Cellular Level
(most advanced/efficient tech in industry)

Proved Exosomes Delivered to Brain & When they Arrived They Were Functional

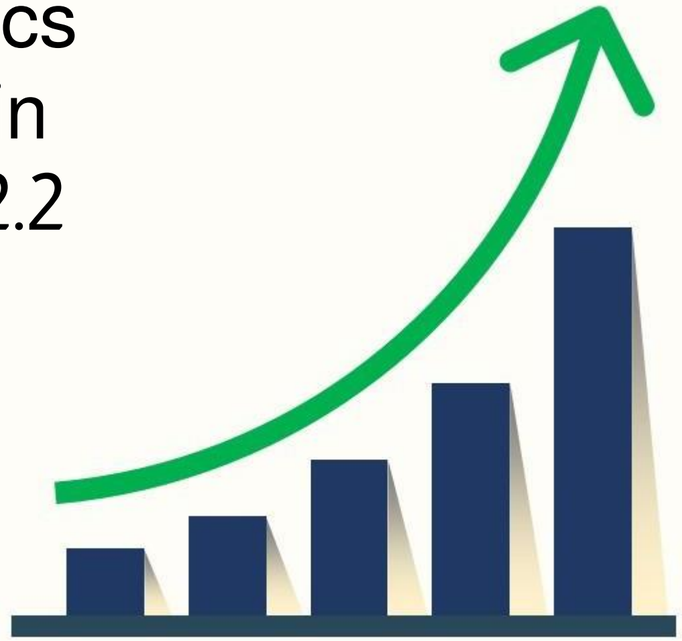


The Gene that Makes Cells look green not only made it through the BBB but was evenly distributed.

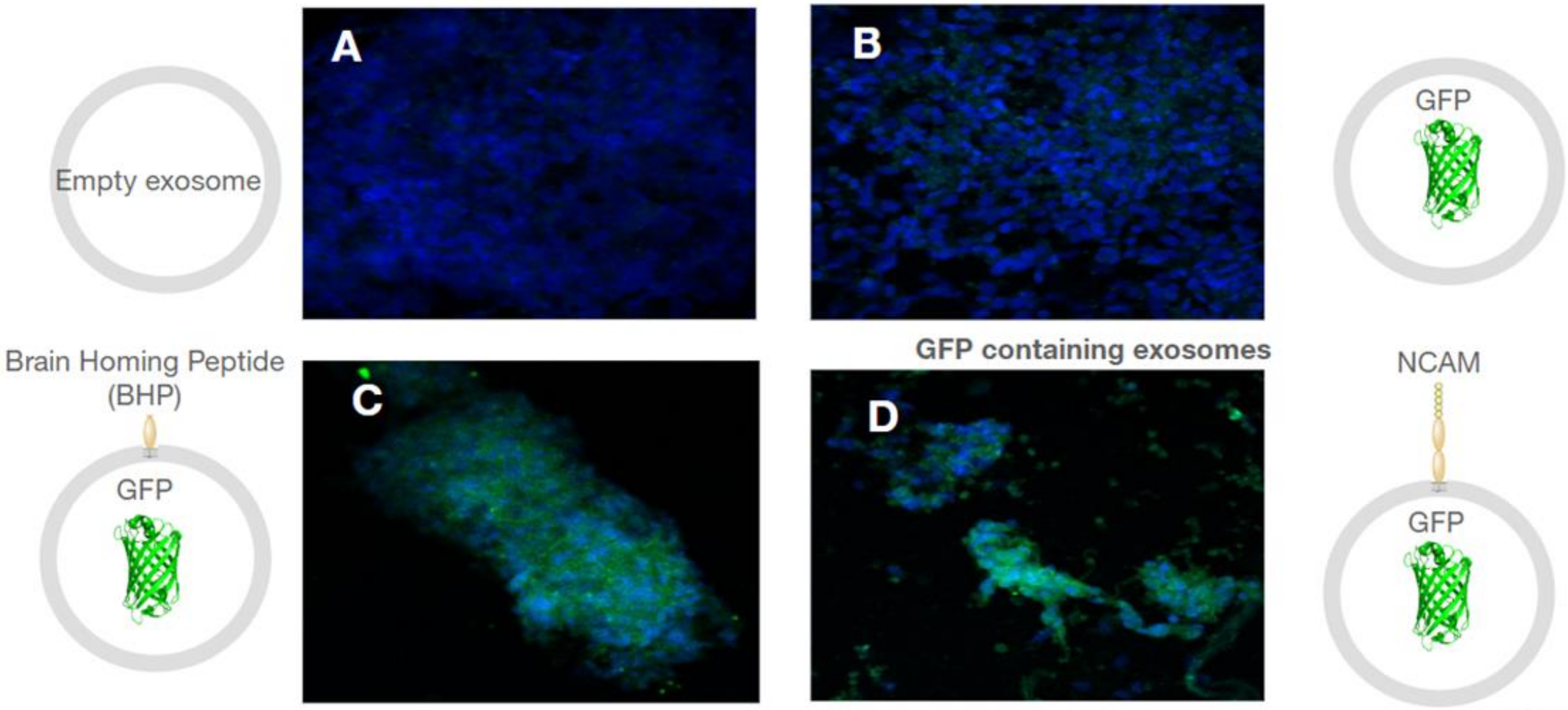
Test Demonstrated Successful Exosomal Delivery of Genes to Brain Tissue

Large Market Potential

The global nucleic acid therapeutics market was valued at $4.1 billion in 2021, and is projected to reach $12.2 billion by 2031



Brain Targeting Receptors (BHP & NCAM)



Increased fluorescence indicates not only excellent uptake in brain cells but also even distribution.

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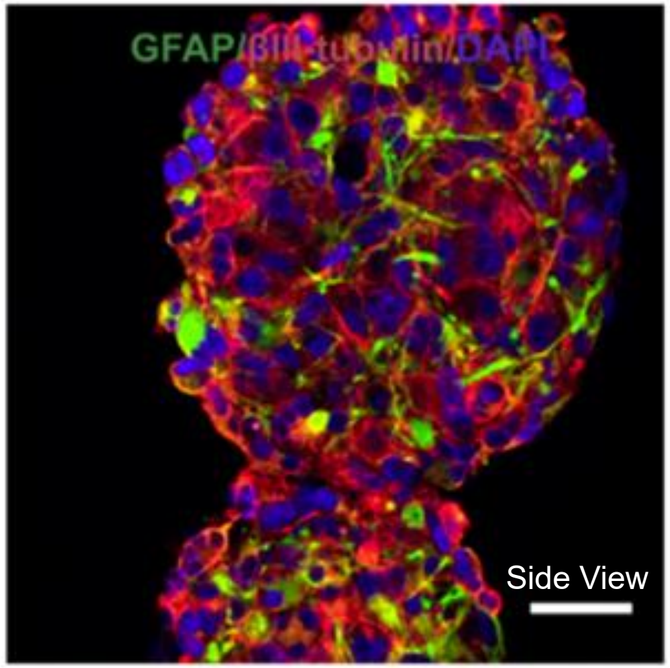
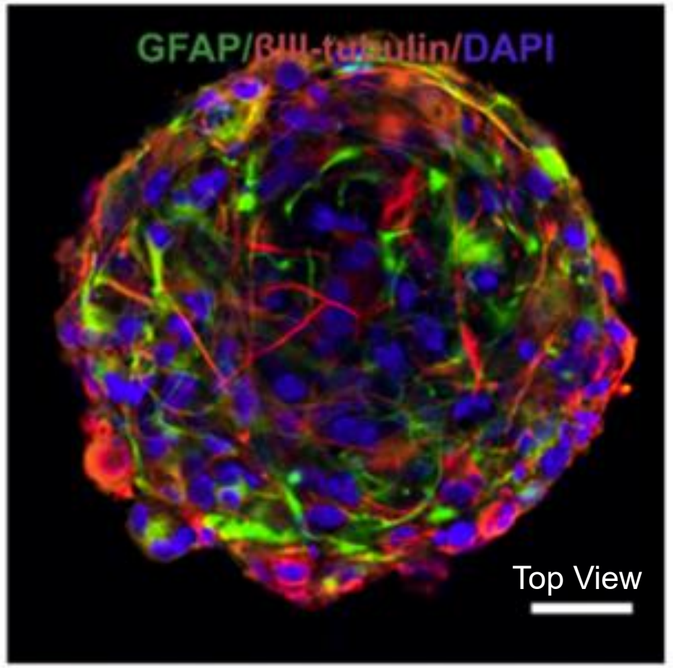
3D View of the human mini-brain by exosome



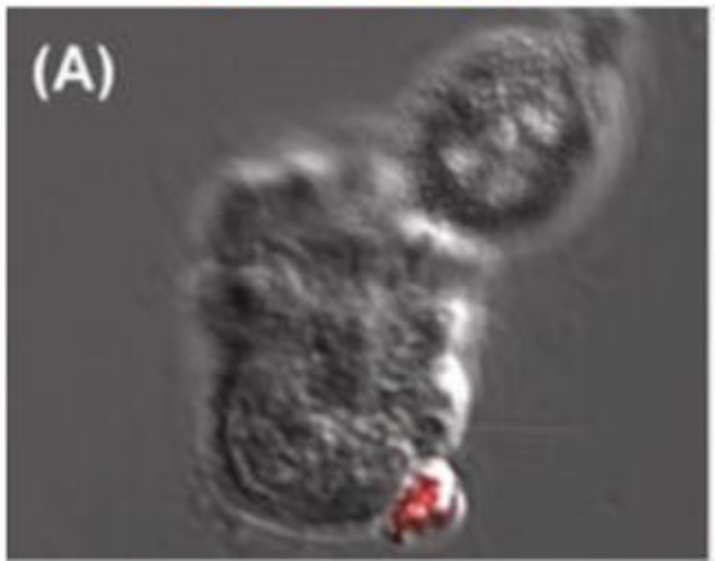


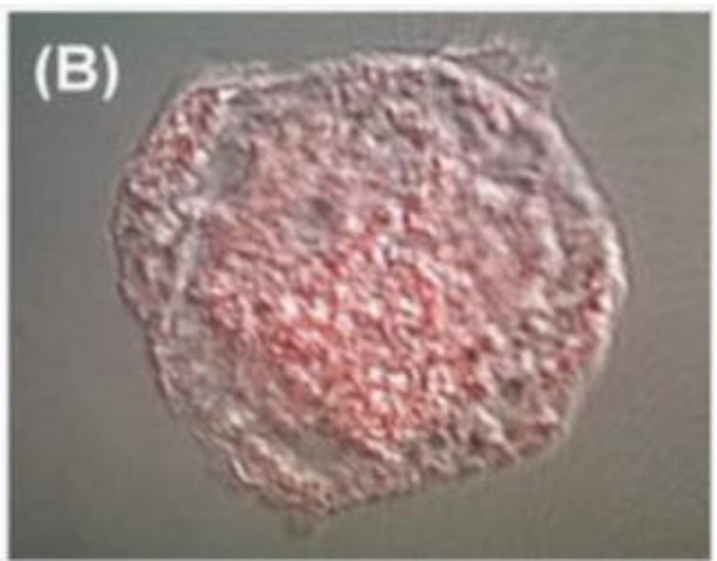
Robust In Vitro Brain Model

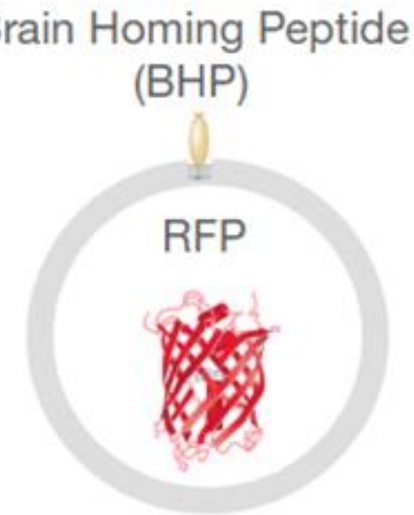
3D version – mimics the brain better notice the permeation throughout.

Even distribution of Neuronal (green) and Glioblastoma Markers (blue)

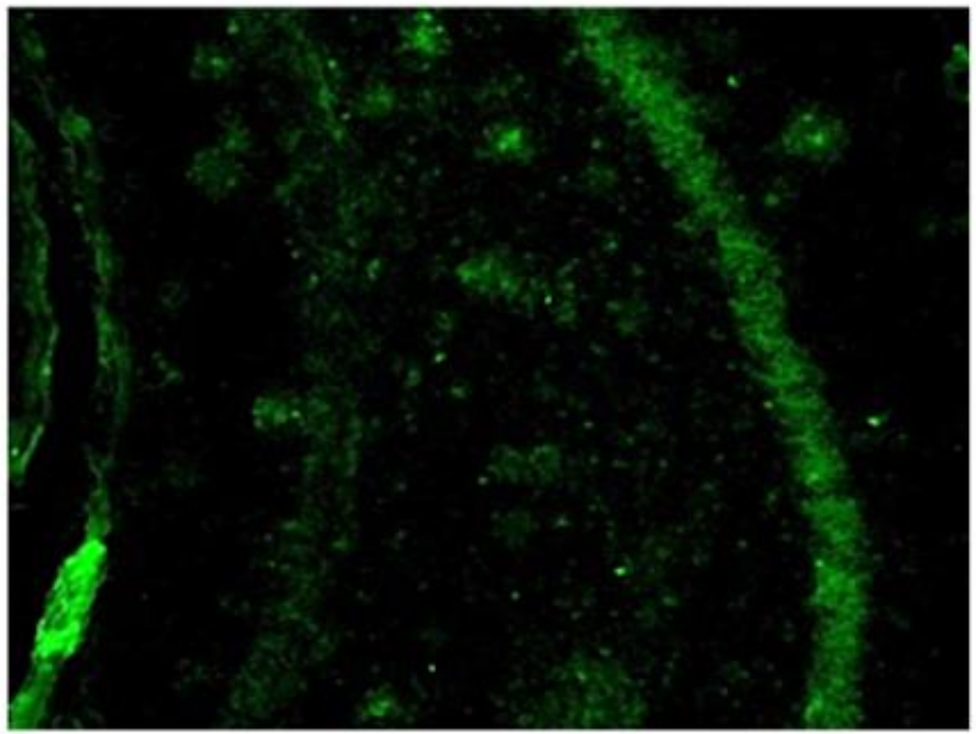
Without the Targeting the permeation is concentrated in (A) and completely Diffused in (B)



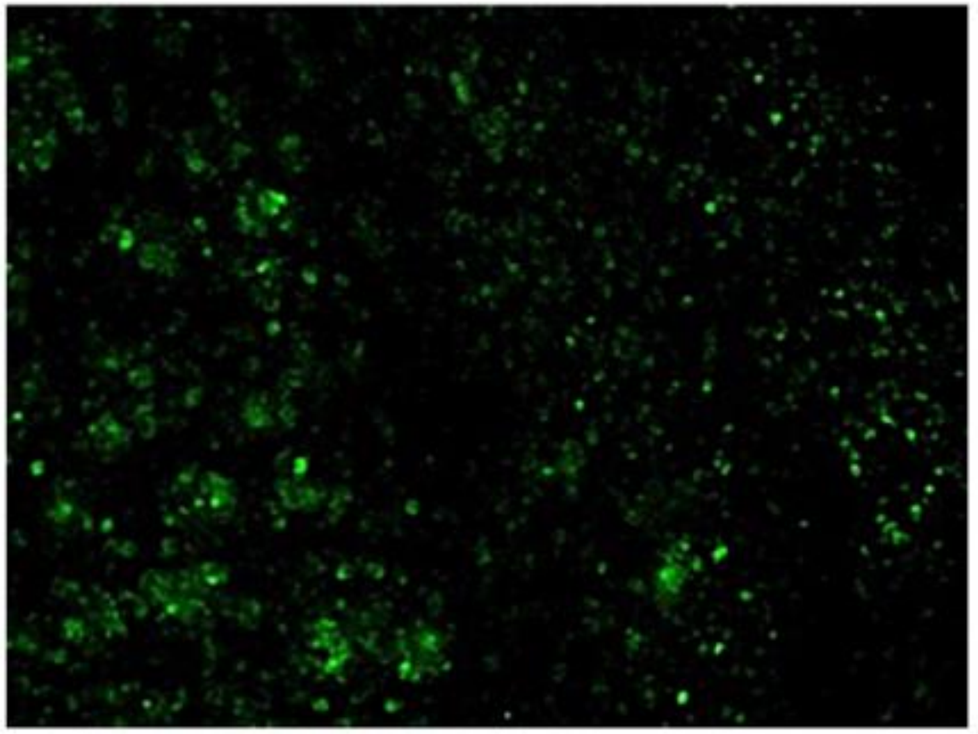




Subcutaneous Injection of Exosomes Results in BBB Penetration



Hippocampus Region of Brain

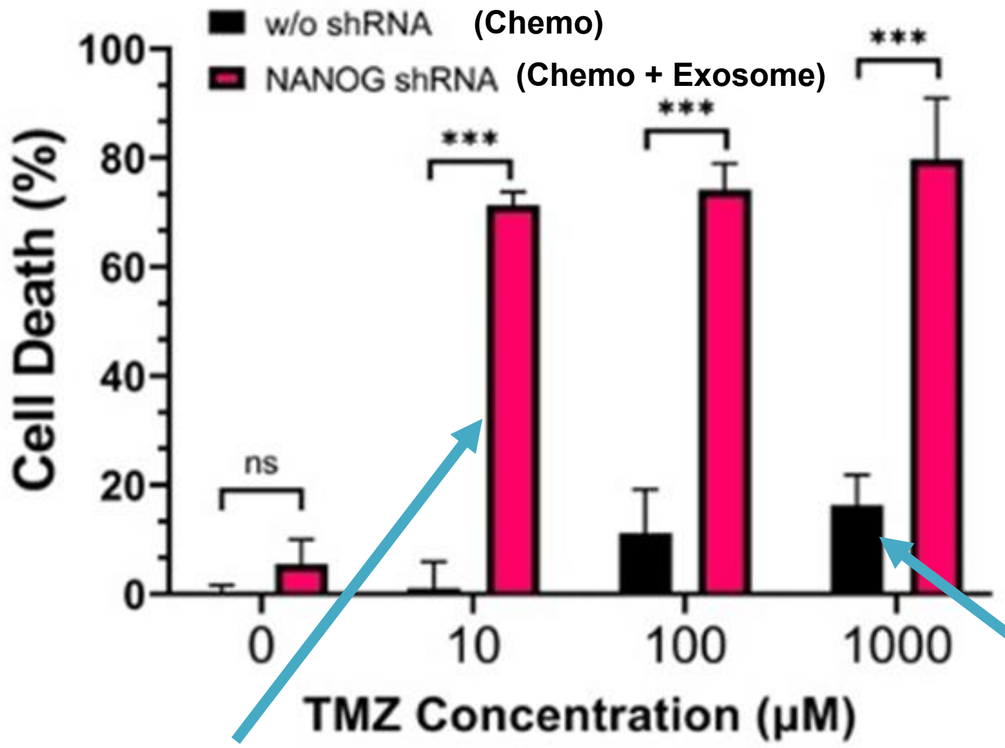


Cortex Region of Brain

Proof of exosomes getting through BBB and into brain via subcutaneous injection. **Opens up strong possibility of administration via inhaler.**

Glioblastoma (GBM) Therapy

A subset of extremely drug-resistant cells, cancer stem cells, exist in GBM, which makes it difficult to treat.

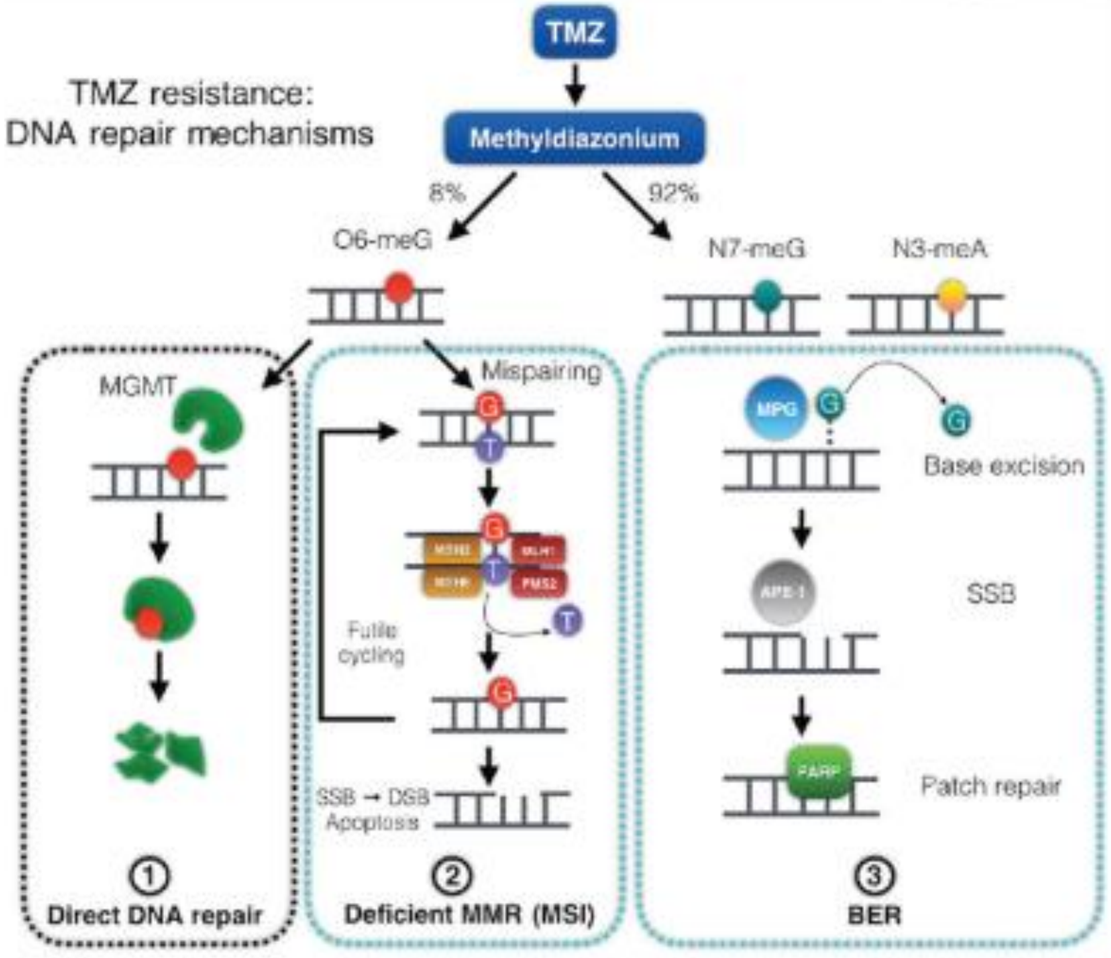


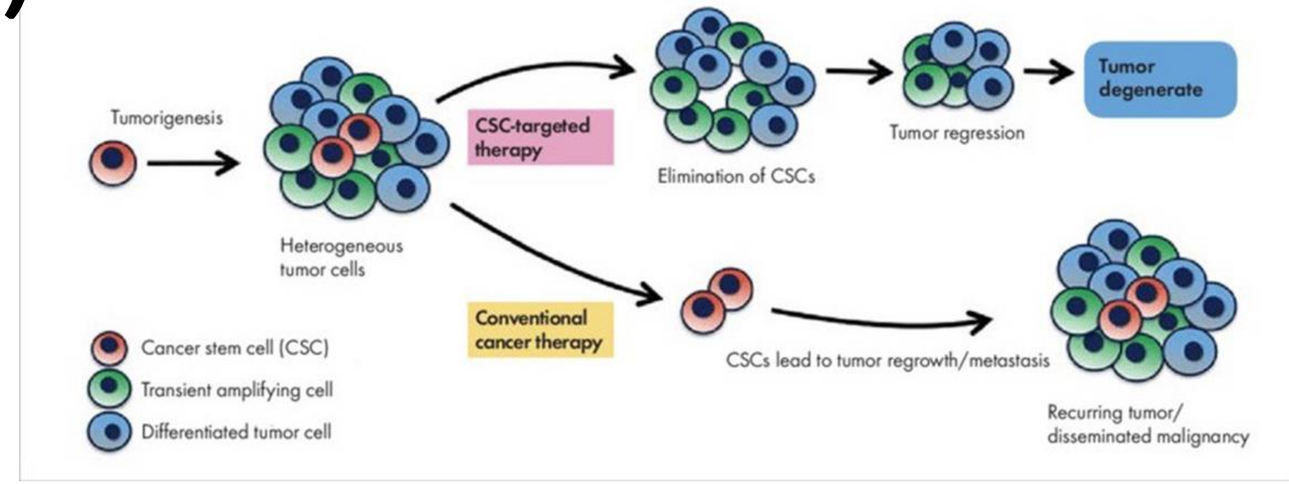
RESULTS Demonstrate a combination therapy of exosomal delivery of a silencing gene reduced the drug resistance mechanisms of GBM and helped TMZ kill almost 100% of cancer stem cells.

Low non-toxic levels of Temozolomide (TMZ) in combination with exosome roughly triple the effect of a very high dose

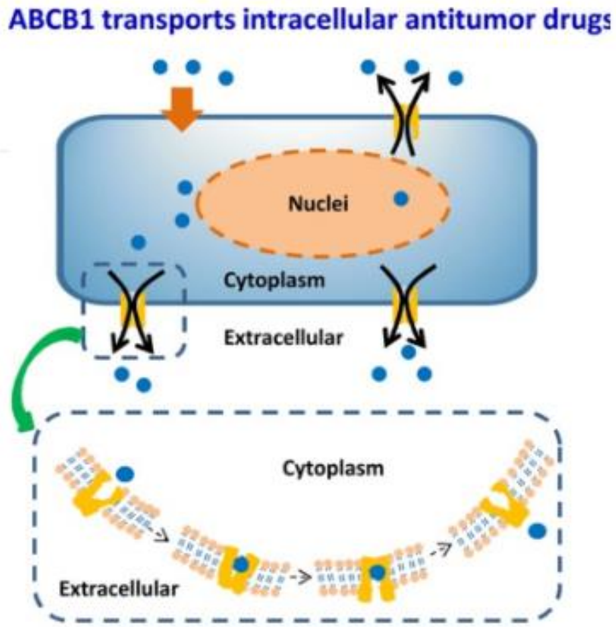
Conventional therapy, Temozolomide (TMZ) can only kill 25% of cancer stem cells, even at a very high (1mM) dose.

Exosomal Delivery of Nucleic-acid Therapeutics for glioblastoma (GBM)





Difficult to eliminate cancer stem cells

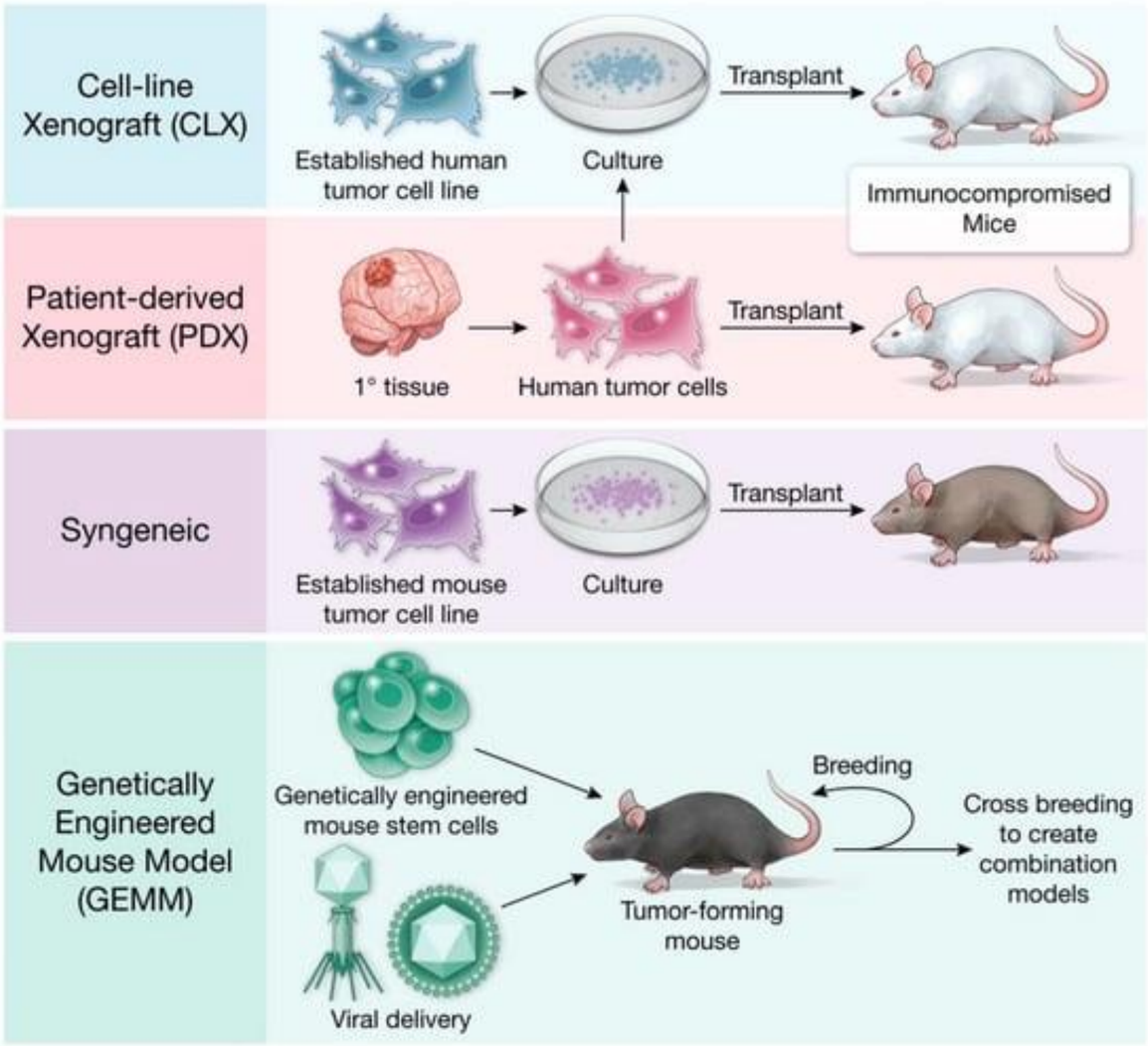


Typical GBM Mouse Models

Xenograft Models: Implantation of human GBM in immunocompromised mice.

Syngeneic Model: Implantation of mouse GBM into another mouse with same genetic background.

Genetically Engineered Mouse Model (GEMMs):
Mice genetically modified to spontaneously develop GBM



https://www.mdpi.com/2073-4409/10/3/712

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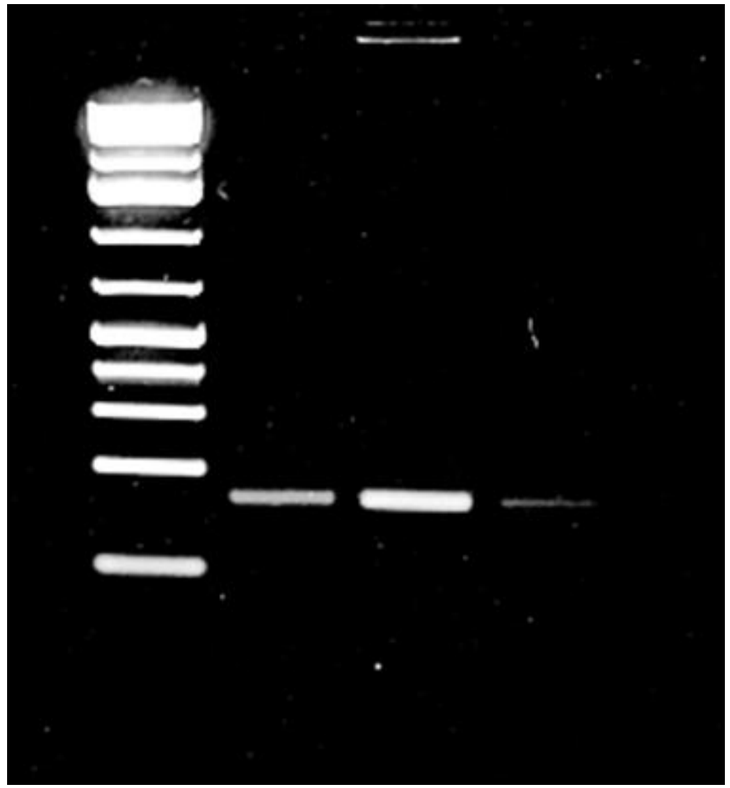
Exosomal Delivery of Nucleic-acid Therapeutics for Coronavirus



Lane 1: Ladder
Lane 2: HCoV 229E infected MRC-5 transfected with DNA gene cassette alone, without exosomes
Lane 3: HCoV 229E infected MRC-5 treated with exosomes without DNA gene cassette
Lane 4: HCoV 229E infected MRC-5 treated with exosomes with DNA gene cassette

1. Normal human lung fibroblast, MRC-5 (ATCC® CCL-171™) cells were infected with Human coronavirus 229E (HCoV 229E VR-740).

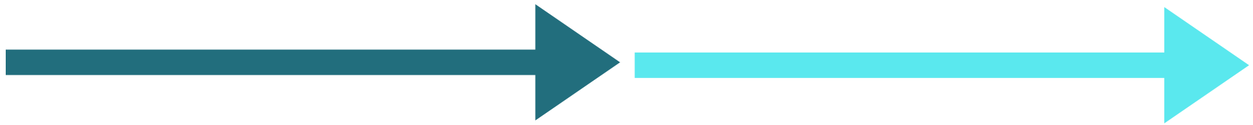
2. Then we did PCR to amplify the spike protein sequence of HCoV 229E for the detection of the virus in MRC-5 cells using following primers.

3. As you see in the figure after exposing the MRC-5 cells to exosomes containing DNA targeting to inhibit HCoV 229E viral production was significantly reduced compared to the control.

RNA therapy to get rid of virus – cuts the viral gene – stopping propagation

Pipeline

Product	Indication	Preclinical	IND Submission	Phase I	Phase II	Phase III	Phase IIII
EXP-100 Intravenous	Glioblastoma						



About Company

Symbol: MAJI (OTCQB)
Alternative Reporting Public Company

- 250M Shares Authorized
- 35.1M Shares Outstanding
- 6.1M Shares in Float
- $1.8 M Market Cap

Location: Orlando, FL
Employees: 1Full Time
Reverse Merger:10/24
Funding: Reg A
No Venture Capital Money

IP Developed via JV w/ Progenicyte

Competition

Lonza – Leader in exosomal products and therapies. They are running a number of clinical trials primarily in oncology and neurological disorders. They have a number of tissue cell lines and load their exosomes using isolation.

Capricor – Involved in clinical trial development of a treatment for Duchenne Muscular Dystrophy (DMD) cardiomyopathy using exosomes to promote repair. They produce allogeneic cardiac-derived cell therapy.

Kimera Labs - Specialize in the production of perinatal mesenchymal stem cell (MSC)-derived exosomes. They also have diagnostic applications that provide early detection of diseases. They claim their exosome are capable of crossing the blood brain, but they are focused on regenerative medicine and tissue repair in dermatology.

ArunaBio – Develops neural exosomes that are able to penetrate the blood brain barrier. In their GMP facility, they cultivated a true neural stem cell line that renews and propagates.

THANK YOU!

Mike Sheikh

Chief Executive Officer

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