CELLGENIC
Flow Exosomes

The New Era of Regenerative Medicine

WWW.CELLGENIC.COM

CELLGENIC
Flow Exosomes

The New Era of Regenerative Medicine

Isolating the beneficial signals given out by stem cells and using them, rather than stem cells themselves, is truly the next generation of Regenerative medicine

Other Cells will react to these messaging signals and will change their behavior accordingly. There is a tremendous therapeutic potential in utilizing extracellular vesicles known as exosomes

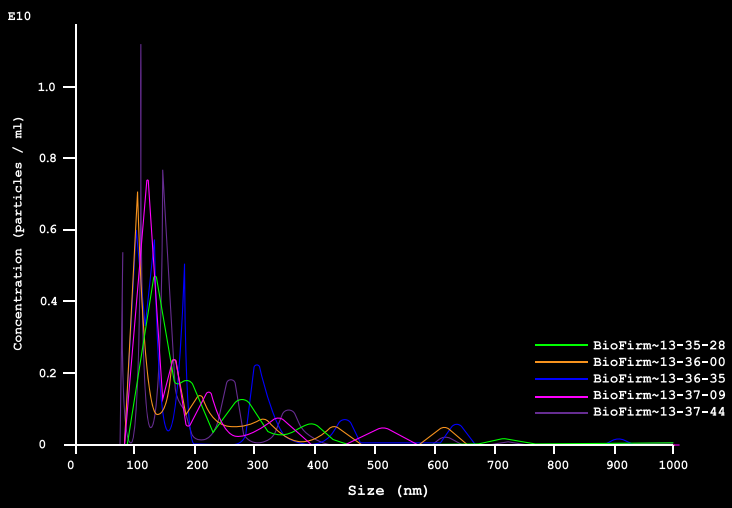
Exosomes are cell-derived nanoparticles that play a pivotal role in cell-to-cell communication and are involved in a wide range of physiological processes. They have an important role in the transfer of proteins, mRNA, miRNA and other bioactive molecules between cells and regulate gene expression in recipient cells, thus influencing various molecular path-ways.

Why Cellgenic Exosomes?

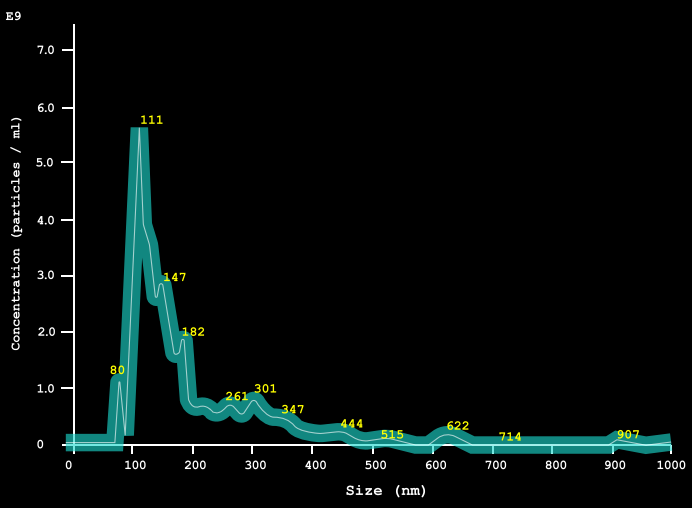
- No HLA antigens, meaning, it does not cause a reaction between unrelated donors and recipients.
- This non-surgical procedure contains hundreds of growth factors and proteins to help create a regenerative response to various treatment treatment therapies
- Cellgenic Exosomes can be stored as an "off-the-shelf" product having the potential for circumventing many of the limitations of viable cells for therapeutic applications in regenerative medicine.

Components of Cellgenic Exosomes

Exosomes, Cytokines, Chemokines, Growth Factors, Hyaluronic Acid (HA).



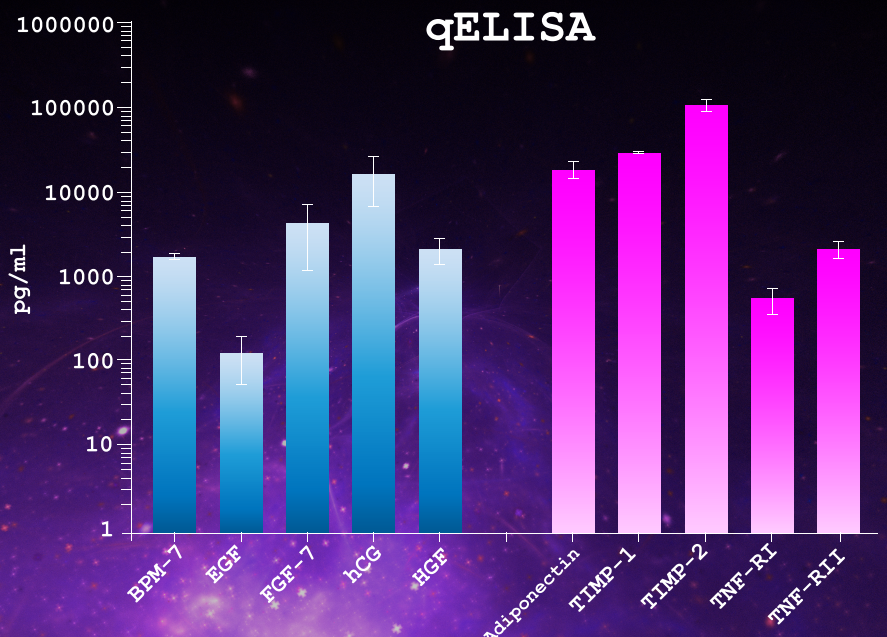
FTLA Concentration / Size graph for Experiment:
BioFirma NeoSomes 2-21-19



Averaged FTLA Concentration / Size for Experiment:
BioFirma NeoSomes 2-21-19 13-32-51
Error bars indicate +/-1 standard error of the mean

Exosomes can Deliver these signals

Anti-Apoptotic, Anti-Fibrotic, Pro-Angiogenic, Pro-Differentiation,
Pro-Proliferation, Immunomodulatory, Immune Privileged.



97% PROTEINS PRESERVED

Maximum Safety and Quality Control

Sterile-filtered without radiation, No cryoprotectant or dilutants ever used Endotoxin and USP <71> testing on all lots. Non Expanded/Non Cultured 100% pure liquid allogeneic secretion. Maximum bioavailability. Non-nucleated cell Minimal Manipulated.

Quality Compliance & Donor Screening

Cellgenic Exosomes is procured and processed in the United States according to standards and regulations established by the American Association of Tissue Banks (AATB), the United States Food & Drug Administration (FDA). All local donors. Donor ethics and non-reactive FDA approved serological screening includes:

Donor consent prior to collections

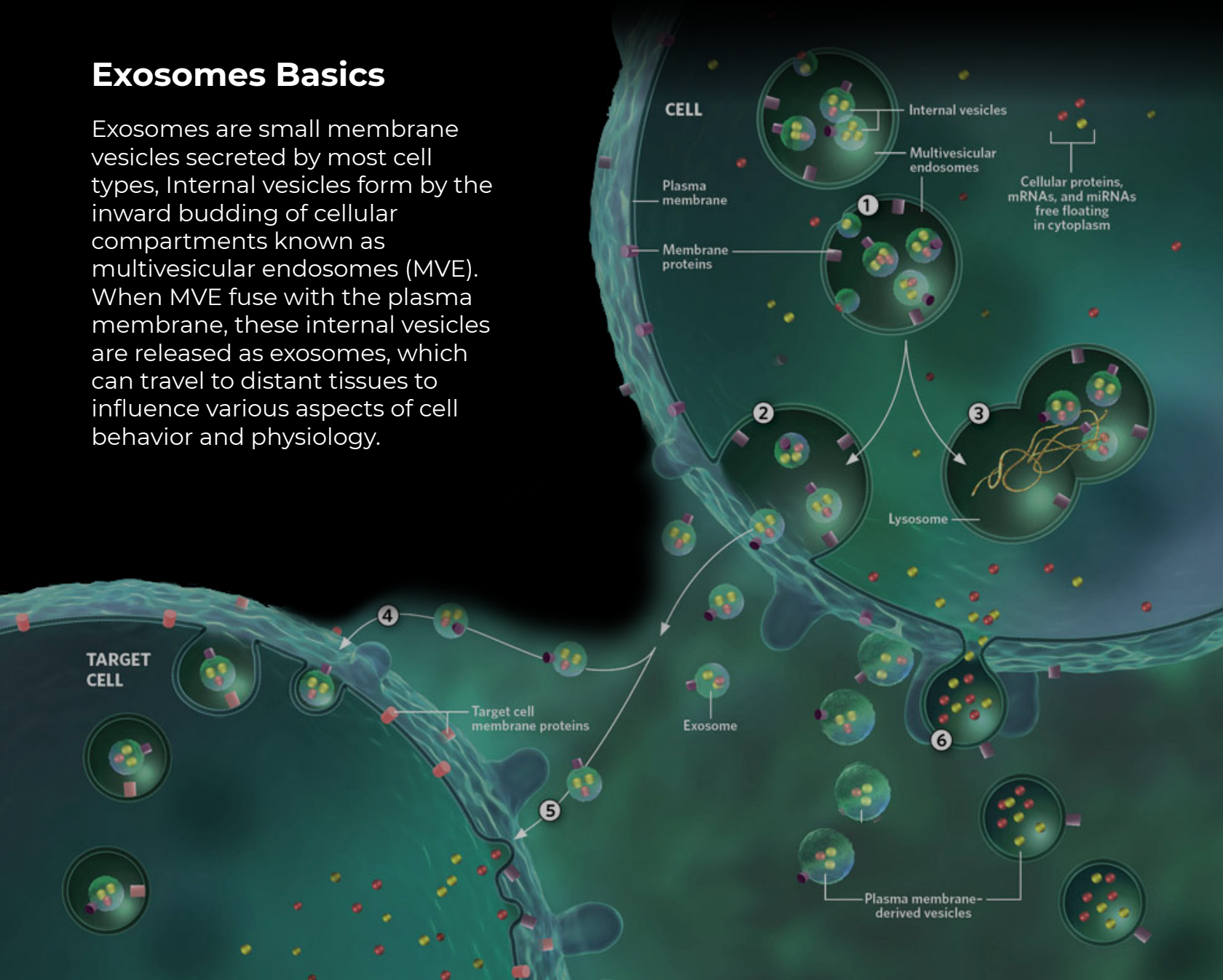
- HCV (Hepatitis C Antibody)
- HBsAG (Hepatitis B Surface Antigen)
- HIV 1/11-Ab (HIV Nucleic Acid Test)
- HBcAb (Hepatitis B core Antibody)
- HCV NAt (HCV Nucleic Acid Test)

The New Era of Regenerative Medicine

CELLGENIC
Flow Exosomes

Exosomes Basics

Exosomes are small membrane vesicles secreted by most cell types, Internal vesicles form by the inward budding of cellular compartments known as multivesicular endosomes (MVE). When MVE fuse with the plasma membrane, these internal vesicles are released as exosomes, which can travel to distant tissues to influence various aspects of cell behavior and physiology.



CELLGENIC
Flow Exosomes

The Messengers

Extracellular vesicles (EV's) consist of exosomes and microvesicles which are released directly from the cell membrane. EV's can mediate cell–cell communication and are crucial in many processes including immune signaling, angiogenesis, stress response, senescence, proliferation, and cell differentiation. EV's are involved in restoring tissue and organ damage and may partially explain the paracrine effects observed in stem cell- based therapeutic approaches. The function and content of EV's may also harbor information that can be used in tissue engineering, in which paracrine signaling is employed to modulate cell recruitment, differentiation, and proliferation.

Growth Factors & Cytokines

Growth factors are proteins that may act locally or systemically to affect the growth of cells in several ways. Various cell activities, including division, are influenced by growth factors. Cytokines are a family of low-molecular-weight proteins that are produced by numerous cell types and are responsible for regulating the immune response, inflammation, tissue remodeling and cellular differentiation. Target cells of growth factors and cytokines are mesenchymal, epithelial, and endothelial cells. These molecules frequently have overlapping activities and can act in an autocrine or paracrine fashion. A complex network of growth factors and cytokines guides cellular differentiation and regeneration in all organs and tissues.

Paracrine Signaling

Paracrine signaling is a form of cell-to-cell communication in which a cell produces a signal to induce changes in nearby cells, thus altering the behavior of those cells. Signaling molecules known as paracrine factors diffuse over a relatively short distance (local action), as opposed to endocrine factors (hormones which travel considerably longer distances via the circulatory system), juxtacrine interactions, and autocrine signaling.

Clinical Applications of Cellgenic Flow Exosomes

(For topical applications, intradermal and intraarticular use only)

HAIR THERAPY

Using Cellgenic Exosomes as a treatment for hair loss has shown prominent hair growth results in both men and women, It's highly recommended for those who are too young for hair transplant surgery and for those within the earlier stages of the hair loss cycle.

BEAUTY/ SKINCARE

Cellgenic Exosomes and its components may help to restore both the youthful contour and shape of the face as well as provide a marked improvement in skin quality, tightness and color irregularities caused by the aging process and exposure to the sun and environment.

PAIN MANAGEMENT

Relief pain and discomfort, these procedures may potencially stimulate repair as opposed to blocking or masking the pain and discomfort.

Common Conditions treated with Cellgenic Exosomes
-Osteoarthritis
-Knee Pain
-Shoulder
-Nerve Pain
-Tendonitis, Osteopathies
-Slow & non healing wounds/burns

ANTI AGING EFFECT

By exposing the cells of an older organism to those of a younger organism we can see that exosomes from the young stem cells are responsible for rejuvenating the older cells. This healing mechanism can now be used in regenerative medicine.

COADJUTANT THERAPY FOR THE MANAGEMENT OF CHRONIC DEGENERATIVE DISEASES

A degenerative disease comes from a continuous deterioration of cells, affecting tissues or organs. An immune response may be enhanced or suppressed by exosomes depending on their cell of origin and its functional state. Stem cell derived exosomes have been reported to impair dendritic cell maturation and to regulate the activation, differentiation, and proliferation of B cells. They have been shown to control natural killer cell activity and to suppress the innate immune response (IIR).

The New Era of Regenerative Medicine

Receiving Cellgenic Flow Exosomes

- Cellgenic Flow Exosomes is a human tissue allograft that is received in a box on dry ice.
- Before opening the box, check the label. You must use graft before the expiry date or transfer to a freezer.
- Move to a Freezer and store at -20C or lower.

Preparation and Dilution

The necessary materials for the procedure are:

- Cellgenic Exosomes Vials.
- 3cc Syringe.
- 18Gauge Needle.
- 22 to 27 Gauge Needle.
- The Dilutant of choice.

Aceptable Dilutants

- Normal saline.
- 1% preservative free pain lidocaine.
- Platelet Rich Plasma.

Prohibited Dilutants

- Glycerol.
- Glucose Solutions (eg.D5NS).
- Epinephrine.
- Lidocaine/marcaine with preservatives.
- Lidocaine/Marcaine in Joints Chemical Debridement (eg. Santyl).

Preparation & Mixing

- Removed the package from freezer. Cut the Package.
- Defrost vial by holding still in hand for 3-5 minutes (do not shake the vial).
- Fill syringe with dilutant. (Typically 1:1 ratio).
- Draw Cellgenic Exosomes into syringe with 18G Needle.
- Use a 22 to 27G needle for implantation.

Post Implantation Protocol

Stimulation of inflammation of tissue is desired to increase success:

- No Anti Inflammatories.
- No Aspirin.
- Minimize Immobilization (joints).
- No Icing.
- Protected Active rehabilitation is recommended.

The New Era of Regenerative Medicine

CELLGENIC
Flow Exosomes

Clinical Support & Ordering Information

WWW.CELLGENIC.COM

CALL US | +1 305 560 5337

EMAIL US | INFO@STEMCELLSGROUP.COM