**Summary**

**ENGEX™: A novel exosome engineering platform enabling targeted transfer of pharmaceutical molecules**


**What are exosomes?**

- Exosomes are extracellular vesicles (30-200 nm) that convey complex molecules and biological signals between cells.
- Convey and protect complex macromolecules that alter the function of recipient cells (tumor vs. non-immunogenic).

**CD9 Biodesics is developing a therapeutic platform utilizing exosome biology, known as ENGEX™.**

**ENGEX™ is a novel exosome engineering platform enabling targeted transfer of pharmacological molecules.**

**What are EWI-IGSF proteins?**

- A variety of cell types was purified using the same method and subjected to proteomic analysis.
- Proteomic analysis by LC/MS-MS led to the identification of highly conserved EWI-IGSF proteins.

**What is PTGFRN?**

- PTGFRN IGSF3 IGSF8

**Exosome Signaling**

- PTGFRN did not alter the broader protein composition of secreted exosomes.

**Exosome Fraction (PSM)**

- PTGFRN overexpression enhanced activity of exosome-mediated delivery of STING agonist.

**Exosome-mediated delivery of STING agonist**

- PTGFRN overexpression enhanced activity of exosome-mediated delivery of STING agonist.

**Stable cellular expression of PTGFRN resulted in 150-fold enrichment of PTGFRN on exosome surface**

- PTGFRN packages fusion proteins into exosomes.

**Exosome Signaling**

- PTGFRN packages fusion proteins into exosomes more efficiently than conventional scaffolds.

**Exosome Signaling**

- PTGFRN packages fusion proteins into exosomes more efficiently than conventional scaffolds.

**Exosome Signaling**

- PTGFRN packages fusion proteins into exosomes more efficiently than conventional scaffolds.

**Exosome Signaling**

- PTGFRN packages fusion proteins into exosomes more efficiently than conventional scaffolds.

**Exosome Signaling**

- PTGFRN packages fusion proteins into exosomes more efficiently than conventional scaffolds.

**Exosome Signaling**

- PTGFRN packages fusion proteins into exosomes more efficiently than conventional scaffolds.