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— *as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))*
— *as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))*

(54) Title: EXTRACELLULAR VESICLES FOR INHALATION

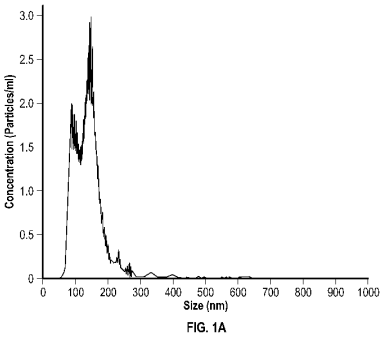


FIG. 1A

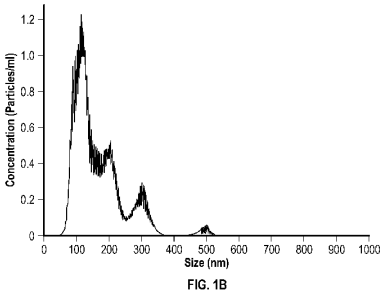


FIG. 1B

(57) Abstract: Vesicles, including exosomes, having a coating of a hydrophilic, neutral polymer such a PEG have an increased ability to form a suspension or colloid compared to uncoated vesicles. This enables the coated vesicles to be used to form aerosol droplets such that a liquid formulation containing vesicles can be used in a nebulizer for inhaled administration thereof. Such coated vesicles are also able to pass through mucus and can deliver their cargo into lung cells. Exosomes from mesenchymal stem cells can deliver additional proteins, miRs, mRNAs and other nucleic acid sequences to lung cells providing a regenerative gene therapy for CF, COPD lung cancer and other lung diseases.

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