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(71) Applicant: **REGENERON PHARMACEUTICALS, INC.** [US/US]; 777 Old Saw Mill River Road, Tarrytown, NY 10591 (US).

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(72) Inventors: **THAKUR, Garima**; c/o Regeneron Pharmaceuticals, Inc., 777 Old Saw Mill River Road, Tarrytown, NY 10591 (US). **MINK, Sheldon, Robert**; c/o Regeneron Pharmaceuticals, Inc., 777 Old Saw Mill River Road, Tarrytown, NY 10591 (US). **TUSTIAN, Andrew, David**; c/o Regeneron Pharmaceuticals, Inc., 777 Old Saw Mill River Road, Tarrytown, NY 10591 (US).

(74) Agent: **ISACSON, John, P.** et al.; McCarter & English, LLP, 265 Franklin Street, Boston, MA 02110 (US).

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(54) Title: METHODS FOR PURIFYING FILLED ADENO-ASSOCIATED VIRUS CAPSIDS

(57) Abstract: The inventions provide methods of purifying full adeno-associated virus (AAV) capsids, wherein the method comprises the steps of (a) subjecting a sample comprising AAV capsids in buffer to anion exchange chromatography (AEX) to separate full AAV capsids from capsids that are not full (that is, partially-filled AAV capsids, nearly empty AAV capsids and empty AAV capsids) and form a first pool ("first AEX pass"), wherein the first pool is enriched in the ratio of full capsids to capsids that are not full; and (b) subjecting the first pool to anion exchange chromatography to form a second pool ("second AEX pass"), wherein the second pool is further enriched in the ratio of full capsids to capsids that are not full (that is, partially-filled AAV capsids, nearly empty AAV capsids and empty AAV capsids), wherein the enrichment in full capsids can be least 3 fold. Third, fourth and more AEX passes also can be undertaken. Depth filtration, single-pass tangential flow filtration and affinity exchange also can be included in the inventive methods, preferably undertaken prior to AEX. Enriched AAV preparations and drug products also are provided.

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