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(71) Applicant: **SHAPE THERAPEUTICS INC.** [US/US];
219 Terry Avenue North, Suite 100, Seattle, WA 98109
(US).

(72) Inventors: **PACKARD, Thomas**; c/o Shape Therapeutics
Inc., 219 Terry Avenue North, Suite 100, Seattle, WA 98109
(US). **BRIGGS, Adrian Wrangham**; c/o Shape Therapeu-
tics Inc., 219 Terry Avenue North, Suite 100, Seattle, WA
98109 (US). **HUSS, David, Jeffrey**; c/o Shape Therapeu-
tics Inc., 219 Terry Avenue North, Suite 100, Seattle, WA
98109 (US). **VIGNEAULT, Francois**; c/o Shape Thera-

peutics Inc., 219 Terry Avenue North, Suite 100, Seattle,
WA 98109 (US). **HAUSE, Ronald, James, Jr.**; c/o Shape
Therapeutics Inc., 219 Terry Avenue North, Suite 100, Seat-
tle, WA 98109 (US). **JIANG, Yue**; c/o Shape Therapeu-
tics Inc., 219 Terry Avenue North, Suite 100, Seattle, WA
98109 (US). **STEIN, Kevin, Christopher**; c/o Shape Ther-
apeutics Inc., 219 Terry Avenue North, Suite 100, Seattle,
WA 98109 (US). **BANJANIN, Bora**; c/o Shape Therapeu-
tics Inc., 219 Terry Avenue North, Suite 100, Seattle, WA
98109 (US).

(74) Agent: **HARWOOD, Melissa, M.** et al.; DLA Piper LLP,
701 Fifth Avenue, Suite 6900, Seattle, WA 98104-7029
(US).

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(54) Title: FUNCTIONAL AAV CAPSIDS FOR INTRAVITREAL ADMINISTRATION

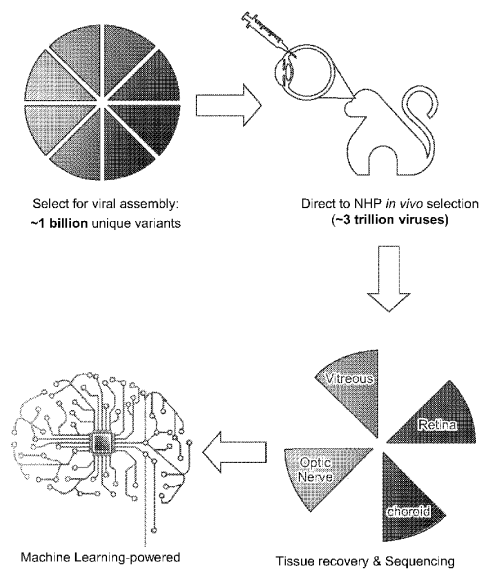


FIG. 1

(57) Abstract: Disclosed herein are engineered AAV VP capsid polypep-
tides with the ability to assemble into virus particles and having improved
tissue tropism to eye tissues, for example, retinal tissues, retinal pigment
epithelial cells, or photoreceptor cells. The capsids are engineered using
the high throughput discovery system described herein. In certain embod-
iments, provided herein are recombinant adeno-associated virus (AAV) VP
capsid polypeptides having at least one mutation in a 581 to 589 region of
the VP capsid polypeptide, corresponding to residues 581 to residue 589
of a VP1 polypeptide of SEQ ID NO: 1.

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