What is claimed is:

1. Use of a recombinant adeno-associated virus-8 (rAAV8) vector in the manufacture of a medicament formulated for suprachoroidal administration for treating neovascular age-related macular degeneration (nAMD) or diabetic retinopathy (DR) in a human subject, wherein the ~~recombinant adeno-associated virus-8 (~~rAAV8~~)~~ vector comprises~~ing~~ an expression cassette encoding an anti-hVEGF antigen-binding fragment, wherein the expression cassette is flanked by AAV2 inverted terminal repeats (ITRs), and wherein the expression cassette comprises:

(i) a CB7 promotor consisting of a chicken β-actin promoter and a CMV enhancer;

(ii) a chicken β-actin intron;

(iii) a nucleotide sequence encoding:

an IL-2 signal peptide;

a heavy chain of the anti-hVEGF antigen-binding fragment comprising:

(a) heavy chain CDRs 1-3 of SEQ ID NOs: 20, 18, and 21; or

(b) the amino acid sequence of SEQ ID NO: 2;

a self-cleaving furin (F)/F2A linker;

a second IL-2 signal peptide;

a light chain of the anti-hVEGF antigen-binding fragment comprising:

(a) light chain CDRs 1-3 of SEQ ID NOs: 14-16; or

(b) the amino acid sequence of SEQ ID NO: 1; and

(iv) a rabbit β-globin poly A signal; and

wherein the anti-hVEGF antigen-binding fragment is expressed and results in treatment of nAMD or diabetic retinopathy (DR);

wherein the ~~recombinant adeno-associated virus-8 (~~rAAV8~~)~~ vector is to be administered to the suprachoroidal space in the eye of the human subject; and

wherein (1) the administration is videoed using an infrared thermal camera and/or (2) ~~-~~after the administration, the post ocular injection thermal profile of the ~~injected material~~ administered medicament in the eye is monitored using an infrared thermal camera.

2. The use of claim 1, wherein the ~~recombinant adeno-associated virus-8 (~~rAAV8~~)~~ vector is to be administered to the human subject by injecting the recombinant viral vector into the

suprachoroidal space using a suprachoroidal drug delivery device.

3. The use of claim 2, wherein the suprachoroidal drug delivery device is a microinjector.

~~4. Use of a recombinant adeno-associated virus-8 (rAAV8) vector in the manufacture of a medicament formulated for administration to the outer space of the sclera for treating nAMD or diabetic retinopathy (DR), the recombinant adeno-associated virus-8 (rAAV8) vector comprising an expression cassette encoding an anti-hVEGF antigen-binding fragment, wherein the expression cassette is flanked by AAV2 inverted terminal repeats (ITRs), and wherein the expression cassette comprises:~~

~~(i) a CB7 promotor consisting of a chicken β-actin promoter and a CMV enhancer;~~

~~(ii) a chicken β-actin intron;~~

~~(iii) a nucleotide sequence encoding:~~

~~an IL-2 signal peptide; a heavy chain of the anti-hVEGF antigen-binding fragment comprising the amino acid sequence of SEQ ID NO: 2;~~

~~a self-cleaving furin (F)/F2A linker;~~

~~a second IL-2 signal peptide;~~

~~a light chain of the anti-hVEGF antigen-binding fragment comprising the amino acid sequence of SEQ ID NO: 1; and~~

~~(iv) a rabbit β-globin poly A signal; and~~

~~wherein the anti-hVEGF antigen-binding fragment is expressed and results in treatment of nAMD or diabetic retinopathy (DR) of the eye; and~~

~~wherein the recombinant adeno-associated virus-8 vector (rAAV8) vector is to be administered to the outer surface of the sclera in the eye of the human subject and after the administration, the post ocular injection thermal profile of the injected material in the eye is monitored using an infrared thermal camera.~~

~~5. The use of claim 4, wherein the recombinant adeno-associated virus-8 (rAAV8) vector is to be administered by the use of a juxtascleral drug delivery device that comprises a cannula whose tip can be inserted and kept in direct apposition to the scleral surface.~~

~~6. The use of claim 5, wherein the recombinant adeno-associated virus-8 (rAAV8) vector is to be administered by inserting and keeping the tip of the cannula in direct apposition to the scleral surface.~~

~~7. Use of a recombinant adeno-associated virus-8 (rAAV8) vector in the manufacture of a medicament formulated for subretinal administration for treating a nAMD or diabetic retinopathy (DR) in a human subject, the recombinant adeno-associated virus-8 (rAAV8) vector comprising an expression cassette encoding an anti-hVEGF antigen-binding fragment, wherein the expression cassette is flanked by AAV2 inverted terminal repeats (ITRs), and wherein the expression cassette comprises:~~

~~(i) a CB7 promotor consisting of a chicken β-actin promoter and a CMV enhancer;~~

~~(ii) a chicken β-actin intron;~~

~~(iii) a nucleotide sequence encoding:~~

~~an IL-2 signal peptide; a heavy chain of the anti-hVEGF antigen-binding fragment comprising the amino acid sequence of SEQ ID NO: 2;~~

~~a self-cleaving furin (F)/F2A linker;~~

~~a second IL-2 signal peptide;~~

~~a light chain of the anti-hVEGF antigen-binding fragment comprising the amino acid sequence of SEQ ID NO: 1; and~~

~~(iv) a rabbit β-globin poly A signal; and~~

~~wherein the anti-hVEGF antigen-binding fragment is expressed and results in treatment of nAMD or diabetic retinopathy (DR) of the eye, and~~

~~wherein the recombinant adeno-associated virus-8 (rAAV8) vector is to be administered to the subretinal space peripheral to the optic disc, fovea and macula located in the back of the eye of a human subject in need of treatment without performing a vitrectomy on the eye of said human patient.~~

~~8. The use of claim 7, wherein the administration is by transvitreal injection.~~

~~9. The use of claim 8, wherein the transvitreal injection comprises inserting a sharp needle into the sclera via the superior or inferior side of the eye and passing the sharp needle all the way through the vitreous to inject the recombinant viral vector to the subretinal space on the other side.~~

~~10. The use of claim 8, wherein the transvitreal injection comprises inserting a trochar into the sclera and inserting a cannula through the trochar and through the vitreous to inject the recombinant viral vector to the subretinal space on the other side.~~

4~~11~~. The use of claim 1, wherein the anti-hVEGF antigen-binding fragment comprises

light chain CDRs 1-3 of SEQ ID NOs:14-16 and heavy chain CDRs 1-3 of SEQ ID NOs:20, 18, and 21.

5. The use of claim 1, wherein the anti-hVEGF antigen-binding fragment comprises a heavy chain comprising the amino acid sequence of SEQ ID NO: 2, and a light chain comprising the amino acid sequence of SEQ ID NO: 1.

6. The use of claim 1, wherein the first and/or second IL-2 signal peptide comprises the amino acid sequence of SEQ ID NO: 24.

7~~12~~. The use of claim 1, wherein the medicament is for treating diabetic retinopathy (DR).

8~~13~~. The use of claim 1, wherein the medicament is for treating nAMD.

9~~14~~. The use of claim 1, wherein a therapeutically effective amount of the anti-hVEGF antigen-binding fragment is to be delievered to the retina of said human subject.

10~~5~~. The use of claim 9~~14~~, wherein the therapeutically effective amount of the anti-hVEGF antigen-binding fragment is produced by human retinal cells of said human subject.

11~~6~~. The use of claim 9~~14~~, wherein the therapeutically effective amount of the anti-hVEGF antigen-binding fragment is produced by human photoreceptor cells, horizontal cells, bipolar cells, amacrine cells, retina ganglion cells, and/or retinal pigment epithelial cells in the external limiting membrane of said human subject.

12~~7~~. The use of claim 11~~6~~, wherein the human photoreceptor cells are cone cells and/or rod cells.

13~~8~~. The use of claim 11~~6~~, wherein the retina ganglion cells are midget cells, parasol cells, bistratified cells, giant retina ganglion cells, photosensitive ganglion cells, and/or Müller glia.

~~19. The use of claim 7, after the administration, the post ocular injection thermal profile of the injected material in the eye is monitored using an infrared thermal camera.~~

14~~20~~. The use of claim 1~~9~~, wherein the infrared thermal camera is an FLIR T530 infrared thermal camera.

15~~21~~. The use of claim 1, wherein the rAAV8 vector is to be administered at a dose of between ~~about~~ 1~~6~~ .~~0~~× 10^{11}~~^{0}~~ to 1 × 10^{12} genome copies per eye or between 1 × 10^{12} to 1 × 10^{13} genome copies per eye.

~~22. The use of claim 1, wherein the vector is to be administered at a dose about 1.6 × 10^{11} genome copies per eye.~~

16~~23~~. The use of claim 1, wherein the rAAV8 vector is to be administered at a dose of about 2.5×10^{11} genome copies per eye.

17~~24~~. The use of claim 1, wherein the rAAV8 vector is to be administered at a dose of about 5.0×10^{11} genome copies per eye.

18. The use of claim 1, wherein the rAAV8 vector is to be administered at a dose of about 1.0×10^{12} genome copies per eye.

19~~25~~. The use of claim 1, wherein the rAAV8 vector is to be administered at a dose of about 3.0 x 10^{12} genome copies per eye.

20. The use of claim 1, wherein the thermal sensitivity of the infrared thermal camera is equal to or smaller than 0.05 °C at 30 °C.

21. The use of claim 1, wherein the infrared resolution of the infrared thermal camera is equal to or greater than 75,000 pixels.

22. The use of claim 1, wherein the field of view (FOV) of the infrared thermal camera is equal to or lower than 25° x 25°.

23. The use of claim 1, wherein after the administration, the post ocular injection thermal profile of the administered medicament ~~i~~n the eye is monitored using an infrared thermal camera.

24. The use of claim 1, wherein (1) the administration is videoed using an infrared thermal camera and (2) after the administration, the post ocular injection thermal profile of the administered medicament in the eye is monitored using an infrared thermal camera.