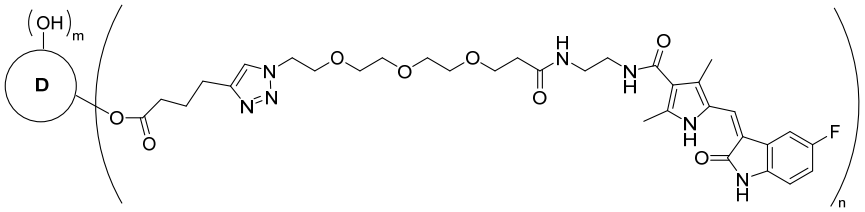
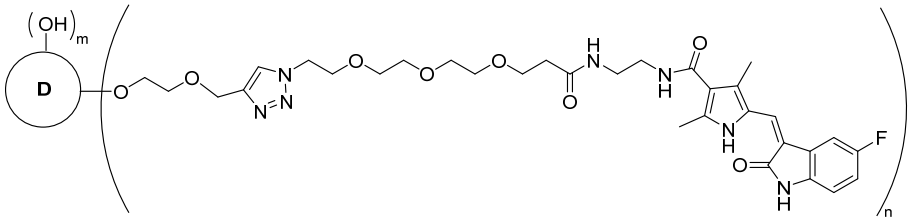
We claim:

1. A pharmaceutical formulation comprising:

a composition comprising a hydroxyl-terminated dendrimer covalently conjugated to a receptor tyrosine kinase inhibitor, wherein the dendrimer is selected from the group consisting of:



, or



,

wherein:

D is a poly(amidoamine) (PAMAM) dendrimer selected from generation 2, generation 3, generation 4, generation 5, generation 6, generation 7, generation 8, generation 9, and generation 10;

n is an integer from 1 to 100;

m is an integer from 16 to 4096; and

one or more pharmaceutically acceptable excipients suitable for systemic administration,

wherein the composition is in an amount effective to treat or alleviate one or more symptoms associated with one or more diseases and/or disorders of the eye.

2. The formulation of claim 1, wherein:

D is a poly(amidoamine) (PAMAM) dendrimer selected from generation 4, generation 5, generation 6, generation 7, and generation 8.

3. The formulation of claim 1, wherein:

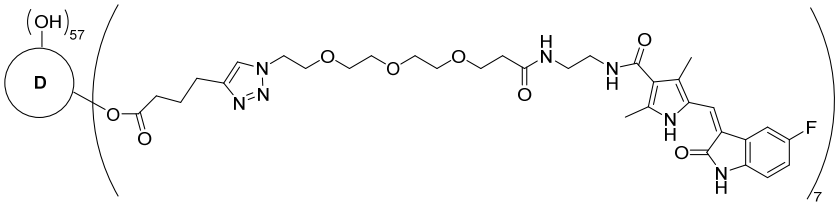
D is a G4 PAMAM dendrimer;

n is an integer from 5 to 15;

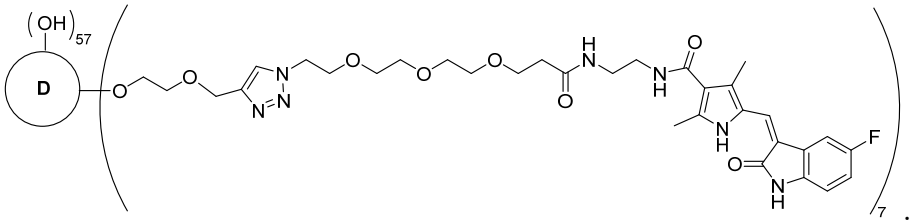
m is an integer from 49 to 59; and

n+m=64.

4. The formulation of claim 1, wherein the dendrimer has the following structure:

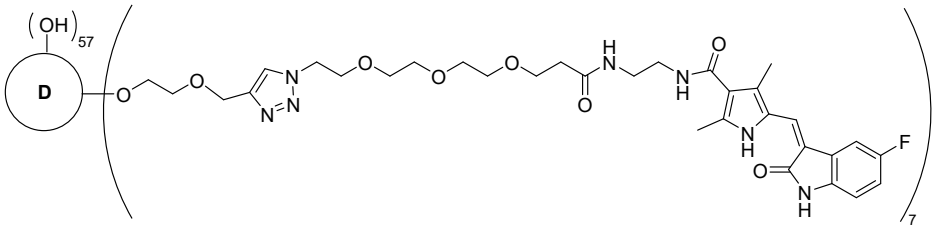


; or



.

5. The formulation of claim 4, wherein the dendrimer has the following structure:



.

6. The formulation of any one of claims 1-5, wherein the dendrimer has a diameter of from about 1 nm to about 20 nm.

7. The formulation of any one of claims 1-6, wherein the dendrimer has a diameter of from about 2 nm to about 10 nm.

8. The formulation of any one of claims 1-7, wherein the dendrimer has a surface charge between -20 mV and 20 mV, between -10 mV and 10 mV, between -10 mV and 5 mV, between -5 mV and 5 mV, or between -2 mV and 2 mV, inclusive.

9. The formulation of any one of claims 1-8, wherein about 0.1% to about 40% of the total surface groups of the dendrimer are covalently linked to active agent or an analog thereof.

10. Use of the pharmaceutical formulation of any one of claims 1-9 in the manufacture of a medicament for treatment of a disease or disorder of the eye in a subject in need thereof.

11. The use of claim 10, wherein the disease or disorder of the eye is an inflammatory and/or angiogenic disease of the eye.

12. The use of claim 10, wherein the disease or disorder of the eye is selected from the group consisting of age-related macular degeneration (AMD), retinitis pigmentosa, optic neuritis, uveitis, retinal detachment, temporal arteritis, retinal ischemia, arteriosclerotic retinopathy, hypertensive retinopathy, retinal artery blockage, retinal vein blockage, diabetic retinopathy, macular edema, retinal neovascularization, and choroidal neovascularization.

13. The use of claim 10, wherein the disease or disorder of the eye is wet age-related macular degeneration (AMD).

14. The use of claim 10, wherein the disease or disorder of the eye is diabetic macular edema (DME).

15. The use of claim 10, wherein disease or disorder of the eye is associated with activated microglia, activated macrophages, and/or retinal pigment epithelial (RPE) cells in the eye.

16. The use of claim 10, wherein the formulation is to be administered to the subject in an amount effective to target the activated microglia, activated macrophages, and/or RPE cells in the eye.

17. The use of claim 10, wherein the formulation is to be administered to the subject in an amount effective to reduce the number and/or activity of the activated microglia and/or activated macrophages in the eye.

18. The use of claim 10, wherein the formulation is to be administered to the subject in an amount effective to alleviate one or more symptoms of the one or more diseases and/or disorders of the eye.

19. The use of claim 10, wherein the formulation is to be administered to the subject systemically.

20. The use of claim 10, wherein the formulation is to be administered to the subject intravenously, subcutaneously, or orally.

21. The use of claim 10, wherein the formulation is to be administered to the subject in a time period selected from the group consisting of daily, weekly, biweekly, monthly, and bimonthly.

22. The pharmaceutical formulation of any one of claims 1-10 for use as a medicament.