52. The polypeptide of any one of the above claims, wherein the polypeptide inhibits or reduces complement activity.

53. The polypeptide of claim 52, wherein the polypeptide inhibits the alternative complement pathway.

54. A nucleic acid comprising a nucleotide sequence encoding the polypeptide of any one of the previous claims.

55. A viral vector comprising the nucleic acid of claim 54.

56. The viral vector of claim 55, wherein said viral vector is selected from the group consisting of a retroviral vector, a lentiviral vector, an adenoviral vector, a Herpes viral vector, a Hepatitis viral vector, an SV40 viral vector, an AAV vector, an EBV vector and an NDV vector.

57. The viral vector of claim 56, wherein said lentiviral vector is a BIV, HIV, EIAV, SIV or FIV vector.

58. The viral vector of claim 57, wherein the viral vector comprises a decay accelerating factor.

59. A pharmaceutical preparation comprising the polypeptide of any one of claims 1-53, the nucleic acid of claim 54, the viral vector of any one of claims 55-58 or any combination thereof.

60. The pharmaceutical preparation of claim 59, comprising at least one ingredient selected from the group consisting of histidine, $MgCl_2$, trehalose, a polysorbate, polysorbate 20, sucrose, arginine and proline.

61. Use of the polypeptide of any one of claims 1-53, the nucleic acid of claim 54, the viral vector of any one of claims 55-58, the pharmaceutical composition of any one of claims 59-60, or any combination thereof in the manufacture of a medicament for ~~A method of~~ inhibiting complement activity, wherein the ~~method~~ use comprises ~~introducing~~ introduction or ~~administering~~ administration to a site of the complement activity the polypeptide of any one of claims 1-53, the nucleic acid of claim 54, the viral vector of any one of claims 55-58, the pharmaceutical composition of any one of claims 59-60, or any combination thereof in an amount sufficient to inhibit the complement activity, wherein the polypeptide inhibits the complement activity.

62. The use ~~method~~ of claim 61, comprising ~~administering to a patient~~ the polypeptide, the nucleic acid, the viral vector, the pharmaceutical composition or any combination thereof to be administered to a patient.

63. The use ~~method~~ of claim 61 or 62, wherein the polypeptide competes with binding of a native complement factor B.

64. ~~A method of~~ Use of the polypeptide, the nucleic acid, the viral vector, the pharmaceutical composition or any combination thereof, as defined in claim 62, or the polypeptide competing with binding of a native complement factor B, as defined in claim 63, in the manufacture of a medicament for treating a complement mediated disease in a patient~~, comprising the method of claim 62 or 63~~.

65. The use ~~method~~ of claim 64, wherein the complement-mediated disease is a disease of the eye.

66. The use ~~method~~ of claim 65, wherein the pharmaceutical composition is to be administered to the eye.

67. The use ~~method~~ of claim 66, wherein the pharmaceutical composition is to be administered by intravitreal injection, subretinal injection, injection to the intraanterior chamber of the eye, injection or application locally to the cornea, subconjunctival injection, subtenon injection, or by eye drops.

68. The use ~~method~~ of any one of claims 64-67, wherein the complement-mediated disease is macular degeneration, age-related macular degeneration (AMD), geographic atrophy, wet AMD, myocardial infarction, dry AMD, drusen formation, arthritis, stroke, ischemic reperfusion injury, diabetic retinopathy, vitreoretinopathy, traumatic organ injury, corneal inflammation, corneal neovascularization, uveitis, ocular hypertension or glaucoma.

69. The use ~~method~~ of any one of claims 64-67, wherein the complement-mediated disease is selected from the group consisting of atherosclerosis, airway hyperresponsiveness, immune related diseases, autoimmune related diseases, lupus nephritis, systemic lupus erythematosus (SLE), arthritis, rheumatologic diseases, anti-phospholipid antibody syndrome, intestinal and renal I/R injury, asthma, atypical hemolytic-uremic syndrome, Type II membranoproliferative glomerulonephritis, non-proliferative glomerulonephritis, fetal loss, brain injury, post-traumatic organ damage, post infarction organ damage, vasculitis, hereditary angioedema, paroxysmal nocturnal hemoglobinuria, cerebrovascular accident, Alzheimer's disease, transplant rejection, infections, sepsis, septic shock, Sjögren's syndrome, myasthenia gravis, antibody-mediated skin diseases, Type I and Type II diabetes mellitus, insulin resistance syndrome, gestational diabetes, thyroiditis, idiopathic thrombocytopenic purpura and hemolytic anemia, neuropathies, multiple sclerosis, cardiopulmonary bypass injury, polyarteritis nodosa, Henoch Schonlein purpura, serum sickness, Goodpasture's disease, systemic necrotizing vasculitis, post streptococcal glomerulonephritis, idiopathic pulmonary fibrosis, membranous glomerulonephritis, acute shock lung syndrome, adult respiratory distress syndrome, and reperfusion.

70. The ~~method~~ use of any one of claims 64-69, further comprising ~~administering to the~~

~~patient, prior to, concurrently with, or after the administration of the pharmaceutical composition,~~ a complement inhibiting factor or an anti-angiogenic factor to be administered to the patient, prior to, concurrently with, or after the administration of the pharmaceutical composition.

71. The use ~~method~~ of claim 70, wherein said complement inhibiting factor is selected from the group consisting of a Factor H, a Factor H-like 1, an MCP, a DAF, or a soluble form of an MCP.

72. The use ~~method~~ of claim 70 or 71, wherein said anti-angiogenic factor is selected from the group consisting of endostatin, a VEGF binding molecule, PEDF, T2-TrpRS, sFLT, aflibercept and kininostatin.

73. The use ~~method~~ of any one of claims 64-72, wherein an anti-inflammatory is to be administered prior to, concurrently with, or after the administration of the pharmaceutical composition.

74. The use ~~method~~ of claim 73, wherein the anti-inflammatory is
(i) to be administered concurrently with the pharmaceutical composition or
(ii) the pharmaceutical composition comprises the anti-inflammatory.

75. The use ~~method~~ of claim 73 or 74, wherein the anti-inflammatory is to be administered to the eye.

76. The use ~~method~~ of claim 73, 74 or 75, wherein the anti-inflammatory is selected from the group consisting of dexamethasone, dexamethasone sodium metasulfobenzoate, dexamethasone sodium phosphate, fluorometholone, bromfenac, pranoprofen, a cyclosporine ophthalmic emulsion, naproxen, glucocorticoids, ketorolac, ibuprofen, tolmetin, non-steroidal anti-inflammatory drugs, steroidal anti-inflammatory drugs, diclofenac, flurbiprofen, indomethacin, and suprofen.

77. The use ~~method~~ of any one of claims 62-64, wherein the pharmaceutical preparation comprising the viral vector is to be administered about once every week, month, 2 months, 3 months, 6 months, 9 months, year, 18 months, 2 years, 30 months, 3 years, 5 years, or 10 years.

78. The use ~~method~~ of any one of claims 64-77, wherein a compound that inhibits, complement activity, T-cell activation, B-cells, tumor necrosis factor (TNF), estrogen, interleukin-1 or interferon-gamma is to be administered prior to, concurrently with, or after the administration of the pharmaceutical composition.

79. The use ~~method~~ of claim 78, wherein the compound is selected from the group

consisting of infliximab, adalimumab, golimumab, etanercept, abatacept and rituximab.

80. The use ~~method~~ of any one of claims 62-64, wherein the pharmaceutical preparation comprising the viral vector is to be administered only once to the patient.

81. A cell comprising the nucleic acid of claim 54, wherein the cell expresses the polypeptide.

82. The cell of any one of claims 81, wherein the cell is a mammalian cell.

83. The cell of claim 81, wherein the cell is selected from the group consisting of a 293 cell, a CHO cell, a PerC6 cell or a Vero cell.

84. The cell of claim 81, wherein the cell is a prokaryotic cell.

85. The cell of claim 81, wherein the cell is an E. coli cell.

86. An *in vitro* method of producing a polypeptide comprising a complement factor B protein analog, the method comprising:

a. expressing in a cell the polypeptide of any one of claims 1-53; and

b. purifying said polypeptide.