residues of the sequence:
GGASKGERLFRGKVPILVELKGDVNGHKFSVRGKGKGDATRGKLTLKFICTTGKLPV
PWPTLVTTLTYGVQCFSRYPKHMKRHDFFKSAMPKGYVQERTISFKKDGKYKTRAE
VKFEGRTLVNRIKLKGRDFKEKGNILGHKLRYNFNSHKVYITADKRKNGIKAKFKIR
HNVKDGSVQLADHYQQNTPIGRGPVLLPRNHYLSTRSKLSKDPKEKRDHMVLLEFV
TAAGIKHGRDERYK (SEQ ID NO: 1).

41. The composition of of claim 40, wherein the supercharged protein comprises or consists of the amino acid sequence set forth in SEQ ID NO: 1.

42. The compositions of any one of claims 1-41, wherein the composition is a pharmaceutical composition.

43. The pharmaceutical composition of claim 42, wherein the composition comprises a pharmaceutically acceptable excipient.

44. The pharmaceutical composition of claim 42 or 43, wherein the composition is formulated for administration to a subject and comprises the supercharged protein and the functional effector protein in an amount effective for delivery to at least one cell of the subject.

45. The pharmaceutical composition of any one of claims 42-44, wherein the composition comprises the supercharged protein and the functional effector protein in an amount effective for inducing a measurable therapeutic effect after administration to a subject.

46. ~~A method comprising:~~

~~providing a subject susceptible to, suffering from, or displaying one or more symptoms of a disease, disorder, or condition; and~~

~~administering the~~Use of composition of any one of claims 1-41 or ~~the~~ pharmaceutical composition of any one of claims 42-45 in the manufacture of a medicament for ameliorating at least one symptom in a subject susceptible to, suffering from, or displaying one or more symptoms of a disease, disorder, or condition~~to the subject, such that at least one symptom is ameliorated~~.

47. The ~~method~~ use of claim 46, wherein the medicament is to be administered ~~step of administering is performed~~ under conditions sufficient for the functional effector protein to penetrate a cell of the subject.

48. The ~~method~~ use of claim 46 or 47, wherein the disease disorder, or condition is associated with abnormally elevated levels of an mRNA, a protein, or combination thereof.

49. The ~~method~~ use of any one of claims 46-48, wherein the composition comprises a nuclease that specifically binds and cleaves a gene encoding a pathogenic RNA or protein, or a gene encoding an RNA or protein that is expressed at abnormally high levels in diseased cells or tissue.

50. The ~~method~~ use of any one of claims 46-49, wherein ~~the step of administering~~administration of the medicament comprises a route of administration selected from the group consisting of oral, intravenous, intramuscular, intra-arterial, subcutaneous, intraventricular, topical, inhalational, and mucosal delivery.

51. An ex-vivo/in vitro method of introducing a functional effector protein into a cell, the method comprising contacting the cell with the composition of any one of claims 1-41 or with the pharmaceutical composition of any one of claims 42-45, under conditions suitable for the functional effector protein to enter the cell, thereby introducing the functional effector protein into the cell.

52. The method of claim 51, further comprising confirming that the functional effector protein has penetrated the cell.

~~53. The method of claim 51 or 52, wherein the cell is comprised in a subject and the contacting is in vivo.~~

~~54~~53. The method of claim ~~53~~51 or 52, wherein the cell is obtained from a subject ~~is~~ diagnosed with having or being at risk of developing a disorder associated with an abnormal expression level of a gene, and wherein the functional effector protein modulates the expression level of the gene.

~~55. The method of claim 54, wherein the method further comprises detecting a change in the level of expression of the gene or detecting a therapeutic response in the subject.~~

~~56~~54. The method of any one of claims 51-~~55~~53, wherein the cell is a somatic cell.

~~57~~55. The method of any one of claims 51-~~56~~54, wherein the cell is contacted with the composition or the pharmaceutical composition in an amount, for a time, and under conditions sufficient to induce programming of the cell to a desired cell fate.

~~58~~56. The method of claim ~~57~~55, ~~further comprising using~~wherein the programmed cell is to be used in a cell replacement therapeutic approach.

~~59~~57. The method of any one of claims 51-~~58~~56, wherein the cell is a cell carrying a genomic allele associated with a disease and the functional effector protein is a nuclease specifically targeting the allele.

~~60~~58. The method of claim ~~59~~57, wherein the cell is contacted ex vivo and is to be re-administered to the subject after successful targeting of the undesired allele by the nuclease.

~~61~~59. A kit comprising the composition of any one of claims 1-41 or the pharmaceutical composition of any one of claims 42-45.

~~62~~60. A kit for carrying out the method of any one of claims 46-~~60~~58.

~~63~~61. A composition comprising a Cas9 protein and a cationic lipid, wherein the Cas9 protein is associated with a gRNA, and the composition is capable of delivering the Cas9 protein to the interior of a cell.

~~64~~62. The composition of claim ~~63~~61, wherein the composition exhibits low toxicity when administered to a population of cells.

~~65~~63. The composition of claim ~~63~~-61 or ~~64~~62, wherein at least 60%, at least 65%, at least 70%, at least 75%, at least 80%, at least 85%, at least 90%, at least 95%, or at least 99% of the cells are viable following administration of the composition.

~~66~~64. The composition of any one of claims ~~63~~61-~~65~~63, wherein the cationic lipids are selected from the group consisting of Lipofectamine® 2000, Lipofectamine® 3000, Lipofectamine® RNAiMAX, and Lipofectamine® LTX.

~~67~~65. The composition of any one of claims ~~63~~61-~~66~~64, wherein the Cas9 protein comprises a wild type Cas9 protein or a variant thereof, a Cas9 nickase, or a nuclease-inactivated Cas9 (dCas9) or a variant thereof.

~~68~~66. The composition of claim ~~67~~65, wherein dCas9 is fused to a transcriptional activator or a transcriptional repressor.

~~69~~67. The composition of claim ~~68~~66, wherein the transcriptional activator is selected from the group consisting of VP16, VP64, and p65; or wherein the transcriptional repressor is a KRAB protein or a SID protein.

~~70~~68. The composition of claim ~~67~~65, wherein dCas9 is fused to a nuclease domain.

~~71~~69. The composition of claim ~~70~~68, wherein nuclease domain comprises a FokI nuclease domain.

~~72~~70. The composition of claim ~~67~~65, wherein the dCas9 is fused to a recombinase catalytic domain.

~~73~~71. The composition of claim ~~72~~70, wherein the recombinase catalytic domain comprises a Hin recombinase catalytic domain, a Gin recombinase catalytic domain, or a Tn3 recombinase catalytic domain.

~~74~~72. The composition of claim ~~67~~65, wherein dCas9 is fused to a deaminase.

~~75~~73. The composition of claim ~~74~~72, wherein the deaminase comprises a cytidine deaminase selected from the group consisting of APOBEC1, AID, and ACF1/ASE deaminases; or wherein the deaminase comprises an adenosine deaminase optionally comprising an ADAT family deaminase.

~~76~~74. The composition of claim ~~67~~65, wherein dCas9 is fused to an epigenetic modifier.

~~77~~75. The composition of claim ~~76~~74, wherein the epigenetic modifier is selected from the group consisting of histone demethylase, histone methyltransferase, hydroxylase, histone deacetylase, and histone acetyltransferase.

~~78~~76. The composition of claim ~~77~~75, wherein the epigenetic modifier comprises the LSD1 histone demethylase or TET1 hydroxylase.

~~79~~77. The composition of claim ~~67~~65, wherein the Cas9 protein is associated with a supercharged protein having a net negative charge, wherein the association has a net negative charge, optionally wherein the association is a covalent association.

~~80~~78. The composition of claim ~~79~~77, wherein the supercharged protein is a fluorescent protein, optionally wherein the supercharged protein is a supernegatively charged GFP.

~~81~~79. A composition comprising an effector protein and a cationic lipid, a cationic polymer, or both a cationic lipid and cationic polymer, wherein the effector protein is associated with a supercharged protein having a net negative charge, the association having a net negative charge, and the composition is capable of delivering the effector protein to the interior of a cell.

~~82~~80. The composition of claim ~~81~~79, wherein the composition exhibits low toxicity when administered to a population of cells.

~~83~~81. The composition of claim ~~81~~-79 or ~~82~~80, wherein at least 60%, at least 65%, at least 70%, at least 75%, at least 80%, at least 85%, at least 90%, at least 95%, or at least 99% of the cells are viable following administration of the composition.

~~84~~82. The composition of any one of claims ~~81~~79-~~83~~81, wherein the cationic lipids are selected from the group consisting of Lipofectamine® 2000, Lipofectamine® 3000, Lipofectamine® RNAiMAX, and Lipofectamine® LTX.

~~85~~83. The composition of any one of claims ~~81~~79-~~84~~82, wherein the supercharged protein is a fluorescent protein, optionally wherein the supercharged protein is a supernegatively charged GFP.

~~86~~84. The composition of any one of claims ~~81~~79-~~85~~83, wherein the effector protein is a recombinase.

~~87~~85. The composition of claim ~~86~~84, wherein the recombinase is Cre recombinase.

~~88~~86. The composition of any one of claims ~~81~~79-~~87~~85, wherein the effector protein comprises a TALE protein.

~~89~~87. The composition of claim ~~88~~86, wherein the TALE protein comprises a VP64 transcriptional activator.

~~90~~88. The compositions of any one of claims ~~81~~79-~~89~~87, wherein the composition is a pharmaceutical composition.

~~91~~89. A pharmaceutical composition of claim 88 for use ~~method comprising administering the pharmaceutical composition of claim 90, to~~in a subject in need thereof.

~~92~~90. An ex-vivo/in vitro method of introducing a Cas9 protein into a cell, the method comprising contacting the cell with the composition of any one of claims ~~81~~79-~~90~~88, under conditions suitable for the Cas9 protein to enter the cell, thereby introducing the Cas9 protein into the cell.

91. Use of composition of any one of claims 1-41 or pharmaceutical composition of any one of claims 42-45 in the manufacture of a medicament for treating diseases, disorders, or conditions selected from the group consisting of autoimmune disorders (e.g. , diabetes, lupus, multiple sclerosis, psoriasis, rheumatoid arthritis); inflammatory disorders (e.g. , arthritis, pelvic inflammatory disease); infectious diseases (e.g., viral infections (e.g. , HIV, HCV, RSV), bacterial infections, fungal infections, sepsis); neurological disorders (e.g. Alzheimer's disease, Huntington' s disease; autism; Duchenne muscular dystrophy); cardiovascular disorders (e.g. atherosclerosis, hypercholesterolemia, thrombosis, clotting disorders, angiogenic disorders such as macular degeneration); proliferative disorders (e.g. cancer, benign neoplasms); respiratory disorders (e.g. chronic obstructive pulmonary disease);

digestive disorders (e.g. inflammatory bowel disease, ulcers); musculoskeletal disorders (e.g. fibromyalgia, arthritis); endocrine, metabolic, and nutritional disorders (e.g. diabetes, osteoporosis); urological disorders (e.g. renal disease); psychological disorders (e.g. depression, schizophrenia); skin disorders (e.g. wounds, eczema); blood and lymphatic disorders (e.g. anemia, hemophilia).