WHAT IS CLAIMED IS:

1. An invention not claimed in any divisional application. A ~~method to treat a smooth muscle dysfunction in a subject in need thereof comprising administering at least one dose of a composition comprising an isolated nucleic acid encoding a Maxi-K potassium channel polypeptide to the subject, wherein the expression of the Maxi-K potassium channel polypeptide in smooth muscle cells of the subject modulates smooth muscle contractility.~~

~~2. The method of claim 1, wherein the Maxi-K potassium channel polypeptide comprises~~

~~(i) a polypeptide encoding a Maxi-K alpha subunit (Slo) or a fragment, variant, mutant, or derivative thereof;~~

~~(ii) a polypeptide encoding a Maxi-K beta subunit or a fragment, variant, mutant, or derivative thereof, wherein the Maxi-K beta subunit is a beta1 subunit, a beta2 subunit, a beta3 subunit, a beta4 subunit, or a combination thereof; or,~~

~~(iii) a combination thereof.~~

~~3. The method of claim 2, wherein the fragment is a functional fragment.~~

~~4. The method of claim 2, wherein the variant is a splice variant.~~

~~5. The method of claim 2, wherein the variant is an allelic (polymorphic) variant.~~

~~6. The method of claim 2, wherein the mutant is a point mutant.~~

~~7. The method of claim 2, wherein the mutant is a deletion and/or an insertion mutant.~~

~~8. The method of claim 2, wherein the mutant is a gain-of-function mutant.~~

~~9. The method of claim 8, wherein the mutant is a loss-of-function mutant.~~

~~10. The method of claim 1, wherein the isolated nucleic acid encoding the Maxi-K potassium channel polypeptide or the Maxi-K potassium channel polypeptide comprises a sequence disclosed in **TABLE 1**.~~

~~11. The method of claim 1, the Maxi-K potassium channel polypeptide comprises a mutation disclosed in **TABLE 2**.~~

~~12. The method of claim 2, wherein the derivative is a fusion protein.~~

~~13. The method of claim 2, wherein the derivative is a chimaera.~~

~~14. The method of any one of claims 1 to 13, wherein the modulation of smooth muscle contractility comprises an increase in contractility.~~

~~15. The method of any one of claim 1 to 13, wherein the modulation of smooth muscle contractility comprises a decrease in contractility.~~

~~16. The method of any one of claims 1 to 15, wherein the smooth muscle dysfunction is selected from the group consisting of overactive bladder (OAB); erectile dysfunction (ED); asthma; benign prostatic hyperplasia (BPH); coronary artery disease; genitourinary dysfunctions of the bladder, endopelvic fascia, prostate gland, ureter, urethra, urinary tract, and vas deferens; irritable bowel syndrome; migraine headaches; premature labor; Raynaud's syndrome; detrusor overactivity; glaucoma; ocular hypertension; and thromboanginitis obliterans or a symptom or sequel thereof.~~

~~17. The method of any one of claims 1 to 16, wherein the smooth muscle dysfunction is idiopathic.~~

~~18. The method of any one of claims 1 to 16, wherein the smooth muscle dysfunction is neurogenic.~~

~~19. The method of any one of claims 1 to 16, wherein the smooth muscle dysfunction is non-neurogenic.~~

~~20. The method of any one of claims 1 to 19, wherein the isolated nucleic acid is a DNA.~~

~~21. The method of claim 20, wherein the DNA is a naked DNA~~

~~22. The method of any one of claims 1 to 19, wherein the isolated nucleic acid is an RNA.~~

~~23. The method of claim 22, wherein the RNA is an mRNA.~~

~~24. The method of any one of claims 1 to 23, wherein the isolated nucleic acid comprises at least one chemically modified nucleobase, sugar, backbone, or any combination thereof.~~

~~25. The method of claim 24, wherein the at least one chemically modified nucleobase is selected from the group consisting of pseudouracil (ψ), N1-methylpseudouracil (m1ψ), 2-thiouracil (s2U), 4' -thiouracil, 5-methylcytosine, 5-methyluracil, and any combinations thereof.~~

~~26. The method of any one of claims 1 to 25, wherein the isolated nucleic acid has been modified by substituting at least one nucleobase, wherein the substitutions is synonymous.~~

~~27. The method of any one of claim 1 to 26, wherein the isolated nucleic acid sequence is codon optimized.~~

~~28. The method of any one of claim 1 to 27, wherein the isolated nucleic acid is a vector.~~

~~29. The method of claim 28, wherein the vector is a viral vector.~~

~~30. The method of claim 29, wherein the viral vector in an adenoviral vector.~~

~~31. The method of claim 30, wherein the adenoviral vector is a third generation adenoviral vector.~~

~~32. The method of claim 30, wherein the viral vector is a retroviral vector.~~

~~33. The method of claim 32, wherein the retroviral vector is a lentiviral vector.~~

~~34. The method of claim 33, wherein the lentiviral vector is a third or fourth generation lentiviral vector.~~

~~35. The method of any one of claims 1 to 34, wherein the isolated nucleic acid or vector is administered with a delivery agent.~~

~~36. The method of claim 35, wherein the delivery agent comprises a lipidoid, a liposome, a lipoplex, a lipid nanoparticle, a polymeric compound, a peptide, a protein, a cell, a nanoparticle mimic, a nanotube, or a conjugate.~~

~~37. The method of any one of claims 1 to 36, wherein the isolated nucleic acid or vector is incorporated into a cell *in vivo*, *in vitro*, or *ex vivo*.~~

~~38. The method of claim 36 or 37, wherein the cell is a stem cell, a muscle cell, or a fibroblast.~~

~~39. The method of any one of claims 1 to 38, wherein the composition is administered topically or parenterally.~~

~~40. The method according to claim 39, wherein the parenteral administration is by injection.~~

~~41. The method of claim 40, wherein the injection is intramuscular injection.~~

~~42. The method of any one of claims 1 to 41, wherein injections are administered at 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, or more injection sites.~~

~~43. The method of any one of claims 40 to 42, wherein the injections sites are in the bladder of the subject.~~

~~44. The method of claim 43, wherein the injections sites are on the bladder wall.~~

~~45. The method of claim 43 or 44, wherein injection sites are in the bladder detrusor muscle.~~

~~46. The method of any one of claims 43 to 45, wherein injection sites are in the bladder trigone.~~

~~47. The method of any one of claims 43 to 45, wherein injection sites are on the bladder base.~~

~~48. The method of any one of claims 40 to 47, wherein the volume of each injection is about 0.5 ml, about 1 ml, about 1.5 ml, or about 2 ml.~~

~~49. The method of any one of claims 40 to 48, wherein the injection sites are about 0.5 cm, about 1 cm, about 1.5 cm, or about 2 cm apart.~~

~~50. The method of any one of claims 40 to 49, wherein the injections are administered at a depth of injection of about 2 mm, 2.5 mm, 3 mm, 3.5 mm or 4 mm.~~

~~51. The method of any one of claim 1 to 50, wherein the composition is administered by instillation into the lumen of an organ.~~

~~52. The method of any one of claims 1 to 51, wherein the dose is a single unit dose.~~

~~53. The method of any one of claims 1 to 52, wherein dose is between 5,000 and 100,000 mcg.~~

~~54. The method of any one of claims 1 to 53, wherein the dose is at least 10,000 mcg.~~

~~55. The method of any one of claims 1 to 54, wherein the dose is 16,000 mcg, 24,000 mcg, or 48,000 mcg.~~

~~56. The method of any one claims 1 to 55, wherein the administration of the composition results in the amelioration of at least one symptom of a smooth muscle dysfunction.~~