WHAT IS CLAIMED IS:

1. A method of producing a polypeptide of interest in a mammalian cell or tissue, the method comprising, contacting said mammalian cell or tissue with a formulation comprising a modified mRNA encoding the polypeptide of interest, wherein the formulation is selected from the group consisting of nanoparticles, poly(lactic-co-glycolic acid) (PLGA) microspheres, lipidoid, lipoplex, liposome, polymers, carbohydrates (including simple sugars), cationic lipids, fibrin gel, fibrin hydrogel, fibrin glue, fibrin sealant, fibrinogen, thrombin, rapidly eliminated lipid nanoparticles (reLNPs) and combinations thereof.

2. The method of claim 1, wherein the modified mRNA comprises a purified IVT transcript.

3. The method of claim 1, wherein the formulation comprising the modified mRNA is a nanoparticle and wherein said nanoparticle comprises at least one lipid.

4. The method of claim 3, wherein the lipid is selected from the group consisting of DLin-DMA, DLin-K-DMA, 98N12-5, C12-200, DLin-MC3-DMA, DLin-KC2-DMA, DODMA, PLGA, PEG, PEG-DMG and PEGylated lipids.

5. The method of claim 3, wherein the lipid is cationic lipid.

6. The method of claim 5, wherein the cationic lipid is selected from the group consisting of DLin-DMA, DLin-K-DMA, DLin-MC3-DMA, DLin-KC2-DMA and DODMA.

7. The method of claim 3, wherein the lipid to modified mRNA weight ratio is between 10:1, and 30:1.

8. The method of claim 7, wherein the mean size of the nanoparticle formulation comprising the modified mRNA is between 60-225 nm.

9. The method of claim 8, wherein the PDI of the nanoparticle formulation comprising the modified mRNA is between 0.03 and 0.15.

10. The method of claim 3, wherein the zeta potential of the lipid is from -10 to +10 at a pH of 7.4.

11. The method of claim 7, wherein the nanoparticle formulation comprising the modified mRNA further comprises a fusogenic lipid, cholesterol, and a PEG lipid.

12. The method of claim 11, wherein the nanoparticle formulation comprising the modified mRNA has a molar ratio of 50:10:38.5:1.5-3.0 (Cationic Lipid: fusogenic lipid: Cholesterol: PEG lipid).

13. The method of claim 12, wherein the PEG lipid is selected from PEG-c-DOMG and PEG-DMG and the fusogenic lipid is DSPC.

14. The method of claim 1, wherein contacting is through the use of a device selected from the group consisting of syringe pump, internal osmotic pump and external osmotic pump.

15. The method of claim 1, wherein the formulation comprising the modified mRNA is a poly(lactic-co-glycolic acid) (PLGA) microsphere.

16. The method of claim 15, wherein microspheres of the PLGA microsphere formulation comprising the modified mRNA are between 4 and 20 μm in size.

17. The method of claim 15, wherein the PLGA microsphere formulation comprising the modified mRNA release less than 50% of the modified mRNA in a 48 hour time period.

18. The method of claim 15, wherein the PLGA microsphere formulation comprising the modified mRNA is stable in serum.

19. The method of claim 18, wherein the stability is determined relative to unformulated modified mRNA in 90% serum.

20. The method of claim 15, wherein the loading weight percent is at least 0.05%, at least 0.1%, at least 0.2%, at least 0.3%, or at least 0.4%.

21. The method of claim 15, wherein the encapsulation efficiency of the modified mRNA in the PLGA microspheres is at least 50%.

22. The method of claim 15, wherein the encapsulation efficiency of the modified mRNA in the PLGA microspheres is at least 70%.

23. The method of claim 15, wherein the encapsulation efficiency of the modified mRNA in the PLGA microspheres is at least 90%.

24. The method of claim 15, wherein the encapsulation efficiency of the modified mRNA in the PLGA microspheres is at least 97%.

25. The method of claim 11, wherein contacting said mammalian cells or tissues occurs via a route of administration selected from the group consisting of intraveneous, intramuscular, intravitreal, intrathecal, intratumoral, pulmonary, and subcutaneous.

26. The method of claim 25, wherein the polypeptide of interest is detectable in the serum for up to 72 hours after contacting at levels higher than the levels prior to contacting.

27. The method of claim 26, wherein the polypeptide of interest is detectable in the serum of female subjects at levels greater than in the serum of male subjects.

28. The method of claim 1, wherein the formulation further comprises a second modified mRNA.

29. The method of claim 28, wherein the formulation further comprises a third modified mRNA.

30. The method of claim 1, wherein the formulation comprising the modified mRNA comprises a rapidly eliminated lipid nanoparticle.

31. The method of claim 30, wherein the rapidly eliminated lipid nanoparticle comprises an reLNP lipid, fusogenic lipid, cholesterol and a PEG lipid at a molar ratio of 50:10:38.5:1.5(reLNP Lipid: Fusogenic lipid: Cholesterol: PEG lipid).

32. The method of claim 31, wherein the fusogenic lipid is DSPC and the PEG lipid is PEG-c-DOMG.

33. The method of claim 31 wherein the reLNP lipid is selected from the group consisting of DLin-DMA with an internal ester, DLin-DMA with a terminal ester, DLin-MC3-DMA-with an internal ester, and DLin-MC3-DMA with a terminal ester.

34. The method of claim 30, wherein in the total lipid to modified mRNA weight ratio is between 10:1 and 30:1.

35. The method of claim 1, wherein contacting occurs via injection using a split dosing schedule.

36. The method of claim 35, wherein the injection is made to the tissue selected from the group consisting of intradermal space, epidermis, subcutaneous tissue, and muscle.

37. The method of claim 1, wherein the formulation comprising the modified mRNA comprises a fibrin sealant.

38. The method of claim 1, wherein the formulation comprising the modified mRNA comprises a lipidoid and wherein the lipid is selected from the group consisting of C12-200 and 98N12-5.

39. The method of claim 1, wherein the formulation comprising the modified mRNA is a polymer and said polymer is coated, covered, surrounded, enclosed or comprises a layer of hydrogel or surgical sealant.

40. The method of claim 39, wherein the polymer is selected from the group consisting of PLGA, ethylene vinyl acetate, poloxamer and GELSITE®.

41. The method of claim 40, further comprising an additional layer of polymer, hydrogel or surgical sealant.

42. The method of claim 2, wherein the modified mRNA comprises at least one 5′ terminal cap selected from the group consisting of Cap0, Cap1, ARCA, inosine, N1-methyl-guanosine, 2′fluoro-guanosine, 7-deaza-guanosine, 8-oxo-guanosine, 2-amino-guanosine, LNA-guanosine, and 2-azido-guanosine.

43. The method of claim 42, wherein the 5' terminal cap is Cap1.

44. The method of claim 43, wherein the modified mRNA comprises at least two modifications.

45. The method of claim 44, wherein the at least two modifications are independently selected from the group consisting of 5-methylcytidine, pseudouridine, and 1-methyl-pseudouridine.

46. A method of producing a polypeptide of interest in a mammalian cell or tissue, the method comprising, contacting said mammalian cell or tissue with a buffer formulation comprising a modified mRNA encoding the polypeptide of interest.

47. The method of claim 46, wherein the buffer formulation is selected from the group consisting of saline, phosphate buffered saline, and Ringer's lactate.

48. The method of claim 46, wherein the buffer formulation comprises a calcium concentration of between 1-10 mM.

49. The method of claim 46, wherein the modified mRNA comprises a purified IVT transcript.

50. The method of claim 46, wherein contacting said mammalian cells or tissues occurs via a route of administration selected from the group consisting of intraveneous, intramuscular, intravitreal, intrathecal, intratumoral, pulmonary, and subcutaneous.

51. The method of claim 25 or 50, wherein said polypeptide of interest is produced in said cell or tissue in a location systemic from the location of contacting.

52. The method of claim 51 wherein the route of administration is either via intramuscular or subcutaneous.

53. The method of claim 3, wherein the lipid nanoparticle formulation is further formulated in a sealant.

54. The method of claim 53, wherein said sealant is a fibrin sealant.

55. A method of producing a pharmacologic effect in a primate comprising contacting said primate with a composition comprising a formulated modified mRNA encoding a polypeptide of interest.

56. The method of claim 55, wherein the modified mRNA comprises a purified IVT transcript.

57. The method of claim 56, wherein the formulation is selected from the group consisting of nanoparticles, poly(lactic-co-glycolic acid) (PLGA) microspheres, lipidoid, lipoplex, liposome, polymers, carbohydrates (including simple sugars), cationic lipids, fibrin gel, fibrin

hydrogel, fibrin glue, fibrin sealant, fibrinogen, thrombin, rapidly eliminated lipid nanoparticles (reLNPs) and combinations thereof.

58. The method of claim 57, wherein the pharmacologic effect is greater than the pharmacologic effect associated with a therapeutic agent known to produce said pharmacologic effect.

59. The method of claim 57, wherein the pharmacologic effect is greater than the pharmacologic effect produced by a composition comprising an unformulated modified mRNA encoding the polypeptide of interest.

60. The method of claim 57, wherein the pharmacologic effect is greater than the pharmacologic effect produced by a composition comprising a formulated unmodified mRNA encoding the polypeptide of interest.

61. The method of claim 57, wherein the pharmacologic effect results in a therapeutically effective outcome of a disease, disorder, condition or infection.

62. The method of claim 61, wherein the pharmacologic effect is selected from the group consisting of a change in cell count, alteration in serum chemistry, alteration of enzyme activity, increase in hemoglobin, and increase in hematocrit.

63. The method of claim 62, wherein the therapeutically effective outcome is selected from the group consisting of treatment, improvement of one or more symptoms, diagnosis, prevention, and delay of onset.

WHAT IS CLAIMED IS:

1. An invention not claimed in any divisional application.