We claim:

1. A modified *Staphylococcus aureus* Cas9 polypeptide comprising the amino acid sequence of SEQ ID NO: 14 or 17.

2. A chimeric nuclease comprising a modified I-Tevl nuclease domain, a linker, an RNA-guided nuclease *Staphylococcus aureus* Cas9 domain, and a guide RNA, wherein the *Staphylococcus aureus* Cas9 domain comprises a functional RNA-guided endonuclease domain having at least 99% sequence identity to SEQ ID NO: 13 and an aspartic acid to glutamic acid substitution at an amino acid corresponding to position 10 of SEQ ID NO: 13.

3. A pharmaceutically-acceptable formulation comprising the chimeric nuclease according to claim 2, a lipid nanoparticle and a pharmaceutically acceptable carrier thereof.

4. The formulation according to claim 3, wherein said lipid nanoparticle comprises exogenous donor DNA.

5. The chimeric nuclease of claim 2 for use in a method to edit genomic DNA of a cell or organism.

6. The formulation according to claim 3 or 4, wherein said formulation further comprises an excipient.

7. The formulation according to claim 6, wherein said excipient is selected from the group consisting of excipients polysorbates, polyphosphates, calcium chlorides, sodium chloride, sodium citrates, sodium hydroxide, sodium phosphates, sodium ethylenediaminetetraacetic acid, potassium chloride, potassium phosphate and starches, or mixtures of these substances.

8. Use of the formulation of claim 3 in the manufacture of a medicament for a method of treating a lung-related disease in a patient in need thereof, wherein the guide RNA targets the chimeric nuclease to a gene mutation associated with the disease.

9. The use according to claim 8, wherein said disease is cystic fibrosis.

10. The use according to claim 8, wherein said chimeric nuclease targets and cleaves a *CFTR* gene.

11. The use according to claim 10, wherein the said chimeric nuclease targets and cleaves a *CFTR delta F508* mutation of the *CFTR* gene.

12. The use according to claim 8, wherein said disease is cancer.

13. The use according to claim 12, wherein said chimeric nuclease targets and cleaves an *EGFR* gene.

14. The use according to claim 12, wherein said cancer is non-small cell lung cancer.

15. The chimeric nuclease according to claim 2, wherein said linker comprises an amino acid sequence selected from the group consisting of SEQ ID NOS: 7 – 8.

16. The chimeric nuclease according to claim 2, wherein the *Staphylococcus aureus* Cas9 domain comprises the amino acid sequence of SEQ ID NO: 17.

17. The chimeric nuclease according to claim 2, wherein the guide RNA comprises the RNA sequence of SEQ ID NO: 15.

18. The chimeric nuclease according to claim 2, wherein the guide RNA comprises the RNA sequence of SEQ ID NO: 21.

19. The chimeric nuclease according to claim 2, wherein the guide RNA comprises the RNA sequence of SEQ ID NO: 16.

20. The chimeric nuclease according to claim 2, wherein said linker comprises an amino acid sequence selected from the group consisting of SEQ ID NOS: 9 – 12.

21. The chimeric nuclease according to claim 2, wherein said *Staphylococcus aureus* Cas9 domain contains an Ala^{580} or Ala^{557} mutation.

22. The chimeric nuclease of claim 2, wherein the *Staphylococcus aureus* Cas9 domain comprises the amino acid sequence of SEQ ID NO: 14.

23. The chimeric nuclease of claim 2, wherein the I-Tevl nuclease domain comprises the amino acid sequence of SEQ ID NO: 6 or a fragment thereof.

24. The polypeptide of claim 1, wherein the modified *Staphylococcus aureus* Cas9 comprises the amino acid sequence of SEQ ID NO: 17.

25. The polypeptide of claim 1, wherein the modified *Staphylococcus aureus* Cas9 comprises the amino acid sequence of SEQ ID NO: 14.

26. The chimeric nuclease according to claim 2, wherein the modified I-Tevl nuclease domain comprises a mutation at an amino acid equivalent to K26 or C39.

27. The chimeric nuclease according to claim 2, wherein the linker comprises a mutation at an amino acid equivalent to T95, V117, K135, Q158 or N140.

28. The formulation according to claim 3, wherein the lipid nanoparticle comprises DOPE, MPEG-5000-DMPE, DPPC, DOBA or cholesterol.

29. The formulation according to claim 3, wherein the lipid nanoparticle comprises DOPE and MPEG-5000-DMPE at a molar ratio of about 2:0.05.

30. The formulation according to claim 3, wherein the lipid nanoparticle comprises DPPC, cholesterol and DOBA at a molar ratio of about 7:2:1.

31. The formulation according to claim 3, wherein the lipid nanoparticle comprises DPPC, cholesterol and MPEG-5000-DMPE at a molar ratio of about 4:1:0.125.

32. The formulation according to claim 3, further comprising N4-cholesteryl-spermine.

33. The formulation according to claim 3, wherein the lipid nanoparticles are manufactured by extrusion.

34. The formulation according to claim 33, wherein the extruded lipid nanoparticles comprise an excipient selected from the group consisting of: polysorbate, polyphosphate, calcium chloride, sodium chloride, sodium citrate, sodium hydroxide, sodium phosphate, sodium ethylenediaminetetraacetic acid, potassium chloride, potassium phosphate, and starch.

35. The formulation according to claim 3, wherein the lipid nanoparticles comprise a mean diameter of about 100 nM.

36. The use according to claim 8, wherein said treatment comprises intravenous administration, injection, or inhalation of the medicament.

37. The use according to claim 8, wherein said treatment comprises inhalation of the medicament by nebulization.

38. The use according to claim 37, wherein the nebulization comprises nebulizing a volume of about 0.5 mL to about 20 mL of the medicament.