

What is claimed is:

1. A mutated recombinant vaccine composition comprising one or more detoxified forms of a whole or part of a tetanus neurotoxin (DrTeNT) proteins, and one or more epitopes derived from a toxin, a pathogen, or a disease, wherein the vaccine composition is able to immunize a human or a non-human mammal against the toxin, the pathogen, or the disease.
2. The vaccine composition of claim 1, wherein the toxin, pathogen, or disease is derived from animals, plants, fungi, bacteria, or viruses.
3. The vaccine composition of claim 1, wherein the epitopes are derived from one or more diseases comprising: tuberculosis, malaria, cancer, flu, pneumonia, psoriasis, itch, and lime disease.
4. The vaccine composition of claim 1, wherein the detoxified form of the whole or the part of the tetanus neurotoxin (DrTeNT) comprises at least one mutated light chain and at least one native heavy chain.
5. The vaccine composition of claim 1, comprising the DrTeNT as a carrier protein and one or more epitopes or subunits of the SARS-CoV-2 virus.
6. The vaccine composition of claim 5, comprising a hybrid protein linking a receptor-binding domain (RBD) epitope of a SARS-Cov-2 pathogen with a TeNT-Cov2 protein.
7. The vaccine composition of claim 5, comprising a S1 subunit of a SARS-CoV spike (S) protein comprising a receptor-binding domain (RBD) epitope.
8. The vaccine composition of claim 1, wherein formaldehyde is not present.
9. The vaccine composition of claim 1, further comprising an adjuvant comprising one or more neurotoxin associated proteins (NAPs) derived from a botulinum neurotoxin (BoNT) produced by a *Clostridium botulinum*.

10. The vaccine composition of claim 1, further comprising an adjuvant comprising one or more of: alum, polylactic acid, polyglycolic acid, Vitamin E, and colloidal particle.
11. The vaccine composition of claim 1, wherein the epitopes with at least 95% sequence identity one or more of SEQ ID NOS: 1-45.
12. The vaccine composition of claim 11, comprising epitopes with at least 95% sequence identity to SEQ ID NOS: 1-6.
13. A recombinant TeNT or DrTeNT vector comprising a nucleic acid that encodes a polypeptide comprising a DrTeNT protein; and a promoter which is operably linked to said polynucleotide.
14. The recombinant vector of claim 13, further comprising the nucleic acid encoding one or more epitopes of a toxin, a pathogen or derived from a disease.
15. The recombinant vector of claim 14, wherein the epitopes are derived from Covid-19, and/or comprises at least one SARS-CoV epitope or subunit.
16. The recombinant vector of claim 15, encoding a SARS-CoV receptor binding domain (RBD) gene and a Tent-Cov2 gene to express a RBD and Tent-Cov2 hybrid protein (Tent-Cov2 protein).
17. A cell in which the recombinant vector according any one or claims 13-16 is introduced.
18. A vaccine or medicament for treating and/or preventing Covid-19 comprising the recombinant vector of claim 16.
19. An isolated non-naturally occurring polypeptide sequence encoding the DrTeNT protein.

20. A method of immunizing a mammal against Covid-19 by administering a vector comprising a nucleic acid encoding a SARS-CoV epitope or subunit gene and a Tent or DrTeNT gene.
21. The method of immunizing of claim 20, wherein the vector comprises a nucleic acid encoding a SARS-CoV receptor binding domain (RBD) gene and a Tent-Cov2 gene to express *in vivo* a RBD and Tent-Cov2 hybrid protein (Tent-Cov2 protein).
22. The method of claim 20, wherein the vector is administered subcutaneously or intramuscularly.
23. The method of claim 20, wherein the vaccine composition further comprises an adjuvant and/or a carrier to protect the vector from degradation.
24. The method of claim 23, wherein the carrier is a lipid molecule or a nanocarrier comprising one or more synthetic polymers or biopolymers under a suitable pH and salt conditions for biological systems.
25. The method of claim 20, wherein the vaccine composition further comprises an adjuvant comprising one or more neurotoxin associated proteins (NAPs) derived from a botulinum neurotoxin (BoNT) produced by a *Clostridium botulinum*.
26. The method of claim 25, further comprising administering the vaccine composition orally, sublingually or intranasally.