CLAIMS

What is claimed is:

1. A lyophilized pharmaceutical unit dosage composition lyophilized from a composition comprising a) an attenuated chikungunya virus; b) 5% (w/v) sucrose; c) 5 mM potassium phosphate; d) 25 mM sodium citrate; e) 5 mM $MgCl_{2;}$ f) 0.5% (w/v) D-sorbitol; g) 10 mM L-methionine; and h) 0.01% (w/v) recombinant human serum albumin (rHSA), wherein said unit dosage composition comprises 10^3 to 5 x 10^4 $TCID_{50}$/dose, preferably10^3 to 2 x 10^4 $TCID_{50}$/dose, and

wherein said attenuated chikungunya virus comprises an RNA genome corresponding to the DNA sequence as defined by SEQ ID NO: 1 (CHIKV-Δ5nsP3) and/or one or more variants thereof, wherein said variant has a nucleic acid sequence that is at least 99% identical to SEQ ID NO: 1 and has the entire 60 amino acid deletion in nsP3 as in SEQ ID NO: 1.

2. The pharmaceutical composition according to claim 1, wherein said dosage is 5 x 10^3 $TCID_{50}$/dose.

3. The pharmaceutical composition according to claim 1 or 2, wherein said attenuated chikungunya virus variant expresses an E2 protein with at least one mutation compared with the wild-type E2 protein as defined by SEQ ID NO: 2, particularly an E2 protein as defined by any of SEQ ID Nos: 3-7.

4. The pharmaceutical composition according to any one of claims 1 to 3, wherein said attenuated chikungunya virus variant expresses an E2 protein with an E168K mutation as defined by SEQ ID NO: 3.

5. Use of a pharmaceutical composition according to any one of claims 1 to 4 in the manufacture of a medicament as a one-shot vaccine for the prevention of chikungunya virus infection.

6. The pharmaceutical composition according to any one of claims 1 to 4, wherein said composition is able to increase serum antibody titers to said virus in a human by at least 1 log relative to a control within about 14 days from primary immunization.

7. The pharmaceutical composition according to any one of claims 1 to 4, wherein said composition is able to increase serum antibody titers to said virus in a human by at least 1 log relative to a control within about 7 days from primary immunization.

8. The pharmaceutical composition according to any one of claims 1 to 4, 6 or 7, wherein said composition is able to stimulate seroconversion in at least 25%, at least 30%, at least 40%, at least

50%, at least 60%, at least 70%, at least 80%, at least 90%, at least 91%, 92%, 93%, 94%, 95%, 96%, 97%, 98%, 99%, up to 100% of vaccinated subjects within 7 days of vaccination, wherein seroconversion is defined as reaching a neutralizing CHIKV antibody titer of at least 10, preferably at least 20.

9. The pharmaceutical composition according to any one of claims 1 to 4, 6 or 7, wherein said composition is able to stimulate seroconversion in at least 25%, at least 30%, at least 40%, at least 50%, at least 60%, at least 70%, at least 80%, at least 90%, at least 91%, 92%, 93%, 94%, 95%, 96%, 97%, 98%, 99%, up to 100% of vaccinated subjects within 14 days of vaccination, wherein seroconversion is defined as reaching a neutralizing CHIKV antibody titer of at least 10, preferably at least 20.

10. The pharmaceutical composition according to any one of claims 1 to 4 or 6 to 9, wherein the protective immune response lasts for at least 6 months.

11. The pharmaceutical composition according to any one of claims 1 to 4 or 6 to 9, wherein the protective immune response lasts for at least 12 months.

12. The pharmaceutical composition according to any one of claims 1 to 4 or 6 to 9, wherein the protective immune response lasts for at least 24 months.

13. The pharmaceutical composition according to any one of claims 1 to 4 or 6 to 9, wherein the protective immune response confers life-long protection against CHIK virus disease.

14. Use of a pharmaceutical composition according to any one of claims 1 to 4 or 6 to 13 in the manufacture of a medicament for prevention of a Chikungunya virus infection.