CLAIMS

1. Use of a vaccine composition in the manufacture of a medicament for booster vaccination for inducing in a human subject a neutralizing antibody response against dengue virus, said composition comprising a dengue antigen of each of serotypes 1 to 4 and wherein each of said dengue antigens is independently selected from the list consisting of: (a) a live attenuated dengue virus and (b) a live attenuated chimeric dengue virus, wherein said live attenuated chimeric dengue virus is a flavivirus in which the genetic backbone has been modified by exchanging the nucleic acid sequences encoding both the prM and E proteins of the flavivirus by the corresponding sequences of a dengue virus;
wherein said subject has previously received a primary vaccination course against each of serotypes 1 to 4 of dengue virus, wherein said primary vaccination course was administered in one, two or three doses, and wherein said subject was dengue naïve before said primary vaccination course, wherein said subject is at least 7 years old; and
wherein said booster vaccination is to be administered at least one year after the end of the primary vaccination course and results in at least a 2-fold increase in the neutralizing antibody titre against at least one of dengue serotypes 1 to 4.

2. The use according to claim 1, wherein the booster vaccination is to be administered at least two years after the end of the primary vaccination course.

3. The use according to claim 1 or claim 2, wherein said primary vaccination course was administered as a single dose, two doses 3-6 months apart or as three doses wherein the first and the third dose were administered 12 months apart.

4. The use according to any one of claims 1 to 3, wherein said booster vaccination results in at least a 2-fold increase in the neutralizing antibody titre for at least three of the dengue serotypes.

5. The use according to any one of claims 1 to 4, wherein said subject is at least 11 or 12 years old.

6. The use according to any of claims 1 to 5, wherein the subject has, before booster administration, a neutralizing antibody titer against each of serotypes 1 to 4 of at least 10 and less than 150, preferably less than 120.

7. The use according to any one of claims 1 to 6, wherein said 2-fold increase in the neutralizing antibody titre against each of serotypes 1 to 4 is measured between 20 and 60 days after said booster vaccination, preferably 28 days after said booster vaccination.

8. The use according to any one of claims 1 to 7, wherein said neutralizing antibody titre is measured using a dengue Plaque Reduction Neutralization Test ($PRNT_{50}$) test.

9. The use according to any one of claims 1 to 8, wherein said vaccine composition administered for booster vaccination is identical to the vaccine composition previously administered during the primary vaccination course.

10. The use according to any one of claims 1 to 8, wherein said vaccine composition administered for booster vaccination is different from the vaccine composition previously administered during the primary vaccination course.

11. The use according to any one of claims 1 to 10, wherein said subject has not previously been naturally infected by a dengue virus.

12. Use of a vaccine composition in the manufacture of a medicament for inducing in a human subject a neutralizing antibody response against dengue virus, said composition comprising a dengue antigen of each of serotypes 1 to 4, wherein said dengue antigens of serotypes 1 to 4 are each independently selected from the group consisting of a live attenuated dengue virus and a live attenuated chimeric dengue virus, wherein said live attenuated chimeric dengue virus is a flavivirus in which the genetic backbone has been modified by exchanging the nucleic acid sequences encoding both the prM and E proteins of the flavivirus by the corresponding sequences of a dengue virus;
wherein said composition is to be administered as:
    (a) a primary vaccination course, wherein said primary vaccination course is to be administered in one, two or three doses; followed at least 1 year after the end of the primary vaccination course by
    (b) a booster vaccination,
and wherein the human subject is initially dengue naive and is at least 7 years old.

13. The use according to claim 12, wherein the booster vaccination is to be administered at least two years after the end of the primary vaccination course.

14. The use according to claim 12 or claim 13, wherein said primary vaccination course is to be administered as a single dose, as two doses 3-6 months apart or as three doses wherein the first and the third dose are to be administered 12 months apart.

15. The use according to any one of claims 12 to 14, wherein said subject is at least around 9 years of age.

16. The use according to any one of claims 12 to 15, wherein said booster vaccination results in at least a 2-fold increase in the neutralizing antibody titre against at least one of dengue serotypes 1 to 4, when compared with the neutralizing antibody titres induced after the primary vaccination course.

17. The use according to any one of claims 12 to 15, wherein said booster vaccination results in at least a 2-fold increase in the neutralizing antibody titre against at least three of the dengue serotypes, when compared with the neutralizing antibody titres induced after the primary vaccination course.

18. The use according to claim 16, wherein said 2-fold increase in the neutralizing antibody titre against each of serotypes 1 to 4 is measured between 20 and 60 days after said booster vaccination, preferably 28 days after said booster vaccination.

19. The use according to any one of claims 16 to 18, wherein said neutralizing antibody titre is measured using a dengue Plaque Reduction Neutralization Test ($PRNT_{50}$) test.

20. The use according to any one of claims 1 to 19, wherein said human subject is protected against dengue disease, preferably against severe dengue disease.

21. The use according to any one of claims 1 to 20, wherein said subject is aged between 9 months and 60 years old.

22. The use according to claim 12, wherein said primary vaccination course consists in administration of 3 vaccine doses, wherein the second dose is to be administered about 6 months after the first dose and the third dose is to be administered about 6 months after the second dose.

23. The use according to any one of claims 1 to 22, wherein the booster vaccination is to be administered less than 20 years after the end of the primary vaccination course, preferably less than 10 years.

24. The use according to any one of claims 1 to 23, wherein the human subject is resident in a dengue endemic area.

25. The use according to any one of claims 1 to 24, wherein said composition comprises a dengue antigen of each of serotypes 1 to 4 and wherein each of said dengue antigens is a live attenuated chimeric dengue virus.

26. The use according to any one of claims 1 to 25, wherein said first flavivirus is a yellow fever virus or a dengue virus, preferably a yellow fever virus.