WHAT IS CLAIMED IS:

1. An infectious arenavirus viral vector, wherein an arenavirus open reading frame (ORF) encoding the arenaviral glycoprotein (GP) is replaced by one or more nucleotide sequences selected from the group consisting of:

a. a nucleotide sequence encoding an HBV pre-S2/S protein or an antigenic fragment thereof;

b. a nucleotide sequence encoding an HBV HBc protein or an antigenic fragment thereof; and

c. a nucleotide sequence encoding a fusion of HBV HBs and HBc proteins or antigenic fragments thereof;

wherein the antigenic fragment thereof is capable of inducing an antigen-specific CD8+ T cell response; and

wherein the arenavirus is lymphocytic choriomeningitis virus (LCMV).

2. The viral vector of claim 1, wherein the arenavirus open reading frame (ORF) encoding the arenaviral glycoprotein (GP) is deleted and replaced by the one or more nucleotide sequences.

3. The viral vector of claim 1 or claim 2, wherein the pre-S2/S protein or the antigenic fragment thereof comprises an amino acid sequence that is 80%, 81%, 82%, 83%, 84%, 85%, 86%, 87%, 88%, 89%, 90%, 91%, 92%, 93%, 94%, 95%, 96%, 97%, 98%, 99%, or 100% identical to an amino acid sequence encoded by the nucleotide sequence of SEQ ID NO: 1.

4. The viral vector of claim 1 or claim 2, wherein the HBc protein or the antigenic fragment thereof comprises an amino acid sequence that is 80%, 81%, 82%, 83%, 84%, 85%, 86%, 87%, 88%, 89%, 90%, 91%, 92%, 93%, 94%, 95%, 96%, 97%, 98%, 99%, or 100% identical to an amino acid sequence encoded by the nucleotide sequence of SEQ ID NO: 2.

5. The viral vector of claim 1 or claim 2, wherein fusion of HBV HBs and HBc proteins or antigenic fragments thereof comprises an amino acid sequence that is 80%, 81%, 82%, 83%, 84%, 85%, 86%, 87%, 88%, 89%, 90%, 91%, 92%, 93%, 94%, 95%, 96%, 97%,

98%, 99%, or 100% identical to an amino acid sequence encoded by the nucleotide sequence of SEQ ID NO: 3.

6. The viral vector of claim 1 or claim 2, comprising at least two of:

a. a nucleotide sequence encoding an HBV pre-S2/S protein or an antigenic fragment thereof;

b. a nucleotide sequence encoding an HBV HBc protein or an antigenic fragment thereof; and

c. a nucleotide sequence encoding a fusion of HBV HBs and HBc proteins or antigenic fragments thereof.

7. The viral vector of claim 1 or claim 2, comprising:

a. a nucleotide sequence encoding an HBV pre-S2/S protein or an antigenic fragment thereof;

b. a nucleotide sequence encoding an HBV HBc protein or an antigenic fragment thereof; and

c. a nucleotide sequence encoding a fusion of HBV HBs and HBc proteins or antigenic fragments thereof.

8. The viral vector of any one of claims 1 to 7, wherein the genomic information encoding the infectious arenavirus viral vector is derived from the lymphocytic choriomeningitis virus (LCMV) Clone 13 strain.

9. The viral vector of any one of claims 1 to 7, wherein the genomic information encoding the infectious arenavirus viral vector is derived from the lymphocytic choriomeningitis virus (LCMV) MP strain.

10. The viral vector of any one of claims 1 to 8, wherein the viral vector comprises a genomic segment, wherein the genomic segment comprises a nucleotide sequence that is at least 90%, 91%, 92%, 93%, 94%, 95%, 96%, 97%, 98%, at least 99%, or 100% identical to the sequence of nucleotide 1639 to 3315 of SEQ ID NO: 11 or 1640 to 3316 of SEQ ID NO: 12.

11. The viral vector of any one of claims 1 to 8, wherein the viral vector comprises a genomic segment comprising a nucleotide sequence encoding an expression product whose

amino acid sequence is at least 90%, 91%, 92%, 93%, 94%, 95%, 96%, 97%, 98%, at least 99%, or 100% identical to the amino acid sequence encoded by 1639 to 3315 of SEQ ID NO: 11 or 1640 to 3316 of SEQ ID NO: 12.

12. The viral vector of any one of claims 1 to 11, wherein the arenavirus is bi-segmented and replication-deficient.

13. The viral vector of any one of claims 1 or 3 to 11, wherein the arenavirus is tri-segmented and replication-competent.

14. The viral vector of any one of claims 1 to 13, wherein the growth or infectivity of the arenavirus is not affected by the nucleotide sequence.

15. A pharmaceutical composition comprising a first viral vector of any one of claims 1 to 14 and a pharmaceutically acceptable carrier.

16. The pharmaceutical composition of claim 15, further comprising a second infectious arenavirus viral vector, wherein an arenavirus open reading frame (ORF) encoding the arenaviral glycoprotein (GP) is replaced by one or more nucleotide sequences selected from the group consisting of:

a. a nucleotide sequence encoding an HBV pre-S2/S protein or an antigenic fragment thereof;

b. a nucleotide sequence encoding an HBV HBc protein or an antigenic fragment thereof; and

c. a nucleotide sequence encoding a fusion of HBV HBs and HBc proteins or antigenic fragments thereof; and

wherein the antigenic fragment thereof is capable of inducing an antigen-specific CD8+ T cell response.

17. The pharmaceutical composition of claim 16, wherein the arenavirus of the second viral vector is Pichinde virus.

18. An immunogenic composition comprising a first viral vector of any one of claims 1 to 14 and a pharmaceutically acceptable carrier.

19. The immunogenic composition of claim 18, further comprising a second infectious arenavirus viral vector, wherein an arenavirus open reading frame (ORF) encoding the arenaviral glycoprotein (GP) is replaced by one or more nucleotide sequences selected from the group consisting of:

a. a nucleotide sequence encoding an HBV pre-S2/S protein or an antigenic fragment thereof;

b. a nucleotide sequence encoding an HBV HBc protein or an antigenic fragment thereof; and

c. a nucleotide sequence encoding a fusion of HBV HBs and HBc proteins or antigenic fragments thereof; and

wherein the antigenic fragment thereof is capable of inducing an antigen-specific CD8+ T cell response.

20. The immunogenic composition of claim 19, wherein the arenavirus of the second viral vector is Pichinde virus.

21. A vaccine comprising a first viral vector of any one of claims 1 to 14 and a pharmaceutically acceptable carrier.

22. The vaccine of claim 21, further comprising a second infectious arenavirus viral vector, wherein an arenavirus open reading frame (ORF) encoding the arenaviral glycoprotein (GP) is replaced by one or more nucleotide sequences selected from the group consisting of:

a. a nucleotide sequence encoding an HBV pre-S2/S protein or an antigenic fragment thereof;

b. a nucleotide sequence encoding an HBV HBc protein or an antigenic fragment thereof; and

c. a nucleotide sequence encoding a fusion of HBV HBs and HBc proteins or antigenic fragments thereof; and

wherein the antigenic fragment thereof is capable of inducing an antigen-specific CD8+ T cell response.

23. The vaccine of claim 22, wherein the arenavirus of the second viral vector is Pichinde virus.

24. Use of a viral vector of any one of claims 1 to 14, the pharmaceutical composition of any one of claims 15 to 17, the immunogenic composition of any one of claims 18 to 20, or the vaccine of any one of claims 21 to 23 in the manufacture of a medicament for treating or preventing a Hepatitis B virus infection in a patient, wherein the medicament is to be administered to the patient.

25. A viral of any one of claims 1 to 14, the pharmaceutical composition of any one of claims 15 to 17, the immunogenic composition of any one of claims 18 to 20, or the vaccine of any one of claims 21 to 23 for use in the treatment or prevention of a Hepatitis B virus infection in a patient.

26. The viral vector of any one of claims 1 to 14, the pharmaceutical composition of any one of claims 15 to 17, the immunogenic composition of any one of claims 18 to 20, or the vaccine of any one of claims 21 to 23 for use according to claim 25 wherein the viral vector, pharmaceutical composition, immunogenic composition or vaccine is suitable for intramuscular injection.

27. The viral vector of any one of claims 1 to 14, the pharmaceutical composition of any one of claims 15 to 17, the immunogenic composition of any one of claims 18 to 20, or the vaccine of any one of claims 21 to 23 for use according to claim 25 wherein the viral vector, pharmaceutical composition, immunogenic composition or vaccine is suitable for intravenous injection.

28. An isolated nucleic acid encoding an arenavirus genomic segment wherein the open reading frame of the genomic segment encoding the arenaviral glycoprotein (GP) is deleted or functionally inactivated and wherein the genomic segment comprises one or more of:

a. a nucleotide sequence encoding an HBV pre-S2/S protein or an antigenic fragment thereof;

b. a nucleotide sequence encoding an HBV HBc protein or an antigenic fragment thereof; and

c. a nucleotide sequence encoding a fusion of HBV HBs and HBc proteins or antigenic fragments thereof;

wherein the antigenic fragment thereof is capable of inducing an antigen-specific CD8+ T cell response; and

wherein the arenavirus is lymphocytic choriomeningitis virus (LCMV).

29. The isolated nucleic acid of claim 28, wherein the arenavirus open reading frame (ORF) encoding the arenaviral glycoprotein (GP) is deleted and replaced by the one or more nucleotide sequences.

30. An *in vitro* method for generating an infectious, replication-deficient arenavirus viral vector comprising:

(a) transfecting into a host cell the nucleic acid of claim 28 or 29;

(b) maintaining the host cell under conditions suitable for virus formation; and

(c) harvesting the infectious, replication-deficient arenavirus viral vector;

wherein the host cell expresses the open reading frame that is deleted or functionally inactivated of the genomic segment.

31. The use of claim 24, wherein the medicament induces a long-lasting immune response against the HBV antigen or an antigenic fragment thereof.

32. The use of claim 31, wherein the long-lasting immune response induces a detectable antibody titer against an HBV antigen or an antigenic fragment thereof.

33. The use of claim 31, wherein the long-lasting immune response induces a detectable antibody titer against the HBV antigen or an antigenic fragment thereof for at least a minimum of 4 weeks.

34. The use of claim 32 or 33, wherein the long-lasting immune response increases the antibody titer against the HBV antigen or an antigenic fragment thereof by at least 100%, at least 200%, at least 300%, at least 400%, at least 500%, or at least 1000% compared to the antibody titer in the sera of a human subject infected with an HBV infection prior to induction of such long-lasting immune response.

35. The pharmaceutical composition of claim 16, wherein the nucleotide sequence of the first viral vector encodes the HBV pre-S2/S protein or an antigenic fragment thereof, and wherein the nucleotide sequence of the second viral vector encodes the HBV HBc protein or an antigenic fragment thereof.

36. The pharmaceutical composition of claim 16, wherein the nucleotide sequence of the first viral vector encodes the HBV pre-S2/S protein or an antigenic fragment thereof, and wherein the nucleotide sequence of the second viral vector encodes the fusion of the HBV HBs and HBc proteins or antigenic fragments thereof.

37. The pharmaceutical composition of any one of claims 15 to 17, 31, or 32, wherein the composition is suitable for intramuscular administration.

38. The pharmaceutical composition of any one of claims 15 to 17, 31, or 32, wherein the composition is suitable for intravenous administration.

39. The use of claim 24, wherein the medicament results in a reduction in liver damage in the patient.

40. The use of claim 24, wherein the medicament results in a reduction in one or more of HBsAg, HBeAg, and HBcAg levels in the blood of the patient.

41. The use of claim 24, wherein the medicament results in a reduction in the level of an antibody against an HBV antigen in the blood of the patient.

42. The viral vector of claim 1, wherein the pre-S2/S protein or the antigenic fragment thereof comprises an amino acid sequence encoded by the nucleotide sequence of SEQ ID NO: 1.

43. The viral vector of claim 1, wherein the HBc protein or the antigenic fragment thereof comprises an amino acid sequence encoded by the nucleotide sequence of SEQ ID NO: 2.

44. The viral vector of claim 1, wherein the fusion of HBV HBs and HBc proteins or antigenic fragments thereof comprises an amino acid sequence encoded by the nucleotide sequence of SEQ ID NO: 3.

45. The viral vector of any one of claims 1 to 12 and 14, wherein the arenavirus is replication-deficient and is engineered to contain a genome with the ability to amplify and express its genetic information in infected cells but unable to produce further infectious progeny particles in normal, not genetically engineered cells.

46. The viral vector of any one of claims 1, 3 to 11, and 14, wherein the arenavirus is replication-competent.

47. The viral vector of claim 1, wherein the arenavirus is bi-segmented.

48. The viral vector of any one of claims 1, 3 to 11, and 14, wherein the arenavirus is tri-segmented.

49. An infectious arenavirus viral vector, wherein an arenavirus open reading frame (ORF) encoding the arenaviral glycoprotein (GP) is replaced by a nucleotide sequence encoding a fusion of HBV HBs and HBc proteins or antigenic fragments thereof, wherein the fragments thereof are capable of inducing an antigen-specific CD8+ T cell response, wherein the arenavirus is lymphocytic choriomeningitis virus (LCMV).

50. The viral vector of claim 49, wherein the open reading frame that encodes the glycoprotein of the arenavirus is deleted or functionally inactivated.

51. The viral vector of claim 49 or 50, wherein the viral vector is replication-deficient.

52. The viral vector of claim 49, wherein the viral vector is replication-competent.

53. The viral vector of claim 49 or 52, wherein the viral vector is tri-segmented.

54. Use of a viral vector of any one of claims 49 to 53 in the manufacture of a medicament for treating or preventing a Hepatitis B virus infection in a patient, wherein the medicament is to be administered to the patient.