

CLAIMS

1. A peptide comprising an amino sequence selected from the group consisting of
5 STLPETAVVRR, STLPETAVVR, STLPETTVVRR, STLPETTVIRR, STPPETTVVRR, STLPETTVVGR and
STIPETTVVRR, wherein the peptide is derived from Hepatitis B virus core169 and is capable
of binding HLA-A*1101 and when bound to HLA-A*1101 is capable of identifying T cells
specific for Hepatitis B virus.
- 10 2. Use of a peptide according to claim 1 for identifying Hepatitis B virus antigen-specific
T cells.
3. A method for selecting Hepatitis B virus antigen-specific T cells, the method
comprising contacting a population of T cells with a peptide according to claim 1.
- 15 4. A T cell receptor (TCR) molecule comprising an amino acid sequence selected from
the group comprising: CASGDSNSPLHF, CASSGGQIVYEQYF, CSARGGRGGDYTF and
CASSQDWTEAFF, the T cell receptor is able to bind to a peptide according to claim 1.
- 20 5. The TCR molecule according to claim 4, wherein the amino acid encodes for a TCR
beta chain portion.
6. A polynucleotide encoding a peptide according to a TCR molecule in claim 4.
- 25 7. The polynucleotide encoding a T cell receptor according to claim 6 has a sequence
selected from the group comprising SEQ ID NOS 1 to 16.
8. An expression vector comprising a polynucleotide according to any one of claims 6 or
7.
- 30 9. A host cell comprising a polynucleotide according to any one of claims 6 or 7, or an
expression vector according to claim 8.

10. The host cell according to claim 9, wherein the host cell is a T cell derived from a patient.
- 5 11. A T cell modified to express the TCR molecule according to any one of claims 4 or 5.
12. The T cell according to claim 11, for use in inducing antiviral T cell activity against a Hepatitis B virus core169 epitope, wherein a polynucleotide according to claim 7 or an expression vector according to claim 8 has been introduced into the T cell, preferably
10 patient-derived T cell, so that the T cell expresses the encoded TCR molecule.
13. A pharmaceutical composition comprising a peptide according to claim 1 or a polynucleotide according to claim 6 or a T cell according to claim 10 and a pharmaceutically acceptable carrier.
- 15 14. A peptide according to claim 1 or a polynucleotide according to claim 6 or a T cell according to claim 11 for use in medicine, wherein the individual to be treated is a human individual who carries HLA-A*1101.
- 20 15. A vaccine against Hepatitis B virus infection comprising a peptide according to claim 1 or a polynucleotide according to claim 6 or a T cell according to claim 11.
16. Use of a peptide according to claim 1 or a polynucleotide according to claim 6 or a T cell according to claim 11 in the manufacture of a medicament for treating a Hepatitis B
25 virus infection.
17. A method of treating a Hepatitis B virus infection in an individual, the method comprising administering to the individual an effective amount of a peptide according to claim 1 or a polynucleotide according to claim 6 or a T cell according to claim 11.
- 30 18. Use of a T cell according to claim 11 in the preparation of a medicament for inducing antiviral T cell activity against a Hepatitis B virus.

19. A method of combating a Hepatitis B virus infection in a patient which carries HLA A*1101, the method comprising:
- (a) obtaining T cells from the patient;
 - 5 (b) introducing into the T cells a polynucleotide encoding a TCR molecule according to claim 4;
 - (c) introducing the T cells produced in step (b) into the patient.
20. The method according to claim 19, wherein the polynucleotide is transfected or
- 10 introduced to the T cells by electroporation.