tolerated. There is thus a need for alternative therapies for MS which are effective at treating MS and at alleviating or reducing the symptoms of MS.

SUMMARY OF THE INVENTION

The present inventors have identified a number of peptides derivable from proteolipid protein (PLP) which can be presented by fixed antigen presenting cells to T-cells. These peptides may be useful in the prevention and/or treatment of demyelinating diseases such as multiple sclerosis.

In a first aspect, therefore, the present invention provides a peptide which is capable of binding to an MHC molecule *in vitro* and being presented to a T cell without antigen processing, which peptide is selected from the following proteolipid protein (PLP) peptides:

PLP 39-53: LTGTEKLIETYFSKN (SEQ ID NO. 7)

PLP 42-56: TEKLIETYFSKNYQD (SEQ ID NO. 8)

PLP 43-57: EKLIETYFSKNYQDY (SEQ ID NO. 9).

Also disclosed is a peptide which is capable of binding to an MHC molecule *in vitro* and being presented to a T cell without antigen processing, and which comprises all or a portion of the following proteolipid protein (PLP) regions:

PLP 36-61: HEALTGTEKLIETYFSKNYQDYEYLI (SEQ ID NO. 1)

PLP 179-206: TWTTCQSIAFPSKTSASIGSLCADARMY (SEQ ID NO. 2)

PLP 207-234: GVLPWNAFPGKVCGSNLLSICKTAEFQM (SEQ ID NO. 3).

The peptide may be selected from the following PLP peptides:

PLP 39-53: LTGTEKLIETYFSKN (SEQ ID NO. 7)

PLP 42-56: TEKLIETYFSKNYQD (SEQ ID NO. 8)

PLP 43-57: EKLIETYFSKNYQDY (SEQ ID NO. 9)

PLP 180-194: WTTCQSIAFPSKTSA (SEQ ID NO. 10)

PLP 181-195: TTCQSIAFPSKTSAS (SEQ ID NO. 11)

CLAIMS

1. A peptide which is capable of binding to an MHC molecule *in vitro* and being presented to a T cell without antigen processing, which peptide is selected from the following proteolipid protein (PLP) peptides:
PLP 39-53: LTGTEKLIETYFSKN (SEQ ID NO. 7)
PLP 42-56: TEKLIETYFSKNYQD (SEQ ID NO. 8)
PLP 43-57: EKLIETYFSKNYQDY (SEQ ID NO. 9).

2. A peptide according to claim 1, for use in the treatment and/or prevention of a demyelinating disease.

3. A peptide for use according to claim 2, wherein the disease is multiple sclerosis.

4. A pharmaceutical composition comprising one or more peptides according to claim 1.

5. The use of a peptide according to claim 1 in the manufacture of a medicament for use in the prevention and/or treatment of a demyelinating disease.

6. The use according to claim 5, wherein the disease is multiple sclerosis.