Claims:

1. Use of the peptide of claim 5 in the manufacture of a medicament for regenerating a nerve or attenuating degeneration of a nerve at a site of nerve injury, wherein the medicament is to be administered at or an area near an injured nerve, a nerve regenerating or nerve degeneration attenuating amount of the peptide of claim 5.

2. The use according to claim 1, wherein the peptide comprises a PDZ domain binding motif.

3. The use according to claim 1, wherein the peptide further comprises a peptide transfer domain (PTD).

4. The use according to claim 1, wherein the nerve injury is in the central nervous system.

5. A peptide which inhibits phosphatase and tensin homolog (PTEN) lipid phosphatase activity, wherein the peptide is a PTEN peptide of amino acid sequence of

(i) VTPDVpSDNEPDHYRYpSDTTDpSDPE (SEQ ID NO:3), wherein pS is phosphorylated Serine;

(ii) RRRRRRRR-VTPDVpSDNEPDHYRYpSDTTDpSDPE-amide (SEQ ID NO:4), wherein pS is phosphorylated Serine;

(iii) HYRYpSDTTDpSDPENEPFDEDQHTQITKV (SEQ ID NO:5), wherein pS is phosphorylated Serine; or

(iv) RRRRRRRR-HYRYpSDTTDpSDPENEPFDEDQHTQITKV-amide (SEQ ID NO:6), wherein pS is phosphorylated Serine.

6. The peptide according to claim 5, wherein the peptide comprises a PDZ domain binding motif.

7. The peptide according to claim 5, wherein the peptide further comprises a peptide transfer domain (PTD).

8. Use of the peptide of claim 5 in the manufacture of a medicament for growing, proliferating or enhancing cell activity of a nerve cell comprising contacting the nerve cell with the peptide of claim 5.

9. The use according to claim 8, wherein the peptide comprises a PDZ domain binding motif.

10. The use according to claim 8, wherein the peptide further comprises a peptide transfer domain (PTD).