Claims:

1. A method of regenerating a nerve or attenuating degeneration of a nerve at a site of nerve injury comprising administering at or an area near an injured nerve, a nerve regenerating or nerve degeneration attenuating amount of phosphatase and tensin homolog (PTEN) lipid phosphatase inhibiting peptide of amino acid sequence of SEQ ID NOS:3 to 6.

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

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

4. The method 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 SEQ ID NOS:3 to 6.

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. A method of growing, proliferating or enhancing cell activity of a nerve cell comprising contacting the nerve cell with a phosphatase and tensin homolog (PTEN) lipid phosphatase inhibiting peptide of amino acid sequence of SEQ ID NOS:3 to 6.

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

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