CLAIMS

1. A sustained drug release sheet for treating nerve injury, the sheet comprising a non-woven fabric that is formed from nanofibers containing a drug and a biocompatible polymer, the drug being selected from vitamin B12 and an extract from inflamed skins of rabbits inoculated with vaccinia virus.

2. The sheet according to claim 1, wherein the vitamin B12 is methylcobalamin.

3. The sheet according to claim 1 or 2, wherein the biocompatible polymer is a biodegradable aliphatic polyester or a polyacrylamide derivative.

4. The sheet according to claim 3, wherein the biodegradable aliphatic polyester is selected from the group consisting of polycaprolactone or a copolymer thereof, polylactic acid or a copolymer thereof, polyglycolic acid or a copolymer thereof, and mixtures of these components.

5. The sheet according to claim 3, wherein the polyacrylamide derivative is selected from the group consisting of poly(N-isopropylacrylamide) or a copolymer thereof, poly(2-hydroxyethylmethacrylamide) or a copolymer thereof, a copolymer of N-isopropylacrylamide and 2-hydroxyethylmethacrylamide, and mixtures of these components.

6. The sheet according to any one of claims 1 to 5, further containing hyaluronic acid.

7. The sheet according to any one of claims 1 to 6, wherein the nerve injury is discontinuity nerve injury or continuity nerve injury to peripheral nerves.

8. The sheet according to claim 7, wherein the continuity nerve injury is entrapment neuropathy.

9. The sheet according to any one of claims 1 to 8, wherein the weight of the sheet is 1 mg/cm^2 to 50 mg/cm^2.

10. The sheet according to any one of claims 1 to 9, wherein the sheet is implanted into the periphery of a nerve injury site upon use.

11. The sheet according to any one of claims 1 to 10, wherein the nerve injury treatment is realized through acceleration of nerve regeneration.

12. A method for producing the sheet according to any one of claims 1 to 11, the method comprising the following steps (1) and (2):

(1) preparing a solution containing a drug, a biocompatible polymer and a solvent, wherein the drug is selected from vitamin B12 and an extract from inflamed skins of rabbits inoculated with vaccinia virus; and

(2) subjecting the solution to spinning by an electrospinning method to form a non-woven fabric.

13. A method for producing the sheet according to any one of claims 1 to 11, the method comprising the following steps (1) and (2):

(1) preparing a solution containing a drug, a biocompatible polymer, a solvent and hyaluronic acid, wherein the drug is selected from vitamin B12 and an extract from inflamed skins of rabbits inoculated with vaccinia virus; and

(2) subjecting the solution to spinning by an electrospinning method to form a non-woven fabric.

14. A method for producing the sheet according to any one of claims 1 to 11, the method comprising the following steps (1), (2) and (3):

(1) preparing a solution containing a drug, a biocompatible polymer, a solvent and hyaluronic acid, wherein the drug is selected from vitamin B12 and an extract from inflamed skins of rabbits inoculated with vaccinia virus;

(2) subjecting the solution to spinning by an electrospinning method to form a non-woven fabric; and

(3) coating the non-woven fabric with hyaluronic acid.

15. The production method according to any one of claims 12 to 14, wherein the electrospinning method is performed at a voltage of 10 to 30 kV.

16. The production method according to any one of claims 12 to 15, wherein the electrospinning method is performed at a flow rate of 0.1 to 1 mL/h.

17. The production method according to any one of claims 12 to 16, wherein the biocompatible polymer is a biodegradable aliphatic polyester or a polyacrylamide derivative.

18. The production method according to claim 17, wherein the biodegradable aliphatic polyester is selected from the group consisting of polycaprolactone or a copolymer thereof, polylactic acid or a copolymer thereof, polyglycolic acid or a copolymer thereof, and mixtures of these components.

19. The production method according to claim 17, wherein the polyacrylamide derivative is selected from the group consisting of poly(N-isopropylacrylamide) or a copolymer thereof, poly(2-hydroxyethylmethacrylamide) or a copolymer thereof, a copolymer of N-isopropylacrylamide and 2-hydroxyethylmethacrylamide, and mixtures of these components.