

THE CLAIMS:

1. An arrangement for improved healing or regeneration of connective tissues, the arrangement including:

5 a magnetic article capable of influencing the connective tissues of the area to be healed or regenerated when positioned appropriately,

wherein the magnetic article and created magnetic field improves healing or regeneration of the connective tissues by establishing a virtual scaffold for the alignment of molecules within the healing or regenerating connective tissues.

10 2. The arrangement for improved healing or regeneration of connective tissues of claim 1, wherein the arrangement includes a dressing, the dressing including:

a first part adapted to be applied on or about the area for healing or regeneration;
a second part including the magnetic article capable of influencing the connective tissues when positioned appropriately on the first part; and
15 and a third part for attaching the first and second parts to the patient and maintaining in place during the healing or regeneration,

wherein the magnetic article and created magnetic field improves wound healing by establishing a virtual scaffold for the alignment of molecules within and or around the wound.

20 3. The arrangement for improved healing or regeneration of connective tissues of claim 2, wherein the first part also maintains a wound in a suitable state of closure, while wound healing takes place.

4. The arrangement for improved healing or regeneration of connective tissues according to any of claims 1 to 3, wherein the magnetic article includes a one-sided flux magnet.

25 5. The arrangement for improved healing or regeneration of connective tissues according to any of claims 1 to 3, wherein the magnetic article is a Halbach array.

6. The arrangement for improved healing or regeneration of connective tissues according to any of claims 1 to 5, wherein the area to be healed is chosen from the following group: a wound; an area of damaged skin; aged skin; and sun damaged skin.

7. The arrangement for improved healing or regeneration of connective tissues according to any one of claims 1 to 6, wherein the magnetic article includes:

a body of a suitable medium; and
a magnetic means incorporated into the body,

5 wherein the article is used to act on connective tissues, and the magnetic means and created magnetic field improves healing or regeneration by establishing a virtual scaffold for the alignment of healing or regenerating connective tissue molecules.

8. The arrangement for improved healing or regeneration of connective tissues according to any one of claims 1 to 7, wherein the arrangement is used for a person to
10 heal or regenerate connective tissue.

9. The arrangement for improved healing or regeneration of connective tissues according to any one of claims 1 to 7, wherein the arrangement is used for an animal other than a person to heal or regenerate connective tissue.

10. The arrangement for improved healing or regeneration of connective tissues
15 accordingly to any one of claims 1 to 9, wherein a dressing is included in the arrangement and may include any items chosen from the following group: bandages; dressings; paper stitches; pads; plasters; surgical tape; wound closing tape; or similar.

11. The arrangement for improved healing or regeneration of connective tissues according to any one of claims 1 to 10, wherein the arrangement is used to treat a
20 wound caused by accident, injury, including an injured joint, or surgery, and may include damage to any tissues chosen from the following group: bone; connective tissue; ligament; skin; or tendon.

12. The arrangement for improved healing or regeneration of connective tissues according to any one of claims 2 to 11, wherein the first part includes self-adhesive tape
25 for closing wounds.

13. The arrangement for improved healing or regeneration of connective tissues according to any one of claims 2 to 11, wherein the first part includes methods of closing the wound including: paper stitches; surgical tape; including products for closing wounds sold under brand names HYPAFIX (Trade Mark) or CLOZEX (Trade Mark).

14. The arrangement for improved healing or regeneration of connective tissues accordingly to any one of claims 1 to 13, wherein the arrangement is used to accelerate healing and improve the outcome by minimising scarring.

15. The arrangement for improved healing or regeneration of connective tissues
5 accordingly to any one of claims 1 to 14, wherein the arrangement is used to close and align the sides of a wound together and minimise the distance between the edges, ready for healing, with minimal scarring.

16. The arrangement for improved healing or regeneration of connective tissues accordingly to any one of claims 1 to 15, wherein the magnetic article is a Halbach array
10 chosen from the following group: linear; circular; or cylindrical varied to suit the healing of different connective tissues, depending on clinical need.

17. The arrangement for improved healing or regeneration of connective tissues accordingly to any one of claims 1 to 16, wherein the magnetic article includes a body of a suitable medium and a magnetic means incorporated into the body, and the medium is
15 a suitable inert medium, such as silicone.

18. The arrangement for improved healing or regeneration of connective tissues accordingly to any one of claims 1 to 17, wherein the magnetic article is provided as a roll that can be cut to size when applying to the patient.

19. The arrangement for improved healing or regeneration of connective tissues
20 accordingly to any one of claims 1 to 17, wherein pre-cut pieces of the magnetic article are provided.

20. The arrangement for improved healing or regeneration of connective tissues accordingly to any one of claims 1 to 19, wherein the magnetic influence creates a magnetic field suitable to encourage correct alignment of the collagen molecules flowing
25 to heal the wound.

21. The arrangement for improved healing or regeneration of connective tissues accordingly to any one of claims 1 to 20, wherein the magnetic influence creates a magnetic field suitable to encourage correct alignment of the proteoglycan molecules flowing to heal the wound.

22. The arrangement for improved healing or regeneration of connective tissues accordingly to any one of claims 1 to 21, wherein the magnetic influence creates a magnetic field suitable to encourage correct alignment of the collagen molecules flowing to heal the wound, and the proteoglycan molecules align perpendicular with the collagen
5 fibres.

23. The arrangement for improved healing or regeneration of connective tissues accordingly to any one of claims 1 to 22, wherein the connective tissue is encouraged to heal with a similar alignment to healthy tissue.

24. The arrangement for improved healing or regeneration of connective tissues
10 accordingly to any one of claims 1 to 23, wherein use of the magnetic influence emulates the extracellular matrix formation as in healthy tissue.

25. The arrangement for improved healing or regeneration of connective tissues accordingly to any one of claims 1 to 24, wherein the positioning of the magnetic article or device is as illustrated in any one of Figures 5, 7, 11, 13 or 14.

15 26. The arrangement for improved healing or regeneration of connective tissues accordingly to any one of claims 1 to 25, wherein the positioning of the magnetic article is that the alternating magnetic fields influence the underlying area or to create a virtual scaffold for the healing.

27. The arrangement for improved healing or regeneration of connective tissues
20 accordingly to any one of claims 1 to 26, wherein healing is accelerated to healing in a few days.

28. The arrangement for improved healing or regeneration of connective tissues accordingly to any one of claims 1 to 26, wherein healing occurs in less than substantially 48 hours.

25 29. The arrangement for improved healing or regeneration of connective tissues accordingly to any one of claims 1 to 26, wherein healing occurs in less than substantially 24 to 48 hours.

30 30. The arrangement for improved healing or regeneration of connective tissues accordingly to any one of claims 1 to 26, wherein healing occurs in less than substantially 24 hours.

31. The arrangement for improved healing or regeneration of connective tissues accordingly to any one of claims 1 to 26, wherein healing may occur sufficient to remove a dressing in only a few hours.

32. The arrangement for improved healing or regeneration of connective tissues
5 accordingly to any one of claims 1 to 31, wherein only very minor or no scarring will remain after healing through use of the invention.

33. The arrangement for improved healing or regeneration of connective tissues accordingly to any one of claims 1 to 32, wherein three separate layers are used, a part applied to the wound or area to be healed to close or cover it, a magnetic containing layer
10 containing the magnetic article and an adhesive or attachment layer to surround the other two layers and maintain in place for healing or regeneration.

34. The arrangement for improved healing or regeneration of connective tissues of claim 33, wherein each of these layers is made integral with one another.

35. The arrangement for improved healing or regeneration of connective tissues
15 accordingly to any one of claims 1 to 34, wherein the shelf life of the magnetic article is a long shelf life.

36. The arrangement for improved healing or regeneration of connective tissues of claim 35, wherein the long shelf life is more than 5 years.

37. An article and dressing for improved wound healing, the article including:
20 a first part adapted to be applied on or about the wound to substantially act to maintain the wound in a suitable state of closure for wound healing;
a second part including a magnetic article including a magnetic means in a body, the magnetic means able to act on the wound closed by the first part;
and a third part for maintaining the first and second parts in place, during the
25 wound healing,

wherein the magnetic means and created magnetic field of the article for improved wound healing establishes a virtual scaffold for the wound healing molecules.

38. A dressing for improved connective tissue healing or regeneration, the dressing including:

a first part adapted to be applied on or about the area of connective tissue for healing or regeneration;

a second part including a magnetic article capable of influencing the connective tissues when positioned appropriately on the first part; and

5 and a third part for attaching the first and second parts to the patient and maintaining in place during the healing or regeneration,

wherein the magnetic article projects a magnetic field and the magnetic field improves healing or regeneration by establishing a virtual scaffold for the alignment of connective tissue molecules in the healing or regenerating connective tissues.

10 39. An article for improved healing or regeneration, the article including:

a body of a suitable medium; and

a magnetic means incorporated into the body,

wherein the article is used to act on connective tissues, and the magnetic means and created magnetic field improves healing or regeneration by establishing a virtual scaffold
15 for the alignment of healing or regenerating connective tissue molecules.

the article is used as part of a dressing for a wound, and the magnetic means creates or projects a magnetic field and the magnetic field improves wound healing by establishing a virtual scaffold for the wound healing molecules.

20 40. A method of improved healing or regeneration of connective tissue using a magnetic article, the method including the following steps:

a) preparing the area to be healed or regenerated;

b) positioning the magnetic article relative on or close to the area at a position whereby it can act thereupon to influence the healing or regeneration of the connective tissues; and

25 c) healing or regeneration of the area in accordance with the virtual scaffold created by the magnetic article.

41. The arrangement according to any one of claims 1 to 36, wherein the arrangement uses the method of claim 40.