SUMMARY

This present disclosure relates to a composition comprising a biocompatible matrix and a mesenchymal stem cells (MSC) population, wherein said mesenchymal stem cells population is substantially pure.

In one aspect of the present disclosure, there is provided a composition suitable for treating soft tissue injuries comprising a biocompatible matrix and a mesenchymal stem cells population derived from adipose tissue, wherein said mesenchymal stem cells population comprises less than 25% of fibroblasts, wherein said mesenchymal stem cells are undifferentiated.

In another aspect of the present disclosure, there is provided a composition as described herein, for use for treating a soft tissue injury in a subject in need thereof.

In yet another aspect of the present disclosure, there is provided a method for the preparation of a composition comprising a biocompatible matrix and a mesenchymal stem cells population derived from adipose tissue, comprising incubating a substantially pure mesenchymal stem cells population, which comprises less than 25% of fibroblasts, with a biocompatible matrix, wherein said mesenchymal stem cells are undifferentiated.

In a further aspect of the present disclosure, there is provided a use of the composition as described herein, in the manufacture of a medicament for treating a soft tissue injury in a subject in need thereof.

According to one embodiment, the mesenchymal stem cells population of the present disclosure comprises less than 25% of fibroblasts.

According to one embodiment, the mesenchymal stem cells of the present disclosure are undifferentiated.

In one embodiment, the mesenchymal stem cells of the present disclosure are derived from adipose tissue, bone-marrow, umbilical cord tissue, Wharton’s jelly, amniotic fluid, placenta, peripheral blood, fallopian tube, corneal stroma, lung, muscle, skin, bone, dental tissue or fetal liver. Preferably, the mesenchymal stem cells of the

CLAIMS

1. A composition suitable for treating soft tissue injuries comprising a biocompatible matrix and a mesenchymal stem cells population derived from adipose tissue, wherein said mesenchymal stem cells population comprises less than 25% of fibroblasts, and wherein said mesenchymal stem cells are undifferentiated.

2. The composition according to claim **1**, wherein said mesenchymal stem cells derived from adipose tissue are from subcutaneous adipose tissue.

3. The composition according to claim **1** or **2**, wherein said biocompatible matrix is acellular.

4. The composition according to any one of claims **1** to **3**, wherein said biocompatible matrix comprises collagen.

5. The composition according to any one of claims **1** to **4**, wherein said biocompatible matrix is human, porcine, bovine or equine.

6. The composition according to any one of claims **1** to **5**, for use for treating a soft tissue injury in a subject in need thereof.

7. The composition for use according to claim **6**, wherein said soft tissue is selected from the group comprising skin tissue, muscle tissue, dermal tissue, tendon tissue, ligament tissue, meniscus tissue and bladder tissue.

8. The composition for use according to claim **6** or **7,** wherein said soft tissue injury is an acute or a chronic wound.

9. The composition for use according to any one of claims **6** to **8**, wherein said soft tissue injury is selected from the group comprising tears or ruptures of soft tissue, skin wounds, skin burns, skin ulcers, surgical wounds, vascular diseases, muscle disease, hernias and radiation wounds.

10. The composition for use according to claim **9**, wherein said skin wound is a diabetic wound.

11. The composition for use according to any one of claims **6** to **10**, wherein mesenchymal stem cells originate from the subject to be treated.

12. The composition for use according to any one of claims **6** to **10**, wherein said composition is to be administered topically or by surgical implantation.

13. A method for the preparation of a composition comprising a biocompatible matrix and a mesenchymal stem cells population derived from adipose tissue, comprising incubating a substantially pure mesenchymal stem cells population, which comprises less than 25% of fibroblasts, with a biocompatible matrix, wherein said mesenchymal stem cells are undifferentiated.

14. Use of the composition according to any one of claims **1** to **5**, in the manufacture of a medicament for treating a soft tissue injury in a subject in need thereof.

15. The use according to claim **14**, wherein said soft tissue is selected from the group comprising skin tissue, muscle tissue, dermal tissue, tendon tissue, ligament tissue, meniscus tissue and bladder tissue.

16. The use according to claim **14** or **15,** wherein said soft tissue injury is an acute or a chronic wound.

17. The use according to any one of claims **14** to **16**, wherein said soft tissue injury is selected from the group comprising tears or ruptures of soft tissue, skin wounds, skin burns, skin ulcers, surgical wounds, vascular diseases, muscle disease, hernias and radiation wounds.

18. The use according to claim **17**, wherein said skin wound is a diabetic wound.

19. The use according to any one of claims **14** to **18**, wherein said composition is to be administered topically or by surgical implantation.