

CLAIMS

We claim:

1. A porcine scaffold comprising:
decellularized, porcine placental extracellular matrix,
wherein the porcine scaffold comprises at least about 0.5% w/w of hyaluronic acid based on the total weight of the porcine scaffold.
2. The porcine scaffold of claim 1, wherein the placental extracellular matrix is substantially devoid of intact cells.
3. The porcine scaffold of claim 1, wherein the porcine scaffold comprises up to about 1200 ng dsDNA per mg of porcine scaffold.
4. The porcine scaffold of claim 1, formulated as a membrane-based construct.
5. The porcine scaffold of claim 1, wherein the placental extracellular matrix comprises at least one placental membrane, at least one amnion membrane, at least one chorion membrane, or a combination thereof.
6. The porcine scaffold of claim 1, wherein the porcine scaffold comprises at least about 1.0% w/w of hyaluronic acid based on the total weight of the porcine scaffold.
7. The porcine scaffold of claim 1, wherein the porcine scaffold comprises at least about 1.5% w/w of hyaluronic acid based on the total weight of the porcine scaffold.
8. The porcine scaffold of claim 1, wherein the porcine scaffold comprises at least about 2.0% w/w of hyaluronic acid based on the total weight of the porcine scaffold.
9. The porcine scaffold of claim 1, wherein the porcine scaffold comprises at least about 2.5% w/w of hyaluronic acid based on the total weight of the porcine scaffold.

10. The porcine scaffold of claim 1, wherein the porcine scaffold retains at least about 50% w/w of any hyaluronic acid present in native porcine placental membrane.
11. The porcine scaffold of claim 1, wherein the porcine scaffold retains at least about 45% of any sulfated glycosaminoglycans present in native porcine placental membrane.
12. The porcine scaffold of claim 1, wherein the porcine scaffold retains at least about 66% of any elastin present in native porcine placental membrane.
13. The porcine scaffold of claim 1, wherein the porcine scaffold comprises up to about 1650 ng fibronectin per gram of porcine scaffold.
14. A porcine scaffold comprising:
decellularized, porcine placental extracellular matrix according to any one of claims 1-13, treated with a detergent and an alkali solution.
15. A method of preparing a porcine scaffold, the method comprising the step of:
processing the porcine placental membrane to form a porcine scaffold,
wherein the porcine placental scaffold retains at least about 50% w/w of any hyaluronic acid present in native porcine placental membrane.
16. A method of preparing a porcine scaffold, the method comprising the step of:
processing the porcine placental membrane to form a porcine scaffold,
wherein the porcine scaffold retains at least about 45% w/w of any sulfated glycosaminoglycans present in native porcine placental membrane.
17. A method of preparing a porcine scaffold, the method comprising the step of:
processing the porcine placental membrane to form a porcine scaffold,
wherein the porcine placental scaffold retains at least about 66% w/w of any elastin present in native porcine placental membrane.
18. A method of preparing a porcine scaffold, the method comprising the step of:
processing the porcine placental membrane to form a porcine scaffold,

wherein the porcine scaffold retains at least about 40% w/w of any sulfated glycosaminoglycans present in native porcine placental membrane.

19. The method of any one of claims 15, 16, 17 or 18, wherein the step of processing the porcine placental membrane to form a porcine scaffold includes treating the porcine placental membrane with a detergent solution, the detergent solution comprising at least one protease enzyme.

20. The method of claim 19, the detergent solution further comprising at least one anionic detergent.

21. The method of any one of claims 15, 16, 17 or 18, wherein the step of processing the porcine placental membrane to form a porcine scaffold includes treating the porcine placental membrane with a viral inactivation solution, the viral inactivation solution comprising at least one alkali solution.

22. The method of claim 21, wherein the alkali solution comprises sodium hydroxide in an amount of about 1 mL to about 50 mL of about 0.1M to about 3.0M sodium hydroxide per gram of porcine placental membrane.

23. The method of any one of claims 15, 16, 17 or 18, wherein the porcine scaffold retains at least about 50% of sulfated and non-sulfated glycosaminoglycans present in native porcine placental membrane.

24. A method of treating a defect, the method comprising the step of:
administering a porcine scaffold as provided in any one of claims 1-13 to a defect.

25. The method of claim 24, wherein the defect is selected from a partial thickness wound, full thickness wound, pressure ulcer, venous ulcer, diabetic ulcer, chronic vascular ulcer, tunneled or undermined wound, surgical wound, wound dehiscence, abrasion, laceration, second degree burn, skin tear, and draining wound.

26. The method of claim 24, wherein the defect is a wound or ulcer.

27. A porcine scaffold comprising:
decellularized, porcine placental extracellular matrix,
wherein the porcine scaffold comprises up to about 85% w/w of total collagen based on the total weight of the porcine scaffold.
28. A porcine scaffold comprising:
decellularized, porcine placental extracellular matrix,
wherein the porcine scaffold comprises up to about 10% w/w of elastin based on the total weight of the porcine scaffold.
29. A porcine scaffold comprising:
decellularized, porcine placental extracellular matrix,
wherein the porcine scaffold comprises up to about 3% w/w of hyaluronic acid based on the total weight of the porcine scaffold.
30. A porcine scaffold comprising:
decellularized, porcine placental extracellular matrix,
wherein the porcine scaffold comprises up to about 2% w/w of sulfated glycosaminoglycans based on the total weight of the porcine scaffold.
31. A porcine scaffold comprising:
decellularized, porcine placental extracellular matrix,
wherein the porcine scaffold comprises up to about 99% w/w of total collagen, elastin, hyaluronic acid and sulfated glycosaminoglycans based on the total weight of the porcine scaffold.
32. The porcine scaffold as in any one of claims 27, 28, 29, 30, or 31, wherein the porcine scaffold comprises up to about 1650 ng fibronectin per gram of porcine scaffold.
33. A porcine scaffold as in any one of claims 1, 27, 28, 29, 30, or 31, wherein the porcine scaffold includes a surface defining one or more fenestrations.
34. A wound dressing comprising a porcine scaffold as in any one of claims 1, 27, 28, 29, 30, or 31.

35. The wound dressing of claim 34, wherein the porcine scaffold includes a surface defining one or more fenestrations.