Claims

1. A non-human induced pluripotent stem cell (iPSC), wherein the iPSC expresses one or more or all of the genes selected from LMNA, HTRA1, PHLDA1, FGF1 and GASK1B.

2. A non-human iPSC according to claim 1, wherein the iPSC expresses all of LMNA, HTRA1, PHLDA1, FGF1 and GASK1B.

3. A non-human iPSC according to claim 1 or 2, wherein the iPSC is a porcine iPSC.

4. A non-human iPSC according to claim 1 or 2, wherein the iPSC is a bovine iPSC.

5. A non-human iPSC according to claim 1 or 2, wherein the iPSC is a canine iPSC.

6. A non-human iPSC according to any preceding claim, wherein the iPSC additionally expresses all of NANOG, REX1, SSEA-3 and SSEA-4.

7. A population of non-human iPSCs, wherein at least 50% of the iPSCs express one or more or all of the genes selected from LMNA, HTRA1, PHLDA1, FGF1 and GASK1B.

8. A population of non-human iPSCs according to claim 7, wherein at least 60% of the iPSCs express one or more or all of the genes selected from LMNA, HTRA1, PHLDA1, FGF1 and GASK1B.

9. A population of non-human iPSCs according to claim 7 or claim 8, wherein at least 70% of the iPSCs express one or more or all of the genes selected from LMNA, HTRA1, PHLDA1, FGF1 and GASK1B.

10. A population of non-human iPSCs according to any one of claims 7-9, wherein at least 80% of the iPSCs express one or more or all of the genes selected from LMNA, HTRA1, PHLDA1, FGF1 and GASK1B.

11. A population of non-human iPSCs according to any one of claims 7-10, wherein at least 90% of the iPSCs express one or more or all of the genes selected from LMNA, HTRA1, PHLDA1, FGF1 and GASK1B.

12. A population of non-human iPSCs according to any one of claims 7-11, wherein at least 95% of the iPSCs express one or more or all of the genes selected from LMNA, HTRA1, PHLDA1, FGF1 and GASK1B.

13. A population of non-human iPSCs according to any one of claims 7-12, wherein the iPSCs are from a farm animal and/or a domestic animal.

14. A population of non-human iPSCs according to any one of claims 7-13, wherein the iPSCs are from dogs, cats, cattle, sheep, pigs, goats, horses, chickens, guinea pigs, donkeys, deer, ducks, geese, camels, llamas, alpacas, turkeys, rabbits, or hamsters

15. A population of non-human iPSCs according to any one of claims 7-14, wherein the iPSCs are bovine, canine, porcine, ovine, or equine.

16. A population of non-human iPSCs according to any one of claims 7-15, wherein the iPSCs are bovine.

17. A population of non-human iPSCs according to any one of claims 7-15, wherein the iPSCs are canine.

18. A population of non-human iPSCs according to any one of claims 7-15, wherein the iPSCs are porcine.

19. A method of inducing pluripotency, comprising culturing non-human neural stem cells (NSCs) in the presence of vectors that express one or more reprogramming factors.

20. A method of inducing pluripotency according to claim 19, wherein the NSCs are derived from a pig, cow or dog.

21. A method according to claim 19 or claim 20, wherein the vectors are non-integrating.

22. A method according to any of claims 19-21, wherein the reprogramming factors are selected from two or more or all of Oct4, Sox2, cMyc and Klf4.

23. A method according to any of claims 19-22, wherein the reprogramming factors are Oct4 and cMyc.

24. A method according to any of claims 19-23, wherein the vectors are viral vectors, e.g. Sendai viral vectors.

25. A non-human iPSC derived from a pig, dog or cow, obtainable by a method according to any of claims 19-24, characterized in that the iPSC expresses NANOG, REX1, SSEA-3 and SSEA-4.

26. A non-human iPSC according to claim 25, characterized in that the iPSC expresses one or more or all of the genes selected from LMNA, HTRA1, PHLDA1, FGF1 and GASK1B.

27. A non-human iPSC according to claim 25 or claim 26, wherein the iPSC expresses all of LMNA, HTRA1, PHLDA1, FGF1 and GASK1B.