WHAT IS CLAIMED IS:

1. A pharmaceutical composition comprising as an active ingredient an isolated population of cell suspension from a mammalian fetal pulmonary tissue, wherein said fetal pulmonary tissue is at a developmental stage corresponding to that of a human pulmonary organ/tissue at a gestational stage selected from a range of ~~about~~ 20 to ~~about~~ 22 weeks of gestation.

2. The pharmaceutical composition of claim 1, wherein said gestational stage is 20 to 21 weeks of gestation.

3. The pharmaceutical composition of claim 1, wherein said gestational stage is 21 to 22 weeks of gestation.

4. The pharmaceutical composition of claim 1, wherein said mammalian fetal pulmonary tissue is a human tissue.

5. The pharmaceutical composition of claim 1, wherein said isolated population of cell suspension comprises a heterogeneous population of cells.

6. The pharmaceutical composition of claim 1, wherein said isolated population of cell suspension comprises progenitor cells.

7. The pharmaceutical composition of claim 6, wherein said progenitor cells are selected from the group consisting of epithelial progenitor cells, mesenchymal progenitor cells and endothelial progenitor cells.

8. The pharmaceutical composition of claim 5, wherein said cells comprise a cytokeratin 5+ (CK5+) marker expression.

9. The pharmaceutical composition of claim 5, wherein said cells comprise a cytokeratin 5+ (CK5+) and cytokeratin 14+ (CK14+) marker expression.

10. The pharmaceutical composition of claim 5, wherein said cells comprise a c-Kit+ CD45- CD34- CD31- CD326- CD271- marker expression.

11. The pharmaceutical composition of claim 5, wherein said cells comprise a c-Kit+ CD34+ CD31+ marker expression.

12. The pharmaceutical composition of claim 5, wherein said cells comprise a c-Kit+ CD34+ CD326+ marker expression.

13. The pharmaceutical composition of claim 5, wherein said cells comprise a CD34+ CD31+ CD14+ CD45+ marker expression.

14. The pharmaceutical composition of claim 5, wherein said cells comprise a CD34+ CD31+ CD45- CD105+ marker expression.

15. The pharmaceutical composition of claim 5, wherein said cells comprise a nestin+ and/or a calcitonin gene related protein+ (CGRP+) marker expression.

16. The pharmaceutical composition of claim 5, wherein said cells comprise an alpha smooth muscle actin+ (alpha-SMA+) and/or a Vimentin+ marker expression.

17. The pharmaceutical composition of claim 5, wherein said cells are capable of regenerating a structural/functional pulmonary tissue.

18. The pharmaceutical composition of claim 17, wherein said structural/functional pulmonary tissue comprises generation of a chimeric lung.

19. The pharmaceutical composition of claim 18, wherein said chimeric lung comprises formation of alveolar, bronchial and/or bronchiolar structures, and/or vascular structures.

20. The pharmaceutical composition of claim 17, wherein said structural/functional pulmonary tissue comprises an ability to synthesize surfactant and/or an ability to transport ions.

21. The pharmaceutical composition of claim 5, wherein said cells are capable of regenerating an epithelial, mesenchymal and/or endothelial tissue.

22. The pharmaceutical composition of claim 21, wherein said cells are CFTR expressing epithelial cells.

~~23. A method of regenerating an epithelial, mesenchymal and/or endothelial tissue in a subject in need thereof, the method comprising administering to the subject a therapeutically effective amount of the pharmaceutical composition of any one of claims 1-22, thereby regenerating the epithelial, mesenchymal and/or endothelial tissue.~~

~~24. The method of claim 23, wherein said epithelial tissue is selected from the group consisting of a lung tissue, a gastrointestinal tract tissue, a reproductive organ tissue, a urinary tract tissue, a renal tissue, a skin tissue, a cardiac tissue, an ischemic tissue and a brain tissue.~~

~~25. The method of claim 23, wherein said mesenchymal tissue is selected from the group consisting of a lymphatic tissue, a circulatory system tissue and a connective tissue.~~

~~26. The method of claim 23, wherein said endothelial tissue is selected from the group consisting of a lymphatic tissue and a circulatory system tissue.~~

~~27. A method of treating a disease or condition in which regeneration of epithelial, mesenchymal and/or endothelial tissue is beneficial in a subject in need thereof, the method comprising administering to the subject a therapeutically effective amount of the pharmaceutical composition of any one of claims 1-22, thereby treating the disease or condition in which regeneration of the epithelial, mesenchymal and/or endothelial tissue is beneficial.~~

~~28. A method of treating a pulmonary disorder or injury in a subject in need thereof, the method comprising administering to the subject a therapeutically effective amount of the pharmaceutical composition of any one of claims 1-22, thereby treating the pulmonary disorder or injury.~~

~~29. The method of any one of claims 23-28, further comprising conditioning the subject under sublethal, lethal or supralethal conditioning protocol prior to said administering.~~

~~30. The method of any one of claims 23-28, wherein said administering is effected by an intravenous route.~~

~~31. The method of any one of claims 23-28, wherein said administering is effected by a route selected from the group consisting of intratracheal, intrabronchial, intraalveolar, intravenous, intraperitoneal, intranasal, subcutaneous, intramedullary, intrathecal, intraventricular, intracardiac, intramuscular, intraserosal, intramucosal, transmucosal, transnasal, rectal and intestinal.~~

~~32. The method of any one of claims 23-28, further comprising treating the subject with an immunosuppressive regimen prior to, concomitantly with or following said administering.~~

~~33. The pharmaceutical composition of any one of claims 1-22 for use in treating a disease or condition in which regeneration of epithelial, mesenchymal and/or endothelial tissue is beneficial in a subject in need thereof.~~

~~34~~23. The pharmaceutical composition of any one of claims 1-22 for use in treating a pulmonary disorder or injury in a subject in need thereof.

~~35~~24. The pharmaceutical composition of ~~any one of~~ claim~~s 33-34~~23, wherein said composition is formulated for intravenous administration.

~~36~~25. The pharmaceutical composition of ~~any one of~~ claim~~s 33-34~~23, wherein said composition is formulated for administration via a route selected from the group consisting of intratracheal, intrabronchial, intraalveolar, intravenous, intraperitoneal, intranasal, subcutaneous, intramedullary, intrathecal, intraventricular, intracardiac, intramuscular, intraserosal, intramucosal, transmucosal, transnasal, rectal and intestinal.

~~37~~26. The pharmaceutical composition ~~of any one~~ of claim~~s 33-34~~23, further comprising a sublethal, lethal or supralethal conditioning protocol.

~~38~~27. The ~~method of claim 29 or~~ pharmaceutical composition of claim ~~37~~26, wherein said sublethal, lethal or supralethal conditioning is selected from the group consisting of a total body irradiation (TBI), a partial body irradiation, a myeloablative conditioning, a co-stimulatory blockade, a chemotherapeutic agent and/or an antibody immunotherapy.

~~39~~28. The ~~method of claim 29 or~~ pharmaceutical composition of claim ~~37~~26, wherein said conditioning comprises naphthalene treatment.

~~40~~29. The ~~method or~~ pharmaceutical composition of claim ~~39~~28, wherein said conditioning further comprises total body irradiation (TBI).

~~41~~30. The ~~method of claim 29 or~~ pharmaceutical composition of claim ~~37~~26, wherein said conditioning comprises total body irradiation (TBI).

~~42~~31. The ~~method or~~ pharmaceutical composition of claim ~~40~~ 29 or ~~41~~30, wherein said TBI comprises a single or fractionated irradiation dose within the range of 1-7.5 Gy.

~~43~~32. The ~~method of any one of claims 23-28 or~~ pharmaceutical composition of ~~any one of~~ claim~~s~~ ~~33-34~~23, wherein said subject is a human subject.

~~44~~33. The ~~method of any one of claims 23-28 or~~ pharmaceutical composition of ~~any one of~~ claim~~s~~ ~~33-34~~23, wherein said mammalian fetal pulmonary tissue is a human tissue.

~~45~~34. The ~~method of any one of claims 23-28 or~~ pharmaceutical composition of ~~any one of~~ claim~~s~~ ~~33-34~~23, wherein said isolated population of cell suspension is non-syngeneic with the subject.

~~46~~35. The ~~method or~~ pharmaceutical composition of claim ~~45~~34, wherein said isolated population of cell suspension is allogeneic with the subject.

~~47~~36. The ~~method or~~ pharmaceutical composition of claim ~~46~~35, wherein said allogeneic cells are selected from the group consisting of HLA identical, partially HLA identical and HLA non-identical with the subject.

~~48~~37. The ~~method or~~ pharmaceutical composition of claim ~~45~~34, wherein said isolated population of cell suspension is xenogeneic with the subject.

~~49~~38. The ~~method of claim 28 or~~ pharmaceutical composition of claim ~~34~~23, wherein said pulmonary disorder or injury is selected from the group consisting of cystic fibrosis, emphysema, asbestosis, chronic obstructive pulmonary disease (COPD), pulmonary fibrosis, idiopatic pulmonary fibrosis, pulmonary hypertension, lung cancer,

sarcoidosis, acute lung injury (adult respiratory distress syndrome), respiratory distress syndrome of prematurity, chronic lung disease of prematurity (bronchopulmonarydysplasia), surfactant protein B deficiency, congenital diaphragmatic hernia, pulmonary alveolar proteinosis, pulmonary hypoplasia and lung injury.

~~50. The method of claim 27 or pharmaceutical composition of claim 33, wherein said disease or condition in which regeneration of epithelial, mesenchymal and/or endothelial tissue is beneficial is selected from the group consisting of pulmonary disorder, disease or injury; renal disorder, disease or injury; hepatic disorder, disease or injury; cardiac disorder, disease or injury; gastrointestinal tract disorder, disease or injury; skin disorder, disease or injury; and brain disorder, disease or injury.~~

~~51. The method of claim 27 or pharmaceutical composition of claim 33, wherein said disease or condition in which regeneration of epithelial tissue is beneficial is selected from the group consisting of chronic ulcers, inflammatory bowel disease (IBD), Crohn's disease, ulcerative colitis, Alzheimer's disease, wound healing defects, cancer, chronic obstructive pulmonary disease (COPD), pulmonary fibrosis, idiopatic pulmonary fibrosis, pulmonary hypertension, lung cancer, sarcoidosis, acute lung injury (adult respiratory distress syndrome), respiratory distress syndrome of prematurity, chronic lung disease of prematurity (bronchopulmonarydysplasia), surfactant protein B deficiency, congenital diaphragmatic hernia, pulmonary alveolar proteinosis, pulmonary hypoplasia, lung injury and corneal degeneration.~~

~~52. The method of claim 27 or pharmaceutical composition of claim 33, wherein said disease or condition in which regeneration of mesenchymal tissue is beneficial is selected from the group consisting of heart disease or condition, diabetes, deafness, Crohn's disease, autoimmune disorders, leukemia, cancer, sickle cell disease, amyotrophic lateral sclerosis and metabolic disorders.~~

~~53. The method of claim 27 or pharmaceutical composition of claim 33, wherein said disease or condition in which regeneration of endothelial tissue is beneficial is selected~~

~~from the group consisting of vascular disease, ischemia, sickle cell disease, cardiovascular disease, atherosclerosis, diabetes and autoimmune disorders.~~

~~54~~39. A cell bank comprising a plurality of cell populations isolated from mammalian fetal pulmonary tissues, wherein said fetal pulmonary tissues are at a developmental stage essentially corresponding to that of a human pulmonary organ/tissue at a gestational stage selected from a range of ~~about~~ 20 to ~~about~~ 22 weeks of gestation, and wherein said plurality of cell populations have been HLA typed to form an allogeneic cell bank, each individually disposed within separate containers.

~~55~~40. The cell bank of claim ~~54~~39, further comprising a catalogue which comprises information about said HLA typed cells of said plurality of cell populations.

WHAT IS CLAIMED IS:

1. A pharmaceutical composition comprising as an active ingredient an isolated population of cell suspension from a mammalian fetal pulmonary tissue, wherein said fetal pulmonary tissue is at a developmental stage corresponding to that of a human pulmonary organ/tissue at a gestational stage selected from a range of about 20 to about 22 weeks of gestation.

2. The pharmaceutical composition of claim 1, wherein said gestational stage is 20 to 21 weeks of gestation.

3. The pharmaceutical composition of claim 1, wherein said gestational stage is 21 to 22 weeks of gestation.

4. The pharmaceutical composition of claim 1, wherein said mammalian fetal pulmonary tissue is a human tissue.

5. The pharmaceutical composition of claim 1, wherein said isolated population of cell suspension comprises a heterogeneous population of cells.

6. The pharmaceutical composition of claim 1, wherein said isolated population of cell suspension comprises progenitor cells.

7. The pharmaceutical composition of claim 6, wherein said progenitor cells are selected from the group consisting of epithelial progenitor cells, mesenchymal progenitor cells and endothelial progenitor cells.

8. The pharmaceutical composition of claim 5, wherein said cells comprise a cytokeratin 5+ (CK5+) marker expression.

9. The pharmaceutical composition of claim 5, wherein said cells comprise a cytokeratin 5+ (CK5+) and cytokeratin 14+ (CK14+) marker expression.

10. The pharmaceutical composition of claim 5, wherein said cells comprise a c-Kit+ CD45- CD34- CD31- CD326- CD271- marker expression.

11. The pharmaceutical composition of claim 5, wherein said cells comprise a c-Kit+ CD34+ CD31+ marker expression.

12. The pharmaceutical composition of claim 5, wherein said cells comprise a c-Kit+ CD34+ CD326+ marker expression.

13. The pharmaceutical composition of claim 5, wherein said cells comprise a CD34+ CD31+ CD14+ CD45+ marker expression.

14. The pharmaceutical composition of claim 5, wherein said cells comprise a CD34+ CD31+ CD45- CD105+ marker expression.

15. The pharmaceutical composition of claim 5, wherein said cells comprise a nestin+ and/or a calcitonin gene related protein+ (CGRP+) marker expression.

16. The pharmaceutical composition of claim 5, wherein said cells comprise an alpha smooth muscle actin+ (alpha-SMA+) and/or a Vimentin+ marker expression.

17. The pharmaceutical composition of claim 5, wherein said cells are capable of regenerating a structural/functional pulmonary tissue.

18. The pharmaceutical composition of claim 17, wherein said structural/functional pulmonary tissue comprises generation of a chimeric lung.

19. The pharmaceutical composition of claim 18, wherein said chimeric lung comprises formation of alveolar, bronchial and/or bronchiolar structures, and/or vascular structures.

20. The pharmaceutical composition of claim 17, wherein said structural/functional pulmonary tissue comprises an ability to synthesize surfactant and/or an ability to transport ions.

21. The pharmaceutical composition of claim 5, wherein said cells are capable of regenerating an epithelial, mesenchymal and/or endothelial tissue.

22. The pharmaceutical composition of claim 21, wherein said cells are CFTR expressing epithelial cells.

23. A method of regenerating an epithelial, mesenchymal and/or endothelial tissue in a subject in need thereof, the method comprising administering to the subject a therapeutically effective amount of the pharmaceutical composition of any one of claims 1-22, thereby regenerating the epithelial, mesenchymal and/or endothelial tissue.

24. The method of claim 23, wherein said epithelial tissue is selected from the group consisting of a lung tissue, a gastrointestinal tract tissue, a reproductive organ tissue, a urinary tract tissue, a renal tissue, a skin tissue, a cardiac tissue, an ischemic tissue and a brain tissue.

25. The method of claim 23, wherein said mesenchymal tissue is selected from the group consisting of a lymphatic tissue, a circulatory system tissue and a connective tissue.

26. The method of claim 23, wherein said endothelial tissue is selected from the group consisting of a lymphatic tissue and a circulatory system tissue.

27. A method of treating a disease or condition in which regeneration of epithelial, mesenchymal and/or endothelial tissue is beneficial in a subject in need thereof, the method comprising administering to the subject a therapeutically effective amount of the pharmaceutical composition of any one of claims 1-22, thereby treating the

disease or condition in which regeneration of the epithelial, mesenchymal and/or endothelial tissue is beneficial.

28. A method of treating a pulmonary disorder or injury in a subject in need thereof, the method comprising administering to the subject a therapeutically effective amount of the pharmaceutical composition of any one of claims 1-22, thereby treating the pulmonary disorder or injury.

29. The method of any one of claims 23-28, further comprising conditioning the subject under sublethal, lethal or supralethal conditioning protocol prior to said administering.

30. The method of any one of claims 23-28, wherein said administering is effected by an intravenous route.

31. The method of any one of claims 23-28, wherein said administering is effected by a route selected from the group consisting of intratracheal, intrabronchial, intraalveolar, intravenous, intraperitoneal, intranasal, subcutaneous, intramedullary, intrathecal, intraventricular, intracardiac, intramuscular, intraserosal, intramucosal, transmucosal, transnasal, rectal and intestinal.

32. The method of any one of claims 23-28, further comprising treating the subject with an immunosuppressive regimen prior to, concomitantly with or following said administering.

33. The pharmaceutical composition of any one of claims 1-22 for use in treating a disease or condition in which regeneration of epithelial, mesenchymal and/or endothelial tissue is beneficial in a subject in need thereof.

34. The pharmaceutical composition of any one of claims 1-22 for use in treating a pulmonary disorder or injury in a subject in need thereof.

35. The pharmaceutical composition of any one of claims 33-34, wherein said composition is formulated for intravenous administration.

36. The pharmaceutical composition of any one of claims 33-34, wherein said composition is formulated for administration via a route selected from the group consisting of intratracheal, intrabronchial, intraalveolar, intravenous, intraperitoneal, intranasal, subcutaneous, intramedullary, intrathecal, intraventricular, intracardiac, intramuscular, intraserosal, intramucosal, transmucosal, transnasal, rectal and intestinal.

37. The pharmaceutical composition of any one of claims 33-34, further comprising a sublethal, lethal or supralethal conditioning protocol.

38. The method of claim 29 or pharmaceutical composition of claim 37, wherein said sublethal, lethal or supralethal conditioning is selected from the group consisting of a total body irradiation (TBI), a partial body irradiation, a myeloablative conditioning, a co-stimulatory blockade, a chemotherapeutic agent and/or an antibody immunotherapy.

39. The method of claim 29 or pharmaceutical composition of claim 37, wherein said conditioning comprises naphthalene treatment.

40. The method or pharmaceutical composition of claim 39, wherein said conditioning further comprises total body irradiation (TBI).

41. The method of claim 29 or pharmaceutical composition of claim 37, wherein said conditioning comprises total body irradiation (TBI).

42. The method or pharmaceutical composition of claim 40 or 41, wherein said TBI comprises a single or fractionated irradiation dose within the range of 1-7.5 Gy.

43. The method of any one of claims 23-28 or pharmaceutical composition of any one of claims 33-34, wherein said subject is a human subject.

44. The method of any one of claims 23-28 or pharmaceutical composition of any one of claims 33-34, wherein said mammalian fetal pulmonary tissue is a human tissue.

45. The method of any one of claims 23-28 or pharmaceutical composition of any one of claims 33-34, wherein said isolated population of cell suspension is non-syngeneic with the subject.

46. The method or pharmaceutical composition of claim 45, wherein said isolated population of cell suspension is allogeneic with the subject.

47. The method or pharmaceutical composition of claim 46, wherein said allogeneic cells are selected from the group consisting of HLA identical, partially HLA identical and HLA non-identical with the subject.

48. The method or pharmaceutical composition of claim 45, wherein said isolated population of cell suspension is xenogeneic with the subject.

49. The method of claim 28 or pharmaceutical composition of claim 34, wherein said pulmonary disorder or injury is selected from the group consisting of cystic fibrosis, emphysema, asbestosis, chronic obstructive pulmonary disease (COPD), pulmonary fibrosis, idiopatic pulmonary fibrosis, pulmonary hypertension, lung cancer, sarcoidosis, acute lung injury (adult respiratory distress syndrome), respiratory distress syndrome of prematurity, chronic lung disease of prematurity (bronchopulmonarydysplasia), surfactant protein B deficiency, congenital diaphragmatic hernia, pulmonary alveolar proteinosis, pulmonary hypoplasia and lung injury.

50. The method of claim 27 or pharmaceutical composition of claim 33, wherein said disease or condition in which regeneration of epithelial, mesenchymal and/or endothelial tissue is beneficial is selected from the group consisting of pulmonary disorder, disease or injury; renal disorder, disease or injury; hepatic disorder, disease or

injury; cardiac disorder, disease or injury; gastrointestinal tract disorder, disease or injury; skin disorder, disease or injury; and brain disorder, disease or injury.

51. The method of claim 27 or pharmaceutical composition of claim 33, wherein said disease or condition in which regeneration of epithelial tissue is beneficial is selected from the group consisting of chronic ulcers, inflammatory bowel disease (IBD), Crohn's disease, ulcerative colitis, Alzheimer's disease, wound healing defects, cancer, chronic obstructive pulmonary disease (COPD), pulmonary fibrosis, idiopatic pulmonary fibrosis, pulmonary hypertension, lung cancer, sarcoidosis, acute lung injury (adult respiratory distress syndrome), respiratory distress syndrome of prematurity, chronic lung disease of prematurity (bronchopulmonarydysplasia), surfactant protein B deficiency, congenital diaphragmatic hernia, pulmonary alveolar proteinosis, pulmonary hypoplasia, lung injury and corneal degeneration.

52. The method of claim 27 or pharmaceutical composition of claim 33, wherein said disease or condition in which regeneration of mesenchymal tissue is beneficial is selected from the group consisting of heart disease or condition, diabetes, deafness, Crohn's disease, autoimmune disorders, leukemia, cancer, sickle cell disease, amyotrophic lateral sclerosis and metabolic disorders.

53. The method of claim 27 or pharmaceutical composition of claim 33, wherein said disease or condition in which regeneration of endothelial tissue is beneficial is selected from the group consisting of vascular disease, ischemia, sickle cell disease, cardiovascular disease, atherosclerosis, diabetes and autoimmune disorders.

54. A cell bank comprising a plurality of cell populations isolated from mammalian fetal pulmonary tissues, wherein said fetal pulmonary tissues are at a developmental stage essentially corresponding to that of a human pulmonary organ/tissue at a gestational stage selected from a range of about 20 to about 22 weeks of gestation, and wherein said plurality of cell populations have been HLA typed to form an allogeneic cell bank, each individually disposed within separate containers.

55. The cell bank of claim 54, further comprising a catalogue which comprises information about said HLA typed cells of said plurality of cell populations.

WHAT IS CLAIMED IS:

1. A pharmaceutical composition comprising as an active ingredient an isolated population of cell suspension from a mammalian fetal pulmonary tissue, wherein said fetal pulmonary tissue is at a developmental stage corresponding to that of a human pulmonary organ/tissue at a gestational stage selected from a range of 20 to 22 weeks of gestation.

2. The pharmaceutical composition of claim 1, wherein said gestational stage is 20 to 21 weeks of gestation.

3. The pharmaceutical composition of claim 1, wherein said gestational stage is 21 to 22 weeks of gestation.

4. The pharmaceutical composition of claim 1, wherein said mammalian fetal pulmonary tissue is a human tissue.

5. The pharmaceutical composition of claim 1, wherein said isolated population of cell suspension comprises a heterogeneous population of cells.

6. The pharmaceutical composition of claim 1, wherein said isolated population of cell suspension comprises progenitor cells.

7. The pharmaceutical composition of claim 6, wherein said progenitor cells are selected from the group consisting of epithelial progenitor cells, mesenchymal progenitor cells and endothelial progenitor cells.

8. The pharmaceutical composition of claim 5, wherein said cells comprise a cytokeratin 5+ (CK5+) marker expression.

9. The pharmaceutical composition of claim 5, wherein said cells comprise a cytokeratin 5+ (CK5+) and cytokeratin 14+ (CK14+) marker expression.

10. The pharmaceutical composition of claim 5, wherein said cells comprise a c-Kit+ CD45- CD34- CD31- CD326- CD271- marker expression.

11. The pharmaceutical composition of claim 5, wherein said cells comprise a c-Kit+ CD34+ CD31+ marker expression.

12. The pharmaceutical composition of claim 5, wherein said cells comprise a c-Kit+ CD34+ CD326+ marker expression.

13. The pharmaceutical composition of claim 5, wherein said cells comprise a CD34+ CD31+ CD14+ CD45+ marker expression.

14. The pharmaceutical composition of claim 5, wherein said cells comprise a CD34+ CD31+ CD45- CD105+ marker expression.

15. The pharmaceutical composition of claim 5, wherein said cells comprise a nestin+ and/or a calcitonin gene related protein+ (CGRP+) marker expression.

16. The pharmaceutical composition of claim 5, wherein said cells comprise an alpha smooth muscle actin+ (alpha-SMA+) and/or a Vimentin+ marker expression.

17. The pharmaceutical composition of claim 5, wherein said cells are capable of regenerating a structural/functional pulmonary tissue.

18. The pharmaceutical composition of claim 17, wherein said structural/functional pulmonary tissue comprises generation of a chimeric lung.

19. The pharmaceutical composition of claim 18, wherein said chimeric lung comprises formation of alveolar, bronchial and/or bronchiolar structures, and/or vascular structures.

20. The pharmaceutical composition of claim 17, wherein said structural/functional pulmonary tissue comprises an ability to synthesize surfactant and/or an ability to transport ions.

21. The pharmaceutical composition of claim 5, wherein said cells are capable of regenerating an epithelial, mesenchymal and/or endothelial tissue.

22. The pharmaceutical composition of claim 21, wherein said cells are CFTR expressing epithelial cells.

23. The pharmaceutical composition of any one of claims 1-22 for use in treating a pulmonary disorder or injury in a subject in need thereof.

24. The pharmaceutical composition of claim 23, wherein said composition is formulated for intravenous administration.

25. The pharmaceutical composition of claim 23, wherein said composition is formulated for administration via a route selected from the group consisting of intratracheal, intrabronchial, intraalveolar, intravenous, intraperitoneal, intranasal, subcutaneous, intramedullary, intrathecal, intraventricular, intracardiac, intramuscular, intraserosal, intramucosal, transmucosal, transnasal, rectal and intestinal.

26. The pharmaceutical composition of claim 23, further comprising a sublethal, lethal or supralethal conditioning protocol.

27. The pharmaceutical composition of claim 26, wherein said sublethal, lethal or supralethal conditioning is selected from the group consisting of a total body irradiation (TBI), a partial body irradiation, a myeloablative conditioning, a co-stimulatory blockade, a chemotherapeutic agent and/or an antibody immunotherapy.

28. The pharmaceutical composition of claim 26, wherein said conditioning comprises naphthalene treatment.

29. The pharmaceutical composition of claim 28, wherein said conditioning further comprises total body irradiation (TBI).

30. The pharmaceutical composition of claim 26, wherein said conditioning comprises total body irradiation (TBI).

31. The pharmaceutical composition of claim 29 or 30, wherein said TBI comprises a single or fractionated irradiation dose within the range of 1-7.5 Gy.

32. The pharmaceutical composition of claim 23, wherein said subject is a human subject.

33. The pharmaceutical composition of claim 23, wherein said mammalian fetal pulmonary tissue is a human tissue.

34. The pharmaceutical composition of claim 23, wherein said isolated population of cell suspension is non-syngeneic with the subject.

35. The pharmaceutical composition of claim 34, wherein said isolated population of cell suspension is allogeneic with the subject.

36. The pharmaceutical composition of claim 35, wherein said allogeneic cells are selected from the group consisting of HLA identical, partially HLA identical and HLA non-identical with the subject.

37. The pharmaceutical composition of claim 34, wherein said isolated population of cell suspension is xenogeneic with the subject.

38. The pharmaceutical composition of claim 23, wherein said pulmonary disorder or injury is selected from the group consisting of cystic fibrosis, emphysema, asbestosis, chronic obstructive pulmonary disease (COPD), pulmonary fibrosis, idiopatic pulmonary fibrosis, pulmonary hypertension, lung cancer, sarcoidosis, acute lung injury (adult respiratory distress syndrome), respiratory distress syndrome of prematurity, chronic lung disease of prematurity (bronchopulmonarydysplasia), surfactant protein B deficiency, congenital diaphragmatic hernia, pulmonary alveolar proteinosis, pulmonary hypoplasia and lung injury.

39. A cell bank comprising a plurality of cell populations isolated from mammalian fetal pulmonary tissues, wherein said fetal pulmonary tissues are at a developmental stage essentially corresponding to that of a human pulmonary organ/tissue at a gestational stage selected from a range of 20 to 22 weeks of gestation, and wherein said plurality of cell populations have been HLA typed to form an allogeneic cell bank, each individually disposed within separate containers.

40. The cell bank of claim 39, further comprising a catalogue which comprises information about said HLA typed cells of said plurality of cell populations.