CLAIMS:

1. A method for producing an isolated therapeutic recombinant biologic polypeptide or protein for treating a disease comprising transfecting a synthetically-produced Pluripotent Stem Cell (spPSC) with a nucleic acid that encodes for said therapeutic recombinant biologic polypeptide or protein, under conditions wherein the polypeptide or protein is expressed by said spPSC, and the polypeptide or protein is then isolated from the spPSC, and the spPSC is produced from a cell of an animal.

2. The method of claim 1 wherein the therapeutic biologic polypeptide or protein is selected from the group consisting of erythropoietin, factor VIII, factor IX, thrombin, an antibody or antibody fragment, alpha interferon, interferon alpha 2A and 2B, beta interferon, growth hormone, antihemophilic factor, G-CSF, GM-CSF, a soluble receptor, TGF-ß, bone morphogenic proteins (BMP), TGFα, interleukin 2, ß-glucocerebrosidase or an analogue thereof, alpha1-proteinase inhibitor, fibrin, fibrinogen, von Willebrand factor, imiglucerase, agalsidase beta, laronidase, glucosidase alpha, thyrotropin alpha, and thymosin alpha.

3. The method of claim 1 further comprising immortalizing the transfected spPSC.

4. The method of claim 3 further comprising inducing differentiation of the transfected, immortalized spPSCs.

5. The method of claim 1 further comprising inducing differentiation of the transfected spPSCs.

6. The method of claim 5 further comprising immortalizing the transfected, differentiated cells.

7. The method of claim 1 wherein the spPSC is selected from the group consisting of transfected non-Pluripotent Stem Cells, pluripotent stem cells produced by Somatic cell nuclear transfer (SCNT pluripotent stem cells), pluripotent stem cells produced by Altered nuclear transfer, oocyte assisted reprogramming (ANT-OAR pluripotent stem cells) and pluripotent stem cells produced by parthenogenesis (PGA pluripotent).

8. The method of claim 1, wherein the therapeutic recombinant biologic polypeptide or protein is selected from the group consisting of: growth hormones, cytotoxic biologics, and monoclonal antibodies.

9. Use of an isolated therapeutic recombinant biologic polypeptide or protein for the manufacture of a medicament for treating an animal suffering from a disease, wherein the isolated therapeutic recombinant biologic polypeptide or protein is produced by:

(a) identifying an animal suffering from the disease;

(b) providing a synthetically-produced Pluripotent Stem Cell (spPSC) derived from the species of animal suffering from the disease; and

(c) producing the isolated therapeutic recombinant biologic polypeptide or protein by transfecting the spPSC with a nucleic acid that encodes for the therapeutic recombinant biologic polypeptide or protein, under conditions wherein the polypeptide or protein is expressed by said spPSC, and the polypeptide or protein is then isolated from the spPSC.

10. The use of claim 9 wherein the therapeutic biologic polypeptide or protein is selected from the group consisting of erythropoietin, factor VIII, factor IX, thrombin, an antibody or antibody fragment, alpha interferon, interferon alpha 2A and 2B, beta interferon, growth hormone, antihemophilic factor, G-CSF, GM-CSF, a soluble receptor, TGF-ß, bone morphogenic proteins (BMP), TGFα, interleukin 2, ß-glucocerebrosidase or an analogue thereof, alpha1-proteinase inhibitor, fibrin, fibrinogen, von Willebrand factor, imiglucerase, agalsidase beta, laronidase, glucosidase alpha, thyrotropin alpha, and thymosin alpha.

11. The use of claim 9 further comprising immortalizing the transfected spPSC.

12. The use of claim 11 further comprising inducing differentiation of the transfected, immortalized spPSCs.

13. The use of claim 9 further comprising inducing differentiation of the transfected spPSC.

14. The use of claim 13 further comprising immortalizing the transfected, differentiated cells.

15. The use of claim 9 wherein the spPSC is selected from the group consisting of: transfected non-Pluripotent Stem Cells, pluripotent stem cells produced by Somatic cell nuclear transfer (SCNT pluripotent stem cells), pluripotent stem cells produced by Altered nuclear

transfer, oocyte assisted reprogramming (ANT-OAR pluripotent stem cells) and pluripotent stem cells produced by parthenogenesis (PGA pluripotent).

16. The use of claim 9, wherein the therapeutic recombinant biologic polypeptide or protein is selected from the group consisting of: growth hormones, cytotoxic biologics, and monoclonal antibodies.

~~WHAT IS CLAIMED IS:~~

1. A method for producing a therapeutic recombinant biologic polypeptide or protein for treating a disease comprising transfecting a synthetically-produced Pluripotent Stem Cell (spPSC) with a nucleic acid that encodes for said therapeutic recombinant biologic polypeptide or protein, under conditions wherein the polypeptide or protein is expressed by said spPSC, wherein the spPSC is produced from a cell of an animal.

2. The method of claim 1 wherein the therapeutic biologic polypeptide or protein is selected from the group consisting of erythropoietin, factor VIII, factor IX, thrombin, an antibody or antibody fragment, alpha interferon, interferon alpha 2A and 2B, beta interferon, growth hormone, antihemophilic factor, G-CSF, GM-CSF, a soluble receptor, TGF-ß, bone morphogenic proteins (BMP), TGFα, interleukin 2, ß-glucocerebrosidase or an analogue thereof, alpha1-proteinase inhibitor, fibrin, fibrinogen, von Willebrand factor, imiglucerase, agalsidase beta, laronidase, glucosidase alpha, thyrotropin alpha, and thymosin alpha.

3. The method of claim 1 further comprising immortalizing the transfected spPSC.

4. The method of claim 3 further comprising inducing differentiation of the transfected, immortalized spPSCs.

5. The method of claim 1 further comprising inducing differentiation of the transfected spPSCs.

6. The method of claim 5 further comprising immortalizing the transfected, differentiated cells.

7. The method of claim 1 wherein the spPSC is selected from the group consisting of transfected non-Pluripotent Stem Cells, pluripotent stem cells produced by Somatic cell nuclear transfer (SCNT pluripotent stem cells), pluripotent stem cells produced by Altered nuclear transfer, oocyte assisted reprogramming (ANT-OAR pluripotent stem cells) and pluripotent stem cells produced by parthenogenesis (PGA pluripotent).

8. The method of claim 1, wherein the therapeutic recombinant biologic polypeptide or protein is selected from the group consisting of: growth hormones, cytotoxic biologics, and monoclonal antibodies.

9. Use of a therapeutic recombinant biologic polypeptide or protein for the manufacture of a medicament for treating an animal suffering from a disease, wherein the therapeutic recombinant biologic polypeptide or protein is produced by:

(a) identifying an animal suffering from the disease;

(b) providing a synthetically-produced Pluripotent Stem Cell (spPSC) derived from the species of animal suffering from the disease; and

(c) producing the therapeutic recombinant biologic polypeptide or protein by transfecting the spPSC with a nucleic acid that encodes for the therapeutic recombinant biologic polypeptide or protein, under conditions wherein the polypeptide or protein is expressed by said spPSC.

10. The use of claim 9 wherein the therapeutic biologic polypeptide or protein is selected from the group consisting of erythropoietin, factor VIII, factor IX, thrombin, an antibody or antibody fragment, alpha interferon, interferon alpha 2A and 2B, beta interferon, growth hormone, antihemophilic factor, G-CSF, GM-CSF, a soluble receptor, TGF-ß, bone morphogenic proteins (BMP), TGFα, interleukin 2, ß-glucocerebrosidase or an analogue thereof, alpha1-proteinase inhibitor, fibrin, fibrinogen, von Willebrand factor, imiglucerase, agalsidase beta, laronidase, glucosidase alpha, thyrotropin alpha, and thymosin alpha.

11. The use of claim 9 further comprising immortalizing the transfected spPSC.

12. The use of claim 11 further comprising inducing differentiation of the transfected, immortalized spPSCs.

13. The use of claim 9 further comprising inducing differentiation of the transfected spPSC.

14. The use of claim 13 further comprising immortalizing the transfected, differentiated cells.

15. The use of claim 9 wherein the spPSC is selected from the group consisting of: transfected non-Pluripotent Stem Cells, pluripotent stem cells produced by Somatic cell nuclear transfer (SCNT pluripotent stem cells), pluripotent stem cells produced by Altered nuclear

transfer, oocyte assisted reprogramming (ANT-OAR pluripotent stem cells) and pluripotent stem cells produced by parthenogenesis (PGA pluripotent).

16. The use of claim 9, wherein the therapeutic recombinant biologic polypeptide or protein is selected from the group consisting of: growth hormones, cytotoxic biologics, and monoclonal antibodies.

17. The use of claim 9, wherein the disease is selected from the group consisting of diabetes and cancer.