23. The alphavirus replicon RNA of claim 5, wherein the polynucleotide encoding the NANOG polypeptide comprises a sequence as set forth in SEQ ID NO:1, wherein "T" is "U".

24. The alphavirus replicon RNA of claim 1, wherein the replicon comprises from 5' to 3': (VEE RNA replicases)-(promoter)-(RF_1)-(self cleaving peptide)-(RF_2)-(self cleaving peptide)-(RF_3)-(IRES or core promoter)-(RF_4)-(IRES or optional promoter)-(optional selectable marker)-(VEE 3'UTR and polyA tail)-(optional selectable marker)-promoter; wherein RF_{1-4} are factors that induce de-differentiation of a somatic cell to a pluripotent cells, wherein RF_{2-3} are optional, RF_{3-4} are optional, or RF_4 is optional; wherein RF_{1-4} are selected from the group consisting of Oct-4, Klf4, Sox-2, c-Myc, Nanog, and Glis1.

25. The alphavirus replicon RNA of claim 1 or 24, wherein the replicon comprise a sequence that is 90%, 95%, 98%, 99% or 100% identical to SEQ ID NO:29, 30, 31, or 32 from about position 1 to about position 7561 wherein "T" of the sequence is substituted with "U", followed by one or more RFs, followed by a 3'UTR and polyA tail, wherein the one or more RFs are selected from the group consisting of Oct-3/4, Sox-2, Klf4, c-Myc, Nanog, and Glis1; wherein when more than one RF is present, the coding sequences may be separated by an internal ribosome entry site (IRES) or a small promoter.

26. The alphavirus replicon RNA of claim 25, wherein the replicon comprise a sequence that is at least 95%, 98%, 99% or 100% identical to a sequence selected from the group consisting of SEQ ID NO:29, 30, 31, or 32, wherein "T" is "U".

27. A composition comprising human cells transformed with a replicon of any one of claims 1-26.

28. The composition of claim 27, further comprising B18R conditioned media.

29. The composition of claim 27, wherein the human cells are somatic cells.

30. The composition of claim 29, wherein the human cells are fibroblasts.

31. A method of making stem cells comprising culturing the composition of claim 27, for at least 30 days under conditions to express the coding sequences of the replicon and isolating stem cells.

32. A method of making stem cells comprising transforming somatic cells with a replicon of any of claims 1-26, culturing the somatic cells under conditions to promote expression of the replicon and isolating stem cells.

33. The method of claim 31 or 32, wherein the culturing comprise culturing the cells in media conditioned with B18R.

34. The method of claim 33, wherein the B18R conditioned media is produced by tranfection of B18R mRNA into primary human fibroblasts.

35. Isolated stem cells obtained from the method of claim 31 or 33, wherein the stem cells are retroviral DNA- or RNA-free.

36. An *in vitro* method comprising:

contacting a human somatic cell with an ectopic self-replicating RNA replicon comprising polynucleotides encoding at least four de-differentiation factors selected from the group consisting of a (i) KLF4, (ii) OCT4, (iii) SOX2, (iv) c-MYC or n-MYC or L-MYC, (v) GLIS1 and (vi) NANOG,

culturing the somatic cell to express the de-differentiation factor;

selecting cells that display a stem cell morphology and/or stem cell markers; and

subculturing the cells to obtain a population of induced stem cells.

37. The method of claim 36, wherein the cells are selected by detecting expression of a Tumor Rejection Antigen 1-60 and/or 1-81.

38. A vector system for producing human stem cells, comprising:

at least one self-replicating RNA replicon comprising one or more polynucleotides encoding de-differentiation factors selected from the group consisting of a KLF4, OCT4, SOX2, c-MYC or n-MYC or L-MYC, GLIS1, NANOG or any combination thereof.

39. The vector system of claim 38, wherein the replicon comprises:

(a) Oct4, Sox2, Klf4, and c-Myc, or

(b) Oct4, Sox2, Klf4, and Glis1.

40. The vector system of claim 38, wherein the one self-replicating RNA vector is derived from an alphavirus.

41. The vector system of claim 40, wherein the alphavirus is VEE.

42. An isolated human somatic cell comprising an ectopic RNA replicon comprising one or more de-differentiation polynucleotide sequences.

43. The human somatic cell of claim 42, wherein upon culture conditions to express the de-differentiation polynucleotides in the ectopic RNA replicon, the somatic cell de-differentiates.

44. A cell population comprising the cells of claim 43.

45. A cell population obtained by the method of claim 35.

46. A cell population of claims 44 or 45 or method of claims 35 or 36, wherein the cells or method comprise culturing the cells in a medium that inhibits the degradation of the ectopic RNA replicon.

23. The alphavirus replicon RNA of claim 5, wherein the polynucleotide encoding the NANOG polypeptide comprises a sequence as set forth in SEQ ID NO:1, wherein "T" is "U".

24. The alphavirus replicon RNA of claim 1, wherein the replicon comprises from 5' to 3': (VEE RNA replicases)-(promoter)-(RF_1)-(self cleaving peptide)-(RF_2)-(self cleaving peptide)-(RF_3)-(IRES or core promoter)-(RF_4)-(IRES or optional promoter)-(optional selectable marker)-(VEE 3'UTR and polyA tail)-(optional selectable marker)-promoter; wherein RF_{1-4} are factors that induce de-differentiation of a somatic cell to a pluripotent cells, wherein RF_{2-3} are optional, RF_{3-4} are optional, or RF_4 is optional; wherein RF_{1-4} are selected from the group consisting of Oct-4, Klf4, Sox-2, c-Myc, Nanog, and Glis1.

25. The alphavirus replicon RNA of claim 1 or 24, wherein the replicon comprise a sequence that is 90%, 95%, 98%, 99% or 100% identical to SEQ ID NO:29, 30, 31, or 32 from about position 1 to about position 7561 wherein "T" of the sequence is substituted with "U", followed by one or more RFs, followed by a 3'UTR and polyA tail, wherein the one or more RFs are selected from the group consisting of Oct-3/4, Sox-2, Klf4, c-Myc, Nanog, and Glis1; wherein when more than one RF is present, the coding sequences may be separated by an internal ribosome entry site (IRES) or a small promoter.

26. The alphavirus replicon RNA of claim 25, wherein the replicon comprises a sequence that is at least 95%, 98%, 99% or 100% identical to a sequence selected from the group consisting of SEQ ID NO:29, 30, 31, or 32, wherein "T" is "U".

27. A composition comprising human cells transformed with a replicon of any one of claims 1-26.

28. The composition of claim 27, further comprising B18R conditioned media.

29. The composition of claim 27, wherein the human cells are somatic cells.

30. The composition of claim 29, wherein the human cells are fibroblasts.

31. A method of making stem cells comprising culturing the composition of claim 27, for at least 30 days under conditions to express the coding sequences of the replicon and isolating stem cells.

32. A method of making stem cells comprising transforming somatic cells with a replicon of any of claims 1-26, culturing the somatic cells under conditions to promote expression of the replicon and isolating stem cells.

33. The method of claim 31 or 32, wherein the culturing comprises culturing the cells in media conditioned with B18R.

34. The method of claim 33, wherein the B18R conditioned media is produced by transfection of B18R mRNA into primary human fibroblasts.

35. Isolated stem cells obtained from the method of claim 31 or 33, wherein the stem cells are retroviral DNA- or RNA-free.

36. An *in vitro* method comprising:

contacting a human somatic cell with an ectopic self-replicating RNA replicon derived from an alphavirus, comprising polynucleotides encoding at least four de-differentiation factors selected from the group consisting of a (i) KLF4, (ii) OCT4, (iii) SOX2, (iv) c-MYC or n-MYC or L-MYC, (v) GLIS1 and (vi) NANOG,

culturing the somatic cell to express the de-differentiation factor;

selecting cells that display a stem cell morphology and/or stem cell markers; and

subculturing the cells to obtain a population of induced stem cells.

37. The method of claim 36, wherein the cells are selected by detecting expression of a Tumor Rejection Antigen 1-60 and/or 1-81.

38. A vector system for producing human stem cells, comprising:

at least one self-replicating RNA replicon derived from an alphavirus, comprising one or more polynucleotides encoding de-differentiation factors selected from the group consisting of a KLF4, OCT4, SOX2, c-MYC or n-MYC or L-MYC, GLIS1, NANOG or any combination thereof.

39. The vector system of claim 38, wherein the replicon comprises:

(a) Oct4, Sox2, Klf4, and c-Myc, or

(b) Oct4, Sox2, Klf4, and Glis1.

40. The vector system of claim 38, wherein the one self-replicating RNA vector is derived from an alphavirus.

41. The vector system of claim 40, wherein the alphavirus is VEE.

42. An isolated human somatic cell comprising an ectopic RNA replicon derived from an alphavirus comprising one or more de-differentiation polynucleotide sequences.

43. The human somatic cell of claim 42, wherein upon culture conditions to express the de-differentiation polynucleotides in the ectopic RNA replicon, the somatic cell de-differentiates.

44. A cell population comprising the cells of claim 43.

45. A cell population of claims 44 or method of claims 35 or 36, wherein the cells or method comprise culturing the cells in a medium that inhibits the degradation of the ectopic RNA replicon.