iPS cell publications & timeline

- **Shinya Yamanaka**, Pluripotency and Nuclear Reprogramming, Keystone conference, 28 March 2006; www.keystonesymposia.org/Meetings/ViewPastMeetings.cfm?MeetingID=786
- **Shinya Yamanaka**, Identification Of Factors That Generate ES-Like Pluripotent Cells From Fibroblast Culture, ISSCR meeting, Toronto, July 2006; www.abstractonline.com/viewer/viewAbstractPrintFriendly.asp?CKey={23482185-19E3-4771-B8CF-FDBD125BAB66}&SKey={9426630B-B824-4F8F-93F7-6C940384237C}&MKey={743B38D5-9EAD-49CC-B2C5-497EBCE87271}&AKey={70E49A1A-9665-43B3-8BAA-55C6A8F9A624}
- Gretchen Vogel,"Four genes confer embryonic potential", *Science* 313, 27, 7 July 2006; published online 3 July 2006; doi: 10.1126/science.313.5783.27
- Erika Check, "Simple recipe gives adult cells embryonic powers", *Nature* 442, 11, 6 July 2006; published online 4 July 2006; doi: 10.1038/442011a

PEER-REVIEWED PUBLICATIONS
(Primary research literature, excluding commentaries)
(NOTE: bolding to emphasize important points, yellow highlight for human iPS cells)

1. Takahashi K and Yamanaka S, **Induction of pluripotent stem cells** from mouse embryonic and adult fibroblast cultures **by defined factors**, *Cell* 126, 663-676, 25 August 2006, doi: 10.1016/j.cell.2006.07.024
2. Okita K *et al.*, Generation of **germline-competent induced pluripotent stem cells**, *Nature* 448, 313-317, 19 July 2007; online 6 June 2007, doi: 10.1038/nature05934
3. Wernig M *et al.*, **In vitro reprogramming** of fibroblasts **into a pluripotent ES-cell-like state**, *Nature* 448, 318-324, 19 July 2007; published online 6 June 2007, doi: 10.1038/nature05944
4. Maherali N *et al.*, Directly reprogrammed fibroblasts show global epigenetic remodeling and widespread tissue contribution, *Cell Stem Cell* 1, 55-70, July 2007; published online 6 June 2007, doi: 10.1016/j.stem.2007.05.014
5. Meissner A *et al.*, Direct reprogramming of genetically unmodified fibroblasts into pluripotent stem cells, *Nature Biotechnology* 25, 1177-1181, October 2007; published online 27 August 2007, doi: 10.1038/nbt1335
6. Blelloch R *et al.*, Generation of induced pluripotent stem cells in the absence of drug selection, *Cell Stem Cell* 1, 245-247, Sept 2007, doi: 10.1016/j.stem.2007.08.008
7. Takahashi K *et al.*, Induction of pluripotent stem cells **from adult human fibroblasts by defined factors**, *Cell* 131, 861-872, 30 November 2007; published online 20 November 2007, doi: 10.1016/j.cell.2007.11.019
8. Yu J *et al.*, Induced pluripotent stem cell lines derived **from human somatic cells**, *Science* 318, 1917-1920, 21 December 2007, published online 20 November 2007, doi: 10.1126/science.1151526
9. Nakagawa M *et al.*, Generation of induced pluripotent stem cells **without Myc** from mouse and **human** fibroblasts, *Nature Biotechnology* 26, 101-106, January 2008, published online 30 November 2007, doi: 10.1038/nbt1374
10. Hanna J *et al.*, **Treatment of sickle cell anemia mouse model** with iPS cells generated from autologous skin, *Science* 318, 1920-1923, 21 December 2007, online 6 Dec 2007, doi: 10.1126/science.1152092

11. Park I-H *et al.*, Reprogramming of **human** somatic cells to pluripotency with defined factors, *Nature* 451, 141-147, 10 January 2008, published online 23 December 2007, doi: 10.1038/nature06534
12. Wernig W *et al.*, **C-Myc is dispensable** for direct reprogramming of mouse fibroblasts, *Cell Stem Cell* 2, 10-12, 10 January 2008, published online 28 December 2007, doi: 10.1016/j.stem.2007.12.001
13. Yamanaka S, Induction of pluripotent stem cells from mouse fibroblasts by four transcription factors, *Cell Proliferation* 41 (suppl 1), 51-56, January 2008, doi: 10.1111/j.1365-2184.2008.00493.x (www3.interscience.wiley.com/journal/119410896/abstract)
14. Brambrink T *et al.* Sequential expression of pluripotency markers during direct reprogramming of mouse somatic cells, *Cell Stem Cel*l 2, 151–159, 7 February 2008, online 6 February 2008, doi: 10.1016/j.stem.2008.01.004
15. Aoi T *et al.*, Generation of pluripotent stem cells **from adult mouse liver and stomach** cells, *Science* 321, 699-702, corrected 1 August 2008; published online 14 February 2008, doi:10.1126/science.1154884
16. Stadtfeld M *et al.*, Defining molecular cornerstones during fibroblast to iPS cell reprogramming in mouse, *Cell Stem Cell* 2, 230-240, March 2008, published online 14 February 2008, doi:10.1016/j.stem.2008.02.001
17. Lowry WE *et al.*, Generation of **human** induced pluripotent stem cells from dermal fibroblasts, *Proc. Natl. Acad. Sci. USA* 105, 2883-2888, 26 February 2008; published online 16 February 2008, doi: 10.1073/pnas.0711983105
18. Wernig M *et al.*, Neurons derived from reprogrammed fibroblasts functionally integrate into the fetal brain and **improve symptoms of rats with Parkinson's disease**, *Proc. Natl. Acad. Sci. USA* 105, 5856-5861, 15 April 2008, doi: 10.1073/pnas.0801677105
19. Hanna J *et al.*, Direct reprogramming of **terminally differentiated mature B lymphocytes** to pluripotency, *Cell* 133, 250-264, 18 April 2008, doi: 10.1016/j.cell.2008.03.028
20. Schenke-Layland K *et al.*, Reprogrammed Mouse Fibroblasts **Differentiate into Cells of the Cardiovascular and Hematopoietic Lineages**, *Stem Cells* 26, 1537-1546, June 2008; published online 1 May 2008, doi: 10.1634/stemcells.2008-0033
21. Liao J *et al.*, **Enhanced efficiency** of generating induced pluripotent stem (iPS) cells from **human** somatic cells by a combination of six transcription factors, *Cell Research* 18, 600-603, May 2008, doi: 10.1038/cr.2008.51
22. Stadtfeld M *et al.*, Reprogramming of **pancreatic β cells into induced pluripotent stem cells**, *Current Biology* 18, 890-894, 24 June 2008, published online 22 May 2008, doi: 10.1016/j.cub.2008.05.010
23. Mikkelsen TS *et al.*, Dissecting direct reprogramming through integrative genomic analysis, *Nature* 454, 49-56, 3 July 2008; published online 28 May 2008, doi: 10.1038/nature07056
24. Mali P *et al.* **Improved Efficiency and Pace** of Generating Induced Pluripotent Stem Cells from **Human** Adult and Fetal Fibroblasts, *Stem Cells* 26, 1998-2005, Sept 2008; published online 29 May 2008, doi:10.1634/stemcells.2008-0346
25. Shi Y *et al.*, A **combined chemical and genetic approach** for the generation of induced pluripotent stem cells, *Cell Stem Cell* 2, 525-528, June 2008, doi: 10.1016/j.stem.2008.05.011
26. Huangfu D *et al.*, Induction of pluripotent stem cells by defined factors in **greatly improved by small-molecule compounds**, *Nature Biotechnology* 26, 795-797, July 2008; published online 22 June 2008, doi: 10.1038/nbt1418
27. Park I-H *et al.* Generation of **human-induced pluripotent stem cells**, *Nature Protocols* 3, 1180-1186, July 2008; published online 26 June 2008, Corrected online 4 September 2008, doi: 10.1038/nprot.2008.92

28. Kim JB *et al.*, Pluripotent stem cells induced **from adult neural stem cells** by reprogramming **with two factors**, *Nature* 454, 646-650, 31 July 2008; published online 29 June 2008, doi: 10.1038/nature07061
29. Wernig M *et al.*, A **drug-inducible transgenic system** for direct reprogramming of multiple somatic cell types, *Nature Biotechnology* 26, 916-924, August 2008; published online 1 July 2008; doi: 10.1038/nbt1483
30. Duinsbergen D *et al.*, Induced pluripotency **with endogenous and inducible genes**, *Experimental Cell Research* 314, 3255-3263, 15 October 2008, published online 9 July 2008, doi: 10.1016/j.yexcr.2008.06.024
31. Narazaki G *et al.*, Directed and systematic **differentiation of cardiovascular cells** from mouse induced pluripotent stem cell, *Circulation* 118, 498-506, 29 July 2008, published online 14 July 2008, doi: 10.1161/CIRCULATIONAHA.108.769562
32. Mauritz C *et al.*, Generation of **functional murine cardiac myocytes** from induced pluripotent stem cells, *Circulation* 118, 507-517, 29 July 2008, published online 14 July 2008, doi: 10.1161/CIRCULATIONAHA.108.778795
33. Eminli S *et al.*, Reprogramming of **neural progenitor cells** into induced pluripotent stem cells in the **absence of exogenous Sox2** expression, *Stem Cells* 26, 2467-2474, October 2008; published online 17 July 2008, doi: 10.1634/stemcells.2008-0317
34. Dimos JT *et al.*, Induced pluripotent stem cells **generated from patients with ALS** can be differentiated into motor neurons, *Science* 321, 1218-1221, 29 August 2008; published online 31 July 2008, doi: 10.1126/science.1158799
35. Marson A *et al.*, **Wnt signaling promotes reprogramming** of somatic cells to pluripotency, *Cell Stem Cell* 3, 132-135, 7 August 2008, doi: 10.1016/j.stem.2008.06.019
36. Park I-H *et al.*, **Disease-specific induced pluripotent stem cells**, *Cell* 134, 877-886, 5 Sept 2008; published online 7 August 2008, doi: 10.1016/j.cell.2008.07.041
37. Tateishi K *et al.*, Generation of **insulin-secreting islet-like clusters from human skin fibroblasts**, *Journal of Biological Chemistry* 283, 31601-31607, 14 November 2008, published online 9 Sept 2008, DOI: 10.1074/jbc.M806597200
38. Maherali N *et al.*, A **high-efficiency system** for the generation and study of **human** induced pluripotent stem cells, *Cell Stem Cell* 3, 340-345, 11 Sept 2008, doi: 10.1016/j.stem.2008.08.003
39. Hockemeyer D *et al.*, A **drug-inducible system** for direct reprogramming of **human** somatic cells to pluripotency, *Cell Stem Cell* 3, 346-353, 11 Sept 2008, doi: 10.1016/j.stem.2008.08.014
40. Stadtfeld M *et al.*, Induced pluripotent stem cells generated **without viral integration**, *Science* 322, 945-949, 7 November 2008; published online 25 Sept 2008, doi: 10.1126/science.1162494
41. Qin D *et al.*, **Mouse meningiocytes** express Sox2 and yield **high efficiency** of chimeras after nuclear reprogramming with exogenous factors, *Journal of Biological Chemistry* 283, 33730-33735, 28 November 2008; published online 1 October 2008, doi: 10.1074/jbc.M806788200
42. Okita K *et al.*, Generation of mouse induced pluripotent stem cells **without viral vectors**, *Science* 322, 949-953, 7 November 2008; published online 9 October 2008, doi: 10.1126/science.1164270
43. Huangfu D *et al.*, Induction of pluripotent stem cells from primary **human** fibroblasts with **only *Oct4* and *Sox2***, *Nature Biotechnology* 26, 1269-1275, published online 12 October 2008, doi: 10.1038/nbt.1502
44. Aasen T *et al.*, **Efficient and rapid generation** of induced pluripotent stem cells **from human keratinocytes,** *Nature Biotechnology* 26, 1276-1284, November 2008; published online 17 October 2008, doi:10.1038/nbt.1503

45. Silva J *et al.*, **Promotion of reprogramming** to ground state pluripotency **by signal inhibition**, *PLoS Biology* 6(10): e253, published 21 October 2008, doi:10.1371/journal.pbio.0060253
46. Shi Y *et al.*, Induction of pluripotent stem cells from mouse embryonic fibroblasts by **Oct4 and Klf4 with small-molecule compounds**, *Cell Stem Cell* 3, 568-574, 6 November 2008, doi: 10.1016/j.stem.2008.10.004
47. Zhao Y *et al.*, Two Supporting Factors **Greatly Improve the Efficiency of Human iPSC** Generation, *Cell Stem Cell* 3, 475-479, 6 November 2008, doi: 10.1016/j.stem.2008.10.002
48. Varas F *et al.*, Fibroblast derived induced pluripotent stem cells show **no common retroviral vector insertions**, *Stem Cells* 27, 300-306, February 2009, published online November 13, 2008; doi:10.1634/stemcells.2008-0696
49. Liu H *et al.*, Generation of Induced Pluripotent Stem Cells **from Adult Rhesus Monkey** Fibroblasts, *Cell Stem Cell* 3, 587-590, 4 December 2008, 10.1016/j.stem.2008.10.014
50. Sommer CA *et al.*, iPS Cell Generation **Using a Single Lentiviral Stem Cell Cassette**, *Stem Cells* 27, 543-549, March 2009, published online December 18, 2008, doi: 10.1634/stemcells.2008-1075
51. Ebert AD *et al.*, Induced pluripotent stem cells **from a spinal muscular atrophy patient**, *Nature* 457, 277-280, 15 January 2009; published online 21 December 2008; doi:10.1038/nature07677
52. Carey BW *et al.*, Reprogramming of murine and human somatic cells **using a single polycistronic vector**, *Proc. Natl. Acad. Sci. USA* 106, 157-162, 6 January 2008, published online 24 December 2008, doi: 10.1073/pnas.0811426106
53. Choi K-D *et al.*, **Hematopoietic and Endothelial Differentiation** of **Human** Induced Pluripotent Stem Cells, *Stem Cells* 27, 559-567, March 2009, published online 8 January 2009, doi: 10.1634/stemcells.2008-0922
54. Liao J *et al.*, Generation of Induced Pluripotent Stem Cell Lines **from Adult Rat Cells**, *Cell Stem Cell* 4, 11-15, 9 January 2009, doi: 10.1016/j.stem.2008.11.013
55. Li W *et al.*, Generation of **Rat and Human** Induced Pluripotent Stem Cells by **Combining Genetic Reprogramming and Chemical Inhibitors**, *Cell Stem Cell* 4, 16-19, 9 January 2009, doi: 10.1016/j.stem.2008.11.014
56. Feng B *et al.*, Reprogramming of fibroblasts into induced pluripotent stem cells **with orphan nuclear receptor Esrrb,** *Nature Cell Biology* 11, 197-203, February 2009, published online 11 January 2009; doi: 10.1038/ncb1827
57. Markoulaki S *et al.*, **Transgenic mice** with defined combinations of **drug-inducible reprogramming factors**, *Nature Biotechnology* 27, 169-171, February 2009; published online 18 January 2009; doi:10.1038/nbt.1520
58. Xu D *et al.*, Phenotypic **correction of murine hemophilia A** using an iPS cell-based therapy, *Proc. Natl. Acad. Sci. USA* 106, 808-813, 20 January 2009, doi: 10.1073/pnas.0812090106
59. Park TS *et al.*, **Derivation of Primordial Germ Cells From Human** Embryonic and **Induced Pluripotent Stem Cells** Is Significantly Improved By Co-Culture With Human Fetal Gonadal Cells, *Stem Cells* 27, 783-795, published online 22 January 2009, doi: 10.1002/stem.13
60. Sridharan R *et al.*, **Role of the Murine Reprogramming Factors** in the Induction of Pluripotency, *Cell* 136, 364–377, 23 January 2009, doi: 10.1016/j.cell.2009.01.001
61. Kim JB *et al.*, **Oct4-Induced Pluripotency in Adult Neural Stem Cells**, *Cell* 136, 41l-419, 6 February 2009, doi: 10.1016/j.cell.2009.01.023

62. Marion RM *et al.*, **Telomeres acquire embryonic stem cell characteristics in induced pluripotent stem cells**, *Cell Stem Cell* 4, 141-154, 6 February 2009, doi: 10.1016/j.stem.2008.12.010
63. Zhang J *et al.*, **Functional cardiomyocytes** derived **from human induced pluripotent stem cells**, *Circulation Research* 104, e30-e41, published online 12 February 2009, doi: 10.1161/CIRCRESAHA.108.192237
64. Chang C-W *et al.*, Polycistronic Lentiviral Vector For **Hit and Run Reprogramming** Of Adult Skin Fibroblasts To Induced Pluripotent Stem Cells, *Stem Cells* 27, 1042-1049, May 2009, published online 12 February 2009, doi: 10.1002/stem.39
65. Senju S *et al.*, Characterization of **dendritic cells and macrophages generated** by directed differentiation from mouse induced pluripotent stem cells, *Stem Cells* 27, 1021-1031, May 2009, published online 13 February 2009, doi: 10.1002/stem.33
66. Guo G *et al.*, Klf4 reverts developmentally programmed restriction of ground state pluripotency, *Development* 136, 1063-1069, 1 April 2009, published online 18 February 2009, doi:10.1242/dev.030957
67. Karumbayaram S *et al.*, Directed Differentiation of **Human** Induced Pluripotent Stem Cells **Generates Active Motor Neurons**, *Stem Cells* 27, 806-811, April 2009, published online 23 February 2009 doi: 10.1002/stem.31
68. Shao L *et al.*, Generation of iPS cells using defined factors linked via the self-cleaving 2A sequences in a **single open reading frame**, *Cell Research* 19, 296-306, March 2009, published online 24 February 2009,. doi: 10.1038/cr.2009.20
69. Taura D *et al.*, **Adipogenic differentiation of human induced pluripotent stem cells**: Comparison with that of human embryonic stem cells, *FEBS Letters* 583, 1029-1033, 18 March 2009, published online 27 February 2009, doi: 10.1016/j.febslet.2009.02.031
70. Chambers SM *et al.*, **Highly efficient neural conversion** of **human** ES and **iPS cells** by dual inhibition of SMAD signaling, *Nature Biotechnology* 27, 275-280, March 2009; published online 1 March 2009; doi:10.1038/nbt.1529
71. Kaji K *et al.*, **Virus-free induction of pluripotency** and **subsequent excision of reprogramming factors**, *Nature* 458, 771-775, 9 April 2009, published online 1 March 2009, doi: 10.1038/nature07864
72. Woltjen K *et al.*, **piggyBac** transposition **reprograms fibroblasts to induced pluripotent stem cells**, *Nature* 458, 766-770, 9 April 2009, published online 1 March 2009, doi: 10.1038/nature07863
73. Zhang D *et al.*, Highly efficient differentiation of **human** ES cells and **iPS cells into mature pancreatic insulin-producing cells**, *Cell Research* 19, 429-438, April 2009, published online 3 March 2009, doi: 10.1038/cr.2009.28
74. Soldner F *et al.*, **Parkinson's disease patient-derived** induced pluripotent stem cells **free of viral reprogramming factors**, *Cell* 136, 964-977, 6 March 2009, doi: 10.1016/j.cell.2009.02.013
75. Loh Y-H *et al.*, Generation of induced pluripotent stem cells **from human blood**, *Blood* published online 18 March 2009, doi: 10.1182/blood-2009-02-204800
76. Yu J *et al.*, **Human** induced pluripotent stem cells **free of vector and transgene sequences**, *Science* 324, 797-801, 8 May 2009, published online 26 March 2009, doi: 10.1126/science.1172482
77. Deng J *et al.*, Targeted bisulfite sequencing reveals **changes in DNA methylation associated with nuclear reprogramming**, *Nature Biotechnology* 27, 353-360, April 2009; published online 29 March 2009; doi:10.1038/nbt.1530

78. Ball MP *et al.*, Targeted and genome-scale strategies reveal gene-body **methylation signatures in human cells**, *Nature Biotechnology* 27, 361-368, April 2009, published online 29 March 2009, doi: 10.1038/nbt.1533
79. Yusa K *et al.*, **Generation of transgene-free** induced pluripotent mouse stem cells by the *piggyBac* transposon, *Nature Methods* published online 31 March 2009, doi:10.1038/nmeth.1323
80. Judson RL *et al.*, Embryonic stem cell-specific **microRNAs promote induced pluripotency**, *Nature Biotechnology* 27, 459-461, May 2009, published online 12 April 2009, doi: 10.1038/nbt.1535
81. Hirami Y *et al.*, **Generation of retinal cells** from mouse and human induced pluripotent stem cells, *Neuroscience Letters* 458, 126-131, 24 July 2009, published online 18 April 2009, doi: 10.1016/j.neulet.2009.04.035
82. Esteban MA *et al.*, Generation of induced pluripotent stem cells lines **from Tibetan miniature pig**, *Journal of Biological Chemistry* published online 21 April 2009, doi:10.1074/jbc.M109.008938
83. Zhou H *et al.*, Generation of Induced Pluripotent Stem Cells **Using Recombinant Proteins**, *Cell Stem Cell* 4, 381-384, 8 May 2009, published online 23 April 2009, doi:10.1016/j.stem.2009.04.005
84. Hotta A *et al.*, Isolation of **human iPS cells using EOS lentiviral vectors** to select for pluripotency, *Nature Methods* 6, 370-376, May 2009, published online 26 April 2009, doi:10.1038/nmeth.1325
85. Tashiro K *et al.*, Efficient **adipocyte and osteoblast differentiation** from mouse induced pluripotent stem cells by adenoviral transduction, *Stem Cells* published online 30 April 2009, doi: 10.1002/stem.108
86. Taura D *et al.*, Induction and isolation of **vascular cells from human-induced pluripotent stem cells**, *Arteriosclerosis Thrombosis and Vascular Biology* published online 7 May 2009, doi: 10.1161/ATVBAHA.108.182162
87. Lyssiotisa CA *et al.*, Reprogramming of murine fibroblasts to induced pluripotent stem cells **with chemical complementation of Klf4**, *Proc. Natl. Acad. Sci. USA* published online 15 May 2009, doi: 10.1073/pnas.0903860106
88. Gonzalez F *et al.*, Generation of mouse-induced pluripotent stem cells by **transient expression of a single nonviral polycistronic vector**, *Proc. Natl. Acad. Sci. USA* published online 19 May 2009, doi: 10.1073/pnas.0901471106
89. Wilson KD *et al.*, **MicroRNA profiling** of **human**-induced pluripotent stem cells, *Stem Cells and Development* 18, 749-758. June 2009, doi: 10.1089/scd.2008.0247