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(54) **Title**: NOVEL NUCLEAR REPROGRAMMING SUBSTANCE

(57) **Abstract**: Reprogramming substances capable of substituting for Klf4, selected from the group consisting of members of the IRX family (e.g., IRX6), members of the GLIS family (e.g., GLIS1), members of the PTX family (e.g., PITX2), DMRTB1, and nucleic acids that encode the same, are provided. Also provided are a method of producing iPS cells, comprising the step of introducing into a somatic cell both one or more kinds of the above-described nuclear reprogramming substances and a substance capable of inducing iPS cells from a somatic cell when combined with Klf4. Still also provided are iPS cells comprising an extraneous nucleic acid that encodes any one of the above-described nuclear reprogramming substances, that can be obtained by the method, and a method of producing somatic cells by inducing the iPS cells to differentiate.