

KINARM KO

PROFESSOR

DEPT. OF STEM CELL BIOLOGY,
SCHOOL OF MEDICINE

e-mail: knko@kku.ac.kr

Educations

- 1992 B.S., Seoul National University, Seoul, Korea
- 1996 M.S., University of Wisconsin-Madison, USA
- 2003 Ph.D., University of Wisconsin-Madison, USA

Professional Background

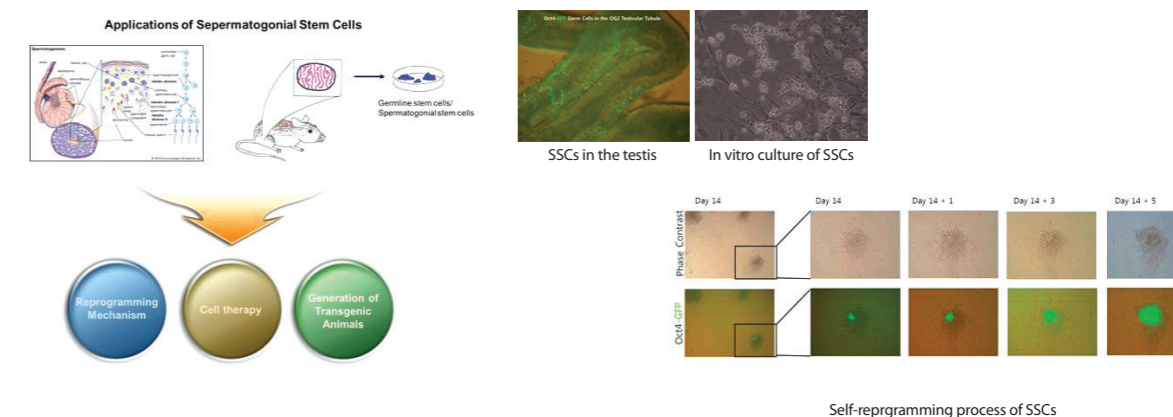
- 2015-Present Professor: School of Medicine, Konkuk University
- 2011-Present Director: Stem Cell Research Center, Institute of Biomedical Science & Technology, Konkuk University
- 2010-2015 Associate professor: School of Medicine, Konkuk University
- 2008-2010 Associate research scientist: Department of Cell and Developmental Biology, Max Planck Institute for Molecular and Biomedicine, Germany
- 2004-2008 Visiting scientist: Department of Cell and Developmental Biology, Max Planck Institute for Molecular and Biomedicine, Germany

Top 5 Publications

- Lee HJ, Choi NY, Lee SW, Ko K, Hwang TS, Han DW, Lim J, Schöler HR, **Ko K**. Epigenetic alteration of imprinted genes during neural differentiation of germline-derived pluripotent stem cells. Epigenetics. 2016 Mar. In press
- Park YS, Nemeño JG, Choi NY, Lee JI, Ko K, Choi SC, Kim WS, Han DW, Tapia N, **Ko K**. Ectopic overexpression of Nanog induces tumorigenesis in non-tumorous fibroblasts. Biol Chem. 2016 Mar 1;397(3):249-55
- **Ko K**, Reinhardt P, Tapia N, Schneider RK, Araúzo-Bravo MJ, Han DW, Greber B, Kim J, Kliesch S, Zenke M, Schöler HR. (2011) Evaluating the potential of putative pluripotent cells derived from human testis. Stem Cells. Aug;29(8):1304-9
- **Ko K**, Bravo MJ, Tapia N, Kim J, Lin Q, Berneman C, Han DW, Gentile L, Reinhardt P, Greber B, Schneider RK, Kliesch S, Zenke M, Schöler HR. (2010) Human Adult Germline Stem Cells in Question. Nature. 465(7301)
- **Ko K**, Tapia N, Wu G, Kim JB, Bravo MJ, Sasse P, Glaser T, Ruau D, Han DW, Greber B, Hausdörfer K, Sebastiano V, Stehling M, Fleischmann BK, Brästerle O, Zenke M, Schöler HR. (2009) Induction of pluripotency in adult unipotent germline stem cells. Cell Stem Cell 5(1):87-96

RESEARCH INTERESTS

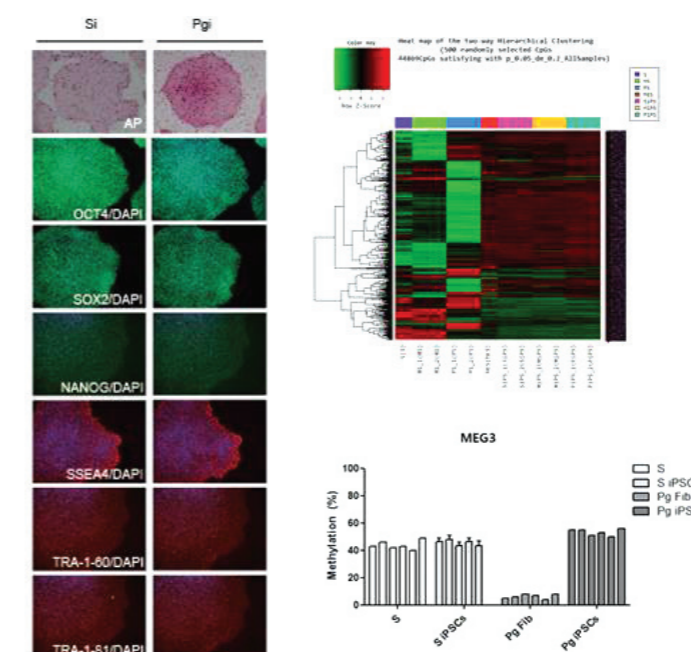
1. Self-reprogramming of Unipotent Stem Cells into Pluripotent Cells



Recent studies have documented the induction of pluripotent cells from spermatogonial stem cells (SSCs) obtained from the adult testis. These SSC-derived pluripotent cells have similar characteristics and differentiation properties. Notably, the induction of SSCs into pluripotent cells is a self-re-

programming process, which occurs without the overexpression of exogenous reprogramming factors. Thus, these data suggest a potential to derive pluripotent cells from human testes and possibly identify new reprogramming factors for iPSC generation.

2. Identification of Novel Human Imprinted Genes Using Uniparental Human Induced Pluripotent Stem Cells



Parental imprinting is considered the hallmark mechanism for regulating parental specific gene expression. To identify novel imprinted differentially methylated regions (DMRs), we compared the DNA methylation status between normal and uniparental human induced pluripotent stem cells (hiPSCs) using global DNA methylation analysis and reduced representation bisulfite sequencing. Our analysis identified previously unknown and novel imprinted genes, which may be associated with various human diseases.