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EDUCATION AND CAREER

PRINCIPAL INVESTIGATOR — JAN 2010 - PRESENT

Genome Institute of Singapore (Joint appointment)

ASSISTANT PROFESSOR — OCT 2009 - PRESENT

Dept. Bio and Brain Engineering, KAIST

RESEARCH PROFESSOR / INSTRUCTOR — MAR 2007 - SEP 2009

Yonsei Genome Institute, Yonsei University

RESEARCH SCIENTIST — SEP 2004 - FEB 2007

Korea Research Institute of Bioscience and Biotechnology

PH.D. — MAR 2000 - AUG 2004

Dept. Life Sciences, Korea Advanced Institute of Science and Technology

Thesis: Global analysis of transcriptional changes in human cancer using the gene coexpression network
(Advisor: Ook Joon Yoo)

M.S. — MAR 1998 - FEB 2000

Dept. Biological Sciences, Korea Advanced Institute of Science and Technology

Thesis: Cloning and characterization of the gene encoding bdellin from Hirudo nipponia
(Advisor: Sun Chang Kim)

B.S. — MAR 1994 - FEB 1998

Dept. Biological Sciences, Korea Advanced Institute of Science and Technology

PUBLICATIONS

- Seo, J., Kim, S. C., Lee, H. -S., Kim, J. K., Shon, H. J., Mohd Salleh, N. L., Desai, K. V., Lee, J. H., Kang, E. -S., Kim, J. S., Choi, J. K. Genome-wide profiles of H2AX and gamma-H2AX differentiate endogenous and exogenous DNA damage hotspots in human cells. *Nucl. Acids Res.* Accepted (2012).
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- Kim, S. C. & Choi, J. K. Controlling transcriptional programs for cellular adaptation by chromatin regulation. *Mol. BioSyst.* **7**, 1713-1719 (2011).

- Ban, H. -J., Kim, S. C., Seo, J., Kang, H. -B., Choi, J. K. Genetic and metabolic characterization of insomnia. *PLoS ONE* **6**, e18455 (2011).
- Choi, J. K. Systems biology and epigenetic gene regulation. *IET Syst. Biol.* **4**, 289-295 (2010).
- Choi, J. K. Contrasting chromatin organization of CpG islands and exons in the human genome. *Genome Biol.* **11**, R70 (2010).
- Choi, J. K., Bae, J. -B., Lyu, J., Kim, T. -Y. & Kim, Y. -J. Nucleosome deposition and DNA methylation at coding region boundaries. *Genome Biol.* **10**, R89 (2009).
- Choi, J. K. & Kim, Y. -J. An international showcase of the rapid expansion of epigenetics. *Epigenomics* **1**, 235-237 (2009).
- Choi, J. K. & Kim, Y. -J. Implications of the nucleosome code in regulatory variation, adaptation and evolution. *Epigenetics* **4**, 291-295 (2009).
- Choi, J. K. & Kim, Y. -J. Intrinsic variability of gene expression encoded in nucleosome positioning sequences. *Nat. Genet.* **41**, 498-503 (2009).
- Jin, L. H., Choi, J. K., Kim, B., Choi, H. S., Kim, J., Kim-Ha, J. & Kim, Y. -J. Requirement of Split ends for epigenetic regulation of Notch signal-dependent genes during infection-induced hemocyte differentiation. *Mol. Cell. Biol.* **29**, 1515-1525 (2009).
- Choi, J. K., Hwang, S. & Kim, Y. -J. Stochastic and regulatory role of chromatin silencing in genomics response to environmental changes. *PLoS ONE* **3**, e3002 (2008).
- Jin, L. H., Choi, J. K., Cho, H. S., Shim, J. & Kim, Y. -J. Microarray analysis of the gene expression profiles of SL2 cells stimulated by LPS/PNG and curdlan. *Mol. Cells* **25**, 553-558 (2008).
- Choi, J. K. & Kim, Y. -J. Epigenetic regulation and the variability of gene expression. *Nat. Genet.* **40**, 141-147 (2008).
- Choi, J. K., & Kim, S. C. Environmental effects on gene expression phenotype have regional biases in the human genome. *Genetics* **175**, 1607-1613 (2007).
- Choi, J. K., Kim, S. C., Seo, J., Kim, S. & Bhak, J. Impact of transcriptional properties on essentiality and evolutionary rate. *Genetics* **175**, 199-206 (2007).
- Choi, J. K., Yu, U. S., Yoo, O. J. & Kim, S. Differential coexpression analysis using microarray data and its application to human cancer. *Bioinformatics* **21**, 4348-4355 (2005).
- Yu, U. S., Choi, Y. J., Choi, J. K. & Kim, S. TO-GO: a Java-based Gene Ontology navigation environment. *Bioinformatics* **21**, 3580-3581 (2005).
- Choi, J. K., Choi, J. Y., Kim, D. G., Choi, D. W., Kim, B. Y., Lee, K. H., Yeom, Y. I., Yoo, H. S., Yoo, O. J. & Kim, S. Integrative analysis of multiple gene expression profiles applied to liver cancer study. *FEBS Lett.* **565**, 93-100 (2004).
- Choi, J. K., Yu, U., Kim, S. & Yoo, O. J. Combining multiple microarray studies and modeling interstudy variation. *Bioinformatics* **19** Suppl. 1, i84-i90 (2003).
- Kim, Y. H., Choi, J. G., Lee, G. M. & Kang, K. W. Domain and genomic sequence analysis of bdellin-KL, a leech-derived trypsin-plasmin inhibitor. *J. Biochemistry* **130**, 431-438 (2001).

PROFESSIONAL ACTIVITIES

Board Member of the Korean Society for Bioinformatics and Systems Biology

Editorial Board of Frontiers in Physiology (Frontiers Media SA)

Editorial Board of Animal Cells and Systems (The Korean Society for Integrative Biology)

Program Committee of the Annual Conference of KSBSB (BIOINFO 2012)

Program Committee of the 10th Asia-Pacific Bioinformatics Conference (APBC 2012)

Program Committee of the 4th International Conference on the Foundations of Systems
Biology in Engineering (FOSBE 2011)

Program Committee of the 22nd International Conference on Genome Informatics (GIW
2011)

Program Committee of the 9th Asia-Pacific Bioinformatics Conference (APBC 2011)