JUENG SOO YOU

ASSISTANT PROFESSOR

DEPT. OF BIOCHEMISTRY,
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Educations

2004 B.S., College of Pharmacy, Sungkyunkwan University, Korea (Summa cum laude)
2006 M.S., College of Pharmacy, Sungkyunkwan University, Korea
2009 Ph.D., College of Pharmacy, Sungkyunkwan University, Korea

Professional Background

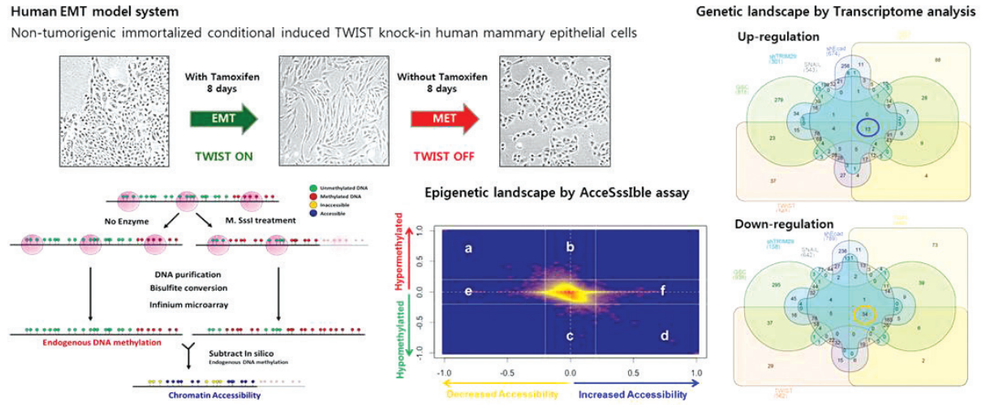
2011-2013 Research associate: Department of Urology & Molecular Biology, University of Southern California, USA
2009-2010 Post-doctoral fellow: Department of Urology & Molecular Biology, University of Southern California, USA
2004-Present Pharmacist, Korean Board of Pharmacy

Top 5 Publications

- Hong SH, Eun JW, Choi SK, Shen Q, Choi WS, Han JW, Nam SW, **You JS**. Epigenetic reader BRD4 inhibition as a therapeutic strategy to suppress E2F2-cell cycle regulation circuit in liver cancer. Oncotarget. 2016 Apr 12. doi: 10. 18632/oncotarget.8701.
- **You JS**, De Carvalho DD, Dai C, Pandiyan K, Zhou XJ, Liang G, Jones PA. SNF5 is an essential executor of epigenetic regulation in pluripotency and differentiation. PLoS Genet. 2013 Apr;9(4):e1003459.
- Pandiyan K*, **You JS***, Baylin SB, Jones PA, Liang G. AcceSssIble: an array-based assay for the study of nucleosome occupancy and DNA methylation using the CpG methyltransferase. SssI Nucleic Acids Res. 2013 Apr;41(7):3973-85 (*These authors contributed equally to this work)
- **You JS** & Jones PA. Cancer genetics and epigenetics: two sides of the same coin? Cancer Cell. 2012 Jul 10, 22(1):9-20
- **You JS**, Kelly TK, Carvalho DD, Taberlay PC, Liang GL and Jones PA. Nucleosome depleted regions maintained by OCT4 control the expression of pluripotent genes. Proc Natl Acad Sci U S A. 2011, 108, 14497 (Honored by F1000)

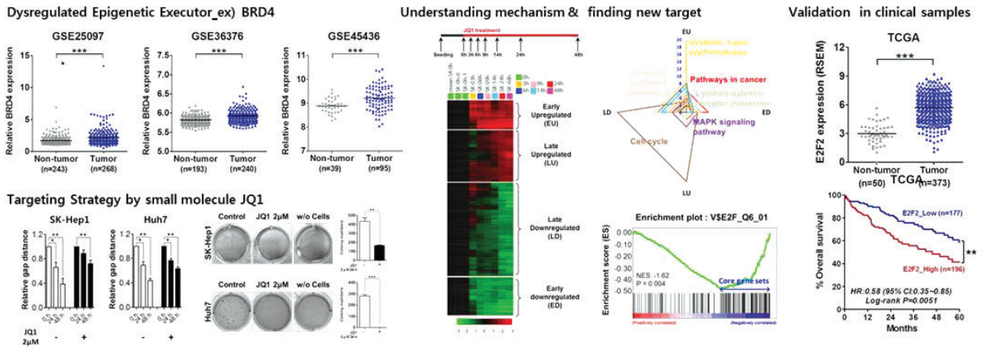
RESEARCH INTERESTS

1. Understanding genetic/epigenetic networks during EMT and tumorigenesis



Recently, intriguing evidence has emerged to suggest that genetic and epigenetic mechanisms are not separate events in cancer; rather, they intertwine and take advantage of each other during tumorigenesis. EMT is central to these pathological processes. Using a human TWIST-HMEC model system, we observed genome-wide structural changes in chromatin and identified key candidates with roles in EMT and tumorigenesis. We will investigate interplay between genetics and epigenetics, which in turn will provide a molecular biological foundation for the development of cancer therapies.

2. Investigating the mechanism and regulation strategy of epigenetic executors



Extensive cancer genome studies have revealed new genes, in particular epigenetic regulators, which were not previously known to be cancer targets. Recently, we found that several epigenetic modifiers and chromatin remodelers are dysregulated in liver and esophageal cancers. We will investigate the underlying mechanisms and regulation strategies using loss- and gain-of-function experiments, followed by integrated mining of the transcriptome and epigenetic landscapes. We hope that our research will provide innovative insights into the development of new cancer therapies.