

# *Curriculum Vitae*

## Young Seok Ju, MD, PhD

last update: 1st Dec 2017

Assistant Professor, Graduate School of Medical Sciences and Engineering,  
Korea Advanced Institute of Science and Technology (KAIST)

2104 Biomedical Center (E7), KAIST, Daejeon, 34141, Korea  
Office +82-42-350-4237; Fax +82-42-350-4240; E-mail [ysju@kaist.ac.kr](mailto:ysju@kaist.ac.kr)  
<http://julab.kaist.ac.kr>

### **RESEARCH EXPERIENCE**

#### **Assistant Professor**

Graduate School of Medical Sciences and Engineering, KAIST, Daejeon, Korea 2015.11-present

#### **Postdoctoral Fellow**

2013.4-2015.10

Cancer Genome Project, Wellcome Trust Sanger Institute, Hinxton, UK

Postdoctoral fellow; Advisors: Prof. Mike Stratton & Dr. Peter Campbell

Substitution of the mandatory military service of South Korea

2010.3-2013.3

Researcher, Life Science Institute, Macrogen Inc., Korea

### **EDUCATION AND TRAINING**

Seoul National University College of Medicine, Seoul, Republic of Korea

2007.3-2010.2

Ph.D. in Biochemistry and Medical Genomics (Advisor: Prof. Jeong-Sun Seo)

Seoul National University College of Medicine, Seoul, Republic of Korea

2001.3-2007.2

M.D. (B.S in Medicine)

### **PUBLICATIONS** *In reverse chronological orders.* (#, corresponding author; \* first author)

34. (review) **Ju YS**#, The mutational signatures and molecular alterations of bladder cancer. *Transl Cancer Res.* 2017;6(Suppl 4):S689-S701

33. Lee JK., Lee J, Kim S, Kim S, Youk J, ... & **Ju YS**#, Clonal history and genetic predictors of transformation into small cell carcinomas from lung adenocarcinomas. *Journal of Clinical Oncology.* 2017 Sep 10;35(26):3065-3074. PMID:28498782

32. **Ju YS**\*, Martincorena I, Gerstung M, Petljak M, Alexandrov LB, ... & Stratton MR. Somatic mutations reveal asymmetric cellular dynamics in the early human embryo. *Nature.* 2017 Mar 30;543(7647):714-718. PMID:28329761

31. Lee JK, Louzada S, An Y, Kim SY, Kim S, Youk J, Park S, ... & **Ju YS**#. Complex Chromosomal Rearrangements by Single Catastrophic Pathogenesis in NUT Midline Carcinoma. *Ann Oncol.* 2017 Feb 14. 28(4):890-897. PMID:28203693

30. Alexandrov LB, **Ju YS**, Haase K, Van Loo P, Martincorena I, ... & Stratton MR. Mutational signatures associated with tobacco smoking in human cancer. *Science.* 2016 Nov 4;354(6312):618-622. PMID:27811275

29. Shlien A, Raine K, Fuligni F, Arnold R, Nik-Zainal S, Dronov S, Mamanova L, Rosic A, **Ju YS**, ... & Campbell PJ. Direct Transcriptional Consequences of Somatic Mutation in Breast Cancer. *Cell Rep.* 2016 Aug 16;16(7):2032-46. PMID:27498871

28. Kemper K, Krijgsman O, Kong X, Cornelissen-Steijger P, Shahrabi A, Weeber F, van der Velden DL, Bleijerveld OB, Kuilman T, Kluijn RJ, Sun C, Voest EE, **Ju YS**, ... & Peeper DS. BRAF(V600E) Kinase Domain Duplication Identified in Therapy-Refractory Melanoma Patient-Derived Xenografts. *Cell Rep*. 2016 Jun 28;16(1):263-77. PMID:27320919
27. Nik-Zainal S, Davies H, Staaf J, Ramakrishna M, Glodzik D, Zou X, Martincorena I, Alexandrov LB, Martin S, Wedge DC, Van Loo P, **Ju YS**, ... & Stratton MR. Landscape of somatic mutations in 560 breast cancer whole-genome sequences. *Nature*. 2016 Jun 2;534(7605):47-54. PMID:27135926
26. (review) **Ju YS**#. Intracellular mitochondrial DNA transfers to the nucleus in human cancer cells. *Curr Opin Genet Dev*. 2016 Jun;38:23-30. PMID:27010587
25. Kim J, Kim S, Ko S, In YH, Moon HG, Ahn SK, Kim MK, Lee M, Hwang JH, **Ju YS**, ... & Han W. Recurrent fusion transcripts detected by whole-transcriptome sequencing of 120 primary breast cancer samples. *Genes Chromosomes Cancer*. 2015 Nov;54(11):681-91. PMID:26227178
24. Yates LR, Gerstung M, Knappskog S, Desmedt C, Gundem G, Van Loo P, Aas T, Alexandrov LB, Larsimont D, Davies H, Li Y, **Ju YS**, ... & Campbell PJ. Subclonal diversification of primary breast cancer revealed by multiregion sequencing. *Nat Med*. 2015 Jul;21(7):751-9. PMID:26099045
23. **Ju YS**\*, Tubio JM, Mifsud W, Fu B, Davies HR, ... & Stratton MR. Frequent somatic transfer of mitochondrial DNA into the nuclear genome of human cancer cells. *Genome Res*. 2015 Jun;25(6):814-24. PMID:25963125
22. **Ju YS**\*, Alexandrov LB, Gerstung M, Martincorena I, Nik-Zainal S, ... & Campbell PJ. Origins and functional consequences of somatic mitochondrial DNA mutations in human cancer. *eLife*. 2014 Oct 1;3. PMID:25271376
21. Tubio JM, Li Y, **Ju YS**, Martincorena I, Cooke SL, ... & Campbell PJ. Extensive transduction of nonrepetitive DNA mediated by L1 retrotransposition in cancer genomes. *Science*. 2014 Aug 1;345(6196):1251343. PMID:25082706
20. Go H, Jung YJ, Kang HW, Park IK, Kang CH, Lee JW, **Ju YS**, ... & Kim YT. Diagnostic method for the detection of KIF5B-RET transformation in lung adenocarcinoma. *Lung Cancer*. 2013 Oct;82(1):44-50. PMID:23932363
19. Kim HJ, Yoo YJ, **Ju YS**, Lee S, Cho SI, ... & Seo JS. Combined linkage and association analyses identify a novel locus for obesity near PROX1 in Asians. *Obesity (Silver Spring)*. 2013 Nov;21(11):2405-12. PMID:23818313
18. Hong D, Lee J, Bleazard T, Jung H, **Ju YS**, ... & Seo JS. TIARA genome database: update 2013. *Database (Oxford)*. 2013 Mar 20;2013:bat003. PMID:23515433
17. Bleazard T, **Ju YS**, Sung J & Seo JS. Fine-scale mapping of meiotic recombination in Asians. *BMC Genet*. 2013 Mar 8;14:19. PMID:23510153
16. Park H, Kim HJ, Lee S, Yoo YJ, **Ju YS**, ... & Seo JS. A family-based association study after genome-wide linkage analysis identified two genetic loci for renal function in a Mongolian population. *Kidney Int*. 2013 Feb;83(2):285-92. PMID:23254893
15. Park H, Lee S, Kim HJ, **Ju YS**, Shin JY, ... & Seo JS. Comprehensive genomic analyses associate UGT8 variants with musical ability in a Mongolian population. *J Med Genet*. 2012 Dec;49(12):747-52. PMID:23118445
14. Seo JS\*, **Ju YS**\*, Lee WC\*, Shin JY, Lee JK, ..., Kim YT. The transcriptional landscape and mutational profile of lung adenocarcinoma. *Genome Res*. 2012 Nov;22(11):2109-19. PMID:22975805 (co-first author)
13. Hong D, Rhie A, Park SS, Lee J, **Ju YS**, ... & Seo JS. FX: an RNA-Seq analysis tool on the cloud. *Bioinformatics*. 2012 Mar 1;28(5):721-3. PMID:22257667
12. Paik SH, Kim HJ, Son HY, Lee S, Im SW, **Ju YS**, ... & Kim JI. Gene mapping study for constitutive skin color in an isolated Mongolian population. *Exp Mol Med*. 2012 Mar 31;44(3):241-9. PMID:22198297
11. **Ju YS**\*, Lee WC, Shin JY, Lee S, Bleazard T, ... & Seo JS. A transforming KIF5B and RET gene fusion in lung adenocarcinoma revealed from whole-genome and transcriptome sequencing. *Genome Res*. 2012 Mar;22(3):436-45.

PMID:22194472

10. Paik SH, Kim HJ, Lee S, Im SW, **Ju YS**, ... & Kwon OS. Linkage and association scan for tanning ability in an isolated Mongolian population. *BMB Rep*. 2011 Nov;44(11):741-6. PMID:22118541
9. **Ju YS**\*, Kim JI\*, Kim S\*, Hong D, Park H, ... & Seo JS. Extensive genomic and transcriptional diversity identified through massively parallel DNA and RNA sequencing of eighteen Korean individuals. *Nat Genet*. 2011 Jul 3;43(8):745-52. PMID:21725310
8. Hong D\*, Park SS\*, **Ju YS**\*, Kim S, Shin JY, ... & Seo JS. TIARA: a database for accurate analysis of multiple personal genomes based on cross-technology. *Nucleic Acids Res*. 2011 Jan;39(Database issue):D883-8. PMID:21051338 (co-first author)
7. (research highlight) **Ju YS**\*, Yoo YJ, Kim JI & Seo JS. The first Irish genome and ways of improving sequence accuracy. *Genome Biol*. 2010;11(9):132. PMID:20815917
6. **Ju YS**\*, Hong D\*, Kim S\*, Park SS, Kim S, ... & Seo JS. Reference-unbiased copy number variant analysis using CGH microarrays. *Nucleic Acids Res*. 2010 Nov;38(20):e190. PMID:20802225
5. Park H\*, Kim JI\*, **Ju YS**\*, Gokcumen O, Mills RE, ... & Seo JS. Discovery of common Asian copy number variants using integrated high-resolution array CGH and massively parallel DNA sequencing. *Nat Genet*. 2010 May;42(5):400-5. PMID:20364138 (co-first author)
4. Kim JI\*, **Ju YS**\*, Park H, Kim S, Lee S, ... & Seo JS. A highly annotated whole-genome sequence of a Korean individual. *Nature*. 2009 Aug 20;460(7258):1011-5. PMID:19587683 (co-first author)
3. Lee JE, Park H, **Ju YS**, Kwak M, Kim JI, ... & Seo JS. Higher mitochondrial DNA copy number is associated with lower prevalence of microalbuminuria. *Exp Mol Med*. 2009 Apr 30;41(4):253-8. PMID:19299914
2. **Ju YS**\*, Park H, Lee MK, Kim JI, Sung J, ... & Seo JS. A genome-wide Asian genetic map and ethnic comparison: the GENDISCAN study. *BMC Genomics*. 2008 Nov 25;9:554. doi: 10.1186/1471-2164-9-554. PMID:19025666
1. Gombojav B, Park H, Kim JI, **Ju YS**, Sung J, ... & Seo JS. Heritability and linkage study on heart rates in a Mongolian population. *Exp Mol Med*. 2008 Oct 31;40(5):558-64. PMID:18985014

## **FELLOWSHIP**

POSCO TJ Park Young Professor Fellowship

**Jan. 2018-Dec. 2019**

EMBO (European Molecular Biology Organisation) Long Term Fellowship  
for Postdoctoral Research

**Apr.2013–Apr.2015**

## **AWARD**

Wunsch Medical Award (for young medical scientist), Korean Society of Medicine (2010)

Best Ph.D. Dissertation Award, Korean Society for Molecular and Cellular Biology (2010)