

Curriculum Vitae
Yoonsung Lee, Ph.D.

Section Head, Center for Genomic Integrity, Institute for Basic Science

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Education

1993-2000 B.S. Oceanography, Seoul National University, Seoul, Korea
2000-2002 B.S. Biological Sciences, Seoul National University, Seoul, Korea
2003-2009 Ph.D. Cell Biology, Duke University, Durham, NC, USA
Mentor: Kenneth D. Poss, Ph.D.

Research Training

2002 Research Assistant, Pharmacology, Vanderbilt University Medical Center,
Nashville, TN, USA
Mentor: Chang Y. Chung, Ph.D.
2009-2015 Postdoctoral fellow, Department of Cellular and Molecular Medicine,
University of California, San Diego, La Jolla, CA, USA
Mentor: David Traver, Ph.D.
2015 Assistant Project Scientist, Department of Cellular and Molecular Medicine,
University of California, San Diego, La Jolla, CA, USA
Mentor: David Traver, Ph.D.

Academic Appointment

2015-2017 Investigator & Section Head, Center for Genomic Integrity, Institute for
Basic Science, Ulsan, Korea
2017-present Section Head & Tenure-Track Research Fellow, Center for Genomic
Integrity, Institute for Basic Science, Ulsan, Korea
2018- present Adjunct Professor, School of Life Sciences, Ulsan National Institute of
Science and Technology (UNIST), Ulsan, Korea

Awards

1997-1999 Hanseung Scholarship, Korea
2000-2001 Academic Scholarship, Seoul National University, Korea
2001 International Study Travel Award, Seoul National University, Korea
2005 Best student talk, Cell Biology Annual Retreat, Duke University, USA
2004, 2006 Travel Award, International Conference on Zebrafish Genetics and
Development

- 2005, 2007 Travel Award, Society of Developmental Biology Annual Meeting
2005-2007 American Heart Association Predoctoral Fellowship, USA
2008 Travel Award, Cold Spring Harbor Symposium: Control & Regulation of Stem Cells
2011-2013 American Heart Association Postdoctoral Fellowship, USA

Society membership

- 2005-2006 Member, Society of Developmental Biology
2010-2013 Member, Society of Hematology and Stem Cells
2016-present Member, Korean Society for Biochemistry and Molecular Biology
2016-present Member, Korean Society for Molecular and Cellular Biology
2016-present Member, Zebrafish Disease Model Society

Meeting oral presentations

- 2014 International Conference on Zebrafish Development & Genetics. "FGF signaling specifies hematopoietic stem cells via somitic Notch pathways".
2016 2nd International Symposium of Center for Genomic Integrity from IBS. "Study of hematopoietic stem cell formation using zebrafish".
2016 Symposium of Zebrafish Subcommittee from Korean Society for Molecular and Cellular Biology. "Identification of novel genes involved in hematopoietic stem cell specification".
2016 9th Zebrafish Disease Model Society Conference. "FACT component Supt16h regulates transcription of Notch elements to specify hematopoietic stem cells".
2017 International Conference of the Genetics Society of Korea. "Study of DNA repair processes using zebrafish as a model system".
2016 9th Animal Model Symposium from Korean Society for Molecular and Cellular Biology. "Study of hematopoietic stem cell development using zebrafish forward genetics".
2018 Asian Society for Aging Research Symposium. "Supt16h regulates hematopoietic stem cell specification through regulation of Notch transcription".
2018 Symposium of Zebrafish Subcommittee from Korean Society for Molecular and Cellular Biology. "Characterization of in vivo functions of DNA repair genes using zebrafish CRISPR mutants".
2018 11th Zebrafish Disease Model Society Conference. "The histone chaperone Supt16h modulates Notch signaling through P53 to specify hematopoietic stem cells".

Trainees under direct research supervision

- Post-doctoral fellows; Changkyu Oh, Ph.D. (IBS 3/2018-present)
Suhyeon Yoon, Ph.D. (IBS, 1/2016 – 12/2016)
Graduate students; Ubeom Shin (IBS/UNIST, 3/2016 – present)
Lab research associates; Sangeun Jeon (IBS, 12/2015 – 3/2017)
Hana Kim (IBS, 2/2017 – 10/2017)
Hayne Song (IBS, 8/2017– present)

Hyemin Song (IBS, 9/2015 – present)

Publications, Peer-Reviewed

Lee, Y., Grill, S., Sanchez, A., Murphy-Ryan, M., and Poss, K.D. (2005). Fgf signaling instructs position-dependent growth rate during zebrafish fin regeneration. **Development** 132, 5173-5183.

Myers, S.A., Han, J.W., **Lee, Y.**, Firtel, R.A., and Chung, C.Y. (2005). A Dictyostelium homologue of WASP is required for polarized F-actin assembly during chemotaxis. **Mol Biol Cell** 16, 2191-2206.

Marques, S.R., **Lee, Y.**, Poss, K.D., and Yelon, D. (2008). Reiterative roles for Fgf signaling in the establishment of size and proportion of the zebrafish heart. **Dev Biol** 321, 397-406.

Lee, Y., Hami, D., De Val, S., Kagermeier-Schenk, B., Wills, A.A., Black, B.L., Weidinger, G., and Poss, K.D. (2009). Maintenance of blastemal proliferation by functionally diverse epidermis in regenerating zebrafish fins. **Dev Biol** 331, 270-280.

Lee, Y., Nachtrab, G., Klinsawat, P.W., Hami, D., Poss, K.D. (2010). Ras controls melanocyte expansion during zebrafish fin stripe regeneration. **Dis Model Mech** 3, 496-503.

Gonzalez-Quevedo, R., **Lee, Y.**, Poss, K.D., Wilkinson, D.G. (2010). Neuronal regulation of the spatial patterning of neurogenesis. **Dev Cell** 18, 136-147.

Shin, D., **Lee, Y.**, Poss, K.D., Stainier, D.Y.R. (2011). Restriction of hepatic competence by Fgf signaling. **Development** 138, 1339-1348.

Lee, Y., Manegold, J.E., Kim, A.D., Pouget, C., Stachura, D.L., Clements, W.K., Traver, D. (2014). FGF signaling specifies hematopoietic stem cells through its regulation of somitic Notch signaling. **Nat Commun** 5, 5583.

Pouget, C., Peterkin, T., Simoes, F., **Lee, Y.**, Traver, D., Patient, R. (2014). FGF restricts BMP signaling and thereby the hematopoietic stem cell program in the dorsal aorta. **Nat Commun** 5, 5588.

Han, S.H.*, Kim, S.H.*, Kim, H.J.*, **Lee, Y.***, Choi, S.Y., Park, G., Kim, D.H., Lee, A., Kim, J., Choi, J.M., Kim, Y., Myung, K., Kim, H., Kim, D.W. (2017). Cobll1 is linked to drug resistance and blastic transformation in chronic myeloid leukemia. **Leukemia**. (*These authors contributed equally).

Espanola, S.G., Song, H., Saxena, A., Manegold, J.E., Sahoo, D., Nasamran, C.A., Bicker, C., Pandolof, L., Ryu, E., Kang, M., Kang, S., Myung, K., Cooper, K.L., Yelon, D., Traver, D., **Lee, Y.** Hematopoietic Stem Cell-Dependent Notch Transcription is Mediated by P53 through the Histone Chaperone Supt16h. *Under Revision*.

Ban, S., Cho, N.H., Min, E., Bae, J.K., Ahn, Y., Shin, S., Park, S., **Lee, Y.**, Jung, W. Label-free optical projection tomography for quantitative 3D anatomy of mouse embryo. *Under Review*.

Lee, Y., Geist, J., Yoo, Y., Shin, S., Schoch, K., Sullivan, J., **Lee, Y.**, Shin, Y.B., Wright, N.T., Choi, M., Kontrogianni-Konstantopoulos, A., Shashi, V. Heterozygous Variants in *MYBPC1* are associated with an Expanded Neuromuscular Phenotype beyond Arthrogyrosis. *Submitted*.