



•Field Molecular Cellular Biology

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Education background

- 2000-2006 Ph.D. Seoul National University (Molecular Immunology)
- 1998-2000 M.S. Seoul National University (Molecular Immunology)
- 1994-1998 B.A. Seoul National University (Molecular Biology)

Major careers

- 2023-present Associate Professor, Department of Biochemistry, College of Medicine, Hallym University
- 2015-2023 Principle Research Fellow, Center for Genomic Integrity, Institute for Basic Science
- 2013-2015 Manager, Institute of New Drug Development, LG life sciences R&D center
- 2012-2013 Research fellow, National Institutes of Health, USA
- 2007-2012 Postdoctoral fellow, National Institutes of Health, USA

Publications (reverse order)

26. Park, S. H. #, Kim, N. #, Kang, N., Ryu, E., Lee, E. A., Ra, J. S., Gartner, A., Kang, S., Myung, K, Lee, K. Y.* 2023. Short-range end resection requires ATAD5-mediated PCNA unloading for faithful homologous recombination. Nucleic Acids Research 51 (19), 10519-105354
25. Kim, S., Kim, Y., Kim, Y., Yoon, S., Lee, K. Y., Lee, Y., Kang, S., Myung, K., Oh, C. K. 2023. PCNA Ser46-Leu47 residues are crucial in preserving genomic integrity. Plos one 18 (5), e0285337
24. Park, S. H. #, Kim, Y. Y. #, Ra, J. S., Wie, M., Kang, M, S., Kang, S., Myung, K, Lee, K. Y.* 2021. Timely termination of repair DNA synthesis by ATAD5 is important in oxidative DNA damage-induced single-strand break repair. Nucleic Acids Research 49 (20), 11746-11764

23. Park, S. H. #, Kim, S. J. #, Myung, K, Lee, K. Y.*. 2021. Characterization of subcellular localization of eukaryotic clamp loader/unloader and its regulatory mechanism. *Scientific Reports*. 11 (1), 1-16.
22. Kang, H. J., Cheon, N. Y., Park, H., Jeong, G. W., Ye, B. J., Yoo, E. J., Lee, J. H., Hur, J. H., Lee, E. A., Kim, H., Lee, K. Y., Choi, S. Y., Lee-Kwon W., Myung, K., Lee, J. Y., Kwon, H. M. 2021. TonEBP recognizes R-loops and initiates m6A RNA methylation for R-loop resolution. *Nucleic Acids Research*. 2021. 49(1):269-284.
21. Lee, K. Y.* Park, S.H. Eukaryotic clamp loaders and unloaders in the maintenance of genome stability. 2020. *Exp. Mol. Med*. 2020. 52(12):1948-1958.
20. Kim, S. J.#, Wie, M. #, Park, S. H., Kim, T. M., Park, J. H., Kim, S., Myung, K.*, and Lee, K. Y.* 2020. ATAD5 Suppresses Centrosome Over-Duplication by Regulating UAF1 and ID1. *Cell cycle*. doi: 10.1080.
19. Kim, S., Kang, N., Park, S. H., Wells, J., Hwang, T., Ryu, E., Kim, B. G., Hwang, S., Kim, S. J., Kang, S., Lee, S., Stirling, P., Myung, K., and Lee, K. Y.* 2020. ATAD5 restricts R-loop formation through PCNA unloading and RNA helicase maintenance at the replication fork. *Nucleic Acids Research*. 48(13):7218-7238.
18. Park, S. H., Kang, N., Song, E., Wie, M., Lee, E. A., Hwang, S., Lee, D., Ra, J. S., Park, I. B., Park, J., Kang, S., Park, J. H., Hohng, S., Lee, K. Y.,* and Myung, K*. 2019. ATAD5 promotes replication restart by regulating RAD51 and PCNA in response to replication stress. *Nature Communications*. 10.1038/s41467-019-13667-4.
17. Kang, H. J., Park, H., Yoo, E. J., Lee, J. H., Choi, S. Y., Lee-Kwon, W., Lee, K. Y., Hur, J-H, Seo, J. K., Ra, J. S., Lee E. A., Myung, K., Kwon, H. M. 2019. TonEBP Regulates PCNA Polyubiquitination in Response to DNA Damage through Interaction with SHPRH and USP1. *iScience*. 19:177-190.
16. Kang, M, S.#, Ryu, E#, Lee, S. W.#, Park, J., Ha, N. Y., Ra, J. S., Kim, Y. J., Kim, J., Abdel-Rahman, M., Park, S. H., Lee, K. Y., Kim, H., Kang, S., and Myung, K. 2019. Regulation of PCNA cycling on replicating DNA by RFC and RFC-like complexes. *Nature Communications*. 10(2410).
- 15.Lee, K. Y., Fu, H., Aladjem, M., and Myung, K. 2013. ATAD5 regulates the lifespan of DNA replication factories by modulating PCNA level on the chromatin. *Journal of Cell Biology* 200(1):31-44.
14. Fox, J. T., Lee, K. Y., Myung, K., 2011. Dynamic regulation of PCNA ubiquitylation/ deubiquitylation. *FEBS letter* 585(18):2780-5.
13. Hendel, A., Krijger, P. H., Diamant, N., Goren, Z., Langerak, P., Kim, J., Reißner, T., Lee, K. Y., Geacintov, N. E., Carell, T., Myung, K., Tateishi, S., D'Andrea, A., Jacobs, H., Livneh, Z. 2011. PCNA Ubiquitination Is Important, But Not Essential for Translesion DNA Synthesis in Mammalian Cells. *PLoS Genetics* 7(9):e1002262.
12. Bell, D.W., Lee, K. Y.#, Sikdar, N.#, Price, J.C.#, Chatterjee, R., Park, H-D., Fox, J., Ishiai, M., Rudd, M.L., Pollock, L. M., Fogoros, S. K., Mohamed, H., Hanigan, C. L., NISC Comparative Sequencing Program, Zhang, S., Cruz, P., Renaud, G., Hansen, N. F., Cherukuri, P. F., Borate, B., McManus, K. J., Stoepel, J., Sipahimalani, P., AndGodwin, A. K., Sgroi, D. C., Merino, M. J., Elliot, G., Elkhouloun, A., Vinson, C., Takata, M., Mullikin, J. C., Wolfsberg, T.G., Hieter, P., Lim, D.S., Myung, K., 2011. Predisposition to Cancer Caused by Genetic and Functional Defects of Mammalian Atad5. *PLoS Genetics* 7(8):

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10. Lee, K. Y., Yang, K., Cohn, M. A., Sikdar, N., D'Andrea, A. D., and Myung, K. 2010. Human ELG1 regulates the level of ubiquitinated proliferating cell nuclear antigen (PCNA) through its interactions with PCNA and USP1. *J. Biol. Chem.* 285(14):10362-9.

9. Sikdar, N.#, Banerjee, S.#, Lee, K. Y., Wincovitch, S., Pak, E., Nakanishi, K., Jasin, M., Dutra, A., Myung, K. 2009. DNA damage responses by human ELG1 in S phase are important to maintain genomic integrity. *Cell Cycle* 8(19): 3199-207. (* represent equal contribution).

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3. Ahn, J., Ko, M., Lee, K. Y., Oh, J., Jeon, S. H., Seong, R. H. 2005. Expression of SRG3, a core component of mouse SWI/SNF chromatin-remodeling complex, is regulated by cooperative interactions between Sp1/Sp3 and Ets transcription factors. *Biochem Biophys Res Commun.* 338(3):1435-46.

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1. Ko, M., Jang, J., Ahn, J., Lee, K. Y., Chung, H., Jeon, S. H., Seong, R. H. 2004. T cell receptor signaling inhibits glucocorticoid-induced apoptosis by repressing the SRG3 expression via Ras activation. *J. Biol. Chem.* 279(21):21903-15.