

Curriculum Vitae



Name: First Last, Degree(s) **You Mie Lee, PhD**

EDUCATION / TRAINING

(Begin with baccalaureate or other initial professional education and including postdoctoral training.)

University name/Institute	Degree	Year	Major
Seoul National University/ College of Pharmacy	BS	1985	Pharmacy
Seoul National University/ College of Pharmacy	MS	1987	Toxicology
Seoul National University/ College of Pharmacy	PhD	1996	Toxicology
Tokyo Medical and Dental University/College of Dentistry	Foreign Scientist	1993-1994	Developmental biology
Pusan National University	Post-Doc	1996-2001	Hypoxia-induced angiogenesis
Harvard Medical School, Children's Hospital, Boston	Research fellow	2001-2003	Angiogenesis, Endothelial cell biology

Positions and Honors

- Professional Career

2003.10.1-2005.1.31	Research Professor, College of Medicine Seoul National University
2005.2.1-2011.2.28	Assistant, Associate Professor School of Life Science and Biotechnology College of Natural Sciences Kyungpook National University
2011.3.1-2014.3.31	Associated Professor College of Pharmacy Kyungpook National University
2014.4.1-	Professor, Dean (2013-2014, 2021-2022) College of Pharmacy
2016.10.22 -2017.5.31	Vice President for International Affairs, KNU
2012.9.1-2017.8.31	PI, Basic Research Lab (Vascular Homeostasis Lab)
2020.7.1-	PI, Medical Research Center (Vessel-Organ Interaction Research Center, VOICE)

- Academic Honors

2014	Academic Award for Best Scientist, Kyungpook Nat. Univ.
------	---

Publication List (past 7 years)

1. Lee SH, Hyeon DY, Yoon SH, Jeong JH, Han SM, Jang JW, Nguyen P, Chi XZ, An SJ, Hyun KG, Jung HJ, Song JJ, Bae SC, Kim WH, Hwang DH, **Lee YM**. RUNX3 methylation drives hypoxia-induced cell proliferation and antiapoptosis in early tumorigenesis. *Cell Death & Differentiation*. 29(4): 1251-1269 (2021)
2. Kwon OK, Choe MS, Lee YM, Lee SK, Lee MY. Comparative analysis of protein profiles between wild-type and Runx3 null mouse embryonic stem cells lines. *Journal of Biomedical and Translational Research* 21(3):109-118 (2020)
3. Choi YS, Jang H, Gupta B, Jeong JH, Ge Y, Yong CS, Kim JO, Bae JS, Song IS, Kim IS, **Lee YM**. Tie2-mediated vascular remodeling by ferritin-based protein C nanoparticles confers antitumor and anti-metastatic activities. *J Hematol Oncol*. 2020; 13: 123 (2020)
4. Kwak SH, Stephenson TN, Lee HE, Ge Y, Lee H, Min SM, Kim JH, Kwon DY, **Lee YM***, Hong J*. Evaluation of Manassantin A Tetrahydrofuran Core Region Analogues and Cooperative Therapeutic Effects with EGFR Inhibition. *Journal of Medicinal Chemistry*, 63(13);6821-6833 (2020)
5. Ge Y, Yoon SH, Jang H, Jeong JH, **Lee YM**. Decursin promotes HIF-1 α proteasomal degradation and immune responses in hypoxic tumour microenvironment, *Phytomedicine*. 13(1);123 (2020)
6. Seo AN, Jung Y, Jang H, Lee H, Bae, HI, Son T, Kwon O, Chung HY, Yu W, **Lee YM**. Clinical significance and prognostic role of hypoxia-induced microRNA 382 in gastric adenocarcinoma. *PLoS One* 14(10):e0223608 (2019)
7. Park MH, Kim AK, Manandhar S, Oh SY, Jang GH, Kang L, Lee DW, Hyeon DY, Lee SH, Lee HE, Huh TL, Suh SH, Hwang D, Byun K, Park HC, **Lee YM**. CCN1 interlinks integrin and Hippo pathway to autoregulate tip cell activity. *eLife* 8:e46012 (2019)
8. Byun JK, Park M, Yun JW, Lee J, Kim JS, Cho SJ, **Lee YM**, Lee IK, Choi YK, Park KG. Oncogenic KRAS signaling activates mTORC1 through COUP-TFII-mediated lactate production. *EMBO reports* 20:e47451 (2019)
9. Choo SY, Yoon SH, Lee DJ, Lee SH, Li K, Koo IH, Lee W, Bae SC, **Lee YM**. RUNX3 inhibits endothelial progenitor cell differentiation and function via suppression of HIF-1 α activity. *Int J Oncol*. 54(4);1327-1336 (2019)
10. Seok J, Yoon SH, Lee SH, Jung JH, **Lee YM**. The oncometabolite d-2-hydroxyglutarate induces angiogenic activity through the vascular endothelial growth factor receptor 2 signaling pathway. *Int J Oncol*. 54(2):753-763 (2019)
11. Islam SU, Lee JH, Shehzad A, Ahn EM, **Lee YM**, Lee YS. Decursinol Angelate Inhibits LPS-Induced Macrophage Polarization through Modulation of the NF κ B and MAPK Signaling Pathways. *Molecules*. 27, 23(8) (2018)
12. Thapa RK, Soe ZC, Ou W, Poudel K, Jeong JH, Jin SG, Ku SK, Choi HG, **Lee YM***, Yong CS*, Kim JO*. Palladium nanoparticle-decorated 2-D graphene oxide for effective photodynamic and photothermal therapy of prostate solid tumors. *Colloids Surf B Biointerfaces*, 169, 429-437 (2018)
13. Manandhar S, **Lee YM**. Emerging role of RUNX3 in the regulation of tumor microenvironment. *BMB Rep*. 51(4) 174-181 (2018)
14. Choi J, **Lee YM**, Jee JG. Thiopurine Drugs Repositioned as Tyrosinase Inhibitors. *Int J Mol Sci*. 19(1) pii:E77 (2018)
15. Park K, Lee HE, Lee SH, Lee D, Lee T, **Lee YM**. Molecular and functional evaluation of a novel HIF inhibitor, benzopyranyl 1,2,3-triazole compound. *Oncotarget*, 9(41) 70521-70537 (2017)
16. Lee SH, Manandhar S, **Lee YM**. Roles of RUNX in Hypoxia-Induced Responses and Angiogenesis. *Adv in Exp Med Biol*. 962: 449-469 (2017)
17. Byun JK, Choi YK, Kim JH, Jeong JY, Jeon HJ, Kim MK, Hwang I, Lee SY, **Lee YM**, Lee IK, Park KG. Positive Feedback Loop between Sestrin2 and mTORC2 Is Required for the Survival of Glutamine-Depleted Lung Cancer Cells. *Cell Rep* 20(3) 586-599 (2017)

18. Kim JH, Bae KH, Byun JK, Lee S, Kim JG, Lee IK, Jung GS, **Lee YM**, Park KG. Lactate dehydrogenase-A is indispensable for vascular smooth muscle cell proliferation and migration. *Biochem Biophys Res Commun* 492(1) 41-47 (2017)
19. Lee SH, Jung YD, Choi YS, **Lee YM**. Targeting of RUNX3 by miR-130a and miR-495 cooperatively increase cell proliferation and tumor angiogenesis in gastric cancer cells. *Oncotarget*, 6(32) 33269-78, (2015)
20. Lee W, Seo J, Kwak S, Park EJ, Na DH, Kim S, **Lee YM**, Kim IS, Bae JSA double-chambered protein nanocage loaded with thrombin receptor agonist peptide (TRAP) and γ -carboxyglutamic acid of protein C (PC-Gla) for sepsis treatment. *Adv. Mater.*, 27(42) 6637-6643 (2015)
21. Kwon DY, Lee HE, Weitzel DH, Park K, Lee SH, Lee CT, Stephenson TN, Park H, Fitzgerald MC, Chi JT, Mook RA Jr, Dewhirst MW, **Lee YM***, Hong J*. Synthesis and biological evaluation of Manassantin analogues for hypoxia-inducible factor 1 α inhibition. *J Med Chem.* 58(19) 7659-71 (2015) *Co-corresponding
22. Nguyen MP, Lee D, Lee SH, Lee HE, Lee HY, **Lee YM**. Deguelin inhibits vasculogenic function of endothelial progenitor cells in tumor progression and metastasis via suppression of focal adhesion. *Oncotarget*, 6(18) 16588-1660 (2015)
23. Lee SH, Jee JG, Bae JS, Liu KH, **Lee YM**. A group of novel HIF-1 α inhibitors, glyceollins, blocks HIF-1 α synthesis and decreases its stability via inhibition of the PI3K/AKT/mTOR pathway and Hsp90 binding. *J Cell Physiol.* 230(4) 835-862 (2015)
24. Seok JK, Lee SH, Kim MJ, **Lee YM**. MicroRNA-382 induced by HIF-1 α is an angiogenic miR targeting the tumour suppressor phosphatase and tensin homolog *Nucleic Acid Research* 42(12) 8062-72 (2014).
25. Choi JH, Nguyen MP, Lee DJ, Oh GT, **Lee YM**. Hypoxia-Induced Endothelial Progenitor Cell Function Is Blunted in Angiotensinogen Knockout Mice. *Mol Cell* 37(6) 487-496 (2014)
26. Lee SH, Bae SC, Kim KW, **Lee YM**. RUNX3 inhibits hypoxia-inducible factor-1 α protein stability by interacting with prolyl hydroxylases in gastric cancer cells. *Oncogene* 33 (11), 1458-1467 (2014)
27. YS Lee, JW Lee, JW Jang, XZ Chi, JH Kim, YH Li, MK Kim, DM Kim, BS Choi, EG Kim, JH Chung, OJ Lee, **YM Lee**, JW Suh, LS Chuang, Y Ito, SC Bae Runx3-inactivation is a crucial early event for lung adenocarcinoma development. *Cancer Cell*, 24, 603-616 (2013)
28. Choi JH, Nguyen MP, Jung SY, Kwon SM, Jee JG, Bae JS, Lee S, Lee MY, **Lee YM**. Inhibitory effect of glyceollins on vasculogenesis through suppression of endothelial progenitor cell function *Molecular Nutrition & Food Research* 57(10):1762-1771 (2013)
29. Lee SH, Lee J, Jung MH, **Lee YM**. Glyceollins, a novel class of soy phytoalexins, inhibit angiogenesis by blocking the VEGF and bFGF signaling pathway. *Molecular Nutrition & Food Research* 57, 225-234 (2013)

Specialty and Present Interest

Topic #1: Hypoxia-induced angiogenesis and HIF-1 stability in tumor progression and metastasis

Topic #2: Role of endothelial cells in tissue microenvironment in disease development

Topic #3: Silencing mechanism of tumor suppressors in hypoxia