CURRICULUM VITAE

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Eun-Woo Lee, Ph.D.

Contact Information

Address Metabolic Regulation Research Center,
Korea Research Institute of Bioscience & Biotechnology (KRIBB),
125 Gwahak-ro, Yuseong-gu, Daejeon 34141, Korea

Telephone (Office) +82-42-879-4294, (Mobile) +82-10-3254-6744

Email Email: ewlee@kribb.re.kr, propadrum@gmail.com

Education

2011	Ph.D.	Department of Biotechnology and Bioengineering, Sungkyunkwan University, Seoul, Korea Advisor : Dr. Jaewhan Song Thesis : MKRN1 regulates both extrinsic and intrinsic apoptosis
2007	M.S.	Department of Biotechnology and Bioengineering, Sungkyunkwan University, Seoul, Korea Advisor : Dr. Jaewhan Song Thesis : The Roles of Jab1 and MKRN1 on the Post-translational Regulation of p53
2005	B.S.	Department of Food Science and Biotechnology, Sungkyunkwan University, Seoul, Korea

Professional Experience

03.2019 - Present	Senior Researcher at Korea Research Institute of Bioscience & Biotechnology (KRIBB)
11. 2016 – 02.2019	Researcher at Korea Research Institute of Bioscience & Biotechnology (KRIBB)
09. 2011 - 11. 2016	Postdoctoral Fellow at Yonsei University (supervisor: Jaewhan Song)
03. 2015 - 07.2015	Visiting Scientist at VIB-Ghent University, Belgium (Supervisor: Peter Vandenabeele)
03. 2009 - 02. 2012	Alternative military service as a Ph.D. candidate at Sungkyunkwan University

Fellowship and Awards

10. 2015	The excellent presentation award, 2015 KSMCB Annual Meeting, Seoul, Korea
10. 2014	ECDO Best Poster Award, 2014 22th ECDO Euroconference on Apoptosis, Greece
10. 2013	The excellent presentation award, 2013 KSMCB Annual Meeting, Seoul, Korea
09. 2013	ECDO Best Poster Award, 2013 21th ECDO Euroconference on Apoptosis, France
05. 2012	The excellent presentation award, 2012 KSBMB Annual Meeting, Seoul, Korea
2011.09-2012.08	Brain Korea (BK 21) Scholarship for Post-Doc

Publications

1. Jeong, M.[*], Seong, D.[*], Seo, J., Shin J.Y., Lee, J.Y., Nam, Y.W., Jo, J.Y., Lee, H., Kim, H.J., Oh, J.H., Ha, S.J., Kim. W., Cheong, J.W., Bae, K.H., Lee, S.C., Oberst, A., Vandenabeele, P., Shin, D.H., **Lee, E.W.[**],** Song, J.[**] Identification of c-MYC as an anti-necroptotic protein that stifles RIPK1-RIPK3 complex formation. *In revision.* **(**Co-corresponding author)**
2. Park, T.J. [*], Park, J.H. [*], Lee, G.S., Lee, J.Y., Shin, J.H., Kim, M.W., Kim, Y.S., Kim, J.Y., Oh, K.J., Han, B.S., Kim, W.K., Ahn, Y., Moon, J.H., Song, J., Bae, K.H., Kim, D.H. [**], **Lee, E.W.**[**], Lee, S.C. [**] Quantitative proteomic analyses reveal that GPX4 downregulation during myocardial infarction contributes to ferroptosis in cardiomyocytes. *Cell Death Dis.* (Accepted) **(**Co-corresponding author)**
3. Yun, H.Y.[*], Kim, M.W[*]., Lee, H.S., Kim, W., Shin, J.H., Kim, H., Shin, H.C., Park, H., Oh, B.H., Kim, W.K., Bae, K.H., Lee, S.C., **Lee, E.W.**[**], Ku, B.[**], Kim, S.J.[**] Structural basis for recognition of the tumor suppressor protein PTPN14 by the oncoprotein E7 of human papillomavirus. PLoS Biol. 17, e3000367-e3000367 (2019). **(**Co-corresponding author)**
4. Lee, S., Lee, J.Y., **Lee, E.W.**, Park, S., Kang, D.H., Min, C., Lee, D.J., Kang, D., Song, J., Kwon, J. & Kang, S.W. Absence of Cytosolic 2-Cys Prx Subtypes I and II Exacerbates TNF-α-Induced Apoptosis via Different Routes. *Cell Reports* **26**, 2194-2211.e2196 (2019).
5. Kim, J.S., Kim, W.K., Oh, K.J., **Lee, E.W.**, Han, B.S., Lee, S.C. & Bae, K.H. Protein Tyrosine Phosphatase, Receptor Type B (PTPRB) Inhibits Brown Adipocyte Differentiation through Regulation of VEGFR2 Phosphorylation. *J. Microbiol. Biotechnol.* **29**, 645-650 (2019).
6. Seo, J., Kim, M.W., Bae, K.H., Lee, S.C., Song, J., **Lee, E.W.**[*] The roles of ubiquitination in extrinsic cell death pathways and its implications for therapeutics. *Biochem. Pharmacol.* **162**, 21-40 (2019). [*]**Corresponding author**
7. Seo, J., **Lee, E.W**., Shin, J., Seong, D., Nam, Y.W., Jeong, M., Lee, S.H., Lee, C., Song, J. K6 linked polyubiquitylation of FADD by CHIP prevents death inducing signaling complex formation suppressing cell death. *Oncogene* 37, 4994-5006 (2018).
8. Lee, H.K., **Lee, E.W.**, Seo, J., Jeong, M., Lee, S.H., Kim, S.Y., Jho, E.H., Choi, C.H., Chung, J.Y. & Song, J. Ubiquitylation and degradation of adenomatous polyposis coli by MKRN1 enhances Wnt/β-catenin signaling. *Oncogene* 37, 4273-4286 (2018).
9. Jeong, A.L., Ka, H.I., Han, S., Lee, S., **Lee, E.W**., Soh, S.J., Joo, H.J., Sumiyasuren, B., Park, J.Y., Lim, J.S., Park, J.H., Lee, M.S. & Yang, Y. Oncoprotein CIP2A promotes the disassembly of primary cilia and inhibits glycolytic metabolism. *EMBO reports* 19, e45144 (2018).
10. Kim, J.H., Seo, D., Kim, S.J., Choi, D.W., Park, J.S., Ha, J., Choi, J., Lee, J.H., Jung, S.M., Seo, K.W., **Lee, E.W**., Lee, Y.S., Cheong, H., Choi, C.Y. & Park, S.H. The deubiquitinating enzyme USP20 stabilizes ULK1 and promotes autophagy initiation. *EMBO reports* 19, e44378 (2018).
11. **Lee, E.W**., Oh, W., Song, H.P. & Kim, W.K. Phosphorylation of p53 at threonine 155 is required for Jab1-mediated nuclear export of p53. *BMB reports* 50, 373-378 (2017).
12. Byun, S.K., An, T.H., Son, M.J., Lee, D.S., Kang, H.S., **Lee, E.W**., Han, B.S., Kim, W.K., Bae, K.H., Oh, K.J. & Lee, S.C. HDAC11 Inhibits Myoblast Differentiation through Repression of MyoD-

Dependent Transcription. *Mol. Cells* 40, 667-676 (2017).

13. Martens, S., Jeong, M., Tonnus, W., Feldmann, F., Hofmans, S., Goossens, V., Takahashi, N., Bräsen, J.H., **Lee, E.W**., Van der Veken, P., Joossens, J., Augustyns, K., Fulda, S., Linkermann, A., Song, J. & Vandenabeele, P. Sorafenib tosylate inhibits directly necrosome complex formation and protects in mouse models of inflammation and tissue injury. *Cell Death Dis*. 8, e2904-e2904 (2017).
14. Kim, J.H., Shin, S., Seo, J., **Lee, E.W**., Jeong, M., Lee, M.S., Han, H.J. & Song, J. C-terminus of HSC70-Interacting Protein (CHIP) Inhibits Adipocyte Differentiation via Ubiquitin- and Proteasome-Mediated Degradation of PPARgamma. *Sci. Rep*. 7, 40023 (2017).
15. Seo, J[*]., **Lee, E.W**[*]., Sung, H., Seong, D., Dondelinger, Y., Shin, J., Jeong, M., Lee, H.K., Kim, J.H., Han, S.Y., Lee, C., Seong, J.K., Vandenabeele, P. & Song, J. CHIP controls necroptosis through ubiquitylation- and lysosome-dependent degradation of RIPK3. *Nat. Cell Biol*. 18, 291 (2016). **([*]Co-first author)**
16. Seo, J., **Lee, E.W**. & Song, J. New role of E3 ubiquitin ligase in the regulation of necroptosis. *BMB reports* 49, 247-248 (2016).
17. Jeong, M., **Lee, E.W**., Seong, D., Seo, J., Kim, J.H., Grootjans, S., Kim, S.Y., Vandenabeele, P. & Song, J. USP8 suppresses death receptor-mediated apoptosis by enhancing FLIPL stability. *Oncogene* (2016).
18. **Lee, E.W**., Seong, D., Seo, J., Jeong, M., Lee, H.K. & Song, J. USP11-dependent selective cIAP2 deubiquitylation and stabilization determine sensitivity to Smac mimetics. *Cell Death Differ.* (2015).
19. **Lee, E.W**. & Song, J. USP11: A key regulator of cIAP2 stability and sensitivity to SMAC mimetics. *Mol. Cell. Oncol*. 3, e1029829-e1029829 (2015).
20. Kim, J.H., Park, K.W., **Lee, E.W**., Jang, W.S., Seo, J., Shin, S., Hwang, K.A. & Song, J. Suppression of PPARgamma through MKRN1-mediated ubiquitination and degradation prevents adipocyte differentiation. *Cell Death Differ*. 21, 594-603 (2014).
21. Park, E.J., Zahari, N.E., **Lee, E.W**., Song, J., Lee, J.H., Cho, M.H. & Kim, J.H. SWCNTs induced autophagic cell death in human bronchial epithelial cells. *Toxicol. In Vitro* 28, 442-450 (2014).
22. Lee, M.S., Seo, J., Choi, D.Y., **Lee, E.W**., Ko, A., Ha, N.C., Yoon, J.B., Lee, H.W., Kim, K.P. & Song, J. Stabilization of p21 (Cip1/WAF1) following Tip60-dependent acetylation is required for p21-mediated DNA damage response. *Cell Death Differ* 20, 620-629 (2013).
23. Hwang, Y.J., **Lee, E.W**., Song, J., Kim, H.R., Jun, Y.C. & Hwang, K.A. MafK positively regulates NF-kappaB activity by enhancing CBP-mediated p65 acetylation. *Sci. Rep*. 3, 3242 (2013).
24. Park, E.J., Choi, D.H., Kim, Y., **Lee, E.W**., Song, J., Cho, M.H., Kim, J.H. & Kim, S.W. Magnetic iron oxide nanoparticles induce autophagy preceding apoptosis through mitochondrial damage and ER stress in RAW264.7 cells. *Toxicol. In Vitro* 28, 1402-1412 (2014).
25. **Lee, E.W**., Kim, J.H., Ahn, Y.H., Seo, J., Ko, A., Jeong, M., Kim, S.J., Ro, J.Y., Park, K.M., Lee, H.W., Park, E.J., Chun, K.H. & Song, J. Ubiquitination and degradation of the FADD adaptor protein regulate death receptor-mediated apoptosis and necroptosis. *Nat. Commun.* 3, 978 (2012).
26. **Lee, E.W**., Seo, J., Jeong, M., Lee, S. & Song, J. The roles of FADD in extrinsic apoptosis and necroptosis. *BMB reports* 45, 496-508 (2012).
27. Ko, A., Shin, J.Y., Seo, J., Lee, K.D., **Lee, E.W**., Lee, M.S., Lee, H.W., Choi, I.J., Jeong, J.S., Chun, K.H. & Song, J. Acceleration of Gastric Tumorigenesis Through MKRN1-Mediated Posttranslational

Regulation of p14ARF. *J. Natl. Cancer Inst.* 104, 1660-1672 (2012).

28. Oh, W*., **Lee, E.W.***, Lee, D., Yang, M.R., Ko, A., Yoon, C.H., Lee, H.W., Bae, Y.S., Choi, C.Y. & Song, J. Hdm2 negatively regulates telomerase activity by functioning as an E3 ligase of hTERT. *Oncogene* 29, 4101-4112 (2010). ***Co-first author**
29. Ko, A., **Lee, E.W.**, Yeh, J.Y., Yang, M.R., Oh, W., Moon, J.S. & Song, J. MKRN1 induces degradation of West Nile virus capsid protein by functioning as an E3 ligase. *J. Virol*. 84, 426-436 (2010).
30. **Lee, E.W**., Lee, M.S., Camus, S., Ghim, J., Yang, M.R., Oh, W., Ha, N.C., Lane, D.P. & Song, J. Differential regulation of p53 and p21 by MKRN1 E3 ligase controls cell cycle arrest and apoptosis. *EMBO J*. 28, 2100-2113 (2009).
31. Oh, W., Ghim, J., **Lee, E.W**., Yang, M.R., Kim, E.T., Ahn, J.H. & Song, J. PML-IV functions as a negative regulator of telomerase by interacting with TERT. *J. Cell Sci*. 122, 2613-2622 (2009).
32. Lee, E.W., Lee, S. & Song, J. Jab1 has negative effects on p53-mediated genotoxic stresses. *BMB Rep* 42, 299-303 (2009).gksrnr
33. Yang, M.R., Lee, S.R., Oh, W., **Lee, E.W**., Yeh, J.Y., Nah, J.J., Joo, Y.S., Shin, J., Lee, H.W., Pyo, S. & Song, J. West Nile virus capsid protein induces p53-mediated apoptosis via the sequestration of HDM2 to the nucleolus. *Cell. Microbiol*. 10, 165-176 (2008).
34. Oh, W., Yang, M.R., **Lee, E.W**., Park, K.M., Pyo, S., Yang, J.S., Lee, H.W. & Song, J. Jab1 mediates cytoplasmic localization and degradation of West Nile virus capsid protein. *J. Biol. Chem*. 281, 30166-30174 (2006).
35. **Lee, E.W**., Oh, W. & Song, J. Jab1 as a mediator of nuclear export and cytoplasmic degradation of p53. *Mol. Cells* 22, 133-140 (2006).
36. Oh, W*., **Lee, E.W***., Sung, Y.H., Yang, M.R., Ghim, J., Lee, H.W. & Song, J. Jab1 induces the cytoplasmic localization and degradation of p53 in coordination with Hdm2. *J. Biol. Chem*. 281, 17457-17465 (2006). ***Co-first author**

Oral presentations at the international meetings

05. 2018 International Cell Death Society Meeting 2018, Seoul, Korea. “Post-translational control of RIPK3 in necroptosis”

05. 2016 2016 KSBMB International Conference, Seoul, Korea “Regulation of necroptosis by the ubiquitin signaling”

04. 2016 10th European Workshops on Cell Death, Fiuggi, Italy “Crosstalk between necroptosis signalling and oncogenic signalling”

10. 2013 2013 KSMCB Annual Meeting, Seoul, Korea. “Ubiquitination and degradation of the FADD adaptor protein regulate death receptor-mediated apoptosis and necroptosis.”

Poster presentations at the international meetings

11. 2017 25th ECDO Euroconference on Apoptosis, Leuven, Belgium. “CHIP controls necroptosis through Ubiquitylation- and Lysosome-Dependent Degradation of RIPK3”

05. 2015 15th International TNF meeting, Ghent, Belgium. “USP11-dependent selective cIAP2

deubiquitylation and stabilization determine sensitivity to Smac mimetics"

10. 2014 22th ECDO Euroconference on Apoptosis, Crete, Greece. "Deubiquitylation-mediated Stabilization of cIAP2 by USP11 Controls BV6-mediated Apoptosis"

09. 2013 21th ECDO Euroconference on Apoptosis, Paris, France. "Ubiquitination and degradation of the FADD adaptor protein regulate death receptor-mediated apoptosis and necroptosis."

04. 2013 COLD SPRING HARBOR ASIA CONFERENCES "Mechanisms and Functions of Non-apoptotic Cell Death", Suzhou, China. "Ubiquitination and degradation of the FADD adaptor protein regulate death receptor-mediated apoptosis and necroptosis."

01. 2012 The EACR conference on Cell Death in Cancer, Amsterdam, Netherlands. "Ubiquitination and degradation of the FADD adaptor protein regulate death receptor-mediated apoptosis and necroptosis."

09.2010. The 15th International p53 Workshop, Philadelphia, USA. "Differential regulation of p53 and p21 by MKRN1 E3 ligase controls cell cycle arrest and apoptosis."