

# 강사 소개

## 개인정보

- ▶ 성명: 김석조
- ▶ 소속: 디티앤씨알오 사업전략팀 상무이사 / AI PDO Institute 연구소장  
성균관대학교 기초과학연구원 책임연구원 /  
영문교정 이나고 아카데미 컨설턴트



## 하이라이트

- ▶ 글로벌 바이오 R&BD 융합 리더십
  - 전주기 통합 역량: 연구개발(R&D) 단계에서 시작해 사업개발(BD)을 실행하고 성과를 도출하는 통합적 리더십 보유.
  - 글로벌 커리어: 미국 Northwestern 및 Michigan 의과대학 연구교수와 국내 바이오 기업 연구소장 및 본부장 역임.
  - 글로벌 네트워크: 11년 이상의 한인 과학자 네트워크 창설 및 회장 활동, 미시간대 류마티스내과 겸임교수 등 탄탄한 인적 자산 확보.
- ▶ IR 전략기획, 자금 조달 및 대외 협력
  - 성공적인 자금 유치: 2026년 2월, 200억 원 규모의 전환사채(CB) 발행 및 자금 조달 주도.
  - 글로벌 IR 실행: JP Morgan Healthcare Conference(San Francisco, 2023)에서 직접 기업 IR 및 파트너링 진행.
  - 신규 비즈니스 창출: Sanofi, Takeda 등 글로벌 기업과 직접 파트너십을 구축하고 독일 프라운호퍼 컨소시엄 국제 공동연구 선정.
- ▶ 바이오-AI 신기술 전략 및 과제 수주
  - 혁신 기술 기획: FDA 관인 NAMs(동물대체시험) 기반 Humanized Mice 및 암 오가노이드 CRO 서비스 전략 수립 주도.
  - AI-Bio 융합: 인공지능 비임상 플랫폼을 활용하여 타겟 발굴에서 신약 전주기 전략 수립 지원 가능.
  - 대규모 과제 수행: 미국 NIH-R21 PI(연구책임자) 경험을 포함하여 국내외 정부 과제 30건 이상 체결 및 수주.
- ▶ 교육 및 인재 양성 리더십 (Talent Management)
  - 차세대 인재 교육: 재직자 대상 바이오의약품 마케팅 전략수립 / 인허가 실무 / AI 및 빅데이터 강의를 수행
  - 바이오 전공 학부 특강: 성균관대 생명과학과, 응용생명공학부, 인천대 바이오 비즈니스론, 한성대 경력개발 강연 등 진행.
  - 사내 교육 체계 구축: Dt&CRO 아카데미를 개설하여 신약개발 전 주기 강연회(8강) 총괄
  - 지식 전수 및 멘토링: 학부생, 교수진, 임직원을 대상으로 100건 이상의 1:1 멘토링을 수행하며 조직 내 커리어 개발 지원.
  - 학술적 기여: SCIE 급 논문 35건 이상 게재 및 50건 이상의 Peer-reviewer 참여, 다수의 논문 작성 및 경력 개발 강연 실시.
- ▶ 조직 구축 및 실무 전문성
  - 연구소 설립: 디티앤씨알오의 AI-PDO Institute 를 포함하여 총 4회의 연구소 설립 및 조직 구축 완수.
  - M&A 및 특허 전략: 그룹 계열사의 독일 기업 M&A 최종 승인 프로세스 참여 및 IP R&D 를 통한

## 글로벌 IP 스타기업 골드등급 확보 기여

### 핵심 키워드

#R&BD 리더십 #IR #자금조달 #AI\_바이오 #NAMs #인재양성 #바이오향약품특강 #조직구축전문가

### 경력사항 (총 20년, 현재 포지션은 bold로 작성)

기간	기관 / 부서 / 직위 직책 (재직기간)
2026.01~ 현재	<b>디티앤씨알오(주) / 사업전략팀, AI-PDO Institute / 상무이사, 연구소장</b>
2026.03~ 현재	<b>인천광역시경제자유구역청 평가위원회 위원</b>
2025.01~ 2025.12	디티앤씨알오(주) / 사업전략팀 / 이사
2023.06 ~ 2024.12	몬드리안에이아이(주) / AI 기업부설연구소 / 연구전략 총괄 이사 (1년 7개월)
2023.05 ~ 현재	<b>성균관대학교 / 기초과학연구원 / 책임연구원 (2년 11개월)</b>
2021.07 ~ 2025.12	<b>미시간대학교 / 류마티스내과 / 겸임교수 4년 6개월</b>
2022.01 ~ 현재	<b>대한독성유전단백체학회 / 상임이사 (학술임원) (4년 3개월)</b>
2021.08 ~ 2023.03	SCM 생명과학(주) / 연구사업혁신개발본부 / 본부장, 연구소장겸 (상무이사) (1년 10개월)
2020.09 ~ 2023.12	미시간대학교 / 피부질환센터 / 멤버 (2년43개월)
2020.09 ~ 2021.06	미시간대학교 / 류마티스내과 / 연구교수 (9개월)
2014.05 ~ 2020.08	노스웨스턴대학교 / 호흡기내과 / 연구교수 (6년 3개월)
2013.04 ~ 현재	<b>노스웨스턴대학교 한인과학자협회 / 회장, 설립자 (11년 6개월)</b>
2012.06 ~ 2014.04	노스웨스턴대학교 / 호흡기내과 / Postdoc (1년 10개월)
2010.08 ~ 2012.05	일리노이주립대학교 / 약리학부 폐혈관센터 / Postdoc (1년 9개월)
2010.03 ~ 2010.07	동아대학교 / BK21 바이오실버사업단 / Postdoc (5개월)
2006.03 ~ 2010.02	성균관대학교 / 생명과학과 당생물학연구실 / 연구실장 (4년)

### 학력사항

- ▶ 2007.03 ~ 2010.02 동아대학교 대학원 / 의생명과학 / 박사 (4.35/4.5)
- ▶ 2005.03 ~ 2007.02 동아대학교 대학원 / 생명공학 / 석사 (4.48/4.5)
- ▶ 1998.03 ~ 2005.02 동아대학교 / 생물공학 / 학사 (4.28/4.5, 학부수석졸업)
- ▶ 1995.03 ~ 1998.02 부산 대동고등학교

### 영어능력

- ▶ 신약개발 연구개발 (국내외 영어 구두발표 등) 및 사업개발 (기업 IR, 파트너링 등) 영어 상급

### 교육이수 및 수상내역

- ▶ 2023.12 챌린지 어워드 수상 (몬드리안에이아이)
- ▶ 2023.10 2023년 인텔리전스 대상'에서 지능형 스타트업 부문 대상 수상 기여 (몬드리안에이아이)
- ▶ 2022.01, 2023.01 인천 글로벌 IP 스타기업 연차평가 두차례 골드등급 기여 (에스씨엠생명과학)
- ▶ 2019.09 미국국립보건원 노화연구소 NIH-R21 과제 수주
- ▶ 2016.04 Oral Abstract Award, 2016 Combined Annual Meeting of CSCTR and MWAfMR (Central Society for

Clinical and Translational Research)

- ▶ 2013.04 Best Poster Award, 2013 Lung Research Symposium (노스웨스턴 의과대학 호흡기내과)
- ▶ 2009. 11 Good Thesis Award (동아대학교 농생명과학 연구센터)
- ▶ 2005.03 대학원 전액장학생 (동아대학교 일반대학원)
- ▶ 2005.02 학부수석졸업 (동아대학교 생명자원과학대학부)
- ▶ 2003-2004 2,3 학년 전액 장학생 (동아대학교)

연구논문

1. Kim SJ, Kim HD, Park CG, Kim DM, Chang YC, Varga J and Kim CH. Gut microbiome bioproduct, trimethylamine-N-oxide: human disease inducer of cancer and metabolic syndrome. *In preparation.*
2. Reyfman PA, Malsin ES, Khuder B, Joshi N, Gadhvi G, Flozak AS, Carns MA, Aren K, Goldberg IA, **Kim SJ**, Alexander M, Sporn PHS, Misharin AV, Budinger GRS, Lam AP, Hinchcliff M, Gottardi CJ, Winter DR.. "A Novel MIP-1 Expressing Macrophage Subtype in Bronchoalveolar Lavage Fluid from Healthy Volunteers". (*Am J Respir Cell Mol Biol.* 2022 Sep 29, doi: 10.1165/rcmb.2021-0123OC. Online ahead of print.)
3. **Kim SJ**, Bale S, Verma P, Wan Q, Ma F, Gudjonsson JE, Hazen SL, Harms PW, Tsou PS, Khanna D, Tsoi LC, Gupta N, Ho KJ, Varga J. "Gut microbial metabolite TMA promotes fibrosis in systemic sclerosis via its FMO3-mediated metabolism" (*iScience.* 2022 Jun 26;25(7): 104669)
4. \*Paul Cheresh, \*Seok-Jo Kim, Renea Jablonski, Satoshi Watanabe, Ziyang Lu, Monica Chi, Kathryn A Helmin, David Gius, G.R. Scott Budinger, David W. Kamp. "SIRT3 Overexpression Ameliorates Asbestos-Induced Pulmonary Fibrosis, mtDNA Damage and Lung Fibrogenic Monocyte Recruitment". \*= equal contribution. (*Int J Mol Sci.* 2021 Jun 25;22(13):6856)
5. \*Park WR, \***Kim SJ**, Cheres P, Kamp DW, Kim, DH. "Magnetic nanotransducers regulating mitophagy signaling for remote cancer treatment" \*= equal contribution. (*Biomater Sci.* 2021 Aug 21;9(16):5497-5507.)
6. \*Cheresh P, \***Kim SJ**, Huang LS, Watanabe S, Joshi N, Williams KJN, Chi M, Lu Z, Harijith A, Yeldandi A, Lam AP, Gottardi C, Misharin AV, Budinger GRS, Natarajan V, Kamp DW. "The Sphingosine Kinase 1 Inhibitor, PF543, Mitigates Pulmonary Fibrosis by Reducing Lung Epithelial Cell mtDNA Damage and Recruitment of Fibrogenic Monocytes." (*Int J Mol Sci.* 2020 Aug 5;21(16):5595.) \*= equal contribution.
7. **Kim SJ**, Cheres P, Jablonski RP, Racheck L, Yeldandi A, Piseaux-Aillon R, Ciesilski M, Ridge K, Gottardi CJ, Lam AP, Pardo A, Selman M, Natarajan V, Kamp DW. "Mitochondrial 8-oxoguanine DNA glycosylase mitigates alveolar epithelial cell PINK1 deficiency, mitochondrial DNA damage, apoptosis, and lung fibrosis." (*Am J Physiol Lung Cell Mol Physiol.* 2020 May 1;318(5):L1084-L1096.)
8. Malsin E, **Kim SJ**, Misharin A, Budinger GS, Gottardi CJ and Lam AP. "Macrophages as a source and recipient of Wnt signals". (*Mini-Review of Frontier in Immunology* 2019. 7.18)
9. Suryadevara V, Huang L, **Kim SJ**, Cheres P, Shaaya M, Bandela M, Fu P, Feghali-Bostwick C, Paolo GD, Kamp DW, and Natarajan V. "Role of phospholipase D in bleomycin-induced mitochondrial reactive

oxygen species generation, mitochondrial DNA damage and pulmonary fibrosis" (*Am J Physiol Lung Cell Mol Physiol*. 2019 Aug 1;317(2):L175-L187)

10. Shigemura M, Lecuona E, Angulo M, Homma T, Rodríguez DA, Gonzalez-Gonzalez FJ, Welch L, Amarelle L, **Kim SJ**, Kaminski N, Budinger GRS, Solway J, and Sznajder JI. "High CO<sub>2</sub> increases airway smooth muscle contractility via caspase-7 mediated regulation of miR-133a" (*Science Translational Medicine*, 2018 Sep 5;10(457). pii: eaat1662.)
11. **Kim SJ**, Cheresch P, Jablonski RP, Vaughan DE, Kim DH, Budinger GS, Ridge K, Schumacker P, Kamp DW. "Anti-aging Klotho regulates alveolar epithelial cell mtDNA damage, apoptosis and pulmonary fibrosis" (*AJP-Lung*, 2017; 313(1):L16-L26.)
12. \*Kim YM, \***Kim SJ**, Tatsunami R, Yamamura H, Fukai T, Ushio-Fukai M. "Cross-talk between the Nox4/Nox2 Axis and Mitochondrial ROS in VEGF Signaling and Angiogenesis". \*= equal contribution. (*AJP-Cell*. 2017; 312(6):C749-C764.)
13. \*Jablonski RP, \***Kim SJ**, Cheresch P, Williams DB, Guis D, Varga G, Budinger GS, Ridge K, Schumacker P, Kamp DW. "SIRT3 Attenuates Asbestos-Induced Alveolar Epithelial Cell Mitochondrial DNA Damage, Apoptosis and Pulmonary Fibrosis." \*= equal contribution. (*FASEB J*. 2017; 31(6):2520-2532.)
14. Chung TW, Kim EY, **Kim SJ**, Choi HJ, Jang SB, Kim KJ, Ha SH, Abekura F, Kwak CH, Kim CH, Ha KT. Sialyllactose suppresses angiogenesis by inhibiting VEGFR-2 activation, and tumor progression. (*Oncotarget*. 2017 Mar 14;8(35):58152-58162.)
15. \***Kim SJ**, \*Cheresch P, Jablonski RP, Morales-Nebreda L, Cheng Y, Hogan E, Yeldandi A, Chi M, Piseaux R, Ridge K, Michael Hart C, Chandel N, Scott Budinger GR, Kamp DW. "Mitochondrial catalase overexpressed transgenic mice are protected against lung fibrosis in part via preventing alveolar epithelial cell mitochondrial DNA damage." \*= equal contribution. (*Free Radic Biol Med*. 2016 Dec;101:482-490. )
16. **Kim SJ**, Cheresch P, Jablonski RP, Williams DB, Kamp DW. "The role of mitochondrial DNA in mediating alveolar epithelial cell apoptosis and pulmonary fibrosis". *Int J Mol Sci* 2015 Sep 7;16(9):21486-519. *Invited Review*
17. Cheresch P, Morales-Nebreda L, **Kim SJ**, Yeldandi A, Williams DB, Cheng Y, Mutlu GM, Budinger GS, Ridge K, Schumacker P, Bohr V, Kamp DW "Asbestos-induced pulmonary fibrosis is augmented in 8-oxoguanine DNA glycosylase (ogg1) knockout mice" *Am J Res Cell Mol Biol*. 2015 Jan;52(1):25-36
18. Chung TW, **Kim SJ**, Choi HJ, Song KH, Jin UH, Yu DY, Seong JK, Kim JG, Kim KJ, Ko JH, Ha KT, Lee YC, Kim CH. "Hepatitis B virus X protein specially regulates the sialyl lewis A synthesis among glycosylation events for metastasis". *Mol Cancer*. 2014 Sep 25;13:222.
19. Chung TW, Choi HJ, **Kim SJ**, Kwak CH, Song KH, Jin UH, Chang YC, Chang HW, Lee YC, Ha KT, Kim CH. "The Ganglioside GM3 Is Associated with Cisplatin-Induced Apoptosis in Human Colon Cancer Cells" *PLoS One*. 2014 May 14;9(5):e92786

20. **Kim SJ**, Cheresh P, Williams DB, Cheng Y, Ridge K, Schumacker P, Bohr V, Weitzman S, Kamp DW. "Mitochondria-Targeted Ogg1 and Aconitase-2 Prevent Oxidant-Induced Mitochondrial DNA Damage in Alveolar Epithelial Cells". *J Biol Chem*. 2014 Feb;289(9):6165-76.
21. **Kim SJ**, Chung TW, Choi HJ, Jin UH, Ha KT, Lee YC, Kim CH. Monosialic ganglioside GM3 specifically suppresses the monocyte adhesion to endothelial cells for inflammation. *Int J Biochem Cell Biol*. 2014 Jan;46:32-8
22. Kamp DW, Liu G, Cheresh P, **Kim SJ**, Mueller A, Lam AP, Trejo H, Tulasiram S, Baker S, Ridge K, Chandel NS, and Beri R. Asbestos-induced alveolar epithelial cell apoptosis: Role of endoplasmic stress response. *Am J Respir Cell Mol Biol*. 2013 Dec;49(6):892-901
23. **Kim SJ**, Williams D, Cheresh P, Kamp DW. Asbestos-Induced Gastrointestinal Cancer: An Update. *J Gastrointest Dig Syst*. 2013 Oct;3(3). pii: 135. *Invited Review*
24. Urao N, Sudhakar V, **Kim SJ**, Chen GF, McKinney RD, Kojda G, Fukai T, Ushio-Fukai M. Critical role of endothelial hydrogen peroxide in post-ischemic neovascularization. *PLoS One*. 2013;8(3):e57618.
25. Chung TW, **Kim SJ**, Choi HJ, Kwak CH, Song KH, Suh SJ, Kim KJ, Ha KT, Park YG, Chang YC, Chang HW, Lee YC, Kim CH. CAPE suppresses VEGFR-2 activation, and tumor neovascularization and growth. *J Mol Med (Berl)*. 2013 Feb;91(2):271-82
26. **Kim SJ**, Chung TW, Choi HJ, Kwak CH, Song KH, Suh SJ, Kwon KM, Chang YC, Park YG, Chang HW, Kim KS, Kim CH, Lee YC. Ganglioside GM3 participates in the TGF- $\beta$ 1-induced epithelial-mesenchymal transition of human lens epithelial cells. *Biochem J*. 2013 Jan 1;449(1):241-51.
27. Cheresh P, **Kim SJ**, Tulasiram S, Kamp DW. Oxidative stress and pulmonary fibrosis. *Biochim Biophys Acta*. 2012;1832(7):1028-40. *Invited Review*
28. \*Oshikawa J, \***Kim SJ**, Furuta E, Caliceti C, Chen GF, McKinney R, Fukai T and Ushio-Fukai M. Novel Role of p66shc in ROS-dependent VEGF Signaling and Angiogenesis in Endothelial Cells. *Am J Physiol Heart Circ Physiol*. 2012 Feb 1;302(3):H724-32 \*= equal contribution
29. Kaplan N, Urao N, Furuta E, **Kim SJ**, Razvi M, Nakamura Y, McKinney R, Poole L, Fukai T and Ushio-Fukai M. Sulfenic Acid Formation by Vascular Endothelial Growth Factor: Role in Endothelial Cell Migration and Angiogenesis. *Free Radical Research*. 2011 Oct;45(10):1124-35.
30. Song NR, **Kim SJ**, Kwon HY, Son SW, Kim KS, Ahn HB. Transcriptional activation of human GM3 synthase (hST3Gal V) gene by valproic acid in ARPE-19 human retinal pigment epithelial cells. *BMB REPORTS*. 2011 Jun;44(6):405-9.
31. Kwak YJ, Kim KS, Kim KM, Yu HY, Chung E, **Kim SJ**, Cha JY, Lee YC, Lee JH. Fermented *Viola mandshurica* inhibits melanogenesis in B16 melanoma cells. *Biosci Biotechnol Biochem*. 2011 May 30;75(5):841-7.
32. Kwon HY, **Kim SJ**, Kim CH, Son SW, Kim KS, Lee JH, Do SI, Lee YC. Triptolide downregulates human GD3 synthase (hST8Sia I) gene expression in SK-MEL-2 human melanoma cells. *Exp Mol Med*. 2010 Dec 31;42(12):849 -55.

33. Kim KS, Yao L, Lee YC, Chung E, Kim KM, Kwak YJ, **Kim SJ**, Cui Z, Lee JH. Hyul-Tong-Ryung suppresses PMA-induced MMP-9 expression by inhibiting AP-1-mediated gene expression via ERK1/2 signaling pathway in MCF-7 human breast cancer cells. *Immunopharmacol Immunotoxicol*. 2010 Dec;32(4):600-6.
34. Chung TW, **Kim SJ**, Choi HJ, Kim KJ, Kim MJ, Kim SH, Lee HJ, Ko JH, Lee YC, Suzuki A, Kim CH. Ganglioside GM3 inhibits VEGF/VEGFR-2-mediated angiogenesis: direct interaction of GM3 with VEGFR-2. *Glycobiology*. 2009 Mar;19(3):229-39.
35. Choi HJ, Chung TW, **Kim SJ**, Cho SY, Lee YS, Lee YC, Ko JH, Kim CH. The AP-2alpha transcription factor is required for the ganglioside GM3-stimulated transcriptional regulation of a PTEN gene. *Glycobiology*. 2008 May;18(5):395-407.
36. **Kim SJ**, Choi HJ, Jin UH, Lee YC, Kim CH. Transcriptional regulation of the human Sia-alpha2,3-Gal-beta1,4-GlcNAc-R:alpha2,8-sialyltransferase (hST8Sia III) by retinoic acid in human glioblastoma tumor cell line. *Biochim Biophys Acta*. 2006 Oct;1759(10): 451-7.
37. **Kim SJ**, Chung TW, Jin UH, Suh SJ, Lee YC, Kim CH. Molecular mechanisms involved in transcriptional activation of the human Sia-alpha2,3-Gal-beta1,4-GlcNAc-R:alpha2,8-sialyltransferase (hST8Sia III) gene induced by KCl in human glioblastoma cells. *Biochem Biophys Res Commun*. 2006 Jun 16;344(4):1057-64.
38. Jang MS, Lee YM, Kim CH, Lee JH, Kang DW, **Kim SJ**, Lee YC. Triphenylmethane reductase from *Citrobacter* sp. strain KCTC 18061P: purification, characterization, gene cloning, and overexpression of a functional protein in *Escherichia coli*. *Appl Environ Microbiol*. 2005 Dec;71(12):7955-60
39. Kim JY, Lee YM, Jang MS, Kang DW, **Kim SJ**, Kim CH, Lee YC. Identification of genes required for decolorization of crystal violet in *Citrobacter* sp. MY-5. *J Gen Appl Microbiol*. 2005 Jun;51(3):191-5.

## 세미나 및 학술발표

- |         |  |
|---------|--|
| 9/2013  | <b>Invited Seminar</b> , ' <i>Mitochondria-targeted Ogg1 and aconitase-2 prevent oxidant-induced mitochondrial DNA damage in alveolar epithelial cells</i> ', Center for Mitochondria Hub Regulation, Department of Medicine at Dong-A University, South Korea |
| 9/2013  | <b>Invited Seminar</b> , ' <i>Asbestos-induced alveolar epithelial cell apoptosis in ER and mitochondria</i> ', Institute of Agricultural Biotechnology at Dong-A University, South Korea  |
| 9/2013  | <b>Invited Seminar</b> , ' <i>Critical role of endothelial hydrogen peroxide in post-ischemic neovascularization</i> ', Department of Molecular Biology at Busan National University, South Korea  |
| 11/2013 | <b>Research Seminar (Research in Progress)</b> ' <i>Mitochondria-targeted Ogg1 and</i>   |

- aconitase-2 prevent oxidant-induced mitochondrial DNA damage in alveolar epithelial cells*, Pulmonary & Critical Care Medicine, Northwestern University, Chicago, IL USA
- 9/2014 **Research Seminar**, '*For collaboration: Klotho attenuates oxidant-induced alveolar epithelial cell mtDNA damage and apoptosis*;', Feinberg Cardiovascular Research Institute, Northwestern University, Chicago, IL USA
- 4/2015 **Research Seminar (Research in Progress)**, '*Mitochondrial catalase overexpressed transgenic mice are protected against lung fibrosis in part via preventing alveolar epithelial cell mitochondrial DNA damage*', Pulmonary & Critical Care Medicine, Northwestern University, Chicago, IL USA
- 12/2015 **Research Seminar**, '*Klotho, an antiaging molecule, attenuates oxidant-induced alveolar epithelial cell mtDNA damage and apoptosis*' Feinberg Cardiovascular Research Institute, Northwestern University, Chicago, IL USA
- 12/2016 **Research Seminar**, '*Epigenetic regulation of the Klotho / Miz1 axis in smoking-induced emphysema*;', Feinberg Cardiovascular Research Institute, Northwestern University, Chicago, IL USA
- 12/2016 **Research Seminar (Research in Progress)** '*Antiaging molecules including Klotho and mitochondrial catalase attenuate oxidant-induced alveolar epithelial cell mtDNA damage and apoptosis*' Pulmonary & Critical Care Medicine, Northwestern University, Chicago, IL USA
- 5/2017 **Invited Specialist Seminar**, '*Mitochondrial catalase regulates lung fibrosis in part via preventing alveolar epithelial cell mitochondrial DNA damage*;', Genetic Toxicology Research Group, Department of General and Applied Toxicology, Innovative Toxicology Research Center, Korea Institute of Toxicology (KIT), Daejeon, South Korea
- 5/2017 **Invited Seminar**, '*Antiaging molecules (Sirtuins and Klotho) regulate oxidant-induced alveolar epithelial cell mtDNA damage and apoptosis*;', Well Aging Center, Daegu Gyeongbuk Institute of Science and Technology (DIGIST), Daegu, South Korea
- 5/2017 **Invited Lecture**, '*SIRT3 deficiency promotes lung fibrosis by augmenting alveolar epithelial cell mitochondrial DNA damage and apoptosis*;', Department of Biotechnology at Dong-A University, Busan, South Korea
- 5/2017 **Invited Seminar**, '*The role of mitochondrial DNA in mediating alveolar epithelial cell apoptosis and pulmonary fibrosis*;', Department of Biochemistry, College of Medicine, Dong-A University, Busan, South Korea
- 1/2018 **Research Seminar**, '*Epigenetic regulation of the Klotho / Miz1 axis in smoking-induced emphysema*;', Fibrosis Group Meeting, Northwestern University-Medicine, Chicago, IL USA
- 5/2018 **Research Seminar**, '*Mitochondrial 8-oxoguanine DNA glycosylase mitigates alveolar epithelial cell PINK1 deficiency, mitochondrial DNA damage, apoptosis, and lung*

- fibrosis*', Scientific Breakthroughs 'Andrew Tager Memorial Symposia' of American Thoracic Society International Conference USA
- 7/2019 **Invited Specialist Seminar**, '*New pathway of the epithelial Klotho/Miz1 and myeloid Wnt/ $\beta$ -catenin signaling to lung disease*', Genetic Toxicology Research Group, Department of General and Applied Toxicology, Innovative Toxicology Research Center, Korea Institute of Toxicology (KIT), Daejeon, South Korea
- 7/2019 **Invited Seminar**, '*Which cell is a conductor in lung orchestra?*', Mitohormesis MRC Research Center, Yonsei University Wonju College of Medicine, Wonju, Gangwon-Do, South Korea
- 7/2019 **Invited Seminar**, '*Macrophages as a Source and Recipient of Wnt Signals*', Department of Biological Sciences, Sungkyunwan University, Suwon, Gyeonggi-Do, South Korea
- 7/2019 **Invited Seminar**, '*Mitochondrial 8-oxoguanine DNA glycosylase mitigates alveolar epithelial cell PINK1 deficiency, mitochondrial DNA damage, apoptosis, and lung fibrosis*', Department of Medicinal Biotechnology, Dong-A University, Busan, South Korea
- 7/2019 **URP Business/Technology Exchange Seminar**, '*Exchange of medical advanced cultural technologies in the United States and management of chronic diseases*', Pusan National University Research Park (PNURP), Busan, South Korea
- 9/2019 **Mentoring Lecture**, '*My career, My life in Chicago*', Daegu Gyeongbuk Institute of Science and Technology (DIGIST), Daegu, South Korea
- 9/2019 **Invited Lecture**, '*Epigenetic regulation of the Klotho / Miz1 axis in smoking-induced emphysema*', Heathy Aging Korean Medical Research Center, Busan, South Korea
- 3/2020 **Research Seminar**, '*The Role of mtDNA Klotho in Lung Diseases*', Fibrosis Group Meeting, Northwestern University-Medicine, Chicago, IL USA
- 6/2021 **Research Seminar at Research Conference-Rheumatology**, '*Gut microbe-derived metabolite trimethylamine N-oxide activates PERK to drive mesenchymal differentiation and fibrosis*', University of Michigan-Internal Medicine/Rheumatology, Ann Arbor, MI, USA
- 6/2021 **Research Seminar at Fibrosis Interest Group**, '*Gut microbe-derived metabolite trimethylamine N-oxide activates PERK to drive mesenchymal differentiation and fibrosis*', University of Michigan-Internal Medicine, Ann Arbor, MI, USA
- 11/2021 **17th International Conferences on Toxicogenomics**, '*Gut microbe-derived metabolite trimethylamine N-oxide activates PERK to drive mesenchymal differentiation and fibrosis*', Seoul, Korea
- 03/2022 **Research Seminar at Sungkyunkwan University**, '*Mesenchymal Stem Cell basic research and therapeutic application for the treatment of intractable diseases*', Suwon, Korea

- 04/2022 **IR at Bio Korea 2022 Bio Live, 'Mesenchymal Stem Cell basic research and therapeutic application for the treatment of intractable diseases',** Seoul, Korea
- 08/2022 **Research Seminar at 2022 Korean Society for Stem Cell Research, 'Mesenchymal Stem Cell basic research and therapeutic application for the treatment of intractable diseases',** Seoul, Korea
- 10/2022 **Research Seminar at 2022 The 28<sup>th</sup> Ajou Otology Symposium, Special Lecture-**  
*'From R&BD to clinical trial of mesenchymal stem cell therapy',* Seoul, Korea
- 11/2022 **IR at 2022 R&D-oriented excellent pharmaceutical and bio company IR (IPIR 2022)- 'Development and commercialization of stem cell treatment based on original technology',** Seoul, Korea  
*R&BD to clinical trial of mesenchymal stem cell therapy',* Seoul, Korea
- 1/2023 IR at **Global IR @ JP Morgan 2023, Nasdaq Entrepreneurial Center, San Francisco**  
*(BioCnetury & Sidley Austin LLP & KBio)*
- 5/2023 **Research Seminar at Sungkyunkwan University, Gut microbe-derived metabolite trimethylamine N-oxide activates PERK to drive mesenchymal differentiation and fibrosis',**  
Suwon, Korea
- 11/2023 **Graduated Course Seminar at Sungkyunkwan University, AI and Bio Big data for Digital Bio',** Suwon, Korea
- 5/2024 **Undergraduated Course Seminar at Sungkyunkwan University, The new technology of AI & Bio Big data,** Suwon, Korea
- 6/2024 **Undergraduated Course Seminar at Incheon National University, The Best practice of Business Development at Bio Industry**

#### 공공강연

- 9/2018 **Lung Health seminar, 'Why we shouldn't bother with our lungs',** Chicago Korean Cultural Center, Wheeling, IL, USA
- 7/2024 **2<sup>nd</sup> Bio Healthcare forum at Songdo Biocluster, 'AI, Big Data and Bio-Healthcare',**  
Incheon, Korea
- 11/2024 **1<sup>st</sup> Songdo Bio-consortium symposium, Introduction of Bio bigdata analysis platform**
- 11/2025 **2<sup>nd</sup> Songdo Bio-consortium symposium, New approach to develop NAMs Technology**

#### 논문작성 및 바이오 경력개발 강연

- 1/2020 *Enago-Mastering the Art of Creating Successful Grant Proposals*
- 2/2020 *Enago-Publishing in Medical Journals*

- 3/2020 *Enago*-The Perils of Predatory Publishing and What To Look Out
- 4/2020 *Enago*-Introduction to Academic Publishing with Yeonsei University
- 5/2020 *Enago*-How to write a successful paper with Sungkyunkwan University
- 6/2020 *Enago*-Common Mistakes in Medical Publishing
- 7/2020 *Enago*-How to write a successful paper with Kyungpook Nat. University
- 8/2020 *Enago*-How to write a successful paper with Pusan Nat. University
- 10/2020 *Enago*-Tip for how to write a successful paper with Yeonsei University
- 3/2021 *Enago*-How to Present Supplementary Data for Publication in Top-tier Journals
- 4/2021 *Enago*-How to write the Case report
- 6/2021 *Enago*-Common Errors in Writing a Scientific Abstract and How to Avoid Them
- 7/2021 *Enago*-Result, Discussion & Conclusion: Key Differences & Writing Tips
- 7/2021 *Enago*-Writing a Scientific Abstract with Avoiding Common Errors
- 11/2021 *Enago*-Enago-How to Write an Academic Research Paper with Kyungpook Nat. Univ.
- 12/2021 *Enago*-How to Write an Academic Research Paper I with Korean Univ.
- 12/2021 *Enago*-How to Write an Academic Research Paper II with Korean Univ.
- 5/2022 *Enago*-How to Present at International Conferences
- 7/2022 *Enago*-Tips and Challenges for Submitting Manuscripts for International Journals
- 10/2022 *Enago*-How to Deal With Journal Rejection—Converting a Failure Into an Opportunity with KIST, UNIST, GIST, DGIST
- 05/2022 *Enago*-How to Write an Academic Research Paper for beginner with Kyungpook Nat. Univ.
- 04/2023 *Enago*-How to prepare research presentations for international conferences
- 11/2023 *Enago*-How to Write an Academic Research Paper
- 02/2024 *Enago*-Tips for Overcoming Academic Writing Challenges and Journal Rejections
- 02/2024 *Enago*-How to Handle Journal Rejection
- 05/2024 *Enago*-Ethical Considerations in Scholarly Publishing
- 05/2024 *Han-sung University* - How to develop my career in Bio industry
- 03/2025 *Enago*-Getting Accepted in the Fellowship Application Process: From preparation to interview
- 04/2025 *Incheon National University HRD Center*- Guidance on AI/Big Data Driven Drug Development for Biologics
- 05/2025 *Incheon National University HRD Center*- Biopharmaceutical Development and

Regulatory Affairs Practice

10/2025 *Incheon National University HRD Center-* Guidance on AI/Big Data Driven Drug Development for Biologics

02/2026 *Incheon National University HRD Center-* Developing a Marketing Strategy for Biologics