

# Curriculum Vitae

## 송은선

직위: 대학원생 (석사과정)

소속: 인천대학교 생명과학부 분자의 생명전공

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## 학력

2024. 02. 16 인천대학교 생명과학과 이학석사

2022. 02. 18 인천대학교 분자의 생명전공 이학사

## 경력

03/2022 – present 석사과정, 인천대학교 일반대학원 생명과학과 단백질공학실험실

03/2023 – 06/2023 Teaching experiment classes at Incheon University

03/2022 – 06/2022 Teaching experiment classes at Incheon University

12/2020 – 02/2022 학부연구생, 인천대학교 일반대학원 생명과학과 단백질공학실험실

## 수상

10/2022 Best Poster Award, 14<sup>th</sup> International Symposium on Natural Sciences

02/2022 생화학분자생물학회장상, 생화학분자생물학회

05/2021 DAEWOONG Best Research Award, International Conference 2021 (KSBMB)

## 연구실적 <논문, 제 1 저자>

1. Lee YJ\*, **Song ES**, Lee YH, Lee KS, So B, Park JH, Yoon JH, Kim D, Kim M, Kwon HW, Byun Y†, Lee KY†, Park JT† (Jun 02, 2025) Dehydroacteoside rejuvenates senescence via TVP23C-CDRT4 regulation. (\*: co-first author, †: co-corresponding author) **Experimental Gerontology** 207: 112800
2. **Song ES**, Lee YH, So MK, Kuk MU, Park J, Yoon JH, Lee YJ, Kim D, So B, Byun Y, Kwon HW†, Park JT† (Mar 05, 2024) Establishment of a new promoter trapping vector using 2A peptide. (†: co-corresponding author) **Biotechnology and Bioprocess Engineering** 29(3):520–528
3. **Song ES**, So MK, Park HJ, Lee H, Lee YH, Kuk MU, Park J, Kwon HW, Choi J†, Park JT† (Jul 03, 2023) Chemical screening identifies the anticancer properties of *Polyporous tuberaster*. (†: co-corresponding author) **Journal of Cancer** 14(11): 2075-2084

## 연구실적 <논문, 공동저자>

1. Lee YH, Kuk MU, So MK, Park HJ, **Song ES**, Park J, Yoon JH, Kwon HW†, Choi J†, Park JT† (Nov 14, 2023) *Polyporus ulleungus* mycelia cultured in MEB medium produce metabolites with anticancer property. (†: co-corresponding author) **Journal of Cancer** 10.7150/jca.89059
2. Lee YH\*, Kuk MU\*, So MK, **Song ES**, Lee H, Ahn S, Kwon HW†, Park JT†, Park SC† (Apr 15, 2023) Targeting Mitochondrial Oxidative Stress as a Strategy to Treat Aging and Age-Related Diseases. (\*: co-first author, †: co-corresponding author) **Antioxidants** 12:934
3. Lee H, **Song ES**, Lee YH, Park JY, Kuk MU, Kwon HW, Roh H†, Park JT† (Apr 02, 2023) A novel hybrid promoter capable of continuously producing proteins in high yield. (†: co-corresponding author) **Biochemical and Biophysical Research Communications** 650: 103-108
4. Kuk MU, Lee H, **Song ES**, Lee YH, Park JY, Jeong S, Kwon HW, Byun Y†, Park SC†, Park JT† (Mar 01, 2023) Functional restoration of lysosomes and mitochondria through modulation of AKT activity ameliorates senescence. (†: co-corresponding author) **Experimental Gerontology** 173:112091

5. Lee YH, Kim M, Park HJ, Park JY, **Song ES**, Lee H, Ko G, Ahn S, Kwon HW, Byun Y, Kim C<sup>†</sup>, Choi J<sup>†</sup>, Park JT<sup>†</sup> (Nov 28, 2022) Chemical screening identifies the anticancer properties of *Polyporous parvovarius*. (<sup>†</sup>: co-corresponding author) **Journal of Cancer** 14(1):50-60
6. Park JY, Lee H, **Song ES**, Lee YH, Kuk MU, Ko G, Byun YJ<sup>†</sup>, Kwon HW<sup>†</sup>, Park JT<sup>†</sup> (Dec 31, 2022) Improvement of Tol2 transposon system by modification of Tol2 transposase. (<sup>†</sup>: co-corresponding author) **Biotechnology and Bioprocess Engineering** 27(6): 987-994
7. Kuk MU\*, Ga YJ\*, Kim YJ, Park JY, **Song ES**, Lee H, Lee YH, Ko G, Kim JK, Yeh JY, Kwon HW<sup>†</sup>, Byun YJ<sup>†</sup>, Park JT<sup>†</sup> (Oct 24, 2022) Metabolic reprogramming as a novel therapeutic target for Coxsackievirus B3. (\*: co-first author, <sup>†</sup>: co-corresponding author) **Animal Cells and Systems** 26(6) 275–28
8. Park JY, Lee H, **Song ES**, Lee YH, Kuk MU, Ko G, Kwon HW<sup>†</sup>, Byun YJ<sup>†</sup>, Park JT<sup>†</sup> (Oct 07, 2022) Restoration of lysosomal and mitochondrial function through p38 MAPK inhibition ameliorates senescence. (<sup>†</sup>: co-corresponding author) **Rejuvenation Research** 25(6):291-299
9. Lee YH, Park JY, **Song ES**, Lee H, Kuk MU, Joo JH, Roh H<sup>†</sup>, Park JT<sup>†</sup> (2022) Improvement of Sleeping Beauty transposon system enabling efficient and stable protein production. (<sup>†</sup>: co-corresponding author) **Biotechnology and Bioprocess Engineering** 27(3): 353-360
10. Kuk MU, Park JY, **Song ES**, Lee H, Lee YH, Joo JH, Kwon HW<sup>†</sup>, Park JT<sup>†</sup> (May 24, 2022) Bacterial artificial chromosome-based protein expression platform using the Tol2 transposon system. (<sup>†</sup>: co-corresponding author) **Biotechnology and Bioprocess Engineering** 27(3): 344-352
11. Lee YH, Choi D, Jang G, Park JY, **Song ES**, Lee H, Kuk MU, Joo JH, Ahn SK, Byun Y<sup>†</sup>, Park JT<sup>†</sup> (Jan 30, 2022) Targeting regulation of ATP synthase 5 alpha/beta dimerization alleviates senescence. (<sup>†</sup>: co-corresponding author) **Aging** 14(2):678-707
12. Kuk MU, Lee YH, Kim JW, Hwang SY, Park JY, **Song ES**, Kwon HW<sup>†</sup>, Oh S<sup>†</sup>, Park JT<sup>†</sup> (Dec 31, 2021) Rapid and Efficient BAC Recombineering: Gain & Loss Screening System. (<sup>†</sup>: co-corresponding author) **Biotechnology and Bioprocess Engineering** 26(6): 1023-1033
13. Lee YH, Park JY, Lee H, **Song ES**, Kuk MU, Joo JH, Oh S, Kwon HW<sup>†</sup>, Park JT<sup>†</sup>, Park SC<sup>†</sup> (Nov 03, 2021) Targeting mitochondrial metabolism as a strategy to treat senescence (<sup>†</sup>: co-corresponding author) **Cells**. 10(11): 3003

#### 연구실적 <특허, 등록>

1. 송은선, 최재혁, 임영운, 박준태 (Dec 30, 2025), 항암 활성을 가지는 폴리포루스 튜버래스터 균주 배양방법, 10-2907970 (등록)

#### 연구실적 <특허, 출원>

1. 이유진, 송은선, 권형욱, 임현웅, 변영주, 박준태 (Jun 13, 2024), 피라졸 유도체를 유효성분으로 포함하는 항노화 조성물, 10-2024-0077014 (출원)
2. 이유진, 송은선, 권형욱, 변영주, 이기용, 박준태 (May 03, 2024), 디하드로악테오사이드를 유효성분으로 포함하는 항노화 조성물, 10-2024-0059125 (출원)
3. 송은선, 권형욱, 변영주, 박준태 (Aug 11, 2022), RMCE 랜딩페드, 10-2022-0100663 (출원)

#### 연구실적 <Poster Presentation>

1. **Song ES**, Park JT (2023) Discovery of new endogenous promoters in CHO cells through promoter trapping, 15th International Symposium on Natural Sciences, October 30th ~ October 31th, 2023, Research Institute of Basic Sciences, Incheon National University
2. **Song ES**, Kang KY, Park JT (2023) Natural substances with anticancer activity discovered in fungal extracts, International Conference 2023, May 10 ~ May 13, 2023, 생화학분자생물학회
3. **Song ES**, Kang KY, Park JT (2023) Increased Protein Productivity Through the Use of the RMCE (Recombinase-Mediated Cassette Exchange) System and P2A, International Conference 2023, May 10 ~ May 13, 2023, 생화학분자생물학회

4. **Song ES**, Park JT (2022) Natural substances with anticancer properties discovered in *Polyporus tuberaster* mycelium extract, 14<sup>th</sup> International Symposium on Natural Sciences, October 6<sup>th</sup> ~ October 7<sup>th</sup>, 2022, Research Institute of Basic Sciences, Incheon National University
5. **Song ES**, Park JT (2022) Modification of recombinase-mediated cassette exchange (RMCE) system to increase protein productivity, 14<sup>th</sup> International Symposium on Natural Sciences, October 6<sup>th</sup> ~ October 7<sup>th</sup>, 2022, Research Institute of Basic Sciences, Incheon National University
6. **Song ES**, Park JT (2022) Increased Protein Productivity Through the Use of the RMCE (Recombinase-Mediated Cassette Exchange) System and P2A, 2022 년도 생화학분자생물학회 춘계 국제학술대회, MAY 23<sup>th</sup>~26<sup>th</sup> 2022, 생화학분자생물학회
7. **Song ES**, Park JT (2022) Natural substances with antica,ncer activity discovered in fungal extracts, 2022 년도 생화학분자생물학회 춘계 국제학술대회, MAY 23<sup>th</sup>~26<sup>th</sup> 2022, 생화학분자생물학회
8. **Song ES**, Park JT (2021) Applying the 2A system to the recombinase-mediated cassette exchange (RMCE) system to increase protein productivity, 2021 년도 한국분자·세포생물학회 추계학술대회, NOV 03<sup>th</sup>~05<sup>th</sup> 2021, 한국분자·세포 생물학회
9. **Song ES**, Park JT (2021) Modification of recombinase-mediated cassette exchange (RMCE) system to increase protein productivity, 13<sup>th</sup> International Symposium on Natural Sciences, October 6<sup>th</sup> 2021, Research Institute of Basic Sciences, Incheon National University
10. **Song ES**, Park JT (2021) Modification of recombinase-mediated cassette exchange (RMCE) system to increase protein productivity, 2021 년도 생화학분자생물학회 춘계 국제학술대회, MAY 25<sup>th</sup>~27<sup>th</sup> 2021, 생화학분자생물학회

## 어학성적

TOEIC Speaking IM2