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I. EDUCATION

- 1999 **B.S. Seoul National University, Seoul, KOREA**
- 2005 **Ph.D. Tumor Biology Program.**
Mayo Clinic College of Medicine, Rochester, MN, USA

II. ACADEMIC EMPLOYMENT HISTORY

- 2005 – 2012 Postdoctoral Fellow
Harvard Medical School, Boston, MA, USA
Department of Cell Biology
Advisor: Dr. Daniel Finley
- 2012 – 2019 Assistant Professor
University of Colorado, Boulder, CO, USA
Department of Molecular, Cellular, and Developmental Biology
- 2019 – present Associate Professor
University of Colorado, Boulder, CO, USA
Department of Molecular, Cellular, and Developmental Biology
- 2015 – Present Member
University of Colorado Cancer Center, CO, USA
Cancer Cell Biology Program

III. FELLOWSHIPS AND AWARDS

- 1996 Korean Glass Fellowship to Outstanding Undergraduates
- 1997 Korean Female Pharmacists Fellowship to Outstanding Undergraduates
- 2007 – 2008 NIH F32 Kirschstein-NRSA Individual Postdoctoral Fellowship
(F32 GM075737)
- 2009 – 2011 Charles A. King Trust Postdoctoral Research Fellowship
- 2013 – 2016 Boettcher Foundation Webb-Waring Biomedical Research Award

III. PUBLICATIONS

1. Nahar A[†], Sokolova V[†], Orth JD, and **Park S***. Inducible Regulators of Proteasome Biogenesis Link Ccr4-Not Activities to Protein Degradation (Manuscript in review by Molecular Biology of the Cell, *MS number: E19-12-0714*) [†]Equal contributions.
2. Nahar A, Fu X, Polovin G, and **Park S***. Two Alternative Mechanisms Regulate the Onset of Chaperone-mediated Assembly of the Proteasomal ATPases. *Journal of Biological Chemistry* 2019 Apr 19;294(16):6562-6577.
3. Fu X[†], Sokolova V[†], Webb J, Old W, and **Park S***. Ubiquitin-mediated switch during assembly of the proteasomal ATPases mediated by Not4 ubiquitin ligase. *PNAS*, 115 (52):13246-13251 (2018). [†]Equal contributions.
4. Zukowski A, Phillips J, **Park S***, Wu R, Gygi SP, and Johnson AM*. Proteomic Profiling of Yeast Heterochromatin Connects Direct Physical and Genetic Interactions. *Current Genetics*, Oct 12. doi: 10.1007/s00294-018-0889-6 (2018).
5. Roelofs J, Suppahia A, Waite K, and **Park S***. Native gel approaches in studying Proteasome Assembly and Chaperones. *Methods in Molecular Biology*, 1844:237-260 (2018).
6. Marcus JM, Burke RT, Doak AE, **Park S**, and Orth JD*. Loss of p53 expression in cancer cells alters cell cycle response after inhibition of exportin-1 but does not prevent cell death. *Cell Cycle*, Jul 23:1-16 (2018).
7. Li F, Tian G, Langager D, Sokolova V, Finley D, and **Park S***. A nucleotide-dependent switch in proteasome assembly mediated by the Nas6 chaperone. *PNAS*, 114 (7): 1548–53 (2017).
8. Sokolova V[†], Li F[†], Polovin G, and **Park S***. Proteasome Activation is Mediated via a Functional Switch of the Rpt6 C-terminal Tail Following Chaperone-dependent Assembly. *Scientific Reports [Nature Press]* 5:14909 (2015). [†]Equal contributions
9. **Park S***, Li X[†], Kim HM[†], Singh RC, Tian G, Hoyt MA, Lovell S, Battaile KP, Zolkiewski M, Coffino P, Roelofs P*, Cheng Y*, and Finley D*. Reconfiguration of the proteasome during chaperone-mediated assembly. *Nature* **7450**, 512-6 (2013). [†]Equal contributions
10. Ehlinger A, **Park S**, Fahmy A, Lary J, Cole J, Finley D and Walters KJ*. Conformational Dynamics of the Proteasome ATPase Rpt6 and its Interaction with Rpn14. *Structure* **5**, 753-65 (2013).
11. Tian G, **Park S**, Lee MJ, Huck B, McAllister F, Hill CP, Gygi SP, Finley D*. An asymmetric interface between the regulatory particle and core particle of the proteasome. *Nature Structural & Molecular Biology* **18**, 1259-67 (2011).
12. **Park S**, Kim W, Tian G, Gygi SP, Finley D*. Structural defects in the regulatory particle-core particle interface of the proteasome induce a novel proteasome stress response. *Journal of Biological Chemistry* **286**, 36652-66 (2011).
13. Lee BH[†], Lee MJ[†], **Park S**, Oh DC, Elsasser S, Chen PC, Gartner C, Dimova N, Hanna J, Gygi SP, Wilson SM, King RW, Finley D*. Enhancement of proteasome activity by a small molecule inhibitor of USP14. *Nature* **467**, 179-184 (2010). [†]Equal contributions
 - Research Highlights. Protein degradation: Time for trimming. *Nature Reviews Molecular Cell Biology* **11**, 754-5 (2010).

14. **Park S**, Tian G, Roelofs J, Finley D*. Assembly manual for the proteasome regulatory particle: the first draft. *Biochemical Society Transactions* **38**, 6-13 (2010).
15. **Park S**, Roelofs J, Kim W, Robert J, Schmidt M, Gygi SP, Finley D*. Hexameric assembly of the proteasomal ATPases is templated through their C termini. *Nature* **459**, 866-870 (2009).
- News and Views. The proteasome assembly line. *Nature* **459**, 787-788 (2009).
 - Research Highlights. Protein degradation: Assembly from the base. *Nature Reviews Molecular Cell Biology* **10**, 442-443 (2009).
- These two commentaries feature both #15 paper (Park et al., 2009) and #16 paper (Roelofs et al., 2009).
16. Roelofs J, **Park S**, Haas W, Tian G, McAllister FE, Huo Y, Lee BH, Zhang F, Shi Y, Gygi SP, Finley, D*. Chaperone-mediated pathway of proteasome regulatory particle assembly. *Nature* **459**, 861-865 (2009).
17. Kleijnen MF[†], Roelofs J[†], **Park S**, Hathaway NA, Glickman M, King RW, Finley D*. Stability of the proteasome can be regulated allosterically through engagement of its proteolytic active sites. *Nature Structural & Molecular Biology* **14**, 1180-1188 (2007). [†]Equal contributions
- Research Roundup. A chewing proteasome is stabilized. *Journal of Cell Biology* **179**, 1086 (2007).
18. Smith DM, Chang SC, **Park S**, Finley D, Cheng Y, Goldberg AL*. Docking of the proteasomal ATPases' carboxyl termini in the 20S proteasome's alpha ring opens the gate for substrate entry. *Molecular Cell* **27**, 731-744 (2007).
- Preview. Unlocking the proteasome door. *Molecular Cell* **27**, 865-867 (2007).
19. **Park S**, James CD*. ECop (EGFR-coamplified and overexpressed protein), a novel protein, regulates NF-kappaB transcriptional activity and associated apoptotic response in an I kappa Balpha-dependent manner. *Oncogene* **24**, 2495-2502 (2005).
20. **Park S**, James CD*. Lanthionine synthetase components C-like 2 increases cellular sensitivity to adriamycin by decreasing the expression of P-glycoprotein through a transcription-mediated mechanism. *Cancer Research* **63**, 723-727 (2003).
21. Eley GD, Reiter JL, Pandita A, **Park S**, Jenkins RB, Maihle NJ, James CD*. A chromosomal region 7p11.2 transcript map: its development and application to the study of EGFR amplicons in glioblastoma. *Neuro-Oncology* **4**, 86-94 (2002).
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V. SPEAKER PRESENTATIONS (after starring at CU Boulder in 2012):

SPEAKER AT SCIENTIFIC MEETINGS:

#3, 5, 8, 10: Annual international meeting in all areas of Biochemistry and Molecular Biology.

#4, 6, 9: Biennial international meeting. Both are prestigious meetings in the Ubiquitin-Proteasome field.

1. 01/2014 Invited Talk, Rocky Mountain Yeast Meeting. (Boulder, CO)

2. 01/2016 Selected Talk, Rocky Mountain Yeast Meeting. (Ft. Collins, CO)
3. 04/2016 Invited Talk, American Society for Biochemistry and Molecular Biology (ASBMB). (San Diego, CA)
4. 06/2016 Selected Talk, FASEB meeting. Ubiquitin and Cellular Regulation. (Big Sky, MO)
5. 04/2017 Invited Talk, American Society for Biochemistry and Molecular Biology (ASBMB). (Chicago, IL)
6. 04/2017 Selected Talk, Cold Spring Harbor Laboratory Meeting, The Ubiquitin Family. (Cold Spring Harbor, NY)
7. 01/2018 Selected Talk, Rocky Mountain Yeast Meeting. (Golden, CO)
8. 04/2018 Selected Talk, American Society for Biochemistry and Molecular Biology (ASBMB) (San Diego, CA)
9. 06/2018 Selected Talk, FASEB meeting. Ubiquitin and Cellular Regulation. (Snowmass, CO)
10. 04/2019 Selected Talk, American Society for Biochemistry and Molecular Biology (ASBMB). (Orlando, FL)

VI. TEACHING

- 2013-2014 MCDB 4100-002/6440, "Special Topics: Cellular Garbage Disposal System".
6 students, Spring 2014, Solo Instructor
I have designed this new course and taught the entire semester (75 minutes/lecture).
- 2014-2015 MCDB 4100-002/6440, "Special Topics: Cellular Garbage Disposal System".
6 students, Spring 2015, Solo Instructor (75 minutes/lecture).
- 2014-2015 MCDB 5230 "Gene Expression (Graduate program CORE)"
14 students, Fall 2014, Co-instructor with other MCDB faculty members. 2 lectures (90 minutes/lecture)
- 2015-2016 MCDB 3135, "Molecular and Cellular Biology I"**
192 students, Fall 2015, Co-instructor with Dr. Mark Winey
I was responsible for 21 lectures (75 minutes/lecture) from October to December.
Dr. Winey completed 9 lectures in September.
- 2015-2016 MCDB 5230 "Gene Expression (Graduate program CORE)"
8 students. Fall 2015, Co-instructor with other MCDB faculty members. 2 lectures (90 minutes/lecture)
- 2016-2017 MCDB 3135, "Molecular and Cellular Biology I"
100 students, Spring 2016, 3 lectures (50 minutes/lecture)
I gave 3 lectures as a substitute while Dr. Ravinder Singh was hospitalized.
- 2016-2017 MCDB 3135, "Molecular and Cellular Biology I"**
200 students, Fall 2016, Solo Instructor (75 minutes/lecture)

- 2016-2017 MCDB 5230 “Gene Expression (Graduate program CORE)”
11 students. Fall 2016, Co-instructor with other MCDB faculty members. 2 lectures (75 minutes/lecture)
- 2017-2018 MCDB 3135, “Molecular and Cellular Biology I”**
204 students, Fall 2017, Solo Instructor (75 minutes/lecture)
- 2017-2018 MCDB 5230 “Gene Expression (Graduate program CORE)”
11 students. Fall 2017, Co-instructor with other MCDB faculty members. 2 lectures (75 minutes/lecture)
- 2018-2019 MCDB 3135, “Molecular and Cellular Biology I”**
232 students, Fall 2018, Solo Instructor (75 minutes/lecture)
- 2018-2019 MCDB 5230 “Gene Expression (Graduate program CORE)”
16 students. Fall 2018, Co-instructor with other MCDB faculty members. 2 lectures (75 minutes/lecture)

VII. SERVICE

SERVICE TO THE DEPARTMENT:

- 2012 – 2013 and 2013 – 2014 **Member, Comprehensive Exam Committee**
- meet 4-5 times in spring and conduct 2-hour oral examinations of graduate students to determine their qualification as Ph.D. candidates in the MCDB department.
 - I was directly involved in examining 14 students in total. I also read the students’ proposals, provided written feedback on their proposals.
- 2016 **Ad hoc member, Comprehensive Exam Committee**
- conduct 2-hour oral examinations of graduate students to determine their qualification as Ph.D. candidates in the MCDB department.
- 2015 – 2016 **Member, Graduate Student Admission Committee**
- meet throughout the fall and early winter, review nearly 100 applications, and interview nearly all invited candidates (~30-40 candidates in total).
- 2016 – 2017 **Member, Graduate Student Admission Committee**
- 2015 – 2016 **Co-chair, Departmental Retreat Planning Committee**
- meet 3-4 times in the fall biannually to organize departmental retreat. This two-member committee schedules 30 sessions of 20-minute talks by all departmental faculty members, and serves as moderators during talk sessions and oversees the poster presentations by all graduate students and post-doctoral fellows.
- 2017 – 2018 **Co-chair, Departmental Retreat Planning Committee**
- 2018 – 2019 **Member, MCDB/CSD Joint Retreat Planning Committee**
- The MCDB Department in CU Boulder and CSD (Cell Biology, Stem Cells and Development) program at Anschutz Medical Campus hold the first joint retreat in 2018 fall. This eight-member committee selects talks based on the submitted

abstract by both departmental faculty members, and serves as moderators during talk sessions and oversees the poster presentations by all graduate students and post-doctoral fellows.

2018 – 2019

Member, Comprehensive Exam Committee

- meet 4-5 times in spring and conduct 2-hour oral examinations of graduate students to determine their qualification as Ph.D. candidates in the MCDB department.

- I am directly responsible for examining 5 students in total. I also read the students' proposals, provided written feedback on their proposals.

SERVICE TO THE SCIENTIFIC COMMUNITY:

2012 – present

Ad-hoc Scientific Reviewer for the journals: *Scientific Reports*, *Cell Cycle*, *Proceedings of the National Academy of Sciences (PNAS)*, *Journal of Biological Chemistry*, *Anti-Cancer Agents in Medicinal Chemistry*, and *PLOS Biology*

2016

Norlin Scholar Selection Committee (CU Boulder)

I reviewed 14 applications of undergraduate students, who applied to Norlin Scholars program. My responsibilities were to rank their applications by evaluating their resumes and essays.

2016 - present

Member of the ASBMB (American Society for Biochemistry and Molecular Biology)

2017

Invited Panelist for Boettcher Foundation Web-Waring Biomedical Research Awards

2017 – present

Editorial Board Member, *Scientific Reports* (Nature Press)