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### **I. EDUCATION**

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- 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**

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- 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        Mentored Member  
**University of Colorado Cancer Center, CO, USA**  
Cancer Cell Biology Program

### **III. FELLOWSHIPS AND AWARDS**

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- 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

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**Asterisks denotes corresponding author.**

1. Sekaran, S, and **Park S\***. Penultimate Step of the Proteasomal ATPase Complex is Mediated by the Nas2 Chaperone. *Journal of Biological Chemistry*. Accepted for publication (2022)
2. Nahar A<sup>†</sup>, Sokolova V<sup>†</sup>, Sekaran, S, Orth JD, and **Park S\***. Assembly checkpoint of the proteasome regulatory particle is activated by coordinated actions of proteasomal ATPase chaperones. *Cell Reports* (2022) Jun 7;39(10):110918. <sup>†</sup>Equal contributions.
3. 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.
4. Fu X<sup>†</sup>, Sokolova V<sup>†</sup>, 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). <sup>†</sup>Equal contributions.
5. 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).
6. 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).
7. 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).
8. 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).
9. Sokolova V<sup>†</sup>, Li F<sup>†</sup>, 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). <sup>†</sup>Equal contributions
10. **Park S**<sup>†</sup>, Li X<sup>†</sup>, Kim HM<sup>†</sup>, 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). <sup>†</sup>Equal contributions
11. 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).
12. 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).
13. **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).

14. Lee BH<sup>†</sup>, Lee MJ<sup>†</sup>, **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). <sup>†</sup>Equal contributions
- Research Highlights. Protein degradation: Time for trimming. *Nature Reviews Molecular Cell Biology* **11**, 754-5 (2010).
15. **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).
16. **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).
17. 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).
18. Kleijnen MF<sup>†</sup>, Roelofs J<sup>†</sup>, **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). <sup>†</sup>Equal contributions
- Research Roundup. A chewing proteasome is stabilized. *Journal of Cell Biology* **179**, 1086 (2007).
19. 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).
20. **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 B alpha-dependent manner. *Oncogene* **24**, 2495-2502 (2005).
21. **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).
22. 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).

#### **IV. GRANT SUPPORT**

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**Current Support:**

NIH/NIHGMS (1R01GM127688)

PI: Soyeon Park

08/01/2018 – 07/31/2023

Title: Mechanisms of Chaperone-Mediated Control in the Assembly of the Proteasome Holoenzyme

Total funding: \$1,589,316

**Past Support:**

Boettcher Foundation Webb-Waring Biomedical Research Award

PI: Soyeon Park

08/2013 – 07/2016

Total funding: \$225,000