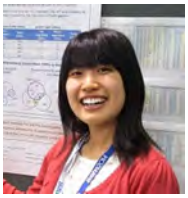

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Background

2009 B.Sci The University of Tokyo, Faculty of Agriculture
2011 M.Sci The University of Tokyo, Graduate School of Agricultural and Life Sciences
2014 Ph.D. The University of Tokyo, Graduate School of Agricultural and Life Sciences

2014- Assistant professor of Biotecnology Research Center, The University of Tokyo

Research

Degradation of environmental pollutants using bacteria is a valuable method for bioremediation. To regulate bacterial degradative ability, it is important to clarify transcriptional networks which regulate physiological activity of bacteria. Because many degradative enzymes are encoded on plasmids, we are especially interested in the effect of plasmid carriage for host cells. We are also investigating the function of nucleoid-associated proteins, which play a key role in transcriptional networks between plasmid and host chromosome.

Key papers

1. Suzuki-Minakuchi C, Hirotani R, Shintani M, Takeda T, Takahashi Y, Matsui K, Vasileva D, Yun CS, Okada K, Yamane H, Nojiri H (2015) "Effects of three different nucleoid-associated proteins encoded on IncP-7 plasmid pCAR1 on host *Pseudomonas putida* KT2440." **Appl. Environ. Microbiol.** 81:2869-80
2. Shintani M, Suzuki-Minakuchi C, Nojiri H (2015) "Nucleoid-associated proteins encoded on plasmids: Occurrence and mode of function." **Plasmid** 80:32-44
3. Yun CS, Takahashi Y, Shintani M, Takeda T, Suzuki-Minakuchi C, Okada K, Yamane H, Nojiri H. "MvaT family proteins encoded on IncP-7 plasmid pCAR1 and the host chromosome regulate host transcriptome cooperatively but differently." **Appl. Environ. Microbiol.** in press
4. Kotake T, Matsuzawa J, Suzuki-Minakuchi C, Okada K, Nojiri H, Iwata K. "Purification and partial characterization of the extradiol dioxygenase, 2'-carboxy-2,3-dihydroxybiphenyl 1,2-dioxygenase, in the fluorene degradation pathway from *Rhodococcus* sp. strain DFA3." **Biosci. Biotechnol. Biochem.** in press
5. Matsuzawa J, Aikawa H, Umeda T, Ashikawa Y, Suzuki-Minakuchi C, Kawano Y, Fujimoto Z, Okada K, Yamane H, Nojiri H (2014) "Crystallization and preliminary X-ray diffraction analyses of the redox-controlled complex of terminal oxygenase and ferredoxin components in the Rieske nonhaem iron oxygenase, carbazole 1,9a-dioxygenase." **Acta Crystallogr. F Struct. Biol. Commun.** 70:1406-9.
6. Yee L, Hosoyama A, Ohji S, Tsuchikane K, Shimodaira J, Yamazoe A, Fujita N, Suzuki-Minakuchi C, Nojiri H (2014) "Complete genome sequence of a dimethyl sulfide-utilizing bacterium, *Acinetobacter guillouiae* strain 20B (=NBRC 110550)." **Genome Announc.** 2:e01048-14.
7. Suzuki C, Kawazuma K, Horita S, Terada T, Tanokura M, Okada K, Yamane H, Nojiri H (2014) "Oligomerization mechanisms of an H-NS family protein, Pmr, encoded on the plasmid pCAR1 provide a molecular basis for functions of H-NS family members." **PLOS ONE** 9:e105656
8. Matsuzawa J, Umeda T, Aikawa H, Suzuki C, Fujimoto Z, Okada K, Yamane H, Nojiri H (2013) "Crystallization and preliminary X-ray diffraction studies of the reduced form of the terminal oxygenase component of the Rieske nonhaem iron oxygenase system carbazole 1,9a-dioxygenase." **Acta Crystallogr. F Struct. Biol. Commun.** 69:1284-7
9. Suzuki C, Yun CS, Umeda T, Terabayashi T, Watanabe K, Yamane H, Nojiri H (2011) "Oligomerization and DNA-binding capacity of Pmr, a histone-like protein H1 (H-NS) family protein encoded on IncP-7 carbazole-degradative plasmid pCAR1." **Biosci. Biotechnol. Biochem.** 75:711-7
10. Yun CS, Suzuki C, Naito K, Takeda T, Takahashi Y, Sai F, Terabayashi T, Miyakoshi M, Shintani M, Nishida H, Yamane H, Nojiri H (2010) "Pmr, a histone-like protein H1 (H-NS) family protein encoded by the IncP-7 plasmid pCAR1, is a key global regulator that alters host function." **J. Bacteriol.** 192:4720-31