Professor

Hideaki Nojiri

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Background

1991 B. Sci The Univ. of Tokyo, Faculty of Agriculture
1993 M.Sci The Univ. of Tokyo, Graduate School of Agricultural and Life Sciences
1995 (leaving) The Univ. of Tokyo, Graduate School of Agricultural and Life Sciences
1998 Ph.D The Univ. of Tokyo, Graduate School of Agricultural and Life Sciences

1995-1999 Assistant Professor of Biotechnology Research Center, The Univ. of Tokyo
1999-2002 Lecturer of Biotechnology Research Center, The Univ. of Tokyo
2002-2012 Associate Professor of Biotechnology Research Center, The Univ. of Tokyo
2013-present Professor of Biotechnology Research Center, The Univ. of Tokyo
2014-present Visiting Professor, College of Resources and Environment Science, Southwest University, China

2006 Award for the Encouragement of Young Scientists, The Japan Society for Bioscience, Biotechnology, and Agrochemistry
2013 9th Japan Academy Medal
2013 9th JSPS Prize (FY2012), Japan Society for the Promotion of Science

Research highlights

Behavior, Survival, and Evolution of Xenobiotic-Degrader in Natural Ecosystem / Plasmid Function in Bacterial Cells / Function of Nucleotide-Associated Proteins / Structure and Function of Xenobiotic-Degrading Enzymes / Isolation and Characterization of Xenobiotic-Degraders

Key papers

1. Yun C-S, 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.
2. Suzuki-Minakuchi C, Hirotani R, Shintani M, Takeda T, Takahashi Y, Matsui K, Vasileva D, Yun C-S, Okada K, Yamane H, Nojiri H, Effects of three different nucleoid-associated proteins encoded on IncP-7 plasmid pCAR1 on host *Pseudomonas putida* KT2440. **Appl. Environ. Microbiol.**, 81, 2869-2880 (2015).
3. Takahashi Y, Shintani M, Takase N, Kazou Y, Kawamura F, Hara H, Nishida H, Okada K, Yamane H, Nojiri H. Modulation of primary cell functions of host *Pseudomonas* bacteria by conjugative plasmid pCAR1. **Environ. Microbiol.**, 17, 134-155 (2015).
4. Suzuki C, Kawazuma K, Horita S, Terada T, Tanokura M, Okada K, Yamane H, Nojiri H. Oligmerization 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 (2014).
5. Inoue K, Usami Y, Ashikawa Y, Noguchi H, Umeda T, Ashikawa-Yamagami A, Horisaki T, Uchimura H, Terada T, Nakamura S, Shimizu K, Habe H, Okada K, Yamane H, Fujimoto Z, Nojiri H. Structural basis of the divergent oxygenation reactions catalyzed by the Rieske non-heme iron oxygenase, carbazole 1,9a-dioxygenase. **Appl. Environ. Microbiol.**, 80, 2821-2832 (2014).
6. Shintani M, Matsui K, Inoue J, Hosoyama A, Ohji S, Yamazoe A, Nojiri H, Kimbara K, Ohkuma M. Single-cell analyses revealed transfer ranges of IncP-1, IncP-7, and IncP-9 plasmids in a soil bacterial community. **Appl. Environ. Microbiol.**, 80, 138-145 (2014).
7. Nojiri H. Impact of catabolic plasmids on host cell physiology. **Curr. Opin. Biotechnol.**, 24, 423-430 (2013).
8. Ashikawa Y, Fujimoto Z, Usami Y, Inoue K, Noguchi H, Yamane H, Nojiri H. Structural insight into the substrate- and dioxygen-binding manner in the catalytic cycle of Rieske nonheme iron oxygenase system, carbazole 1,9a-dioxygenase. **BMC Struct. Biol.**, 12, 15 (2012).
9. Shintani M, Takahashi Y, Tokumaru H, Kadota K, Hara H, Miyakoshi M, Naito K, Yamane H, Nishida H, Nojiri H. Response of the *Pseudomonas* host chromosomal transcriptome to carriage of the IncP-7 plasmid pCAR1. **Environ. Microbiol.**, 12, 1413-1426 (2010).
10. Inoue K, Ashikawa Y, Umeda T, Abo M, Katsuki J, Usami Y, Noguchi H, Fujimoto Z, Terada T, Yamane H, Nojiri H. Specific interactions between the ferredoxin and terminal oxygenase components of a class IIB Rieske nonheme iron oxygenase, carbazole 1,9a-dioxygenase. **J. Mol. Biol.**, 392, 436-451 (2009).