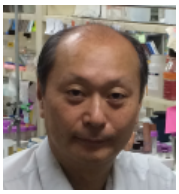

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Background

1984 B.Sci The Univ. of Tokyo, Faculty of Agriculture
1986 M. Sci The Univ. of Tokyo, Graduate School of Agriculture
1991 Ph.D. The Univ. of Tokyo, Graduate School of Agriculture

1988-1994 Assistant professor of The Univ. of Tokyo
1994-2003 Associate professor of The Univ. of Tokyo
2003-present Professor of Biotecnology Research Center, The Univ. of Tokyo

1993 Award for the Encouragement of Young Scientists, The Japan Society for Bioscience, Biotechnology, and Agrochemistry

Research

Microorganisms live in every place on the Earth by utilizing their metabolic abilities to biosynthesize and degrade a variety of compounds. Microorganisms are known to produce many useful compounds such as antibiotics; however, we can utilize only a small portion of their potential abilities. We focus on their abilities to biosynthesize a great variety of compounds and conduct basic and applied research for production of useful compounds through elucidation of their biosynthetic pathways and their underlying regulatory mechanisms.

Key papers

Publications & Citations (Google Scholar)

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2. Matsuda K, Tomita T, Shin-ya K, Wakimoto T, Kuzuyama T, Nishiyama M. (2018) "Discovery of unprecedented hydrazine-forming machinery in bacteria." **J Am Chem Soc**, 140:9083-9086
3. Hasebe F, Matsuda K, Shiraishi T, Futamura Y, Nakano T, Tomita T, Ishigami K, Taka H, Mineki R, Fujimura T, Osada H, Kuzuyama T, Nishiyama M. (2016) "Amino group carrier protein-mediated secondary metabolite biosynthesis in *Streptomyces*." **Nat Chem Biol**, 12:967-972
4. Yoshida A, Tomita T, Atomi H, Kuzuyama T, Nishiyama M. (2016) "Lysine biosynthesis of *Thermococcus kodakarensis* with the capacity to function as an ornithine biosynthetic system." **J Biol Chem**, 291:21630-21643
5. Yoshida A, Tomita T, Fujimura T, Nishiyama C, Kuzuyama T, Nishiyama M. (2015) "Structural insight into amino group-carrier protein-mediated lysine biosynthesis: crystal structure of the LysZ·LysW complex from *Thermus thermophilus*." **J Biol Chem**, 290:435-447
6. Ouchi T, Tomita T, Horie A, Yoshida A, Takahashi K, Nishida H, Lassak K, Taka H, Mineki R, Fujimura T, Kosono S, Nishiyama C, Masui R, Kuramitsu S, Albers S-V, Kuzuyama T, Nishiyama M. (2013) "Lysine and arginine biosyntheses mediated by a common carrier protein in *Sulfolobus*." **Nat Chem Biol**, 9:277-283
7. Tomita T, Kuzuyama T, Nishiyama M. (2011) "Structural basis for leucine-induced allosteric activation of glutamate dehydrogenase." **J Biol Chem**, 286:37841-37848
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9. Okada T, Tomita T, Wulandari AP, Kuzuyama T, Nishiyama M. (2010) "Mechanism of substrate recognition and insight into feedback inhibition of homocitrate synthase from *Thermus thermophilus*." **J Biol Chem**, 285:4195-4205
10. Horie A, Tomita T, Saiki A, Kono H, Taka H, Mineki R, Fujimura T, Nishiyama C, Kuzuyama T, Nishiyama M. (2009) "Discovery of proteinaceous N-modification in lysine biosynthesis of *Thermus thermophilus*." **Nat Chem Biol**, 5:673-679