

Curriculum Vitae

Shogo Nakano, Ph. D., Research Assistant Professor

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[Education]

2009-2012: Ph.D, Department of Mathematical and Life Sciences, Graduate School of Science, Hiroshima University, Hiroshima

2007-2009: M.Sc, Department of Mathematical and Life Sciences, Graduate School of Science, Hiroshima University, Hiroshima

2003-2007: B.Sc, Department of Chemistry, Department of Science, Hiroshima University, Hiroshima

[Research Experience]

2015-present: Research Assistant Professor, Department of Food and Nutritional Sciences, University of Shizuoka

2012-2015: Postdoctoral Researcher, Asano Active Enzyme Molecule Project, ERATO, Toyama

[Research interest]

- Development of artificial protein design method by combination of computational and biochemical approaches.
- Structure and functional analysis of enzymes.

[Awards]

Nov. 2015: Outstanding Reviewer Status (Journal of Molecular Catalysis B: Enzymatic, Elsevier)

Sep. 2011: Koichi Suzuki Memorial Award (the 84th annual meeting of the Japanese Biochemical Society)

Oct. 2009: Excellent presentation award (the 82th annual meeting of the Japanese Biochemical Society)

[Publication List]

- 1). **Shogo Nakano**, Kazuyuki Yasukawa, Takaki Tokiwa, Takeshi Ishikawa, Erika Ishitsubo, Naoya Matsuo, Sohei Ito, Hiroaki Tokiwa, and Yasuhisa Asano, Origin of stereoselectivity and substrate/ligand recognition in an FAD-dependent *R*-selective amine oxidase, *J. Phys. Chem. B.*, 120, 10736-10743, (2016)
- 2). **Shogo Nakano***1, Seiji Okazaki*1, Erika Ishitsubo, Nobuhiro Kawahara, Hidenobu Komeda, Hiroaki Tokiwa and Yasuhisa Asano, “Structural and computational analysis of peptide recognition mechanism of class-C type penicillin binding protein, alkaline D-peptidase from *Bacillus cereus* DF4-B”, *Scientific Reports*, 5, 13836 (doi: 10.1038/srep13836), (2015), *1 Equal contribution
- 3). Wisarut Payoungkiattikun, Seiji Okazaki, **Shogo Nakano**, Atsutoshi Ina, Aran H-Kittikun, Yasuhisa Asano, “In Silico Identification for α -Amino- ϵ -Caprolactam Racemases by Using Information on the Structure and Function Relationship”, *Applied Biochemistry and Biotechnology*, 176: 1303-1314, (2015)
- 4). **Shogo Nakano** and Yasuhisa Asano, “Protein evolution analysis of *S*-hydroxynitrile lyase by complete sequence design utilizing the INTMSAlign software”, *Scientific Reports*, 5, 8193 DOI: 10.1038/srep08193, (2015)
- 5). **Shogo Nakano**, Seiji Okazaki, Hiroaki Tokiwa and Yasuhisa Asano, “Binding of NAD⁺ and L-threonine induces stepwise structural and flexibility changes in *Cupriavidus necator* L-threonine dehydrogenase”, *Journal of Biological Chemistry*, 289: 10445-10454, (2014)
- 6). Kazuyuki Yasukawa, **Shogo Nakano** and Yasuhisa Asano, “Tailoring D-amino acid oxidase from the pig kidney to *R*-stereoselective amine oxidase and its use in deracemization of α -methylbenzylamine”, *Angewandte Chemie International Edition*, 53: 4428-4431, (2014)
- 7). **Shogo Nakano***1, Mohanmad Dadashipour*1, and Yasuhisa Asano, “Structural and functional analysis of hydroxynitrile lyase from *Baliospermum montanum* with crystal structure, molecular dynamics and enzyme kinetics”, *BBA Proteins and Proteomics*, 1844: 2059-2067, (2014), *1 Equal contribution
- 8). Seiji Okazaki, **Shogo Nakano**, Daisuke Matsui, Shusaku Akaji, Kenji Inagaki and Yasuhisa Asano, “X-Ray crystallographic evidence for the presence of the cysteine tryptophylquinone cofactor in L-lysine epsilon-oxidase from *Marinomonas mediterranea*”, *Journal of Biochemistry*, 154: 233-236, (2013)
- 9). **Shogo Nakano**, Misa Takahashi, Atsushi Sakamoto, Hiromichi Morikawa and Katsuo Katayanagi, “X-ray crystal structure of a mutant assimilatory nitrite reductase that shows sulfite reductase-like activity”, *Chemistry & Biodiversity*, 9: 1989-1999, (2012)
- 10). Manami Hashimoto, Kazuya Monma, Satoshi Inaba, **Shogo Nakano** and Shin-ichi

Aizawa, "The hydrophobic core of FliG domain II is the stabilizer in the Salmonella flagellar motor", *Microbiology*, **158**: 2556-2567, (2012)

- 11). **Shogo Nakano**, Misa Takahashi, Atsushi Sakamoto, Hiromichi Morikawa and Katsuo Katayanagi, "The reductive reaction mechanism of tobacco nitrite reductase derived from a combination of crystal structures and ultraviolet-visible microspectroscopy", *Proteins: Structure, Function and Bioinformatics*, **80**: 2035-2045, (2012)
- 12). **Shogo Nakano**, Mamoru Sugihara, Risato Yamada, Katsuo Katayanagi and Shin-ichi Tate, "Structural implication for the impaired binding of W150A mutant LOX -1 to oxidized low density lipoprotein, OxLDL", *BBA Proteins and Proteomics*, **1824**: 739-749, (2012)
- 13). **Shogo Nakano**, Misa Takahashi, Atsushi Sakamoto, Hiromichi Morikawa and Katsuo Katayanagi, "Structure-function relationship of assimilatory nitrite reductases from the leaf and root of tobacco based on high-resolution structures", *Protein Science*, **21**: 383-395, (2012)