

Young Woo Nam, Ph.D.

Post-doctoral Fellow
Department of Biomedical and Pharmaceutical Sciences
Chapman University, School of Pharmacy
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Research Experience

- Chapman University, Orange, CA. 2015. 11-present
Post-doctoral Fellow, School of Pharmacy
The structural basis of small molecule drugs for KCa_{2/3} channels
Investigating the regulation of channel-phospholipids interactions by posttranslational modification
- Graduate school of Agriculture and Life Sciences, the University of Tokyo, Japan 2015. 04 - 2015. 10
Agricultural Researcher
Researching for structures of novel UDP-glucose hexose 1-phosphate uridylyltransferase in novel GNB/LNB pathway
- Graduate school of Agriculture and Life Sciences, the University of Tokyo, Japan 2012 to 2015
Researching for structures of novel cellobionic acid phosphorylases (CBAPs) related in oxidative cellulose degradation pathway
- Graduate school of Agriculture and Life Sciences, the University of Tokyo, Japan 2010 to 2012
Study on characterization of Sulerythrin and NADP⁺ Oxidoreductase from hyperthermophilic archaea

Education

- Graduate school of Agriculture and Life Sciences, the University of Tokyo, Japan 2012 to 2015
Ph.D (Enzymology and Structural biology)
Thesis title: Studies on structures of novel sugar metabolic enzymes
Advisor: Shinya Fushinobu
- Graduate school of Agriculture and Life Sciences, the University of Tokyo, Japan 2010 to 2012
M.S (Enzymology)
Thesis title: Characterization of Sulerythrin from *Sulfolobus tokodaii*
Advisor: Takayoshi Wakagi
- College of biotechnology, Mokwon University, South Korea 1999 to 2007
B.S (Microbiology)

Teaching Experience

Graduate school of Agriculture and Life Sciences, the University of Tokyo, Japan Teaching assistant for graduate students	2012 to 2015
Graduate school of Agriculture and Life Sciences, the University of Tokyo, Japan Teaching assistant for undergraduate students	2010 to 2012

Research techniques in proficient

Microbe related: Isolation, screening, cultivation, and identification of microbe

DNA related: Isolation genomic DNA, gene cloning and plasmid construction, site-directed mutagenesis

Protein related: Protein expression and purification, including anion chromatography, affinity chromatography, hydrophobic chromatography, and gel filtration chromatography. Amino acid sequence, Western blot, and various enzyme activity assay. Protein crystallization, X-ray data collection and refinement, X-ray crystal structure determination and refinement; Pymol, CCP4, WinCoot, and PHENIX programs.

Chemical related: HPLC, MALDI-TOF/MS, CD spectra, ICP-AES, and UV-visible spectrum.

Publications

1. Young-Woo Nam, Takanori Nihira, Takatoshi Arakawa, Yuka Saito, Motomitsu Kitaoka, Hiroyuki Nakai, Shinya Fushinobu. Crystal structure and substrate recognition of cellobionic acid phosphorylase playing a key role in oxidative cellulose degradation by microbes. **Journal of Biological Chemistry**. 2015 Jul 24;290(30):18281-92
2. Mayo Sato, Takatoshi Arakawa, Young-Woo Nam, Mamoru Nishimoto, Motomitsu Kitaoka, Shinya Fushinobu. Open-Close Structural Change upon Ligand Binding and Two Magnesium Ions Required for the Catalysis of N-Acetylhexosamine 1-Kinase. **Biochim Biophys Acta**. 2015 May;1854(5):333-40.
3. Zhen Yan, Young-Woo Nam, Shinya Fushinobu, Takayoshi Wakagi. *Sulfolobus tokodaii* ST2133 is characterized as thioredoxin reductase-like ferredoxin: NADP⁺ oxidoreductase. **Extremophiles**. 2014 Jan;18(1):99-110.
4. Kentaro Suzuki, Jun-ichi Sumitani, Young-Woo Nam, Toru Nishimaki, Shuji Tani, Takayoshi Wakagi, Takashi Kawaguchi, Shinya Fushinobu. Crystal structures of glycoside hydrolase family 3 β -glucosidase 1 from *Aspergillus aculeatus*. **Biochemical Journal**. 2013 Jun 1;452(2):211-21

Professional Memberships

2012- The Protein Science Society of Japan

2013- The Japanese Society of Carbohydrate Research

2013- The Cellulose Society of Japan

2014- The Japan Society for Bioscience, Biotechnology, and Agrochemistry