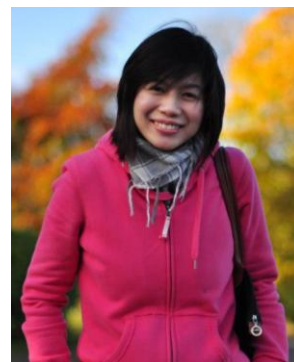


CURRICULUM VITAE

NAME: Thanyaporn Wongnate
BIRTH: September 4, 1984, Nakornsawan, Thailand
GENDER: Female



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Amphur Muang, Nakornsawan province, 60000, Thailand
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EDUCATION:
1999-2004 High school, Nakornsawan School, Nakornsawan, Thailand
2004-2007 B.Sc. in Chemistry, Mahidol University, Bangkok, Thailand
2007-2011 Ph.D. in Biochemistry, Mahidol University, Bangkok, Thailand

Scholarships from high school through Ph.D. supported by Junior Science Talent Project (JSTP)

EXPERTISE & SKILL:

- Presteady state kinetics / Steady state kinetics (5 years experience)
- Thermodynamic (5 years experience)
- Stopped-flow techniques for investigating enzyme reaction mechanisms (5 years experience)
- Computational chemistry (QM)
- Site-directed mutagenesis / Gene expression / Protein purification and enzyme assay
- Fermentation techniques

RESEARCH INTEREST:

- Mechanistic enzymology / Enzyme kinetics
- Biocatalysis
- Biofuel
- Computational chemistry
- EPR spectroscopy

INTERNATIONAL PUBLICATIONS:

2009

1. Prongjit M, Sucharitakul J, **Wongnate T**, Haltrich D, Chaiyen P. Kinetic Mechanism of Pyranose 2-oxidase from *Trametes multicolor*. Biochemistry. 2009; 48: 4170-4180. (IF = 3.379)

2010

2. Sucharitakul J, **Wongnate T**, Chaiyen P. Kinetic isotope effects on the noncovalent flavin mutant protein of pyranose 2-oxidase reveal insights into the flavin reduction mechanism. Biochemistry. 2010; 49: 3753-3765. (IF = 3.379)
3. Tan TC, Pitsawong W, **Wongnate T**, Spadiut O, Haltrich D, Chaiyen P, Divne C. H-Bonding and Positive Charge at the N(5)/O(4) Locus Are Critical for Covalent Flavin Attachment in *Trametes* Pyranose 2-Oxidase. J Mol Biol. 2010; 402: 578-594. (IF = 4.146)

2011

4. Sucharitakul J, **Wongnate T**, Chaiyen P. Hydrogen peroxide elimination from C4a-hydroperoxy-flavin in a flavoprotein oxidase occurs through a single proton transfer from flavin N5 to a peroxide leaving group. J Biol Chem. 2011; 286: 16900-16909. (IF = 5.328)
5. **Wongnate T**, Sucharitakul J, Chaiyen P. Identification of a catalytic base for sugar oxidation in the pyranose 2-oxidase reaction. ChemBioChem. 2011; 12: 2577-2586. (IF = 3.945)

2012

6. Chosrowjan H, Taniguchi S, **Wongnate T**, Sucharitakul J, Chaiyen P, Tanaka F. Conformational heterogeneity in pyranose 2-oxidase from *Trametes multicolor* revealed by ultrafast fluorescence dynamics. J Photochem Photobiol A Chem. 2012; 234: 44-48. (IF = 2.243)
7. Sucharitakul J, **Wongnate T**, Montersino S, van Berkel WJH, Chaiyen P. Reduction kinetics of 3-hydroxybenzoate 6-hydroxylase from *Rhodococcus jostii* RHA1. Biochemistry. 2012; 51: 4309-4321. (IF = 3.226)
8. Taniguchi S, Chosrowjan H, **Wongnate T**, Sucharitakul J, Chaiyen P, Tanaka F. Ultrafast fluorescence dynamics of flavin adenine dinucleotide in pyranose 2-oxidases variants and their complexes with acetate: conformational heterogeneity with different dielectric constants. J Photochem Photobiol A Chem. 2012 (In revision).
9. **Wongnate T**, Chaiyen P. The Pyranose Oxidases (Book chapter). Handbook of Flavoproteins. De Gruyter Berlin, Germany, 2012 (In revision).

INTERNATIONAL PROCEEDINGS:

1. **Wongnate T**, Sucharitakul J, Chaiyen P. H548 is a catalytic base in the reaction of Pyranose 2-Oxidase from *Trametes multicolor*. The 17th International Symposium on Flavins and Flavoproteins book. (In press)

ORAL PRESENTATIONS:

2008

1. **Wongnate T**, Sucharitakul J, Chaiyen P. Investigation on the Mechanism of Flavin Reduction in Pyranose-2-oxidase using Substrate Analogue. 29 April 2008, JSTP congress 11, National Science and Technology Development Agency (NSTDA), Bangkok, Thailand.

2010

2. **Wongnate T**, Sucharitakul J, Chaiyen P. Investigation on the role of His548 and Asn593 in the catalytic mechanism of Pyranose-2-oxidase (P2O) from *trametes multicolor*. 2 November, 2010, Department of Food Sciences and Biotechnology, University of Natural Resources and Life Sciences, Vienna, Austria.

2011

3. **Wongnate T**, Sucharitakul J, Chaiyen P. Identification of a catalytic base for sugar oxidation in pyranose 2-oxidase reaction. 1 September 2011, The 6th International Symposium of the Protein Society of Thailand, Chulabhorn research institute convention center, Bangkok, Thailand.
4. **Wongnate T**, Sucharitakul J, Chaiyen P. Identification of a catalytic base for sugar oxidation in pyranose 2-oxidase reaction. 12 October 2011, The 37th Congress on Science and Technology of Thailand (STT 37), Bangkok convention center at Central world, Bangkok, Thailand.

POSTER PRESENTATIONS:

2008

1. **Wongnate T**, Sucharitakul J, Chaiyen P. Investigation on the Mechanism of Flavin Reduction in Pyranose-2-oxidase using Substrate Analogue. 8-13 June 2008, The 16th International Symposium on Flavins and Flavoproteins, Universidad de Zaragoza, Spain.
2. **Wongnate T**, Sucharitakul J, Chaiyen P. Investigation on the Mechanism of Flavin Reduction in Pyranose-2-oxidase using Substrate Analogue. 28-29 August 2008, The 3rd Annual Symposium of Protein Society of Thailand, Chulabhorn Research Institute Conference Center, Bangkok, Thailand.

2009

3. **Wongnate T**, Sucharitakul J, Chaiyen P. Investigation on the role of Asn593 in the catalytic mechanism of pyranose-2-oxidase (P2O) from *Trametes multicolor*. 26-28 August 2009, The 4rd Annual Symposium of Protein Society of Thailand, Chulabhorn Research Institute Conference Center, Bangkok, Thailand.
4. **Wongnate T**, Sucharitakul J, Chaiyen P. Investigation on the role of Asn593 in the catalytic mechanism of pyranose-2-oxidase (P2O) from *Trametes multicolor*. 29 October 2009, MUSC Graduate Research Exposition 2009, Faculty of Science, Mahidol university, Bangkok, Thailand.

2010

5. **Wongnate T**, Sucharitakul J, Chaiyen P. Probing the Proton Transfer during Formation and Decay of C4a Hydroperoxy Flavin in the Reaction of Pyranose 2-oxidase(P2O) Using Solvent Kinetic Isotope Effects. 21-23 January 2010, Pure and Applied Chemistry International Conference (PACCON 2010), Sunee Grand Hotel and Convention Center, Ubon Ratchathani, Thailand.
6. **Wongnate T**, Sucharitakul J, Chaiyen P. Probing the Proton Transfer during Formation and Decay of C4a Hydroperoxy Flavin in the Reaction of Pyranose 2-oxidase(P2O) Using Solvent Kinetic Isotope Effects. 23-25 June 2010, The 5th Annual Symposium of Protein Society of Thailand, Chulabhorn Research Institute Conference Center, Bangkok, Thailand.

2011

7. **Wongnate T**, Sucharitakul J, Chaiyen P. Investigation on the role of His548 and Asn593 in the catalytic mechanism of Pyranose-2-oxidase (P2O) from *trametes multicolor*. 6-8 April 2011, The 3rd BMB International Conference "From Basic to Translational Researches for a Better Life", The Empress Convention Centre, Chiang Mai, Thailand.
8. **Wongnate T**, Sucharitakul J, Chaiyen P. Identification of a catalytic base for sugar oxidation in pyranose 2-oxidase reaction. 24-29 July 2011, 17th International Symposium on Flavins and Flavoproteins, University of California Berkeley, Berkeley, California, USA.

2012

9. **Wongnate T**, Sucharitakul J, Chaiyen P. Investigation on the role of His548 and Asn593 in the catalytic mechanism of pyranose 2-oxidase(P2O) from *trametes multicolor*. 7-10 October 2012, The EMBO Conference "Catalytic mechanisms by biological systems: combining computational and experimental approaches", University of Groningen, Groningen, The Netherlands.

RESEARCH TRAINING EXPERIENCE:

- | | |
|-----------|---|
| 2005-2007 | Research project in protein ligand engineering research (3 years) |
| 2006 | Synchrotron Protein Crystallography workshop, National Siam Photon Research Center, Thailand (1 month) |
| 2008-2011 | Research project in flavin and flavoenzyme research (5 years) |
| 2010 | Research training at Division of Food Biotechnology, University of Natural Resources and Life Sciences, Vienna, Austria. (4 months) |

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|------|---|
| 2011 | Research project in computational chemistry research (QM) (1 year) |
| 2012 | Research training (rapid freeze and EPR spectroscopy) at Manchester Interdisciplinary Biocentre, University of Manchester, UK |

ACHIEVEMENT & AWARD:

HIGH SCHOOL LEVEL

1. Student of the year 2001
Awarded from Song Bulsook Foundation, Thailand
2. The Promotion of Academic Olympiads and Development of Science Education Foundation in Biology
Selected as one of 30 students to attend the Academic Olympiads Science Camp
3. Junior Science Talent Project scholarship
Awarded a scholarship to complete Bachelor's, Master's and Doctoral degrees from National Science and Technology Development Agency (NSTDA), Thailand
4. Thai Student of the year 2002
Awarded from National Youth Bureau, Office of Prime Minister, Thailand
5. Student of the year 2002
Awarded from Bangkok Post Student Weekly, Thailand
6. Selected to visit Russia's three most advanced fields (gerontology, space technology and nanotechnology)
Selected from Thai government agency as one of 6 students to visit Russia
7. Solving Science problem award 2003
First prize awarded from Ministry of Science and Technology, Thailand
8. Magic Stick innovation
Awarded from "Tee Nee Pratreed Thai" TV program, Channel 5, Thailand
9. Exemplary student award
Awarded an honorable pin by Her Royal Highness Crown Princess Sirindorn

GRADUATE LEVEL

- | | |
|------|---|
| 2007 | Oral presentation award:
First prize awarded from the 8 th Science Project Exhibition, Mahidol University |
| 2009 | Poster presentation award:
Third prize awarded from the 4 th International Symposium of the Protein Society of Thailand |
| 2010 | ASEM-DUO Fellowship Program:
Awarded a scholarship to do short research (4 months) at Vienna, Austria |
| 2011 | Outstanding Abstract Award:
Awarded from the 6 th International Symposium of the Protein Society of Thailand |

OTHER ACADEMIC & SOCIAL ACTIVITIES:

1. President of academic program in 16th Mahidol Alternative Science Camp, Mahidol University, Thailand
2. President of academic program in tour salaya camp for freshman 2005, Mahidol University, Thailand
3. Lecturer in Chemistry at Mahidol Tu' Ent. camp, Mahidol University, Thailand

4. Columnist of “Sanook Wit” Magazine (Science magazine for children), Technology Management Center, NSTDA, Thailand
5. Columnist of “Tuk Kromg” Magazine (Magazine for Mahidol student), Mahidol University, Thailand
6. Organizing committee in A day Art–Science Gallery by A day magazine, Siam Square, Bangkok, Thailand

REFEREES:

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