

Year 2013

Sucharitakul J, Tongsook C, Pakotiprapha D, van Berkel WJ, Chaiyen P. The Reaction Kinetics of 3-Hydroxybenzoate 6-Hydroxylase from *Rhodococcus jostii* RHA1 Provide an Understanding of the para-Hydroxylation Enzyme Catalytic Cycle. *J Biol Chem.* 2013 (just accepted)

Tinikul R, Pitsawong W, **Sucharitakul J**, Nijvipakul S, Ballou DP, Chaiyen The Transfer of Reduced Flavin Mononucleotide from LuxG Oxidoreductase to Luciferase Occurs via Free Diffusion. *P. Biochemistry*, 2013; 52: 6834-6843.

Prongjit M, **Sucharitakul J**, Palfey BA, Chaiyen Oxidation mode of pyranose 2-oxidase is controlled by pH. *P. Biochemistry*, 2013; 52: 1437-1445.

Tan TC, Spadiut O, Wongnate T, **Sucharitakul J**, Krondorfer I, Sygmund C, Haltrich D, Chaiyen The 1.6 Å crystal structure of pyranose dehydrogenase from Agaricus meleagris rationalizes substrate specificity and reveals a flavin intermediate. *P. Peterbauer CK, Divne C. PLoS One*, 2013; 8(1): e53567

Year 2012

Tinikul R, **Thotsaporn K**, Taveekarn V, Jitrapakdee S, Chaiyen P. The fusion *Vibrio campbellii* luciferase as a eukaryotic gene reporter. *J. Biotechnol.* 2012; 162(2-3): 346-53.

Oonanant W, **Sucharitakul J**, Chaiyen P, Yuvaniyama J. Crystallization and preliminary X-ray analysis of the reductase component of *p*-hydroxyphenylacetate 3-hydroxylase from *Acinetobacter baumannii*. *Acta Crystallogr. Sect. F Struct Biol. Cryst. Commun.* 2012; 68: 720-723.

Phongsak T, **Sucharitakul J**, **Thotsaporn K**, Oonanant W, Yuvaniyama J, Svasti J, Ballou DP, Chaiyen P. The C-terminal domain of 4-hydroxyphenylacetate 3-hydroxylase from *Acinetobacter baumannii* is an autoinhibitory domain. *J. Biol. Chem.* 2012; 287: 26213-26222.

Sucharitakul J, Wongnate T, Montersino S, van Berkel WJ, Chaiyen P. Reduction kinetics of 3- hydroxybenzoate 6-hydroxylase from *Rhodococcus jostii* RHA1. *Biochemistry*. 2012; 51: 4309-4321.

Year 2011

Tongsook C, Sucharitakul J, Thotsaporn K, Chaiyen P. Interactions with the substrate phenolic group are essential for hydroxylation by the oxygenase component of *p*-hydroxyphenylacetate 3-hydroxylase. *J. Biol. Chem.* 2011; **286**: 44491-44502.

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.

Thotsaporn K, Chenprakhon P, Sucharitakul J, Mattevi A, Chaiyen P. Stabilization of C4a-hydroperoxyflavin in a two-component flavin-dependent monooxygenase is achieved through interactions at flavin N5 and C4a atoms. *J. Biol. Chem.* 2011; **286**: 28170-28180.

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.

Ruangchan N, Tongsook C, Sucharitakul J, Chaiyen P. pH-dependent studies reveal an efficient hydroxylation mechanism of the oxygenase component of *p*-hydroxyphenylacetate 3-hydroxylase. *J. Biol. Chem.* 2011; **286**: 223-233.

Year 2010

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.

Pitsawong W, Sucharitakul J, Prongjit M, Tan TC, Spadiut O, Haltrich D, Divne C, Chaiyen P. A conserved active-site threonine is important for both sugar and flavin oxidations of pyranose 2-oxidase. *J. Biol. Chem.* 2010; **285**, 9697-9705.

Chenprakhon P, Sucharitakul J, Panijpan B, Chaiyen P. Measuring binding affinity of protein. Ligand interaction using spectrophotometry: binding of neutral red to riboflavin-binding protein. *J. Chem. Ed.* 2010; **87**, 829-831.

Year 2009

Baron R, Riley C, Chenprakhon P, Thotsaporn K, Winter RT, Alfieri A, Forneris F, van Berkel WJ, Chaiyen P, Fraaije MW, Mattevi A, McCammon JA. Multiple pathways guide oxygen diffusion into flavoenzyme active sites. *Proc. Natl. Acad. Sci. USA*. 2009; **106**: 10603-10608.

Chosrowjan H, Taniguchi S, Mataga N, Phongsak T, Sucharitakul J, Chaiyen P, Tanaka F. Ultrafast solvation dynamics of flavin mononucleotide in the reductase component of *p*-hydroxyphenylacetate hydroxylase. [J. Phys. Chem. 2009; 113: 8439-8442](#)

Prongjit M, Sucharitakul J, Wongnate T, Haltrich D, Chaiyen P. Kinetic mechanism of pyranose 2- oxidase from *Trametes multicolor*. [Biochemistry. 2009; 48: 4170-4180.](#)

Year 2008

Kirdphoksap P, Serichetaphongse P, Benjavongkulchai E, Phattanasri S, Rachdawong P, Intarapanya W, Tancharoen J. Study of sewage water quality in the Faculty of Dentistry, Chulalongkorn University. [CU Dent J. 2008; 31: 283-294.](#)

Sucharitakul J, Prongjit M, Haltrich D, Chaiyen P. Detection of a C4a-hydroperoxyflavin intermediate in the reaction of a flavoprotein oxidase. [Biochemistry. 2008; 47: 8485-8490.](#)

Year 2007

Arirachakaran P, Benjavongkulchai E, Luengpailin S, Ajdić D, Banas JA. Manganese affects *Streptococcus mutans* virulence gene expression. [Caries Res. 2007; 41: 503-511.](#)

Arirachakaran P, Luengpailin S, Banas JA, Mazurkiewicz JE, Benjavongkulchai E. Effects of manganese on *Streptococcus mutans* planktonic and biofilm growth. [Caries Res. 2007; 41: 497-502.](#)

Sucharitakul J, Phongsak T, Entsch B, Svasti J, Chaiyen P, Ballou DP. Kinetic of a two-component *p*- hydroxyphenylacetate hydroxylase explain how reduced flavin is transferred from the reductase to the oxygenase. [Biochemistry 2007; 46: 8611-8623.](#)

Year 2006

Jittapiromsak N, Benjavongkulchai E, Purnaveja S. Nystatin release from tissue conditioner and its candididal effects. [J. Dent. Assoc. Thai. 2006; 56: 30-35.](#)

Kujawa M, Ebner H, Leitner C, Hallberg BM, Prongjit M, Sucharitakul J, Ludwig R, Rudsander U, Peterbauer C, Chaiyen P, Haltrich D, Divne C. Structural basis for substrate binding and regioselective oxidation of monosaccharides at C3 by pyranose 2-oxidase. [J. Biol. Chem. 2006; 281: 35104-35115.](#)

Sucharitakul J, Chaiyen P, Entsch B, Ballou DP. Kinetic mechanism of the oxygenase from a two- component enzyme, *p*-Hydroxyphenylacetate 3-Hydroxylase from *Acinetobacter baumannii*. [J. Biol. Chem.](#) 2006; 281: 17044-17053.