CURRICULUM VITAE: TAWEESAK DHAMMARAJ

NAME: Taweesak Dhammaraj, Ph.D.
POSITION: Lecturer in Medicinal Chemistry and Pharmaceutical Control (2004 – present)
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EDUCATIONAL AND PROFESSIONAL QUALIFICATIONS

2000	**B. Pharm**	**Chiang Mai University, Thailand**
2004	**MS. in Pharmaceutical Chemistry**	**Chulalongkorn University, Thailand**
2017	**Ph.D. (Biochemistry)**	**Mahidol Universtiy, Thailand**

PUBLICATIONS

Taweesak Dhammaraj, Aisaraphon Phintha, Chatchadaporn Pinthong, Dheeradhach Medhanavyn, Ruchanok Tinikul, Pirom Chenprakhon, Jeerus Sucharitakul, Nontima Vardhanbhuti, Chutima Jiarpinitnun, and Pimchai Chaiyen. *p*-Hydroxyphenylacetate 3-hydroxylase as a biocatalyst for the synthesis of 3,4,5-trihydroxyphenolic acids. ACS Catalysis 2015; 5 (8): 4492-4502.

Taweesak Dhammaraj, Chatchadaporn Pinthong, Surawit Visitsatthawong, Chanakan Tongsook, Panida Surawatanawong, and Pimchai Chaiyen. A single-site mutation at Ser146 expands the reactivity of the oxygenase component of *p*-Hydroxyphenylacetate 3-hydroxylase. ACS Chemical Biology 2016; 11 (10); 2889-2896.

Pirom Chenprakhon, **Taweesak Dhammaraj**, Rattikarn Chantiwas, Pimchai Chaiyen. Hydroxylation of 4-hydroxyphenylethtylamine derivatives by R263 variants of the oxygenase component of *p*-hydrxoyphenylacetate-3-hydroxylase. Archives of Biochemistry and Biophysics 2017; 620; 1-11

Komkrich Sawasdee, Jeerus Sucharitakul, **Taweesak Dhammaraj,** Nuttawee Niamsiri, Pimchai Chaiyen, and Kanlaya Prapainop. Encapsulation of the reductase component of *p*-hydroxyphenylacetate hydroxylase in poly(lactide-co-glycolide) nanoparticles by three different emulsification techniques. IET Nanobiotechnology 2017; inpress.

Warintra Pitsawong, Pirom Chenprakhon, **Taweesak Dhammaraj,** Dheeradach Medhanavyn, Jeerus Sucharitakul, Chanakan Tongsook, Willem J. H. van Berkel, Pimchai Chaiyen, and Anne-Frances Miller. Tuning of pKa values activates substrates in flavin-

dependent aromatic hydroxylase. Journal of Biological Chemistry 2020; 295(12); 3965-3981.

Pawitra Pulbutr, Pichanatcha Nantana, surabot Suksabai, Chawannuch Mudjupa, Rattazart Denchai, Sakulrat Rattanakiat, **Taweesak Dhammaraj.** Inhibitory actions of Lupinifolin isolated from *Derris reticulate* stem against carbohydrate-digesting enzymes. Pharmacognosy Research 2020; 12(2); 102-106.

Prapairat Seephonkai, Natwipha Mongkolsiri, Wiranya Thiabphet, Rattanaphorn Traisathit, Sutthira Sedlak, Komgrit Wongpakam, **Taweesak Dhammaraj,** Aphidech Sangdee. Antioxidant, xanthine oxidase inhibitory and antibacterial activities of selected galactogogue Thai medicinal plant water and ethyl acetate extracts. Journal of Research in Pharmacy 2021; 25(4); 519-530.

ORAL PRESENTATION:

Taweesak Dhammaraj. Use of *p*-hydroxyphenylacetate hydroxylase as a biocatalyst for synthesis of trihydroxyaromatic acids. Annual Symposium of TRF Team Building Grant (Senior Scholar) "Enzyme Catalysis" 2014, Faculty of Science, Mahidol University, Thailand

POSTER PRESENTATION:

Taweesak Dhammaraj and Pimchai Chaiyen. A single-site mutation at Ser146 expands the reactivity of the oxygenase component of *p*-Hydroxyphenylacetate 3-hydroxylase to include hydroxylation of *p*-aminophenylacetate. BEST 2016 Conference and International Symposium, National Central University, Taoyuan, Taiwan

Taweesak Dhammaraj, Aisaraphon Phintha, Chatchadaporn Pinthong, Dheeradhach Medanavyn and Pimchai Chaiyen. *p*-Hydroxyphenylacetate 3-hydroxylase as a biocatalyst for synthesis of 3,4,5-trihydroxyphenolic acids. Biotrans 2015, Vienna, Austria

Taweesak Dhammaraj, Aisaraphon Phintha, and Pimchai Chaiyen. Engineering of *p*-hydroxyphenylacetate hydroxylase for catalysis of phenolic compound. 18th International Symposium on Flavins and Flavoproteins. 2014, Petchaburi, Thailand **(Poster presentation award)**

Taweesak Dhammaraj, Aisaraphon Phintha, and Pimchai Chaiyen. Engineering of p-Hydroxyphenylacetate 3-Hydroxylase for Biocatalysis of Phenolic and Aniline Compounds. The RGJ-Ph.D. Congress XV 2014. Pattaya, Thailand
(Poster presentation award)

Taweesak Dhammaraj and PImchai Chaiyen. Reaction of monooxygenase component (C_2) of *p*-hydroxyphenylacetate hydroxylase with substrate analogues. Pure and Applied Chemistry International Conference (PACCON) 2013, Chonburi, Thailand

Taweesak Dhammaraj and Pimchai Chaiyen. Reaction of monooxygenase component (C_2) of *p*-hydroxyphenylacetate hydroxylase with substrate analogue. 13th FAOBMB International Congress of Biochemistry and Molecular Biology 2012, Bangkok Thailand.

Taweesak Dhammaraj and Pimchai Chaiyen. Reaction of monooxygenae (C_2) component of *p*-hydroxyphenylacetate hydroxylase with substrate analogue 2011. 17th International Symposium on Flavins and Flavoproteins 2011. UC Berkeley, California, USA

Taweesak Dhammaraj and Pimchai Chaiyen. Reaction of monooxygenase (C_2) component of *p*-hydroxyphenylacetate hydroxylase with substrate analogues. The 6th International Symposium of the Protein Society of Thailand 2011. Bangkok, Thailand

OVERSEA EXPERIENCES

1. Five months experience in Institut fur Biochemie, Universtat Greifswald, Germany, 2016.
2. Two poster presentations in the U.S. (2011) and Austria (2016).

RESEARCH GRANTS

Project Reseach	Grant	Status	Duration
Thao-Wan-Priang compound extracts: Standardization of herbal composition, quality control, pharmacological studies and capsule formulation	Agricultural research development agency, Public organization (2,5000,000 THB)	Head of Research project	July1019-Jun 2021