ประวัตินักวิจัย

Name Wipa Suginta

Affiliation Biochemistry-Electrochemistry Research Unit, School of Chemistry and Biochemistry, Institute of Science,
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Degree Ph.D. (Biochemistry), University of Edinburgh, UK
M.Sc. (Biochemistry), Mahidol University, Bangkok, Thailand
B.Sc. (Biochemistry), Chulalongkorn University, Bangkok, Thailand

Marital status married with one child

Current Position Associate Professor in Biochemistry

Fellowships/Awards (year 2000 - present)

2008-2010	Alexander von Humboldt Fellowship for Experienced Researchers at Jacobs University Bremen and the Max-Planck Institute for Molecular Physiology, Dortmund, Germany.
2006	Suranaree University of Technology Award for "Outstanding Academic Performance in Science"
2005	For Women in Science Fellowship from L'OREAL (Thailand)/UNESCO.
2004	Biochemical Society General Travel Grant for a study visit to the Max-Planck Institute for Molecular Physiology, Dortmund, Germany.
2003	DAAD Fellowship for a Study Visit to the Max-Planck Institute for Molecular Physiology, Dortmund, Germany.
1999-2000	Wellcome Trust fellowship for Postdoctoral research study in Membrane Biology Group, The University of Edinburgh, United Kingdom.

Research Interests

1. Structure and function of bacterial porins
2. Structure and function of chitinases and chitobiases from marine bacteria to humans

Publications

Research Articles

1. Pantoom S, Vetter I, Prinz, H & **Suginta W** (2009) Structural analysis of *Vibrio harveyi* chitinase A in complex with chitinase inhibitors: Implications for drug development, In preparation for Nature-Structural Biology.
2. **Suginta W**, Chuenark D, Prinz H, Masuhara M & Fukamizo T (2009) Gene isolation, cloning, expression, and functional characterization of two non-homologous *N*-acetylglucosaminidases from *Vibrio harveyi*. In preparation for *FEBS J.*
3. Sritho N & **Suginta W** (2009) The effects of the active site residues Asp313 and Tyr345 on the binding and catalytic activities of *Vibrio harveyi* chitinase A. In preparation for *J. Appl Microbiol.*
4. Schulte A, Ruamchan S & Khunkaewla P, **Suginta W** (2009) The outer membrane protein VhOmp from *Vibrio harveyi*: The pore-forming properties in black lipid membranes. *J. Memb. Biol.* (Revised submission).
5. **Suginta W**, Pantoom S & Prinz H (2009) Substrate binding modes and anomer selectivity of chitinase A from *Vibrio harveyi*. *J. Chem. Biol.* (online available May 28th, 2009).
6. Songsiriritthigul C, Pantoom S, Aguda AH, Robinson RC & **Suginta W** (2008) Crystal structures of *Vibrio harveyi* chitinase A complexed with chitooligosaccharides: Implications for the catalytic mechanism. *J. Struct. Biol.* 162, 491-499. (JIF2007 = 3.667)
7. Pantoom S, Songsiriritthigul C & **Suginta W** (2008) The effects of the surface-exposed residues on the binding and hydrolytic activities of *Vibrio carchariae* chitinase A. *BMC-Biochemistry*, 9:2. (unofficial JIF2006 = 2.34)
8. **Suginta W**, Songsiriritthigul C, Kobdaj A, Opassiri R & Svasti J (2007) Mutations of Trp275 and Trp397 altered the binding selectivity of *Vibrio carchariae* chitinase A. *BBA - General Subjects* 1770, 1151-1160. (JIF2005 = 2.418)
9. **Suginta W** (2007) Identification of chitin binding proteins and characterization of two chitinase isoforms from *Vibrio alginolyticus* 283. *Enzyme Microb. Tech.*41, 212-220. (JIF2006 =1.987)
10. Songsiriritthigul C, Yuvaniyama J, Robinson RC, Vongsuwan A, Prinz H & **Suginta W** (2005) Expression, purification, crystallization and preliminary crystallographic analysis of chitinase A from *Vibrio carchariae*. *Acta Cryst. Section F.* 61, 895-898. (Newly launched journal, journal impact factor has not been assigned)

11. **Suginta W**, Vongsuwan A, Songsiriritthigul C, Svasti J & Prinz H (2005) Enzymatic properties of wild-type and active site mutants of chitinase A from *Vibrio carchariae*, as revealed by HPLC-MS. *FEBS J.* 272, 3376-3386. (JIF2006 = 3.292)

12. Siritapetawee J, Prinz H, Krittanai C & **Suginta W** (2004) Expression, refolding of Omp38 from *Burkholderia pseudomallei* and *B. thailandensis*, and its function as a diffusion porin. *Biochem. J.* 384, 609–617. (JIF2005 = 4.224)

13. **Suginta W**, Vongsuwan A, Songsiriritthigul C, Prinz H, Estibeiro P, Duncan RR, Svasti J & Fothergill-Gilmore LA (2004) An endochitinase A from *Vibrio carchariae*: gene isolation, modelled structure topology, cloning and functional expression. *Arch. Biochem. Biophys.* 424, 171-180. (JIF2005 = 3.152)

14. Siritapetawee J, Prinz H, Samosornsuk W, Ashley RH & **Suginta W** (2004) Functional reconstitution, gene isolation and topology modelling of porins from *Burkholderia pseudomallei* and *B. thailandensis*. *Biochem. J.* 377, 579-587. (JIF2005 = 4.224)

15. **Suginta W**, Karoulias N, Aitkin A & Ashley RH (2001) Brain dynamin-1 interacts directly with the chloride intracellular channel protein CLIC4 in a complex containing actin and 14-3-3 proteins. *Biochem. J.* 359, 55-64. . (JIF2005 = 4.224)

16. **Suginta W**, Robertson PAW, Austin B, Fry SC & Fothergill-Gilmore LA (2000) Chitinases from *Vibrio*: activity screening and purification of chi A from *Vibrio carchariae*. *J. Appl. Microbiol.* 89, 76-84. (JIF2007 = 2.512)

17. Svasti J, Srisomsap C, Surarit R, Benjavongkulchai E, **Suginta W**, Khunyoshyeng S, Champattanachai V, Nilwarangkoon S & Rungvirayudx S (1996) Potential Applications of Plant Glycohydrolases for Oligosaccharide Synthesis. *In Protein Structure-Function Relationship* (Zaidi, Z.H. and Smith, D.L., eds.), Plenum Press. pp.249-257.

18. Surarit R, Svasti MR J, Srisomsap C, **Suginta W**, Khunyoshyeng S, Nilwarangkoon S, Harnsakul P & Benjavongkulchai E (1995) Possible Use of Glycosidase Enzymes from Thai Plant Seeds for Oligosaccharide Synthesis. In Biopolymers and Bioproducts: structure, function and applications (Svasti, J. et al., eds.), Samakkhisan Public Co. Ltd., Bangkok, 251-255.

19. **Suginta W** & Svasti MRJ (1995) Purification and Properties of β-Galactosidase from *Hibiscus sabdariffa* L. var. *altissima*. *ScienceAsia* 21, 183-186.

20. **Suginta W** & Svasti J (1995) Beta- Galactosidase from Thai Jute: Purification and Characterization. In Biopolymers and Bioproducts: Structure, Function and Applications (Svasti, J. et al., eds.), Samakkhisan Public Co. Ltd., Bangkok, 256-260.
21. Surarit R, Svasti MRJ, Srisomsap C, **Suginta W**, Khunyoshyeng S, Nilwarangkoon S, Harnsakul P & Benjavongkulchai E (1995) Screening of Glycohydrolase Enzymes in Thai Plant Seeds for Potential Use in Oligosaccharide Synthesis. *ScienceAsia* 21, 293-303.

Presentations at Scientific Meetings (Years 2000-present)

1. Sritho N & **Suginta W.** Mutational analysis of the active-site residues Aspartate313 and Tyr435 of Chitinase A from a marine bacterium *Vibrio harveyi.* 2nd SUT Graduate Conference 2009, Suranaree University of Technology, Nakhon Ratchasima, January 21st-22nd, 2009. AG-P-13, *Poster presentation.*
2. Ruamchan S, Schulte A & **Suginta W.** Ion channel activity of *Burkholderia pseudomallei* and *thailandensis* porins in black lipid membranes. 3rd Annual Symposium of the Protein Society of Thailand "Frontiers in Protein Research", Chulabhorn Research Institute Conference Center, Bangkok, August 28th-29th, 2008. P53, *Poster presentation.*
3. Chuenark D, Prinz & **Suginta W.** Cloning, expression, and characterization of two zincin-like fold containing chitobiases from *Vibrio harveyi.* 3rd Annual Symposium of the Protein Society of Thailand "Frontiers in Protein Research", Chulabhorn Research Institute Conference Center, Bangkok, August 28th-29th, 2008. P73, *Poster presentation.*
4. Sritho N, Songsiriritthigul C & **Suginta W.** Mutational analysis of the reducing-end binding residues of chitinase A from *Vibrio harveyi.* 3rd Annual Symposium of the Protein Society of Thailand "Frontiers in Protein Research", Chulabhorn Research Institute Conference Center, Bangkok, August 28th-29th, 2008. P50, *Poster presentation.*
5. Pantoom S, Prinz H & **Suginta W.** Identification of novel inhibitors of chitinase A from *Vibrio harveyi* using a hig-throughput screening approach. 3rd Annual Symposium of the Protein Society of Thailand "Frontiers in Protein Research", Chulabhorn Research Institute Conference Center, Bangkok, August 28th-29th, 2008. P48, *Poster presentation.*
6. Pantoom S, Songsiriritthigul C & **Suginta W.** Crystallization of wild-type chitnase A and mutants (W275G and W397F) from Vibrio harveyi in complex with potential inhibitors. 3rd Annual Symposium of the Protein Society of Thailand "Frontiers in Protein Research",

Chulabhorn Research Institute Conference Center, Bangkok, August 28th-29th, 2008. P46, *Poster presentation.*

7. **Suginta W** & Prinz H. Substrate binding preference and anomer selectivity of *Vibrio carchariae* chitinase A as revealed by HPLC-MS. 2nd Annual Symposium of the Protein Society of Thailand "Odysseys in Protein Research", Chulabhorn Reserch Institute Conference Center, Bangkok, September 20th-21st, 2007. P14, *Invited oral presentation.*
8. **Suginta W.** Identification of chitin binding proteins and characterization of two chitinase isoforms from *Vibrio alginolyticus* 283. 2nd Annual Symposium of the Protein Society of Thailand "Odysseys in Protein Research", Chulabhorn Reserch Institute Conference Center, Bangkok, September 20th-21st, 2007. P47. *Poster presentation.*
9. Songsiriritthigul C, Kobdaj A & **Suginta W.** The active site residues Trp275 and Trp397 are important for the binding selectivity of chitinase A to soluble substrates. 2nd Annual Symposium of the Protein Society of Thailand "Odysseys in Protein Research", Chulabhorn Reserch Institute Conference Center, Bangkok, September 20th-21st, 2007. P53. *Poster presentation.*
10. Pantoom S, Songsiriritthigul C & **Suginta W.** The influence of the surface-exposed residues on the binding and hydrolytic activities of *Vibrio carchariae* chitinase A. 2nd Annual Symposium of the Protein Society of Thailand "Odysseys in Protein Research", Chulabhorn Reserch Institute Conference Center, Bangkok, September 20th-21st, 2007. P27. *Poster presentation.*
11. Pantoom S, Songsiriritthigul C & **Suginta W.** The effect of the *N*-terminal residues on the enzymatic properties of *Vibrio carchariae* chitinase A. 1st Annual Symposium of the Protein Society of Thailand "Challenges in Protein Research in Thailand", Chulabhorn Reserch Institute Conference Center, Bangkok, October 24-25th, 2006. P61. *Poster presentation.*
12. Songsiriritthigul C, Aguda A, Robinson RC & **Suginta W.** Structural analysis of *Vibrio carchariae* chitinase A reveals conformational changes during substrate hydrolysis. 1st Annual Symposium of the Protein Society of Thailand "Challenges in Protein Research in Thailand", Chulabhorn Reserch Institute Conference Center, Bangkok, October 24-25th, 2006. P19. *Oral presentation.*
13. Songsiriritthigul C, Aguda A, Robinson RC & **Suginta W.** Structure of chitinase A from *Vibrio carchariae*. 2nd Protein Crystallization Workshop. Synchrotron Research Center, Nakhon Ratchasima, 20 – 23 July 2006. *Invited oral presentation by SC.*

14. **Suginta W.** On the structure and function of bacterial porins and chitinases. A Departmental Special Seminar, Department of Life Sciences, Faculty of Sciences and Agriculture, The University of the West Indies, Trinidad and Tobago, May 15th, 2006. *Invited oral presentation.*
15. Songsiriritthigul C, Vongsuwan A, Krittanai C & **Suginta W** A study of substrate specificity of chitinases A from *Vibrio carchariae*. 31st Congress on Science and Technology of Thailand at Suranaree University of Technology, Nakhon Ratchasima, 18 – 20 October 2005. P327. *Oral presentation.*
16. Songsiriritthigul C, Yuvaniyama J, Robinson RC, Vongsuwan A & **Suginta W** Expression, purification, crystallization, and preliminary crystallographic analysis of chitinases A from *Vibrio carchariae.* 31st Congress on Science and Technology of Thailand at Suranaree University of Technology, Nakhon Ratchasima, 18 – 20 October 2005. P335. *Poster presentation.*
17. Songsiriritthigul C, Vongsuwan A, Krittanai C & **Suginta W** Active-site mutation alters substrate specificity of chitinase A from *Vibrio carchariae.* 2nd Protein Symposium Network, Chulabhorn Research Institute, Bangkok, Thailand, September 23th-24th, 2005. *Invited oral presentation.*
18. Siritapetawee J, Prinz H, Krittanai C, Ashley RH & **Suginta W** Porin from *Burkholderia pseudomallei* and B. *thailandensis*. In 30th FEBS Congress & 9th IUBMB Meeting, Budapest, Hungary, July2nd-7th, 2005. *FEBS J. Vol.* 272, *Supp.* 1, P389. *Poster presentation.*
19. Songsiriritthigul C, Robinson RC, Yuvaniyama J & **Suginta W** Expression, purification, and preliminarily structural analysis of chitinase A from *Vibrio carchariae.* The 15th Annual Meeting of the Thai Society for Biotechnology. February, 3rd-6th, 2004. P164. *Poster presentation.*
20. Siritapetawee J & **Suginta W** Expression and refolding of Omp38 from *Burkholderia pseudomallei* and *Burkholderia thailandensis*, and their function as a non-specific channel. The 15th Annual Meeting of the Thai Society for Biotechnology. February, 3rd-6th, 2004. P5. *Poster presentation.*
21. **Suginta W,** Svasti J & Prinzs H Enzymatic properties of a family 18 chitinase a from *Vibrio carchariae*, as revealed by HPLC/ESI mass spectrometry, Joint Senior Research Scholar Meeting: Protein Structure and Thalassemia Research Fund, Royal River Hotel, Bangkok, August 22th-23th, 2003, *Invited oral presentation.*

22. Siritapetawee J, Ashley RH, Prinz H, Samosornsuk W & **Suginta W** Identification of *Burkholderia* porins using MALDI-TOF and nanoelctrospray MS. 1st Protein Symposium Network, Mahidol, Thailand, August 29th-30th, 2002. *Invited oral Presentation.*
23. **Suginta W** *C*-terminal protein processing study of *Vibrio carchariae* chitinase, using MALDI-TOF and nanoelectrospray MS, 1st Protein Symposium Network, Mahidol, Thailand, August 29th-30th, 2002. *Oral presentation.*
24. Sun Q, McDonald A, **Suginta W** & Ashley RH (2001) Localisation of a CLIC (Chloride Intracellular Channel) protein fused to green fluorescent protein. *Biochem. Soc. Trans.* A112. *Poster Presentation.*
25. **Suginta W** & Ashley RH (2000) The chloride intracellular channel protein p64H1 (CLIC4) associates *in vitro* with brain dynamin, actin and 14-3-3 proteins. *Molecular Biophysics of Cell Membranes (FASEB conference)*, P57. *Poster presentation.*
26. **Suginta W**, Estibeiro P, Rigden DJ & Fothergill-Gilmore LA (2000) Chitinase A from a marine bacterium, *Vibrio carchariae*, Gene isolation, Nucleotide sequence, and homology modelling of 3D-structure. *Biophy. J.* P417A. *Poster presentation.*