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EDUCATION

- 2003.5-2004.5 Postdoctoral research in University Chemical Laboratories, University of Cambridge, Cambridge, UK
2000-2004 PhD in Chemistry, University of Cambridge, Cambridge, UK

EXPERIENCE/ POSITION HELD

- 2009.8-present Joint Appointment Assistant/Associate Professor, Biotechnology Center, National Chung Hsing University
2007.2-present Assistant/Associate Research Fellow, Genomics Research Center, Academia Sinica, Taipei, Taiwan
2004.9-2007.2 Assistant Professor, Department of Food Science, National Taiwan Ocean University, Keelung, Taiwan

RESEARCH INTEREST

Natural products chemistry; Small molecule chemoenzymatic synthesis; Secondary metabolite pathway engineering; Mechanistic structural biology (protein x-ray crystallography); Synthetic biology (medicine & biofuel); Microbial pathogenesis (pathogenic virulence factor)

SELECTED PUBLICATION (*: corresponding author)

1. Li TL*, Liu YC, Lyu SY, *Combining biocatalysis and chemoselective chemistries for glycopeptide antibiotics modification*, 2012, Curr Opin Chem Biol, epub ahead of print.
2. Wu HC, Li YS, Liu YC, Lyu SY, Wu CJ, Li TL*, *Chain elongation and cyclization in type III PKS DpgA*, 2012, ChemBioChem, epub ahead of print.
3. Chen SH, Hwang DR, Chen GH, Hsu NS, Wu YT, Li TL*, Wong CH*, *Enhanced bioethanol production of Pichia stipitis on xylose by directed-evolution of the rate-limiting transaldolase*, 2011, ACS Chemical Biology, epub ahead of print.
4. Ho JY, Lin TL, Lee A, Cheng AN, Li CY, Chen MC, Wu SH, Wang JT*, Li TL*, Tsai MD*, *Functions of some capsular polysaccharide biosynthetic genes in Klebsiella pneumonia NTUH K-2044*, 2011, PLoS One 6(7), e21664.
5. Liu YC, Li YS, Lyu SY, Hsu LJ, Chen YH, Huang YT, Chan HC, Huang CJ, Chen GH, Chou CC, Tsai MD, Li TL*, *Interception of teicoplanin oxidation intermediates yields new antimicrobial scaffolds*, Nat Chem Biol. 2011, 7(5), 304-309.
6. Chan HC, Huang YT, Lyu SY, Huang CJ, Li YS, Liu YC, Chou CC, Tsai MD*, Li TL*, *Regioselective deacetylation based on teicoplanin-complexed Orf2* crystal structures*, Mol Biosyst. 2011 Apr 1;7(4):1224-1231.
7. Huang YT, Lyu SY, Chuang PH, Hsu NS, Li YS, Chan HC, Huang CJ, Liu YC, Wu CJ, Yang WB, Li TL*, *In vitro characterization of enzymes involved in the synthesis of nonproteinogenic residue (2S,3S)- β -methylphenylalanine in glycopeptide antibiotic mannopeptimycin*, ChemBioChem. 2009 Sep 3;10(15):2480-2487.
8. Li TL*, Spitteller D, Spencer JB, *Identification of a pentaketide stilbene produced by a type III polyketide synthase from Pinus sylvestris and characterisation of free coenzyme A intermediates*, ChemBioChem. 2009 Mar 23;10(5):896-901.
9. Huang HN, Li TL, Chan YL, Chen CL, Wu CJ*, *Transdermal immunization with low-pressure-gene-gun mediated chitosan-based DNA vaccines against Japanese encephalitis virus*, Biomaterials. 2009 Oct; 30(30):6017-6025.
10. Li YS, Ho JY, Lee CY, Hsu PH, Huang YT, Huang CC, Lyu SY, Chan HC, Huang CJ, Tsai MD, Li TL* *A Unique flavin mononucleotide-linked primary alcohol oxidase for glycopeptide A40926 maturation*. J Am Chem Soc. 2007 Oct 13; 129(44): 13384-13385.
11. Ho JY, Huang YT, Wu CJ, Li YS, Tsai MD, Li TL*, *Three homologous proteins are novel deacetylases and thymidyltransferase in biosynthetic pathways of three clinically important glycopeptide antibiotics*, J Am Chem Soc. 2006 Oct 25; 128(42):13694- 13695.
12. Huang F, Haydock SF, Spitteller D, Mironenko T, Li TL, Leadlay PF, O'Hagan D, Spencer JB*, *Characterisation of a locus involved in fluorometabolite biosynthesis in Streptomyces cattleya*. Chem Biol. 2006 May;13(5):475-484.
13. Li TL, Huang F, Haydock SF*, Mironenko T, Leadlay, PF, Spencer JB*, *The biosynthetic gene cluster for the glycopeptide antibiotic teicoplanin in Actionplanes teichomyceticus: identification of the glycosyltransferases and of a key acyltransferase involved in the maturation of the antibiotic*, Chem Biol. 2004 Jan;11(1):107-119.
14. Li TL, Choroba OW, Hong H, Williams DH, Spencer JB*, *Biosynthesis of the vancomycin group of antibiotics: characterisation of a type III polyketide synthase in the pathway to (S)-3,5-dihydroxyphenylglycine*, Chem Commun (Camb). 2001 Sep 21;(18):1752-3.
15. Li TL, Choroba OW, Charles EH, Sandercock AM, Williams DH, Spencer JB*, *Characterisation of a hydroxymandelate oxidase involved in the biosynthesis of two unusual amino acids occurring in the vancomycin group of antibiotics*, Chem Commun (Camb). 2001 Oct 21;(20):2156-7.

PATENT

1. Structural and mechanistic basis for novel compounds biosynthesis using a 4-electron hexose oxidase, Li TL, Liu YC, Li YS, Lyu SY, USA/TAIWAN (application file No.: 12,896,747)
2. Crystal-structures-based development for new glycopeptide antibiotics, Li TL, Liu YC, Lyu SY, USA/TAIWAN (Academia Sinica file No. 28A-991215)