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MANUSCRIPTS IN PREPARATION

14. Cheng, Y.-Q. et al. (2007) Genomics-guided discovery of two missing genes required for FK228 biosynthesis in *Chromobacterium violaceum* no 968.
13. Matter, A.M., et al. and Cheng, Y.-Q. (2007) Molecular evolution and comparative analysis of the valinomycin biosynthetic gene cluster in various *Streptomyces* strains.

RESEARCH PAPERS (* indicates equal contribution)

12. Tang, G.-L.; Cheng, Y.-Q. and Shen, B. (2007) Chain initiation in the leinamycin-producing hybrid non-ribosomal peptide/ polyketide synthetase from *Streptomyces atrolivaceus* S-140: discrete, monofunctional adenylation enzyme and peptidyl carrier protein that directly load (D)-alanine. **Journal of Biological Chemistry** 282:20273-20282.
11. Cheng, Y.-Q., Yang, M. and Matter, A.M. (2007) Characterization of a gene cluster responsible for the biosynthesis of anticancer agent FK228 in *Chromobacterium violaceum* no. 968. **Applied and Environmental Microbiology** 73: 3460-3469.
10. Cheng, Y.-Q. (2006) Deciphering the biosynthetic codes for the potent anti-SARS-CoV cyclodepsipeptide valinomycin in *Streptomyces tsusimaensis* ATCC 15141. **ChemBioChem** 7:471-477.
9. Tang, G.-L., Cheng, Y.-Q. and Shen, B. (2006) Polyketide chain skipping mechanism in the biosynthesis of the hybrid nonribosomal peptide-polyketide antitumor antibiotic leinamycin in *Streptomyces atrolivaceus* S-140. **Journal of Natural Products**. 69:387-393.
8. Tang*, G.-L., Cheng*, Y.-Q. and Shen, B. (2004) The biosynthetic gene cluster of the antitumor antibiotic leinamycin from *Streptomyces atrolivaceus* S-140 revealing unprecedented architectural complexity for a hybrid polyketide synthase and nonribosomal peptide synthetase. **Chemistry & Biology** 11:33-45.
7. Cheng*, Y.-Q., Tang*, G.-L. and Shen, B. (2003) Type I polyketide synthase requiring a discrete acyltransferase for polyketide biosynthesis. **Proceedings of the National Academy of Sciences (USA)**. 100:3149-3154 (Highlighted by a **Commentary**).
6. Cheng, Y.-Q., Tang, G.-L. and Shen, B. (2002) Identification and localization of the antitumor macrolactam leinamycin biosynthesis gene cluster from *Streptomyces atrolivaceus* S-140. **Journal of Bacteriology** 184:7013-7024.
5. Ahn, J.-H., Cheng, Y.-Q. and Walton, J.D. (2002) A refined physical map of the *TOX2* locus of *Cochliobolus carbonum* required for cyclic peptide biosynthesis. **Fungal Genetics & Biology** 35:31-38.
4. Cheng, Y.-Q. and Walton, J.D. (2000) A eukaryotic alanine racemase gene involved in cyclic peptide biosynthesis. **Journal of Biological Chemistry** 275:4906-4911.
3. Cheng, Y.-Q. Ahn, J.-H. and Walton, J.D. (1999) A putative branched-chain-amino acid transaminase gene required for HC-toxin biosynthesis and pathogenicity in *Cochliobolus carbonum*. **Microbiology** 145:3539-3546.

2. Cheng, Y.-Q., Le, L.D., Walton, J.D. and Bishop, K.D. (1999) ¹³C labeling indicates that the epoxide-containing amino acid of HC-toxin is synthesized by head-to-tail condensation of acetate. **Journal of Natural Products** 62:143-145.
1. Scott-Craig, J., Cheng, Y.-Q., Cervone, F., de Lorenzo, G., Pitkin, J.W. and Walton, J.D. (1998) Targeted mutants of *Cochliobolus carbonum* lacking the two major extracellular polygalacturonases. **Applied and Environmental Microbiology** 64:1497-1503.

PATENTS AND PATENT APPLICATIONS

4. Cheng, Y.-Q. (2007) Sequences for FK228 biosynthesis and methods of synthesizing FK228 and FK228 analogs. (**US Provisional Patent** filed by the UWM Research Foundation. Control No. 020871-9009-US00)
3. Cheng, Y.-Q. (2006) A gene sequence essential to valinomycin biosynthesis and its utility in engineered biosynthesis of novel antibiotic/antiviral drugs. (**US Provisional Patent** filed by the WiSys. WiSys Case No. T05015US)
2. Shen, B., Cheng, Y.-Q. and Tang, G.-L. (2006) Discrete acyltransferases associated with type I polyketide synthases and methods of use (**US 7,153,667 B2**)
1. Shen, B., Cheng, Y.-Q., Tang, G.-L., Nakagawa, S. and Mizoguchi, H. (2002) Leinamycin biosynthesis gene cluster and its components and their uses (**PCT/Int. Appl. WO 0277179; PCT/US02/08937**)

INVITED JOURNAL REVIEWS AND BOOK CHAPTERS

5. Shen, B.; Cheng, Y.-Q.; Christenson, S. D.; Jiang, H.; Ju, J.; Kwon, H.-J.; Lim, S.-K.; Liu, W.; Nonaka, K.; Seo, J.-W.; Smith, W. C.; Standage, S.; Tang, G.-L.; Van Lanen, S.; Zhang, J. (2007) Polyketide biosynthesis beyond the type I, II, and III polyketide synthase paradigms: a progress report. In **ACS symposium series 955, Polyketides: Biosynthesis, Biological Activities, and Genetic Engineering**. Rimando, A.M.; Baerson, S.R. eds., ACS, pp154-166.
4. Shen, B.; Chen, M.; Cheng, Y.-Q.; Du, L.; Edwards, D.J.; George, N.P.; Huang, Y.; Oh, T.; Sanchez, C.; Tang, G.-L.; Wendt-Pienkowski, E.; Yi, F. (2005) "Prerequisites for Combinatorial Biosynthesis: Evolution of Hybrid NRPS-PKS Gene Clusters" in **Biocombinatorial Approaches for Drug Finding, The Ernst Schering Research Foundation Workshop 51**, Springer-Verlag, Berlin, 2005, pp107-126.
3. Du, L., Cheng, Y.-Q., Ingenhorst, G., Tang, G.-L., Huang, Y. and Shen, B. (2003) hybrid peptide-polyketide natural products: biosynthesis and prospects towards engineering novel molecules. In **Genetic Engineering, Principle and methods**, Setlow, J.K. ed., vol. 25, pp.227-267. Kluwer Academic.
2. Walton, J.D., Scott-Craig, J., Cheng, Y.-Q., Tonukari, N.J. and Pedley, K. (2000) Fungal virulence factors: some things are and some things aren't. In **Biology of Plant-Microbe Interactions**, vol. 2. deWit, P.J.G.M., Bisseling, T. and Stiekema, W.J. ed., Intl. Soc. Mol. Plant-Microbe Interact., St. Paul, MN, pp.175-179.
1. Walton, J.D., Ahn, J.H., Pitkin, J.W., Cheng, Y.-Q., Nikolskaya, A.N. Ransom, R. and Wagener, S. (1998) Enzymology, molecular genetics, and regulation of biosynthesis of the host-selective toxin HC-toxin. In **Molecular Genetics of Host-specific Toxins in Plant Disease**, Kohmoto, K. and Yoder, O.C. ed., pp.25-34. Kluwer Academic.

RECENT PRESENTATIONS

1. FK228 Biosynthesis and Engineering of Novel Anticancer Bio-Agents. Cheng, Y.-Q. (June 15, 2007) **Beijing University of Chemical Technology College of Life Sciences and Technology**. Beijing, China. Invited oral presentation.
2. FK228 Biosynthesis and Engineering of Novel Anticancer Bio-Agents. Cheng, Y.-Q. (June 14, 2007) **Tianjin University School of Pharmaceutical Science and Technology**. Tianjin, China. Invited oral presentation.
3. FK228 Biosynthesis and Engineering of Novel Anticancer Bio-Agents. Cheng, Y.-Q. (June 13, 2007) **Nankai University College of Pharmacy**. Tianjin, China. Invited oral presentation.
4. Cloning and Characterization of the Depsipeptide FK228 Biosynthetic Gene Cluster for Engineered Biosynthesis of Novel Anticancer Agents. Cheng, Y.-Q., Yang, M. and Matter, A. (Feb 7-8, 2007) **The 4th Cancer Drug Research And Development Conference**. Philadelphia, PA. Poster presentation.
5. Depsipeptide Biosynthesis and Towards Engineered Biosynthesis of Natural Product Analogs. Cheng, Y.-Q., Yang, M. and Matter, A. (July 30 – August 3, 2006) **The 57th Annual Meeting of the Society for Industrial Microbiology**. Baltimore, Maryland. Poster presentation.
6. Microbial Biodiversity in Lake Michigan Sediment and a Search for Bioactive Natural Products. Barman, M. and Cheng, Y.-Q. (May 21-25, 2006) **106th General Meeting of the American Society of Microbiology**. Orlando, Florida. Poster presentation.
7. Toward metabolic engineering of candidate drugs: depsipeptide biosynthesis. Cheng, Y.-Q. (March. 15, 2006) **Milwaukee Microbiology Society**. Invited oral presentation.
8. Exploration of microbial resource in Lake Michigan sediment for bioactive natural products. Barman, M., Bricceno, K. and Cheng, Y.-Q. (August 21-25, 2005) **The 56th Annual Meeting of the Society for Industrial Microbiology**. Chicago, Illinois. Poster presentation.
9. Guest lecture: Harness microbial metabolic potential for drug discovery and development. Cheng, Y.-Q. (Nov. 18, 2004) University of Wisconsin – The Great Lakes WATER Institute. Invited oral presentation.
10. Biosynthesis and engineering of the antitumor agent leinamycin in *Streptomyces*. Cheng, Y.-Q. (Oct. 15, 2003) **Milwaukee Microbiology Society**. Invited oral presentation.
11. Leinamycin biosynthesis by a hybrid nonribosomal peptide synthetase and polyketide synthase system with unusual structure and mechanism. Cheng, Y.-Q., Tang, G.-L. and Shen, B. (Sept. 21-26, 2003) **6th International marine Biotechnology Conference / 5th Asia-Pacific Marine Biology Conference**. Chiba, Japan. Poster presentation.
12. Leinamycin biosynthesis by a hybrid nonribosomal peptide synthetase and polyketide synthase system with unusual structure and mechanism. Cheng, Y.-Q., Tang, G.-L. and Shen, B. (Aug. 10-14, 2003) **Annual Meeting of the Society for Industrial Microbiology**. Minneapolis, Minnesota. Poster presentation.
13. Decipher the substrate specificity of a discrete acyltransferase involved in leinamycin biosynthesis. Cheng, Y.-Q. (March 28, 2003) **School of Pharmacy, University of Wisconsin – Madison**. Oral presentation.
14. Leinamycin biosynthesis and bioengineering in *Streptomyces atroolivaceus*. Cheng, Y.-Q. (Jan. 27, 2003) **Department of Chemistry and Biochemistry, Miami University, Oxford, Ohio**. Invited oral presentation.
15. Harnessing the microbial metabolic potential for drug discovery and development. Cheng, Y.-Q. (Dec. 2, 2002) **Department of Biological Sciences, University of Wisconsin – Milwaukee**. Invited oral presentation.