

Yun Ding

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WORK EXPERIENCE

02/2007 – Present: Manager, Discovery Chemistry, ELT Boston, GlaxoSmithKline, Waltham, MA

- Lead the “on-DNA” chemistry development, library design and library synthesis for the DNA-encoded library technology.
- Lead the development on the second generation of DNA-encoded library technology.
- Leader of various projects, including technology improvement projects and library projects.
- Expanded building blocks & scaffolds collection; Control the molecular property of scaffolds and building block applied in the DNA-encoded library.
- Hit-to-lead optimization on sEH project. Delivered 7 series of sEH leads, one of which led to drug candidate that has successfully completed Phase I clinical trial.

02/2004 – 02/2007: Staff Scientist, Praecis Pharmaceutical Inc., Waltham, MA

- DNA-encoded library Technology:
 - Developed new on-DNA chemistries;
 - Designed and synthesized DNA-encoded libraries.
 - Hit confirmation, SAR study and hit optimization on ADAMTS-4 and sEH projects. Both projects delivered potent hits/leads, which led to the acquisition of Praecis by GSK.
- Medicinal chemistry projects:
 - Transglutaminase inhibitors;
 - Topoisomerase I inhibitors.

12/2002 – 01/2004: Postdoctoral Research Associate, The Scripps Research Institute, San Diego, CA (Advisor: Prof. Kim Janda)

- Synthesized porphyrin-based photosensitizers and covalently linked them with antibody JW3C2 for photodynamic therapy study.
- Chemically synthesized quorum sensing peptides and their analogs from autoinducing peptides (AIP) of *S. aureus*.
- Synthesized several haptens for generating antibodies that are specific for cholesterol ozonolysis products as tools for diagnostics of atherosclerosis and Alzheimer's.

08/97 – 12/2002: Ph.D. Research Associate, Department of Chemistry, University of Florida, Gainesville, Florida. (Advisor: Prof. Nigel Richards)

- Designed and synthesized several potent inhibitors of asparagine synthetase; Developed a new synthesis of L-4, 4-difluoroglutamate to investigate the catalytic mechanism of the enzyme; Synthesized a *o*-nitrobenzyl derivative of glutamine as photolabile precursor of glutamine.
- Computational Chemistry: Use of homology modeling and molecular dynamics simulation methods to construct hypothetical models of substrates, intermediates and β -asparaginyladenylate bound within the synthetase domain of both the bacterial and human forms of asparagine synthetase.

10/96 - 05/97: Research Associate, Shanghai Institute of Organic Chemistry, Chinese Academy of Sciences. Totally synthesized an analogue of corosolone, a natural cytotoxic annonaceous acetogenin in 13 steps.

09/94 - 07/96: MSci Research Associate, Shanghai Institute of Organic Chemistry, Chinese Academy of Sciences. Designed and synthesized 8 nucleoside analogs as potential antiviral reagents; Synthesized P-modified nucleoside 2',3'-cyclic phosphates.

EDUCATION

08/97-10/02: **Ph. D.** in Organic Chemistry. Department of Chemistry, University of Florida. Research Advisor: Prof. Nigel G. J. Richards.

09/93-07/96: **M. S.** in Organic Chemistry. Shanghai Institute of Organic Chemistry, Chinese Academy of Sciences, Shanghai. Research Advisor: Prof. Yao-Quan Chen.

09/89-07/93: **B. S.** in Medicinal Chemistry. East China University of Science and Technology, Shanghai.

AWARDS

- Silver Award from GSK for delivery of libraries that have produced tractable hits for various targets. (2009)
- Multiple Bronze Awards from GSK. (2007-2014)
- WONG Kuan-Cheng Chinese International Scholarship for graduate study in King's College London, University of London. (08/1996, Declined)
- Admitted to graduate study without entrance exam. (09/1993)
- Outstanding Graduate Award from Shanghai Higher Education Commission. (07/1993)
- Outstanding Student Award from Shanghai Higher Education Commission. (07/1992 & 07/1991)

PATENTS

1. **Ding, Y.** "Preparation of 2,4-diamino-1,3,5-triazine and 4,6-diamino-pyrimidine derivatives as aggreganase inhibitors" PCT Int. Appl. (2010), WO 2010085246
2. **Ding, Y.**; Thalji, R. K.; Marino, J. P. "Preparation of 2-amino-1,3,5-triazine derivatives as soluble epoxide hydrolase (sEH) inhibitors and their use" PCT Int. Appl. (2009), WO 200949157.
3. **Ding, Y.**; Thalji, R. K.; Marino, J. P. "Preparation of 2-amino-1,3,5-triazine derivatives as soluble epoxide hydrolase (sEH) inhibitors and their use" PCT Int. Appl. (2009), WO 2009049165.
4. **Ding, Y.**; Longdregan, A. T.; Marino, J. P. "Preparation of 2-amino-1,3,5-triazine derivatives as soluble epoxide hydrolase (sEH) inhibitors and their use" PCT Int. Appl. (2009), WO 2009049154.
5. **Ding, Y.**; Marino, J. P.; Li, P.; Longdregan, A. T. "Preparation of novel sEH inhibitors and their use" PCT Int. Appl. (2008), WO 2008105968.

PUBLICATIONS

1. **Ding, Y.**; DeLorey, J. L.; Clark, M. A. "A Novel Catalyst System for the Suzuki-Miyaura Coupling with Challenging on-DNA Aryl Chlorides", *J. Am. Chem. Soc.*, **2016**, in preparation.
2. **Ding, Y.**; Franklin, G. J.; DeLorey, J. L.; Centrella, P. A.; Mataruse, S.; Clark, M. A.; et al "Design and Synthesis of Bi-Aryl DNA-encoded Libraries", *Chemical Science*, in preparation
3. **Ding, Y.**; Clark, M. A. "Robust Suzuki-Miyaura Cross-Coupling on DNA-Linked Substrates", *ACS Comb. Sci.* **2015**, *17*, 1-4.
4. **Ding, Y.**; O'Keefe, H.; DeLorey, J. L.; Israel, D. I.; Messer, J. A.; Chiu, C. H.; Skinner, S. R.; Matico, R. E.; Murray-Thompson, M. F.; Li, F.; Clark, M. A.; Cuzzo, J. W.; Arico-Muendel, C.; Morgan, B. A. *ACS Med. Chem. Lett.*, **2015**, *6*, 888-893.
5. **Ding, Y.**; Belyanskaya, S. L.; Svendsen, J. L.; Franklin, G. J.; Israel, D. I.; Messer, J. A.; et al "Discovery of Novel soluble epoxide hydrolase (sEH) inhibitors through DNA-encoded library technology" *ACS Med. Chem. Lett.* In preparation.

6. Wu, Z.; Graybill, T. L.; Zeng, X.; Platcek, M.; Zhang, J.; Bodmer, V. Q.; Wisnoski, D. D.; Deng, J.; Coppo, F. T.; Yao, G.; Tamburino, A.; Scavello, G.; Franklin, G. J.; Mataruse, S.; Bedard, K. L.; **Ding, Y.**; Chai, J.; Summerfield, J.; Centrella, P. A.; Messer, J. A.; Pope, A. J.; Israel, D. I. *ACS Comb. Sci.* **2015**, *17(12)*, 722-731.
7. Wood, E. R.; Bledsoe, R.; Chai, J.; Daka, P.; Deng, H.; **Ding, Y.**; Harris-Gurley, S.; Kryn, L.H.; Nartey, E.; Nichols, J.; et al *J. Bio. Chem.* **2015**, *290(32)*, 19681-19696.
8. Yang, H.; Medeiros, P.F.; Raha, K.; Elkins, P.; Lind, K.E.; Lehr, R.; Adams, N.D.; Burgess, J. L.; Schmidt, S.J.; Knight, S.D.; Auger, K.R.; Schaber, M.D.; Franklin, G.J.; **Ding, Y.**; et al. *ACS Med. Chem. Lett.* **2015**, *6*, 531-536.
9. Deng, H.; Zhou, J.; Sundersingh, F.S.; Summerfield, J.; Somers, D.; Messer, J.A.; Satz, A.L.; Ancellin, N.; Arico-Muendel, C.C.; (Sargent) Bedard, K.L.; Beljean, A.; Belyanskaya, S.L.; Bingham, R.; Smith, S.E.; Boursier, E.; Carter, P.; Centrella, P.A.; Clark, M.A.; Chung, C.; Davie, C.P.; DeLorey, J.L.; **Ding, Y.**; et al *ACS Med. Chem. Lett.*, **2015**, *6*, 919-924.
10. Thalji, R. K.; McAtee, J. J.; Belyanskaya, S.; Brandt, M.; Brown, G. D.; Costell, M. H.; **Ding, Y.**, Dodson, J. W.; et al *Bioorg. & Med. Chem. Lett.* **2013**, *23(12)*, 3584-3588.
11. Podolin, P. L.; Bolognese, B. J.; Foley, J. F.; Long, E.; Peck, B.; Umbrecht, S.; Zhang, X.; Zhu, P.; Schwartz, B.; Xie, W.; Quinn, C.; Q. H.; Sweitzer, S.; Chen, S.; Galop, M.; **Ding, Y.**; et al *Prostaglandins and Other Lipid Mediators* **2013**, *104-105*, 25-31.
12. Clark, M. A.; Acharya, R. A.; Arico-Muendel, C. C.; Belyanskaya, S. L.; Benjamin, D. R.; Carlson, N. R.; Centrella, P. A.; Chiu, C. H.; Creaser, S. P.; Cuzzo, J. W.; Davie, C. P.; **Ding, Y.**; et al *Nat. Chem. Bio.* **2009**, *5*, 647-654.
13. Ikeuchi, H.; Meyer, M. E.; **Ding, Y.**; Hiratake, J.; Richards, N. G. J. *Bioorg. & Med. Chem.* **2009**, *17(18)*, 6641-6650.
14. **Ding, Y.**; Wang, J.; Schuster, S. M.; Richards, N. G. J. *J. Org. Chem.* **2002**, *67(12)*, 4372-4375.
15. **Ding, Y.**; Wang, J.; Abboud, K. A.; Xu, Y.; Dolbier, W. R. J.; Richards, N. G. J. *J. Org. Chem.* **2001**, *66(19)*, 6381-6388.
16. **Ding, Y.**; Zhang, Y.-Y.; Zhang, J.; Chen, Y.-Q. *Bioorg. & Med. Chem. Lett.* **1997**, *7(13)*, 1607-1610.
17. **Ding, Y.**; Zhang, Y.-B.; Chen, Y.-Q. *Chinese Chem. Lett.* **1997**, *8(3)*, 199-202.
18. **Ding, Y.**; Zhang, J.; Chen, Y.-Q. *Chinese J. Chem.*, **1997**, *15(4)*, 379-384.
19. Zhang, Y.-Y.; **Ding, Y.**; Zhang, Y.-B.; Chen, Y.-Q. *Acta Chim Sinica* **1997**, *55(4)*, 411-416.
20. Zhang, Y.-Y.; **Ding, Y.**; Zhang, Y.-B.; Chen, Y.-Q. *Chinese Chem. Lett.* **1996**, *7(4)*, 309-312.

RECENT CONFERENCE ORAL PRESENTATION:

“Discovery of soluble epoxide hydrolase inhibitors through DNA-encoded library technology (ELT)”, *250th ACS National Meeting & Exposition*, Boston, MA, United States, August 16-20, 2015, MEDI-350.

CONFERENCE PAPERS: 10