

Curriculum Vitae

Qi-Yin Chen, PhD

Department of Medicinal Chemistry, Pharmacy College, University of Florida
1345 Center Drive, Gainesville, FL32610, USA
Phone: 1-352-273-7739; **E-mail:** chenqufl@ufl.edu

Education

- 2002 - 2005 PhD, Organic Chemistry, Institute of Chemistry, Chinese Academy of Sciences, China
1997 - 2000 MS, Applied Chemistry, Central South University of Tech. (Central South University), China
1993 - 1997 BS, Chemistry, Henan Normal University, China

Academic Experience

- 2018 - Research Assistant Professor, Department of Medicinal Chemistry, University of Florida
Research Core Leader, Synthetic Chemistry Core (SCC) at Center for Natural Products, Drug
Discovery and Development (CNPD3), University of Florida.
2012 - 2018 Research Assistant Scientist, Department of Medicinal Chemistry, University of Florida.
Advisor: Prof. Hendrik Luesch
2008 - 2012 Postdoc Associate, Department of Medicinal Chemistry, University of Florida
Advisor: Prof. Hendrik Luesch
2007 - 2012 Postdoc Associate, Departments of Chemistry, University of Florida
Advisor: Prof. Alan R. Katritzky
2005 - 2006 Postdoc Associate, Department of Industrial Chemistry, Tokyo University of Science, Japan.
Advisor: Prof. Yujiro Hayashi

Industrial Experience

- 2016 - 2017 Principal Investigator (contract), Oceanyx Pharmaceuticals, Inc., Florida, US.
2005 Senior Chemist, WuXi AppTech, Shanghai, China.
2000 - 2002 Senior Chemist, Project Manager, Hunan AHDA New Material, Co. Ltd., China.

Mentoring Experience

- 2008 – Have supervised PhD students (7), postdoc (2), visiting scholars (1), visiting PhD students (4), and undergraduate student (1) for their projects of organic synthesis with my role: synthetic route design, trouble-shooting, data collection and analysis (NMRs, Mass, HPLC, etc.) advice, bench-operation as well as safety training and so on.

Research Interests

- √ Drug leads discovery and optimization based on natural products and molecules of pharmaceutical importance; √ Target oriented drug design and synthesis; √ Total synthesis of natural products of pharmaceutical interests; √ Synthesis of pharmaceutical important molecules and bioprobes; √ The development of methodology of organic synthesis in medicinal chemistry; √ Process chemistry.

Honors and Awards

- 2020 “Research Service Incentive Award”, Pharmacy College, University of Florida
 2016 “Innovator Award”, University of Florida
 2004 “Hai Yang Hua Gong” Prize, Institute of Chemistry, CAS, China
 2004 “Head of Institute of Chemistry” Scholarship, Institute of Chemistry, CAS, China

Peers Review Publications

- David A Brumley, Sarath P Gunasekera, Thomas Sauvage, Larissa A H Dos Santos, **Qi-Yin Chen**, Valerie J Paul, Hendrik Luesch, Discovery, Synthesis, and Biological Evaluation of Anaenamides C and D from a New Marine Cyanobacterium, *Hormoscilla* sp. *J. Nat. Prod.* 2022. doi: 10.1021/acs.jnatprod.1c01073.
- Weijing Cai, Ranjala Ratnayake, Mengxiong Wang, **Qi-Yin Chen**, Kevin P Raisch, Long H Dang, Brian K Law, Hendrik Luesch, Inhibition of cotranslational translocation by apratoxin S4: Effects on oncogenic receptor tyrosine kinases and the fate of transmembrane proteins produced in the cytoplasm. *Curr. Res. Pharmacol. Drug Discov.* 2021, 2:100053. doi: 10.1016/j.crphar.2021.100053.
- Beiyong Qiu, Alison Tan, Yu Zhi Tan, **Qi-Yin Chen**, Hendrik Luesch, Xiaomeng Wang Largazole Inhibits Ocular Angiogenesis by Modulating the Expression of VEGFR2 and p21. *Mar. Drugs* 2021, 19, 471
- Susan Matthew, **Qi-Yin Chen (Equal contribution)**, Ranjala Ratnayake, Charles S Fermaintt, Daniel Lucena-Agell, Francesca Bonato, Andrea E Prota, Seok Ting Lim, Xiaomeng Wang, J Fernando Díaz, April L. Risinger, Valerie J. Paul, Marian A. Oliva, Hendrik Luesch, Gatorbulin-1, a distinct cyclodepsipeptide chemotype, targets a seventh tubulin pharmacological site, *PNAS* 2021, 118, 9, e20211847118.
- Xiao Liang, **Qi-Yin Chen**, Gustavo M. Seabra, Susan Matthew, Jason C. Kwan, Chenglong Li, Valerie J. Paul, Hendrik Luesch, Bifunctional doscadenamides activate quorum sensing in Gram-negative bacteria and synergize with TRAIL to induce apoptosis in cancer cells. *J. Nat. Prod.* 2021, 84, 779-789.
- Qi-Yin Chen**; Danmeng Luo; Gustavo Miranda Seabra; Hendrik Luesch, Ahp-cyclodepsipeptides as tunable inhibitors of human neutrophil elastase and kallikrein 7: total synthesis of tutuilamide A, serine protease selectivity profile and comparison with lyngbyastatin 7. *Bioorganic & Medicinal Chemistry* 2020, 28(23):115756.
- Al-Awadhi FH; Salvador-Reyes LA; Elsadek LA; Ratnayake R; **Chen QY**; Luesch H. Largazole is a brain-penetrant class I HDAC inhibitor with extended applicability to glioblastoma and CNS diseases. *ACS Chem Neurosci.* 2020, 11(13):1937-1943.
- David A. Brumley, Sarath P. Gunasekera, **Qi-Yin Chen**, Valerie J. Paul, Hendrik Luesch. Discovery, total synthesis, and SAR of anaenamides a and b: anticancer cyanobacterial depsipeptides with a chlorinated pharmacophore. *Org. Lett.* 2020, 22, 11, 4235–4239.
- Beiyong Qiu; Alison Tan; Amutha Barathi Veluchamy; Yong Li; Hannah Murray; Wei Cheng; Chenghao Liu; Joanna Marie Busoy; **Qi-Yin Chen**; Srivani Sistla; Walter Hunziker; Chui Ming Gemmy Cheung; Tien Yin Wong; Wanjin Hong; Hendrik Luesch; Xiaomeng Wang. Apratoxin S4 inspired by a marine natural product, a new treatment option for ocular angiogenic diseases. *IOVS* 2019, 60, 3254-3263.
- Michelle S.Bousquet, Ranjala Ratnayake, Jillian L.Pope, **Qi-Yin Chen**, Fanchao Zhu, Sixue Chen, Thomas J.Carney, Raad Z.Gharaibeh, Christian Jobin, Valerie J.Paul, Hendrik Luesch. Seaweed natural products modify the host inflammatory response via Nrf2 signaling and alter colon microbiota composition and gene expression. *Free Radic Biol Med.* 2019, pii: S0891-5849(19)30996-7.
- Xiao Liang, Susan Matthew, **Qi-Yin Chen**, Jason C. Kwan, Valerie J. Paul, Hendrik Luesch.

- Discovery and total synthesis of doscadenamide a: a quorum sensing signaling molecule from a marine cyanobacterium. *Org. Lett.* 2019, 21, 7274–7278.
12. Weijing Cai, Ranjala Ratnayake, Michael H. Gerber, **Qi-Yin Chen**, Yichao Yu, Hartmut Derendorf, Hendrik Luesch. Development of apratoxin S10 (Apra S10) as an anti-pancreatic cancer agent and its preliminary evaluation in an orthotopic patient-derived xenograft (PDX) model. *Investigational New Drugs* 2019, 37(2), 364-374.
 13. Weijing Cai, Susan Matthew, **Qi-Yin Chen**, Valerie J. Paul and Hendrik Luesch. Discovery of new A- and B-type laxaphycins with synergistic anticancer activity. *Bioorganic & Medicinal Chemistry* 2018, 26, 2310-2319.
 14. **Qi-Yin Chen**, Pravin R. Chaturvedi, Hendrik Luesch. Process development of and scale up total synthesis of largazole, a potent class I histone deacetylase inhibitor. *Org. Process Res. Dev.* 2018, 22, 190–199.
 15. Weijing Cai, Lilibeth A. Salvador-Reyes, Wei Zhang, **Qi-Yin Chen**, Susan Matthew, Simon Dolles, Daniel J. Gibson, Valerie J. Paul, Hendrik Luesch. Apratyramide, a marine-derived peptidic stimulator of VEGF-A and other growth factors with potential application in wound healing. *ACS Chem. Biol.* 2018, 13, 91–99.
 16. Weijing Cai, **Qi-Yin Chen (Equal contribution)**, Long Dang, Hendrik Luesch. Apratoxin S10, a dual inhibitor of angiogenesis and cancer cell growth to treat highly vascularized tumors. *ACS Medicinal Chemistry Letter* 2017, 8, 1007-1012.
 17. Ping Wu, Weijing Cai, **Qi-Yin Chen**, Senhan Xu, Ruwen Yin, Yingxia Li, Wei Zhang, Hendrik Luesch. Total synthesis and biological evaluation of apratoxin e and its C30 epimer: configurational reassignment of the natural product. *Org. Lett.* 2016, 18, 5400-5403.
 18. Danmeng Luo, **Qi-Yin Chen** and Hendrik Luesch. Total synthesis of the potent marine-derived elastase inhibitor lyngbyastatin 7 and in vitro biological evaluation in model systems for pulmonary diseases. *J. Org. Chem.* 2016, 81, 532-544.
 19. **Qi-Yin Chen**, Yanxia Liu and Hendrik Luesch. Improved total synthesis and biological evaluation of potent apratoxin s4 based anticancer agents with differential stability and further enhanced activity. *J. Med. Chem.* 2014, 57, 3011-3029.
 20. Mingming Yu, Lilibeth A. Salvador, Sherwin K. B. Sy, Yufei Tang, Ravi S. P. Singh, **Qi-Yin Chen**, Yanxia Liu, Jiyong Hong, Hartmut Derendorf, Hendrik Luesch. Largazole pharmacokinetics in rats by LC-MS/MS. *Marine Drugs* 2014, 12, 1623-1640.
 21. Bumki Kim, Heekwang Park, Lilibeth A. Salvador, Patrick E. Serrano, Jason C. Kwan, Sabrina L. Zeller, **Qi-Yin Chen**, Soyoun Ryu, Yanxia Liu, Seongrim Byeon, Hendrik Luesch and Jiyong Hong. Evaluation of class I HDAC isoform selectivity of largazole analogue. *Bioorganic & Medicinal Chemistry Letters* 2014, 24, 3728-3731.
 22. Lilibeth Salvador, Heekwang Park, Fatma Al-Awadhi, Yanxia Liu, Bumki Kim, Sabrina Zeller, **Qi-Yin Chen**, Jiyong Hong, Hendrik Luesch. Modulation of activity profiles for largazole-based HDAC inhibitors through alteration of prodrug properties. *ACS Medicinal Chemistry Letters* 2014, 5, 905-910.
 23. **Qi-Yin Chen**, Yanxia Liu and Hendrik Luesch. Systematic chemical mutagenesis identifies a potent novel apratoxin a/e hybrid with improved in vivo antitumor activity. *ACS Med. Chem. Lett.* 2011, 2, 861-865.
 24. Yujiro Hayashi, Seiji Aratake, Yoshinaga Imai, Kazuhiro Hibino, **Qi-Yin Chen**, Junichiro Yamaguchi, Tadafumi Uchimar. Direct asymmetric α -amination of cyclic ketones catalyzed by siloxyproline. *Chemistry - An Asian Journal*, 2008, 3, 225-232.
 25. Alan R. Katritzky (PI), **Qi-Yin Chen** and Srinivasa R. Tala, Convenient Preparation of Azo-Dye-Labelled Amino Acids and Amines. *Org. Biomol. Chem.* 2008, 6, 2400-2404.

26. Alan R. Katritzky, Srinivasa R. Tala, Hong Lu, Anatoliy V. Vakulenko, **Qi-Yin Chen**, Jothilingam Sivapackiam, Keyur Pandya, Shibo Jiang, and Asim K. Debnath. Design, synthesis, and structure-activity relationship of a novel series of 2-aryl 5-(4-oxo-3-phenethyl-2-thioxothiazolidinylidene)methyl)furans as hiv-1 entry inhibitors. *J. Med. Chem.* 2009, 52, 7631–7639.
27. Alan R. Katritzky (PI), **Qi-Yin Chen** and Srinivasa R. Tala. Convenient and efficient preparations of azodye-labeled peptides. *Chem Biol Drug Des.* 2009, 73, 611–617.
28. **Qi-Yin Chen** and Chuan-Feng Chen. A new fluorescent as well as chromogenic chemosensor for anions based on an anthracene carbamate derivative. *Tetrahedron Lett.* 2004, 45, 6493-6496.
29. Chuan-Feng Chen (PI), **Qi-Yin Chen**. A tetra-sulfonamide derivative bearing two dansyl groups designed as a new fluoride selective fluorescent chemosensor. *Tetrahedron Lett.* 2004, 45, 3957-3960.
30. **Qi-Yin Chen** and Chuan-Feng Chen. A new Hg²⁺-selective fluorescent sensor based on a dansyl amide-armed Calix[4]-aza-crown. *Tetrahedron Lett.* 2005, 46, 165-168.
31. **Qi-Yin Chen** and Chuan-Feng Chen. A highly selective fluorescent chemosensor for H₂PO₄⁻ based on a calix[4]arene tetraamide derivative. *Eur. J. Org. Chem.*, 2005, 12, 2468-2472.
32. **Qi-Yin Chen** and Chuan-Feng Chen. Azocalix[4]arene-based chromogenic anion probes. *New J. Chemistry* 2006, 30 (2), 143-147.
33. Linggang Lu; **Qiyin Chen** and Chuanfeng Chen. A new convenient synthesis of alkoxyanthracenes from alkoxy-9,10-anthraquinones. *Synthesis* 2003, 16, 2464-2466.

Patent applications

1. Hendrik Luesch, Valerie Paul, Susan Matthew, **Qi-Yin Chen**, Ranjala Ratnayake. Gatorbulin-1 (GB1) and derivatives thereof for use as anticancer agents. US patent, Serial No. 63/088,806, U1195.70185US00, Oct. 7, 2020.
2. Hendrik Luesch, Xiao Liang, **Qi-Yin Chen**, Matthew Susan, Janson Kwan, Valerie J. Paul. “Discovery, total synthesis, and bioactivity of doscadenamides.” Application No. PCT/US2020/043495.
3. Hendrik Luesch, **Qi-Yin Chen**, “Macrocyclic therapeutic agents, methods of manufacture, and methods of treatment.” Application No. PCT/US2015/016743.

Conferences

1. **Qi-Yin Chen**, Weijing Cai, Hendrik Luesch, The Evolution of Apratoxins: Total Synthesis of Natural Products and Analogues with Improved Anticancer Activity. CHI’s 13th **Drug Discovery Chemistry**, august, April 2-6, **2018**, San Diego, CA
2. **Qi-Yin Chen**, Yanxia Liu, Weijing Cai, Hendrik Luesch, Total synthesis and Biological Evaluation Analogues of Apratoxin A. Annual Meeting of the American Society of Pharmacognosy (ASP), august, **2014**, Oxford, Mississippi
3. **Qi-Yin Chen**, Srinivasa R. Tala, Alan R. Katritzky, Convenient and Efficient Preparation of Azo-Dye-Labelled Peptides, Peptide Alcohols, Amino Acids and Amines. 9th Annual Florida Heterocyclic and Synthetic Conference, March, **2008**, Gainesville, FL

Reviewer for Scientific Journals

√ European Journal of Organic Chemistry; √ Marine Drugs; √ Tetrahedron; √ Tetrahedron Letter; √ International Journal of Molecular Sciences; √ Phytomedicine; √ Chemico-Biological Interactions