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### EDUCATION

1989-1993	Ph.D., Queen's University, Belfast, with Professor Tony McKervey
1983-1986	M.Sc., East China University of Science & Technology
1979-1983	B.Sc., East China University of Science & Technology

### PROFESSIONAL EXPERIENCE

2015-	Professor & Senior PI, Peking University Shenzhen Graduate School
2002-2015	Deputy Director of Institute of Materia Medica, Associate Professor, Hong Kong Polytechnic University Hong Kong Polytechnic University
1998-2002	Research Assistant Professor, The Hong Kong of University
1994-1998	ROPA Fellow, Nottingham University, with Professor Gerry Pattenden
1993-1994	Postdoctoral Fellow, Queen's University, Belfast, with Professor Tony McKervey
1986-1989	Lecturer, East China University of Science & Technology

### HONORS AND AWARDS

2015	Fellow of the Royal Society of Chemistry, 2015
2014	Xiaoyu Hu Memorial Award
2012	WuXi PharmaTech Life Science and Chemistry Award
2012	Asian Core Program Lectureship Award 2012 (To deliver lectures in Japan)
2012	Asian Core Program Lectureship Award 2012 (To deliver lectures in Beijing)
1994-1998:	ROPA Fellowship (Engineering and Physical Sciences Research Council, U.K.)
1991	Prize Winner of "The Pfizer Organic Chemistry Poster Symposium"

### PROFESSIONAL SERVICE

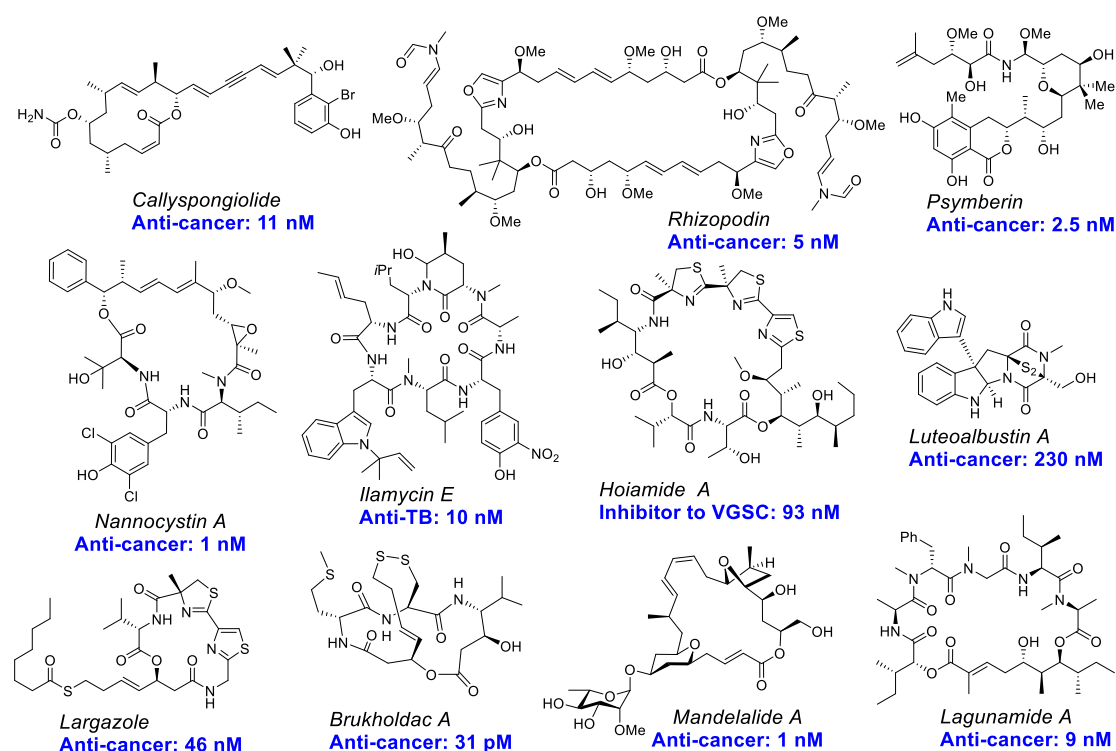
- Associate Editor (2013-2017) "Frontiers in Chemical Biology"
- Member of Senior Editorial Board of "American Journal of Cancer Research",
- Member of Editorial Board of "Journal of Pharmaceutics".
- Member of Editorial Board of "Dataset Papers in Sciences",
- Member of Editorial Board of "Natural Products Chemistry & Research"
- Member of Editorial Board of "Chemical Biology Letters"

### RESEARCH INTEREST

Our research interests span the disciplines of natural product synthesis, chemical biology, synthetic biology and drug discovery, which include the discovery and development of new agents of medicinal value through major advances in chemical synthesis and biosynthesis.

Currently, we are working in two main areas:

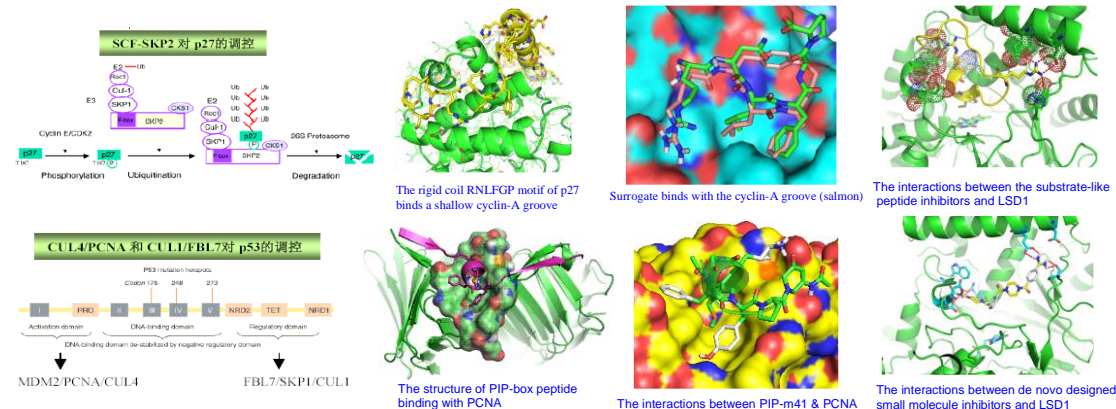
(1) **Synthesis and Biological Evaluation of Natural Products and Their Analogues.** Natural products have provided considerable value to the pharmaceutical industry over the past half century. In particular, the therapeutic area of oncology has benefited from numerous drug classes derived from natural product sources. Synthesis of natural products and their analogues has been a key tool in drug discovery and development. The synthesis allows verification of primary structure proposed on the basis of studies of natural product, and presents opportunities to modify the structure, with the ultimate aim of improving activity or physicochemical/biological properties of the lead molecule. Synthesis is also crucial in the establishment of structure-activity relationships since the ability to make analogues of the lead compound chemically and/or biochemically is a prerequisite of drug discovery. We have been particularly devoting to the exploration of natural-products-based drug discovery. The larger part of our research program is dedicated to the training and research in chemical synthesis, biosynthesis and biological evaluation of natural products with known biological activities. Structures of some completed molecules are shown below:



(2) **Design and Syntheses of Novel Small Molecule Bioprobes and Drugs.**

Protein–protein interactions play a key role in most biological processes, and offer attractive opportunities for therapeutic intervention. The targeted manipulation of protein-protein interactions with the use of small molecules is rapidly gaining importance in the development of biological tools for dissecting living processes on a molecular level and for the discovery of conceptually novel drugs. Our research centers on rationally designed molecular probes / drug

candidates, and their application to biological problems, especially in cancer biology and neurodegenerative disorders.



## SELECTED PUBLICATION (2010-)

1. "Asymmetric Total Syntheses of Kopsane Alkaloids via a PtCl<sub>2</sub>-Catalyzed Intramolecular [3+2] Cycloaddition" *Angew. Chem. Int. Ed.* **2020**, 59, asap
2. "Total Synthesis of Dysoxylactam A" *Org. Lett.* **2020**, 22, 1776-9;
3. "Reductase of Mutanobactin Synthetase Triggers Sequential C-C Macrocyclization, C-S Bond Formation, and C-C Bond Cleavage" *Org. Lett.* **2020**, 22, 960-4;
4. "Total Synthesis of Hoiamide A Using an Evans-Tishchenko Reaction As a Key Step" *Org. Lett.* **2019**, 21, 5471-4;
5. "Total Synthesis of Psymberin (Irciniastatin A)" *Org. Lett.* **2019**, 21, 3670-3;
6. "Discovery of Amantamide, a Selective CXCR7 Agonist from Marine Cyanobacteria" *Org. Lett.* **2019**, 21, 1622-6;
7. "Total Synthesis of Asperphenins A and B" *Org. Lett.* **2018**, 20, 6170-3;
8. "Total Synthesis of Anti-tuberculosis Natural Products Ilamycins E1 and F" *Org. Lett.* **2018**, 20, 6166-9;
9. "Discovery and Characterization of Brintonamides A-E, Novel Dual Protease and GPCR Modulators from a Marine Cyanobacterium Targeting Breast Cancer Metastasis" *J. Med. Chem.* **2018**, 61, 6364-78;
10. "Studies toward the Synthesis of Iriomoteolide-2a: Construction of the C(6)-C(28) Fragment" *Org. Lett.* **2018**, 20, 2213-5;
11. "Genome Mining and Assembly-Line Biosynthesis of the UCS1025A Pyrrolizidinone Family of Fungal Alkaloids" *J. Am. Chem. Soc.* **2018**, 140, 2067-71;
12. "Total synthesis of amphidinins E, F and epi-amphidinin F" *Org. Chem. Front.* **2018**, 5, 629-32;
13. "Regio- and Stereospecific Construction of 3a-(1H-Indol-3-yl)pyrrolidinoindolines and Application to the Formal Syntheses of Gliocladins B and C" *Org. Lett.* **2017**, 19, 5134-7;
14. "Total Synthesis and Stereochemical Assignment of Actinoranone" *Chem. Eur. J.* **2017**, 23, 3572-6;
15. "Concise Total Synthesis of Nannocystin A", *Angew. Chem. Int. Ed.* **2016**, 55, 13263-6. This paper has been featured by SYNFACTS Highlights in *Current Synthetic Organic Chemistry* 2016, 12, 1228
16. "Total Synthesis and Stereochemical Assignment of Callyspongiolide" *J. Am. Chem. Soc.*

- 2016**, 138, 6948-51;
17. "Discovery, Total Synthesis and Key Structural Elements for the Immunosuppressive Activity of Cocosolide, a Symmetrical Glycosylated Macrolide Dimer from Marine Cyanobacteria" *Chem. Eur. J.* **2016**, 22, 8158-66;
  18. "Discovery of Mandelalide E and Determinants of Cytotoxicity for the Mandelalide Series" *Org. Lett.* **2016**, 18, 1374-7;
  19. "The total synthesis and stereochemical assignment of scytonemin A", *Chem. Commun.*, **2016**, 52, 1002-5;
  20. "Total synthesis of largamide B" *Chem. Commun.* **2015**, 51, 2510-13. (This paper has been featured on the intra-front cover of issue 13, volume 51 (2015) of Chemical Communications)
  21. "Total Synthesis and Stereochemical Reassignment of Mandelalide A" *Angew. Chem. Int. Ed.* **2014**, 53, 6533-37. (hot paper)
  22. "Total Synthesis and Biological Evaluation of Grassypeptolide A" *Chem. Euro. J.*, **2013**, 19, 6774-84.;
  23. "Total Synthesis of Padanamides A and B" *Chem. Commun.* **2013**, 49, 2977-9. (This paper has been featured on the intra-front cover of issue 29, volume 49 (2013) of Chemical Communications)
  24. "A Novel CyclinE/CyclinA-CDK2 Inhibitor Targets p27Kip1 Degradation, Cell Cycle Progression and Cell Survival: Implications in Cancer Therapy" *Cancer Letters*, **2013**, 333, 103-12;
  25. "A histone deacetylase inhibitor largazole decreases liver fibrosis and angiogenesis by inhibiting TGF- $\beta$  and VEGF signalling" *Liver International*, **2013**, 504-15.;
  26. "Pluripotent Stem Cell Protein Sox2 Confers Sensitivity towards LSD1 Inhibition in Cancer Cell", *Cell Reports*, **2013**, 5, 445-57;
  27. "Total Synthesis and Stereochemical Revision of Lagunamide A" *Chem. Commun.* **2012**, 48: 8697-9;
  28. "Total Synthesis and Absolute Configuration of Nocardioazine B" *Chem. Commun.* **2012**, 48: 4344-6.;
  29. "Novel Histone Demethylase LSD1 Inhibitors Selectively Target Cancer Cells with Pluripotent Stem Cell Properties" *Cancer Res.* **2011**, 71: 7238-49. This paper was highlighted by NATURE (China).
  30. "Total Synthesis of Hoiamide C" *Org. Lett.* **2011**, 13, 2506-9.
  31. "Inhibition of PDGF, TGF- $\beta$  and Abl Signaling and Reduction of Liver Fibrosis by the Small Molecule Bcr-Abl Tyrosine Kinase Antagonist Nilotinib", *J. Hepatology*, **2011**, 55, 612-25.
  32. "Total Synthesis of Grassypeptolide" *Chem. Commun.* **2010**, 46; 7486-8. This paper was featured on the intra-front cover of issue 40, volume 46, (2010) of Chemical Communications and highlighted by NATURE (China).
  33. "Synthesis of the Macrocyclic Core of Iriomoteolide-1a", *Chem. Commun.* **2010**, 46, 4773-5;
  34. "Total Synthesis and Stereochemical Reassignment of Bisebromoamide" *Org. Lett.* **2010**, 12, 3018-21;
  35. "Synthesis of the C9–C23 (C9'-C23') Fragment of the Dimeric Natural Product Rhizopodin" *Org. Lett.* **2010**, 12, 2036-9;

36. "Total Synthesis of Sintokamide C" *Org. Lett.* **2010**, *12*, 1100-3;  
37. "Towards the Stereochemical Assignment of Natural Lydiamycin A" *Chem. Commun.* **2010**, *46*, 574-6;  
38. "Total Synthesis of Largamide H" *Chem. Commun.* **2010**, *46*, 153-5.

**Book:** "Modern Catalytic Methods for Organic Synthesis with Diazo Compounds: From Cyclopropanes to Ylides" (652 pages), Doyle, M. P.; McKervey, M. A.; Ye, Tao, John Wiley & Sons, Inc., New York. **1998**



**Modern Catalytic Methods for Organic Synthesis with  
Diazo Compounds: From Cyclopropanes to Ylides**

Michael P. Doyle (Univ. of Arizona, Tuscon )  
M. Anthony McKervey (The Queen's Univ. of Belfast, Northern  
Ireland)  
Tao Ye (Nottingham Univ., UK )

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