

# BIN YU (余斌)

Department of Medicinal Chemistry  
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Zhengzhou University  
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## RESEARCH EXPERIENCE AND EDUCATION

### University of Cambridge

Feb 2014-Jan 2016

Visiting PhD student, Chemistry

Department of Chemistry

- Supervisor: Professor David R. Spring (spring@ch.chem.ac.uk).
- **Research project:** Diversity oriented synthesis for the discovery of new antibacterial agents with novel mode of action.

### Zhengzhou University

Sep 2012-Jan 2014

Doctor of Medicine, Medicinal Chemistry

School of Pharmaceutical Sciences

- Supervisors
  - ✓ Professor De-Quan Yu, Academician of Chinese Academy of Engineering and investigator at Institute of Materia Medica, Chinese Academy of Medical Sciences & Peking Union Medical College (dquyu@imm.ac.cn).
  - ✓ Professor Hong-Min Liu, Dean of School of Pharmaceutical Sciences and Director of New Drug Research & Development Centre of Zhengzhou University (liuhm@zzu.edu.cn).
- **[Research Highlights]** My research focus is to find novel small molecules with biologically important properties using modern synthetic strategies, anticancer agents in particular. Now I have already completed the synthesis and bioactivity evaluation of steroidal dienamides, spiro-oxindoles and phenyl linked steroidal dimer.
- Published 5 first-authored papers and a patent, and another several manuscripts are under review.

### Zhengzhou University

Sep 2010-Jul 2012

Engineering Master, Pharmaceutical Engineering

School of Pharmaceutical Sciences

- Professor Hong-Min Liu (supervisor).
- Thesis title: "Synthesis of dipeptide-similar  $\gamma$ -alkylidenebutenolides and exploration into novel synthetic route of Moxalactam".
- Research concerned the following two aspects: (1) Synthesis of  $\gamma$ -alkylidenebutenolides and homoserine lactones and their *in vitro* biological evaluation; (2) Synthesis of Moxalactam.
- Applied for an innovative item for graduates of Zhengzhou University, entitled 'Synthesis of *N*-acyl homoserine lactone and its derivatives as quorum sensing modulators' (No. 10Y03003).
- Published 4 peer reviewed papers and 2 conference papers.
- Recommended for admission to Zhengzhou University in 2010.
- Overall GPA between September 2010 and July 2012 is 3.76.

### Zhengzhou University

Sep 2006-Jul 2010

Bachelor of Science, Pharmacy

School of Pharmaceuti

- Thesis title: "Research on synthesis of the key intermediate of Moxalactam" (A).
- Applied for an innovative item for undergraduates of Zhengzhou University, titled with 'for the fresh *Rehmannia Glutinosa Libosch*-milk drink' (No. 2008CXS128). This project was by associate professor Cheng-Xue Pan.
- Published 4 peer reviewed papers (In Chinese).

- Overall GPA during the period is 3.50.

## RECORDS OF STANDARD TESTS

- College English Test Band-IV and -VI 490 and 501 respectively
- National Computer Rank Examination Great II
- IELTS: Overall Band Score: 6.5 (Listening: 6.0, Reading: 7.5, Writing: 7.0 and Speaking: 6.0) (Test Date: 16/NOV/2013, Test Report Form Number: 13CN396385YUB001A).

## AWARDS AND HONORS

- 2013-2014
  - ✓ National Scholarship (Doctorial Level)
- 2012-2013
  - ✓ The third prize for the graduate thesis contest of Zhengzhou University
  - ✓ The first-class excellent academic scholarship of Zhengzhou University (Doctorial Level)
- 2010-2012
  - ✓ The first-class excellent academic scholarship of Zhengzhou University (Master Level)
  - ✓ The third prize and consolation prize for the postgraduate thesis contest of Zhengzhou University respectively (Medical)
- 2010-2011
  - ✓ Excellent league member of Zhengzhou University
  - ✓ The first-class excellent academic scholarship of Zhengzhou University (Master Level)
- 2009-2010
  - ✓ Hong Kong realistic scholarship
  - ✓ The seventh "challenge cup" for the competition of extracurricular academic science and technology works of university students in henan province (the consolation prize)
  - ✓ The third "challenge cup" for the competition of extracurricular academic science and technology works of Zhengzhou university (the third prize)
- 2008-2009
  - ✓ Model student of Zhengzhou University
  - ✓ National Inspirational Scholarships
  - ✓ The first-prize of the undergraduate thesis contest of Zhengzhou University
- 2007-2008
  - ✓ Model Student of Zhengzhou University
- 2006-2007
  - ✓ Outstanding student scholarship of Zhengzhou University

## SELECTED PUBLICATIONS

Nov 2013

### JOURNAL ARTICLES ([HTTP://SCHOLAR.GOOGLE.COM/CITATIONS?USER=QH6EZIMAAA](http://scholar.google.com/citations?user=QH6EZIMAAA))

1. Jin-Mei Xu, En Zhang, Xiao-Jing Shi, Yan-Chao Wang, **Bin Yu**, Wei-Wei Jiao, Bao-Le Zhang, Ya-Zhuo Guo, Hong-Min Liu. Synthesis and preliminary biological evaluation of 1, 2, 3-triazole-Jaspine B hybrids as potential cytotoxic agents. *European Journal of Medicinal Chemistry*, **2014, accepted**.
2. Xian-Wei Ye, Yi-Chao Zheng, Ying-Chao Duan, Meng-Meng Wang, **Bin Yu**, Jing-Li Ren, Jin-Lian Ma, En Zhang, Hong-Min Liu. Synthesis and biological evaluation of coumarin-1, 2, 3-triazole-dithiocarbamate hybrids as potent LSD1 inhibitors. *Medicinal Chemistry Communications*, **2014, accepted**.
3. **Bin Yu**, Xiao-Jing Shi, Ping-Ping Qi, De-Quan Yu, Hong-Min Liu. Synthesis and cytotoxicity of novel steroidal piperazine hybrids. *European Journal of Medicinal Chemistry*, **2014, under review**.
4. **Bin Yu**, Ping-Ping Qi, Yan-Ling Zhang, Bing Zhao, En Zhang, De-Quan Yu, Hong-Min Liu. Catalyst-free one-pot synthesis of steroidal spiro-oxindoles with spirotricyclic skeleton via 1, 3-dipolar cycloaddition. *RSC Advances*, **2014, under review**.
5. **Bin Yu**, Xiao-Jing Shi, Ping-Ping Qi, En Zhang, De-Quan Yu, Hong-Min Liu. Design, synthesis and biological evaluation of steroidal spiro-oxindoles as potential cytotoxic agents. *Journal of Steroid Biochemistry and Molecular Biology*, **2014, accepted**.

6. **Bin Yu**, Xiao-Jing Shi, Yong-Fei Zheng, Yuan Fang, En Zhang, De-Quan Yu, Hong-Min Liu. A novel [1, 2, 4] triazolo [1, 5-a] pyrimidine-based phenyl-linked steroid dimer: Synthesis and its cytotoxic activity. *European Journal of Medicinal Chemistry*, **2013**, 69, 323-330. DOI: 10.1016/j.ejmech.2013.08.029.
7. **Bin Yu**. Glycerol. *Synlett*, **2014**, Accepted. (**Spotlight Article**)
8. **Bin Yu**, Xiao-Nan Sun, Xiao-Jing Shi, Ping-Ping Qi, Yuan Fang, En Zhang, De-Quan Yu, Hong-Min Liu. Stereoselective synthesis of novel antiproliferative steroidal (*E, E*) dienamides through a cascade aldol/cyclization process. *Steroids*, **2013**, 78, 1134-1140. DOI: 10.1016/j.steroids.2013.08.001
9. Bao-Le Zhang, En Zhang, Lu-Ping Pang, Li-Xing Song, Ya-Fei Li, **Bin Yu**, Hong-Min Liu Bao-Le Zhang, En Zhang, Lu-Ping Pang, Li-Xing Song, Ya-Fei Li, Bin Yu, Hong-Min Liu. Design and synthesis of novel D-ring fused steroidal heterocycles. *Steroids*, **2013**, 78, 1200-1208. DOI : 10.1016/j.steroids.2013.07.006.
10. Meng-Meng Wang, Ying-Chao Duan, Xian-Wei Ye, Jing-Li Ren, **Bin Yu**, En Zhang, Hong-Min Liu. Design, synthesis and antitumor study of novel 1,4-bis(piperazine-carbodithioic acid [1-substituted-(1,2,3-triazole)-4-]methyl esters. *Chinese Journal of Organic Chemistry*, **2013**, 33, 2384-2390. DOI: 10.6023/cjoc201306035.
11. **Bin Yu**, Xiao-Jing Shi, Jing-li Ren, Xiao-Nan Sun, Ping-Ping Qi, Yuan Fang, Xian-Wei Ye, Meng-Meng Wang, Jun-Wei Wang, En Zhang, De-Quan Yu, Hong-Min Liu. Efficient construction of novel D-ring modified steroidal dienamides and their cytotoxic activities. *European Journal of Medicinal Chemistry*, **2013**, 66, 171-179. DOI: 10.1016/j.ejmech.2013.05.035.
12. Jing-Li Ren, En Zhang, Xian-Wei Ye, Meng-Meng Wang, **Bin Yu**, Wen-Hua Wang, Ya-Zhuo Guo, Hong-Min Liu. Design, synthesis and antibacterial evaluation of novel AHL analogues. *Bioorganic & Medicinal Chemistry Letters*, **2013**, 23, 4154-4156. DOI: 10.1016/j.bmcl.2013.05.035.
13. **Bin Yu**, En Zhang, Xiao-Nan Sun, Jing-Li Ren, Yuan Fang, Bao-Le Zhang, De-Quan Yu, Hong-Min Liu. Facile synthesis of novel D-ring modified steroidal dienamides via rearrangement of 2*H*-pyrans. *Steroids*, **2013**, 78, 494-499. DOI: 10.1016/j.steroids.2013.02.004.
14. **Bin Yu**, En Zhang, Yuan Fang, Xiao-Nan Sun, De-Quan Yu, Hong-Min Liu. The new convenient synthesis of novel  $\gamma$ -alkylidenebutenolides from 6-aminopenicilanic acid. *Heterocycles*, **2013**, 87, 163-176. DOI: 10.3987/COM-12-12611. (**Highlighted in ChemInform, 2013, Volume 44, Issue 19, DOI: 10.1002/chin.201319215**).
15. Bao-Le Zhang, Wei Qin, Ying-Chao Duan, **Bin Yu**, En Zhang, Hong-Min Liu. Recent development on the synthetic methods of chiral indoline derivatives. *Chinese Journal of Organic Chemistry*, **2012**, 32, 1359-1367. DOI: 10.6023/cjoc1111293.
16. Li-Hua Huang, Yong-Fei Zheng, Yong-Zheng Lu, Chuan-Jun Song, Yan-Guang Wang, **Bin Yu**, Hong-Min Liu. Synthesis and biological evaluation of novel steroidal [17, 16-d] [1, 2, 4] triazolo [1, 5-a] pyrimidines. *Steroids*, **2012**, 77, 710-715. DOI: 10.1016/j.steroids.2012.03.002.
17. **Bin Yu**, Yuan Fang, Ying-Chao Duan, Zhi-Yu Xie, Hong-Juan Li, En Zhang, Hong-Min Liu. *N*-acyl homoserine lactones as microorganism quorum sensing modulators: research advances. *Journal of International Pharmaceutical Research*, **2011**, 38, 254-262. DOI: 10.3969/j.issn.1674-0440.2011.04.002. (In Chinese)

#### PATENTS

1. Hong-Min Liu, **Bin Yu**, Xiao-Jing Shi, En Zhang, Jia-Xin Zheng, Jing-Li Ren, Xiao-Nan Sun, Ping-Ping Qi. Steroidal dienamides, preparation and their applications. **2013**. 07. 10. (Chinese Patent No: CN 103193851A)

#### CONFERENCE ARTICLES

1. **Bin Yu**, Yuan Fang, Jing-Li Ren, Bao-Le Zhang, Zhi-Yu Xie, En Zhang, Hong-Min Liu. Design and synthesis of new type of *N*-acyl homoserine lactone as quorum sensing modulator. *International Conference: Natural Products and Cancer targets: Progress and Promise*, **2011**, Zhengzhou, China.
2. **Bin Yu**, Yuan Fang, Jing-Li Ren, Bao-Le Zhang, Zhi-Yu Xie, En Zhang, Hong-Min Liu. Synthesis of new type of thiocarbamate-containing *N*-acyl homoserine lactone as quorum sensing modulator. *Chinese Medicinal Chemistry Symposium*, **2011**, Guangzhou, China.

#### REVIEWERS

Nov 2013

Current Medicinal Chemistry (2); European Journal of Medicinal Chemistry (2); Journal of Heterocyclic Chemistry (2); Synthetic Communications