

## Peng George Wang

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### EDUCATION

Ph.D. in Organic/Bioorganic Chemistry, 1990, University of California, Berkeley.  
B.S. in Chemistry, 1984, Nankai University, China.

### EXPERIENCE

4/2015-present **Chair** Department of Chemistry, Georgia State University

8/2011-present **Professor** Department of Chemistry, Georgia State University  
**Georgia Research Alliance (GRA) Eminent Scholar** (<http://gra.org/cgi-bin/MySQLdb>)  
An endowed chair professor in carbohydrate chemistry and glycobiology

9/2003-8/2011 **Professor** Departments of Biochemistry and Chemistry  
**Ohio Eminent Scholar**  
An endowed chair professor in macromolecular structure and function  
The Ohio State University (OSU)  
**Member** The Dorothy M. Davis Heart & Lung Research Institute, OSU  
**Member** The Center for Microbial Interface Biology (CMIB), OSU  
**Member** The Ohio State University Comprehensive Cancer Center (OSUCCC)

2/2007-8/2011 **Founding Dean** College of Pharmacy, Nankai University, China  
**Adjunct Professor** (part time) Nankai University, China

8/2001-9/2003 **Professor** Department of Chemistry, Wayne State University  
**Joint Professor** Barbara Ann Karmanos Cancer Institute  
The Detroit Medical Center, Wayne State University  
**Member** Institute for Drug Design, Wayne State University

8/1997-8/2001 **Associate Professor** Department of Chemistry, Wayne State University

8/1994-8/1997 **Assistant Professor** Department of Chemistry, University of Miami.

2/1992-8/1994 **Postdoctoral Fellow** Scripps Research Institute  
Advisor: Dr. Chi-Huey Wong

1/1991-2/1992 **Postdoctoral Fellow** University of California, Berkeley  
Advisor: Dr. Mark D. Bednarski

5/1987-12/1990 **Graduate Research Assistant** University of California, Berkeley  
Research Advisor: Dr. Mark D. Bednarski & Dr. Andrew Streitwieser

## RESEARCH FOCUS

**Glycoscience** on glycobiology, glycochemistry, glycoanalysis, glycomics, glyco-immunology and glyco-pharmaceutical science, with emphasis on carbohydrate-based vaccines, glycopeptide and glycoprotein drugs and immunotherapy.

**Medicinal Chemistry/Chemical Biology** with emphasis on development of anticancer drugs and other pharmaceuticals through mechanism-based drug design in posttranslational protein modification.

## PUBLICATION RECORD (google scholar h index factor 53)

Top 10 Years	Citation Past 10 years	10 Most Cited Articles	
Total Articles:	Sum Times Cited:10314	Pub Date:	Times Cited:
1999-26	2016-761	2002	925
2002-24	2015-739	1996	290
2016-23	2014-700	2006	242
2006-21	2013-762	1999	231
2003-19	2012-728	2007	215
2001-19	2011-769	2003	138
2005-17	2010-662	2002	133
2008-16	2009-669	1998	118
2011-15	2008-677	2012	117
2000-14	2007-556	2004	114

## JOURNAL EDITING ACTIVITIES

2014-present Member of Editorial Board of *Journal of Biological Chemistry*  
2003-present Member of Editorial Board of *Applied and Environmental Microbiology*  
2001-present Member of Editorial Board of *Medicinal Research Reviews*  
2002-present Member of Editorial Board of *Marine Drugs*  
2002-present Regional Editor, *Current Organic Chemistry*  
2005-2012 Member of Editorial Board of *Carbohydrate Research*  
2008-present Member of Editorial Board of *American Journal of Biomedical Sciences*

## HONORS

- 2012 AAAS Fellow (The American Association for the Advancement of Science fellow elected in November 2012) (<http://membercentral.aaas.org/fellows>)
- 2009 Recipient of Grand Challenges Exploration Award Phase I from Bill & Melinda Gates Foundation
- 2002 Horace S. Isbell Award from American Chemical Society, Division of Carbohydrate Chemistry (Only one such award is given each year by American Chemical Society Division of Carbohydrate Chemistry to a scientist of less than 41 year old who has made outstanding contribution to the field of carbohydrate chemistry or glycobiology)
- 2000 Co-recipient of the Presidential Green Chemistry Challenge Award honoring C. -H. Wong
- 2000 Metro Detroit's Creator from Crain's Detroit Business
- 2000 Career Development Chair Award, Wayne State University
- 1999 Camille Dreyfus Teacher-Scholar Award from The Camille and Henry Dreyfus Foundation. (Criteria for this award include an independent body of scholarship attained within the first five years of their appointment as independent researchers, and a demonstrated commitment to education, signaling the promise of continuing outstanding contributions to both research and teaching. Each year there 10 to 15 awards are given.)
- 96-01 National Institutes of Health First Independent Research Support and Transition (FIRST) Award
- 1998 NATO Fellowship from NATO Advanced Study Institute, 1988

## AFFILIATIONS

American Chemical Society  
American Association for the Advancement of Science  
American Society for Biochemistry and Molecular Biology  
American Society for Microbiology  
The Society for Glycobiology

## BOOKS EDITED

1. Wang, Peng George; Bertozzi, Carolyn R. "Glycochemistry: Principles, Synthesis, and Applications" Marcel Dekker, Inc. New York, **2001**.
2. Wang, Peng George; Ichikawa, Yoshi. "Synthesis of Carbohydrates through Biotechnology" ACS Symposium Series for 224<sup>th</sup> American Chemical Society meeting, **2003**.
3. Wang, Peng George; Cai, Tingwei; Taniguchi, Naoyuki "Nitric Oxide Donors and Their Applications" Wiley-VCH, **2004**.
4. Chen, Xi; Halcomb, Randall L.; Wang, Peng George. "Chemical Glycobiology" ACS Symposium Series 990, **2008**.
5. Comprehensive Natural Products II: Chemistry and Biology by *Elsevier* **2008**. Vol. 6: CARBOHYDRATES, NUCLEOSIDES AND NUCLEIC ACIDS Edited by Wong, Chi-Huey and Wang, Peng George.

## CURRENT FUNDED RESEARCH PROGRAMS

R01AI083754 Peng George Wang, PI 09/27/2012 – 08/31/2017  
NIH (Nat Institute of Allergy & Infectious Diseases) \$370,000 total/Year, \$250,000 direct cost/Year

### **Research and Development of a Novel System to Produce Polysaccharide Conjugate Vaccine**

*This project aims to develop a general technology platform to produce a series of polysaccharide-protein conjugate vaccines by bioengineering the biosynthesis pathways into one recombinant E. coli strain. This one-pot fermentation process produces a structurally well defined polysaccharide-protein conjugate which are never available before. It will be used to optimize the bioactivity of sugar-protein conjugate vaccines regarding to the linkage, the sugar density, the length of polysaccharide and other structural parameters.*

R01GM085267 Peng George Wang, PI 04/01/2014 - 12/31/2017  
NIH (Nat Institute of General Medical Science) \$296,000 total/Year, \$200,000 direct cost/Year

### **Biosynthesis of polysaccharides**

*The program has been our long-term efforts to use both chemical and biochemical tools to elucidate the basic mechanism of polysaccharide biosynthesis and to produce promising drug candidates for biomedical evaluation. In the next 4 or 5 years, this program will mainly focus on the biosynthesis of lipopolysaccharides (LPS) and their analogs for immunological evaluation.*

U01GM116263 Peng George Wang, PI 07/05/2015 – 06/30/2019  
NIH (Nat Institute of General Medical Science) \$492,999 total/Year, \$327,574 direct cost/Year

### **Facile Synthesis of O-Glycans and O-Glycopeptides**

*This project aims to develop core synthesis – enzymatic extension (CSEE) approach to produce large O-glycans and glycopeptides with most natural structural diversity. In CSEE approach, a core comprising a few sugars in the reducing end is synthesized first. Convergent core synthesis is cost-efficient with well documented methodologies. Then glycosyltransferases are used to elongate the core by following a variety of different biosynthesis pathways to generate complex and larger glycoconjugates with high diversity.*

U01GM120419 Xi Chen, PI; Peng George Wang, Co-PI 09/01/2016 – 07/31/2020  
NIH (Nat Institute of General Medical Science) \$225,000 total/Year to P. G. Wang at GSU

### **Facile chemoenzymatic synthesis and purification of glycolipids**

*This proposal will establish practical technology and protocols by combining effective chemoenzymatic synthesis and facile cartridge purification to allow non-specialists to synthesize, functionalize, purify, and study complex biomedically important glycolipids.*

U01OD024855 Jinxong She, PI; Peng George Wang, Co-PI 09/01/2017 – 08/31/2020  
NIH (National Cancer Institute) \$152,000 total/Year to P. G. Wang at GSU

### **Multiplex Luminex glycan arrays for large scale analyses of glycan-binding proteins**

*The program plans to expand on the Luminex Multiplex Glycan Array (LMGA) platform for analysis of glycan-binding proteins (GBPs) for studies of cancers and type 1 diabetes.*

U01GM125288 Hai Yu, PI; Lei Li (research faculty in Wang's team), Co-PI  
NIH (Nat Institute of General Medical Science) 09/01/2017 – 08/31/2021  
\$225,000 total/Year to Lei Li at GSU

### **Chemoenzymatic synthesis of bacterial polysaccharides**

*This program will develop effective chemoenzymatic approaches to access a diverse array of bacterial polysaccharides. Convenient-to-store and easy-to-use enzymes and reagent kits will be assembled. Protocols will be prepared and shared on a designated website and be included in the kits.*

## Patents

1. Wang, Peng George; Chen, Wenlan Alex; Martin, Brian; Mautino, Mario R.; Vahanian, Nicholas N.; Link, Charles J., Jr. “Rhamnose and Forssman conjugate immunogens” US2013149331 (A1), June 13, **2013**.
2. Zhang, G.; Fang, L.; Wang, P. G.; Sun, D. “Multidrug resistant anticancer anthracyclines”, US 7737123, Jun 15, **2010**
3. Wang, P. G.; Wu, X.; Tang, X. “Enzyme activated nitric oxide donors”, US 6867194, Mar 15, **2005**
4. Wang, P. G.; Xie, W.; Qiao, L.; Cheng, H. N.; Murphy, D. J.; Gu, Q.-M. “Novel Oxime-linked polysaccharides and methods of preparing the same”, US 6846923, Jan 25, **2005**.
5. Wang, P. G.; Xie, W; Qiao, L.; Nickol, R. G.; Cheng, H.N. “Acetoacetylated Saccarides and Process of Making the Same”, US 6528644, Mar 4, **2003**.
6. Cheng, H. N.; Nickol, R. G.; Wang, P. G.; Li, J. “Galactosylated Hydroxylalkyl Polysaccharides”, US 6433161, Aug 13, **2002**.

## PUBLICATION LIST

417. Song, Qitao, Zhigang Wu, Yueyuan Fan, Woran Song, Peiru Zhang, Li Wang, Faxing Wang, Yangyang Xu, Peng George Wang, and Jiansong Cheng. "Production of homogeneous glycoprotein with multisite modifications by an engineered N-glycosyltransferase mutant." *Journal of Biological Chemistry* 292, no. 21 (2017): 8856-8863.
416. Ma, Jing, Qingpeng Wang, Zhonglv Huang, Xiande Yang, Quandeng Nie, Wenpei Hao, Peng George Wang, and Xin Wang. "Glycosylated Platinum (IV) Complexes as Substrates for Glucose Transporters (GLUTs) and Organic Cation Transporters (OCTs) Exhibited Cancer Targeting and Human Serum Albumin Binding Properties for Drug Delivery." *Journal of Medicinal Chemistry* (2017).
415. Jiang, Kuan, Arya Aloor, Jiangyao Qu, Cong Xiao, Zhigang Wu, Cheng Ma, Lianwen Zhang, and Peng George Wang. "Rapid and sensitive MALDI MS analysis of oligosaccharides by using 2-hydrazinopyrimidine as a derivative reagent and co-matrix." *Analytical and Bioanalytical Chemistry* 409, no. 2 (2017): 421-429.
414. Zhang, Guo-Qiang, Hongzhen Jin, Yunyan Zhao, Lina Guo, Xue Gao, Xiaoxue Wang, Shiyang Tie, Jie Shen, Peng George Wang et al. "An efficient anticoagulant candidate: Characterization, synthesis and in vivo study of a fondaparinux analogue Rrt1. 17." *European Journal of Medicinal Chemistry* 126 (2017): 1039-1055.
413. Fu, Xuan, Wenjing Shang, Shuaishuai Wang, Yunpeng Liu, Jingyao Qu, Xi Chen, Peng George Wang, and Junqiang Fang. "A general strategy for the synthesis of homogeneous hyaluronan conjugates and their biological applications." *Chemical Communications* 53, no. 25 (2017): 3555-3558.
412. Ma, Jing, Xiande Yang, Wenpei Hao, Zhonglv Huang, Xin Wang, and Peng George Wang. "Mono-functionalized glycosylated platinum (IV) complexes possessed both pH and redox dual-responsive properties: Exhibited enhanced safety and preferentially accumulated in cancer cells in vitro and in vivo." *European Journal of Medicinal Chemistry* 128 (2017): 45-55.
411. Zhu He, Xu Li, Jingyao Qu, Cong Xiao, Kuan Jiang, Ebtessam Gashash, Ding Liu, Jing Song, Jiansong Cheng, Cheng Ma, Peng George Wang. "Diethylaminoethyl Sepharose (DEAE-Sepharose) microcolumn for enrichment of glycopeptides." *Analytical and Bioanalytical Chemistry* 409, no. 2 (2017): 511-518.
410. Jiang, Kuan, He Zhu, Cong Xiao, Ding Liu, Garrett Edmunds, Liuqing Wen, Cheng Ma, Jing Li, and Peng George Wang. "Solid-phase reductive amination for glycomic analysis." *Analytica Chimica Acta* 962 (2017): 32-40.
409. Wu, Zhigang, Yunpeng Liu, Cheng Ma, Lei Li, Jing Bai, Lauren Byrd-Leotis, Yi Lasanajak et al. "Identification of the binding roles of terminal and internal glycan epitopes using enzymatically synthesized N-glycans containing tandem epitopes." *Organic & Biomolecular Chemistry* 14, no.

47 (2016): 11106-11116.

408. Kondengaden, Shukkoor M., Liu-fei Luo, Kenneth Huang, Mengyuan Zhu, Lanlan Zang, Eudoxie Bataba, Runling Wang et al. "Discovery of novel small molecule inhibitors of lysine methyltransferase G9a and their mechanism in leukemia cell lines." *European Journal of Medicinal Chemistry* 122 (2016): 382-393.
407. Li, Jing, Jiajia Wang, Liuqing Wen, He Zhu, Shanshan Li, Kenneth Huang, Kuan Jiang et al. "An OGA-resistant probe allows specific visualization and accurate identification of O-GlcNAc-modified proteins in cells." *ACS Chemical Biology* 11, no. 11 (2016): 3002-3006.
406. Ma, Cheng, Jingyao Qu, Xu Li, Xinyuan Zhao, Lei Li, Cong Xiao, Garrett Edmunds, Ebtesam Gashash, Jing Song, and Peng George Wang. "Improvement of core-fucosylated glycoproteome coverage via alternating HCD and ETD fragmentation." *Journal of proteomics* 146 (2016): 90-98.
405. Liu, Yunpeng, Liuqing Wen, Lei Li, Madhusudhan Reddy Gadi, Wanyi Guan, Kenneth Huang, Zhongying Xiao et al. "A General Chemoenzymatic Strategy for the Synthesis of Glycosphingolipids." *European Journal of Organic Chemistry* 2016, no. 25 (2016): 4315-4320.
404. Wen, Liuqing, Kenneth Huang, Yuan Zheng, Yunpeng Liu, He Zhu, and Peng George Wang. "A two-step strategy for the preparation of 6-deoxy-l-sorbose." *Bioorganic & Medicinal Chemistry Letters* 26, no. 17 (2016): 4358-4361.
403. Wen, Liuqing, Yuan Zheng, Kuan Jiang, Mingzhen Zhang, Shukkoor Muhammed Kondengaden, Shanshan Li, Kenneth Huang, Jing Li, Jing Song, and Peng George Wang. "Two-Step Chemoenzymatic Detection of N-Acetylneuraminic Acid- $\alpha$  (2-3)-Galactose Glycans." *Journal of the American Chemical Society* 138, no. 36 (2016): 11473-11476.
402. Wen, Liuqing, Kenneth Huang, Yuan Zheng, Junqiang Fang, Shukkoor Muhammed Kondengaden, and Peng George Wang. "Two-step enzymatic synthesis of 6-deoxy-l-psiocose." *Tetrahedron letters* 57, no. 34 (2016): 3819-3822.
401. Wu, Zhigang, Kuan Jiang, Hailiang Zhu, Cheng Ma, Zaikuan Yu, Lei Li, Wanyi Guan et al. "Site-directed glycosylation of peptide/protein with homogeneous O-linked eukaryotic N-glycans." *Bioconjugate Chemistry* 27, no. 9 (2016): 1972-1975.
400. Shang, Wenjing, Yafei Zhai, Zhongrui Ma, Gongjin Yang, Yan Ding, Donglei Han, Jiang Li et al. "Production of human blood group B antigen epitope conjugated protein in Escherichia coli and utilization of the adsorption blood group B antibody." *Microbial Cell Factories* 15, no. 1 (2016): 138.
399. Xiao, Zhongying, Yuxi Guo, Yunpeng Liu, Lei Li, Qing Zhang, Liuqing Wen, Xuan Wang, Wang, Peng George. "Chemoenzymatic synthesis of a library of human milk oligosaccharides." *The Journal of Organic Chemistry* 81, no. 14 (2016): 5851-5865.

398. Wen, Liuqing, Yuan Zheng, Tiehai Li, and Peng George Wang. "Enzymatic synthesis of 3-deoxy-d-manno-octulosonic acid (KDO) and its application for LPS assembly." *Bioorganic & medicinal chemistry letters* 26, no. 12 (2016): 2825-2828.
397. Zhang, Huajie, Bin Wang, Zhongrui Ma, Mohui Wei, Jun Liu, Dong Li, Houcheng Zhang, Peng George Wang, and Min Chen. "1-Rhamnose Enhances the Immunogenicity of Melanoma-Associated Antigen A3 for Stimulating Antitumor Immune Responses." *Bioconjugate chemistry* 27, no. 4 (2016): 1112-1118.
396. Jiang, Kuan, Bingyang Bai, Yajie Ta, Tingling Zhang, Zikang Xiao, Peng George Wang, and Lianwen Zhang. "O-GlcNAc regulates NEDD4-1 stability via caspase-mediated pathway." *Biochemical and biophysical research communications* 471, no. 4 (2016): 539-544.
395. Ma, Jing, Qingpeng Wang, Xiande Yang, Wenpei Hao, Zhonglv Huang, Jiabao Zhang, Xin Wang, and Peng George Wang. "Glycosylated platinum (IV) prodrugs demonstrated significant therapeutic efficacy in cancer cells and minimized side-effects." *Dalton Transactions* 45, no. 29 (2016): 11830-11838.
394. Wang, Qingpeng, Zhonglv Huang, Jing Ma, Xiaolin Lu, Li Zhang, Xin Wang, and Peng George Wang. "Design, synthesis and biological evaluation of a novel series of glycosylated platinum (IV) complexes as antitumor agents." *Dalton transactions* 45, no. 25 (2016): 10366-10374.
393. Liu, Yonghui, Wenpeng Zhang, Qianqian He, Fan Yu, Tianbang Song, Tingting Liu, Zhenqing Zhang, Jun Zhou, Peng George Wang, and Wei Zhao. "Fully synthetic self-adjuvanting MUC1-fibroblast stimulating lipopeptide 1 conjugates as potential cancer vaccines." *Chemical Communications* 52, no. 72 (2016): 10886-10889.
392. Wang, J., Wang, X., Zhao, Y., Ma, X., Wan, Y., Chen, Z., Chen, H., Gan, H., Li, J., Li, L. and Wang, P.G. "Synthesis and biological evaluation of d-gluconhydroximo-1, 5-lactam and its oxime-substituted derivatives as pharmacological chaperones for the treatment of Gaucher disease." *MedChemComm* 7, no. 2 (2016): 365-370.
391. Jiang, Kuan, Yang Gao, Weiwei Hou, Fang Tian, Wantao Ying, Ling Li, Bingyang Bai, Gang Hou, Peng George Wang, and Lianwen Zhang. "Proteomic analysis of O-GlcNAcylated proteins in invasive ductal breast carcinomas with and without lymph node metastasis." *Amino acids* 48, no. 2 (2016): 365-374.
390. Liuqing Wen, Kenneth Huang, Yunpeng Liu, Peng George Wang "Facile Enzymatic Synthesis of Phosphorylated Ketopentoses" *ACS Catalysis*, 2016, 6 (3), 1649–1654
389. Li, S., Zhu, H., Wang, J., Wang, X., Li, X., Ma, C., Wen, L., Yu, B., Wang, Y., Li, J. and Wang, P.G. "Comparative analysis of Cu (I)-catalyzed alkyne-azide cycloaddition (CuAAC) and



- strain-promoted alkyne-azide cycloaddition (SPAAC) in O-GlcNAc proteomics." *Electrophoresis*, **2016**, 37(11): 1431-1436
388. Wen, Liuqing; Zang, Lanlan; Huang, Kenneth; Li, Shanshan; Wang, Runlilng; Wang, Peng George "Efficient enzymatic synthesis of l-rhamnulose and l-fuculose" *Bioorganic & Medicinal Chemistry Letters* **2016**, 26 (3), 969-72.
387. Wu, Zhigang; Zhao, Guohui; Li, Tiehais; Qu, Jingyao; Guan, Wanyi; Wang, Jiajia.; Ma, Cheng; Li, Xu; Zhao, Wei; Wang, Peng George; Li, Lei "Biochemical characterization of an  $\alpha$ 1,2-colitosyltransferase from Escherichia coli O55:H7" *Glycobiology* **2016**, 1-8.
386. Rao X; Duan X; Mao W; Li X1; Li Z1; Li Q; Zheng Z; Xu H; Chen M; Wang PG; Wang Y; Shen B; Yi W. "O-GlcNAcylation of G6PD promotes the pentose phosphate pathway and tumor growth" *Nat Commun.* **2015** Sep 24; 6:8468
385. Jiajia Wang, Yan Nie, Yunjuan Li, Yuanyuan Hou, Wei Zhao, Jiagang Deng, Peng George Wang, and Gang Bai "Identification of Target Proteins of Mangiferin in Mice with Acute Lung Injury Using Functionalized Magnetic Microspheres Based on Click Chemistry" *J. Agric. Food Chem.* **2015**, 63, 10013–10021
384. Cheng Ma, Jingyao Qu, Jeffrey Meisner, Xinyuan Zhao, Xu Li, Zhigang Wu, Hailiang Zhu, Zaikuan Yu, Lei Li† Yuxi Guo, Jing Song, and Peng George Wang, "Convenient and Precise Strategy for Mapping N- Glycosylation Sites Using Microwave-Assisted Acid Hydrolysis and Characteristic Ions Recognition" *Anal. Chem.* **2015**, 87, 7833–7839
383. Fengzhi Li, Siwei Li, Xiaofen Liu, Xue Yang, Peng Wang and Yuequan Shen "The structure of WbnH in a near active state" *Protein and Cell* **2015**, 6(8):615-8
382. Qingpeng Wang, Hongbo Zhang, Xin Ning, Hang Hang, Zhonglv Huang, Haoran Song, Xin Wang and Peng Wang "Microwave-Assisted Construction of C-Hydroxydiketopiperazines using Lanthanum(III) Triflate" *Asian Journal of Organic Chemistry* **2015**, 4, 132-136.
381. Hongbo Zhang, Qingpeng Wang, Xin Ning, Hang Hang, Jing Ma, Xiande Yang, Xiaolin Lu, Jiabao Zhang, Yonghong Li, Congwei Niu, Haoran Song, Xin Wang and Peng George Wang "Synthesis and Biological Evaluations of a Series of Thaxtomin Analogues" *J. Agric. Food Chem.* **2015**, 63, 3734–3741.
380. Yuanming Wang, Kai Jiang, Huanna Ma, Wei Zeng, Peng G. Wang, Nana Yao, Weiqing Han, Jiansong Cheng and Wei Wang "Enzymatic production of HMO mimics by the sialylation of galacto-oligosaccharides" *Food Chemistry* **2015**, 181, 51–56.
379. Wenjun Wang, Zhongyue Yang, Yun Xu, Taibao Liu, Tianbang Song, Yunyan Zhao, Xiufang Xu, Wei Zhao and Peng George Wang "Armed and disarmed" theory in the addition of an azide radical to glucals, *RSC Adv.* **2015**, 5, 38577-38580.

378. Congcong Chen, Yan Zhang, Mengyang Xue, Xianwei Liu, Yanhong Li, Xi Chen, Peng George Wang, Fengshan Wang, and Hongzhi Cao “Sequential one-pot multienzyme (OPME) synthesis of lacto-Nneotetraose and its sialyl and fucosyl derivatives” *Chem. Commun.* **2015**, 51, 7689-7692.
377. Li, Lei; Liu, Yunpeng; Ma, Cheng; Qu, Jingyao; Calderon, Angie D.; Wu, Bolin; Wei, Na; Wang, Xuan; Guo, Yuxi; Xiao, Zhongying; Song, Jing; Sugiarto, Go; Li, Yanhong; Yu, Hai; Chen, Xi; Wang, Peng George “Efficient Chemoenzymatic Synthesis of an N-glycan Isomer Library” *Chemical Science* **2015**, 6 (10), 5652-5661.
376. Wen, Liuqing; Huang, Kenneth; Wei, Mohui; Meisner, Jeffrey; Liu, Yunpeng; Garner, Kristina; Zang, Lanlan; Wang, Xuan; Li, Xu; Fang, Junqiang; Zhang, Houcheng; Wang, Peng George “Facile Enzymatic Synthesis of Ketoses” *Angewandte Chemie International Edition* **2015**, 54 (43), 12654-8.
375. Li, Lei; Liu, Yonghui; Li, Tiehai; Wang, Wenjun; Yu, Zaikuan; Ma, Cheng; Qu, Jingyao; Zhao, Wei; Chen, Xi; Wang, Peng George “Efficient chemoenzymatic synthesis of novel galacto-N-biose derivatives and their sialylated forms” *Chemical Communications* **2015**, 51 (51), 10310-3.
374. Guo, Yuxi; Fang, Junqiang; Li, Tiehai; Li, Xu; Ma, Cheng; Wang, Xuan; Wang, Peng George; Li, Lei “Comparing substrate specificity of two UDP-sugar pyrophosphorylases and efficient one-pot enzymatic synthesis of UDP-GlcA and UDP-GalA” *Carbohydrate Research* **2015**, 411, 1-5.
373. Wu, Baolin; Wei, Na; Thon, Vireak; Wei, Mohui; Yu, Zaikuan; Xu, Yongmei; Chen, Xi; Liu, Jian; Wang, Peng George; Li, Tiehai “Facile chemoenzymatic synthesis of biotinylated heparosan hexasaccharide” *Organic & Biomolecular Chemistry* **2015**, 13 (18), 5098-101.
372. Shang, Wening; Xiao, Zhongying; Yu, Zaikuan; Wei, Na; Zhao, Guohui; Zhang, Qing; Wei, Mohui; Wang, Xuan; Wang, Peng George; Li, Tiehai “Chemical synthesis of the outer core oligosaccharide of Escherichia coli R3 and immunological evaluation” *Organic & Biomolecular Chemistry* **2015**, 13 (14), 4321-30.
371. Muthana, Musleh; Qu, Jingyao; Xue, Mengyang; Klyuchnik, Timofey; Siu, Alex; Li, Yanhong; Zhang, Lei; Yu, Hai; Li, Lei; Wang, Peng George; Chen, Xi “Improved one-pot multienzyme (OPME) systems for synthesizing UDP-uronic acids and glucuronides” *Chemical Communications* **2015**, 51, 4595-8.
370. Ma, Cheng; Zhang, Qi; Qu, Jingyao; Zhao, Xinyuan; Li, Xu; Liu, Yunpeng; Wang, Peng George “A precise approach in large scale core-fucosylated glycoprotein identification with low- and high-normalized collision energy” *Journal of Proteomics* **2015**, 114, 61-70.
369. Xing Li-Juan, Wang Xi-Mei, Li Hong-Ying, Zhou Wen, Kang Ning, **Wang Peng** and Wang Bin “Metal-free synthesis of methylene-bridged bis-1,3-dicarbonyl compounds via oxidative C-C bond cleavage of tertiary aliphatic amines” *RSC Advances* **2014**, 4, 26783-26786.

368. Liu Xiaoyan, Li Ling, Wang Yuqiu, Yan Hui, Ma Xiaofeng, **Wang Peng George** and Zhang Lianwen “A peptide panel investigation reveals the acceptor specificity of O-GlcNAc transferase” *FASEB Journal* **2014**, 28, 3362-3372.
367. Guo Weikang, Yang Xiaoning, Guo Lina, Xing Ye, Zhao Hui, Zhang Hanwen, Yu Shuwen, Wang Peng, Yin Zheng and Lu Yaxin “An automated on-line-HPLC method for the direct pharmacokinetic studies on rat plasma samples of 3'-azido analogue of doxorubicin” *Latin American Journal of Pharmacy* **2014**, 33, 1520-1526.
366. Tiehai Li, Hui Ye, Xuefeng Cao, Jiajia Wang, Yonghui Liu, Lifei Zhou, Qiang Liu, Wenjun Wang, Jie Shen, Wei Zhao and **Peng Wang** “Total Synthesis of Anticoagulant Pentasaccharide Fondaparinux” *ChemMedChem* **2014**, 9, 1071–1080.
365. Yun Xu, Wenjun Wang, Yu Cai, Xia Yang, **Peng George Wang** and Wei Zhao “A convenient and efficient synthesis of glycals by zinc nanoparticles” *RSC Adv.* **2014**, 4, 46662-46665.
364. Xibo Yan, Yue Zhang, Hongbo Zhang, **Peng George Wang**, Xiaogang Chua and Xin Wang “Amphiphilic polyethylenimine (PEI) as highly efficient non-viral gene carrier” *Org. Biomol. Chem.* **2014**, 12, 1975-1982361.
363. Viennois E, Xiao B, Ayyadurai S, Wang L, Wang PG, Zhang Q, Chen Y, Merlin D “Micheliolide, a new sesquiterpene lactone that inhibits intestinal inflammation and colitis-associated cancer”, *Lab Invest.* **2014** 94(9), 950-65.
362. Cheng, Chongyun; Gu, Jianhua; Su, Jing; Ding, Wei; Yin, Jie; Liang, Wenguang; Yu, Xiaoxia; Ma, Jun; Wang, Peng George; Xiao, Zhicheng “Crystallization, preliminary X-ray crystallographic and cryo-electron microscopy analysis of a bifunctional enzyme fucokinase/l-fucose-1-P-guanlyltransferase from *Bacteroides fragilis*” *Acta Crystallographica, Section F: Structural Biology Communications* **2014**, 70(9), 1206-1210.
361. Zhao, Guohui; Wu, Baolin; Li, Lei; Wang, Peng George “O-antigen polymerase adopts a distributive mechanism for lipopolysaccharide biosynthesis” *Applied Microbiology and Biotechnology* **2014**, 98(9), 4075-4081.
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