

BIOGRAPHICAL SKETCH

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NAME Sun, Xue-Long		POSITION TITLE Associate Professor of Pharmaceutical Chemistry	
eRA COMMONS USER NAME (credential, e.g., agency login) SUNXUELONG			
EDUCATION/TRAINING (Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable.)			
INSTITUTION AND LOCATION	DEGREE (if applicable)	MM/YY	FIELD OF STUDY
ShenYang Pharmaceutical University, China	B.S.	1988	Pharmaceutics
Kitasato University, Tokyo, Japan	M.S.	1994	Pharmaceutical Chemistry
Kitasato University, Tokyo, Japan	Ph.D.	1997	Pharmaceutical Chemistry
Riken Institute, Wako, Japan	Postdoc	2000	Medicinal Chemistry
Emory University, Atlanta, GA	Postdoc	2002	Biomedical Engineering

A. Personal Statement

I was trained as pharmaceutical chemist and have more than ten years experience of pharmaceutical and biomedical research. First, he had worked on anti-influenza agent (Pharmaceutical Chemistry) at RIKEN Institute (Japan) as a basic science special research fellow, and then worked on antithrombotic biomaterials (Biomedical Engineering) at Emory University School of Medicine as a NIH-funded research fellow. Currently, the main research interests of my group are cell surface mimicry for novel antithrombotic agent and targeted drug delivery applications, which are supported from NIH RO1 and Ohio Scholar Research Program grants and had been supported by American Heart Association (AHA) and American Health Assistance Foundation grants previously. Specifically, we are exploring vascular pathological and surgical interventional sites-local/targeted antithrombotics. In addition, we focus on cell surface mimicry for pathogen and biomarker identification, drug screening and bio-interface nanomaterial development applications.

B. Positions and Honors**Positions and Employment**

1989-1992 Research Assistant, ShenYang Pharmaceutical University, Department of Medicinal and Natural Product Chemistry, ShenYang-city, P. R. China

1997-2000 Basic Science Special Research Fellow, RIKEN Institute (The Institute of Physical and Chemical Research), Wako, Japan

2000-2002 NIH-Funded Postdoctoral Fellow, Emory University School of Medicine, Department of Surgery, Atlanta, Georgia

2002-2006 Assistant Professor, Emory University School of Medicine, Department of Surgery and Biomedical Engineering, Atlanta, Georgia

2006-2009 Assistant Professor (tenure track), Cleveland State University, Department of Chemistry, Cleveland, Ohio

2009-2012 Associate Professor (tenured), Cleveland State University, Department of Chemistry, Cleveland, Ohio

2007- Adjunct Staff, Cleveland Clinic, Department of Molecular Cardiology, Cleveland, Ohio

20012- Professor (tenured), Cleveland State University, Department of Chemistry, Cleveland, Ohio

Professional Memberships

2000- American Chemical Society

2002- American Association of Pharmaceutical Scientists

2004- The Society of Glycobiology

2006- American Heart Association

2010- American Society of Mass Spectrometry

Honors

- 1997 Basic Science Special Researcher Award (RIKEN Institute, Wako, Japan)
- 2005 Emory University Research Committee Award
- 2006 Most-Cited Articles No.1 in **2006** full year in *Bioconjugate Chemistry* (American Chemical Society journal)
- 2007 Featured on the cover page of *Bioconjugate Chemistry* (**2008**, Volume 19, Issue 1, American Chemical Society journal)
- 2008- Editorial Board Member, *Virus Adaptation and Treatment* (peer reviewed journal, Dove Medical Press)
- 2008 Organizer/Host of 4th Midwest Carbohydrate and Glycobiology Symposium (72 attendees), October 3-4, **2008**, Cleveland, Ohio
- 2009 Co-Chair of Organic Chemistry Session of Central Regional Meeting of American Chemical Society (CERMACS2009), May 20-23, **2009**, Cleveland, Ohio
- 2010 Guest Editor of a Special Issue of Carbohydrate Recognition and Application for *Medicinal Research Reviews* (Wiley InterScience), **2010**, Volume 30 Issue 2.
- 2010 Most-Cited Articles No.1 during the past three years in *Bioconjugate Chemistry* (American Chemical Society journal)
- 2010 Organizer/Host of the 2010 Cleveland Symposium of Pharmaceutical Sciences (about 50 attendees), April 30, **2010**, Cleveland, Ohio.
- 2010 Outstanding Research Award, College of Science, Cleveland State University, Cleveland Ohio.
- 2010- Editorial Board Member, *Journal of Glycomics and Lipidomics* (peer reviewed journal, OMICS Publishing Group)
- 2011- Editorial Board Member, *International Journal of Organic Chemistry* (peer reviewed journal, Scientific Research Publishing Group)
- 2011 Faculty Merit Recognition Award of Research, Cleveland State University
- 2011 NSF MRI Award for Acquisition of NMR Spectrometer (PI)
- 2012 Faculty Merit Recognition Award of Research, Cleveland State University
- 2012 Editorial Board Member, *Medicinal Chemistry* (peer reviewed journal, OMICS Publishing Group)

C. Selected Peer-reviewed Publications (Total 74 peer-reviewed publications)**Publications at Cleveland State University**

1. Y. Ma, I. Sobkiv, V. Gruzdys, H. Zhang and **Xue-Long Sun***, Liposomal glyco-microarray for studying glycolipid-protein interactions. *Analytical and Bioanalytical Chemistry* **2012**, in press, DOI: 10.1007/s00216-012-6096-2
2. S. N. Narla and **Xue-Long Sun***, Immobilized Sialyloligo-Macroligand and Its Protein Binding Specificity. *Biomacromolecules* **2012**, in press. DOI: 10.1021/bm3003896
3. H. Nie, Y. Li, **Xue-Long Sun***, Recent Advances in Sialic Acid-Focused Glycomics. *Journal of Proteomics* **2012**, in press, DOI: 10.1016/j.jprot.2012.03.050
4. X. Zeng, C. A.S. Andrade, M. D.L. Oliveira, **Xue-Long Sun**. Carbohydrate-protein interactions and their biosensing applications. *Analytical and Bioanalytical Chemistry*. **2012**, *402*, 3161-3176.
5. R. Jiang, J. Weingart and **Xue-Long Sun*** End-Point Immobilization of Recombinant Thrombomodulin via Sortase-Mediated Ligation. *Bioconjugate Chem.* **2012**, *23*, 643-649.
6. S. N. Narla, **Xue-Long Sun***, Glyco-Macroligand Microarrays with Controlled Glycan Density and Orientation. *Lab on a Chip* **2012**, *12*, 1656-1663.
7. Y. Ma, R. Jiang, H. Zhang and **Xue-Long Sun***, Chemoselective Functionalizable Tethered Bilayer Lipid Membrane for Versatile Membrane Mimetic Systems Fabrication. *Journal of Materials Chemistry* **2012**, *22*, 6148-6155.
8. S. N. Narla, H. Nie, Y. Li, **Xue-Long Sun***, Recent Advances in Synthesis and Biomedical Applications of Chain-End Functionalized Glycopolymers. *Journal of Carbohydrate Chemistry* **2012**, *32*, 67-92.
9. J. Weingart, **Xue-Long Sun***, "Glyco-Functionalized Quantum Dots" in *ACS Symposium Book Series "Petite and Sweet: Glyco-Nanotechnology as a Bridge to New Medicines."* edited by Xuefei Huang and Joseph Barch, **2011**, Volume 1091, Chapter 7, Page 105-121.

10. Y. Ma, H. Zhang and **Xue-Long Sun***, Azide-Reactive Liposome for Chemoselective and Biocompatible Liposomal Surface Functionalization and Glyco-Liposomal Microarray Fabrication. *Langmuir*, **2011**, *27*, 13097-13103.
11. J. Peng, J. Jiang, W. Wang, X. Qi, **Xue-Long Sun**, Q. Wu, Glycosylation and Processing of Pro-B-type Natriuretic Peptide in Cardiomyocytes, *Biochem. Biophys. Res. Commun.* **2011**, *411*, 593-598.
12. H. Zhang, Y. Ma, **Xue-Long Sun***, "Chemical Selective and Biocompatible Liposome Surface Functionalization Approach" in *Methods in Molecular Biology Book Series: Bioconjugation Protocols*, 2nd Ed. Sonny S. Mark Editor (Humana Press/Springer Science), **2011**, *Chapter 16*, Page 268-280.
13. S. N. Narla, **Xue-Long Sun***, Synthesis of Orientated Glyco-Macroligand Based on Site-Specific Immobilization of Chain-End Functionalized Glycopolymer. *Organic and Biomolecular Chemistry* **2011**, *9*, 845-850.
14. Y. Ma, H. Zhang and **Xue-Long Sun***, Spherical Glycosurface Assembling Based on Chemoselective and Biocompatible Immobilization and Further Modification of Intact Liposome. *Bioconjugate Chemistry* **2010**, *21*, 1994-1999.
15. Y. Wang, S. Chalagalla, T. Li, **Xue-Long Sun**, W. Zhao, P. Wang, X. Zeng, Label Free Carbohydrate Biosensors Based on Polyvalent Interaction for Sensitivity Amplification. *Biosensors and Bioelectronics* **2010**, *26*, 996-1001.
16. S. Chalagalla, Y. Wang, D. Ray, X. Zeng and **Xue-Long Sun***, Synthesis and Characterization of Oriented Glyco-Capturing Macroligand. *ChemBioChem* **2010**, *11*, 2018-2025.
17. **Xue-Long Sun**, Preface for Special Issue of Carbohydrate Recognition and Applications for *Medicinal Research Reviews*, **2010**, *30* (2), 169-170.
18. H. Zhang, Y. Ma, **Xue-Long Sun***, Recent Carbohydrate Recognition Based Targeted Drug and Gene Delivery. *Medicinal Research Review*, **2010**, *30*, 270-289.
19. S. Chalagalla, **Xue-Long Sun***, Synthesis and Characterization of Biotin Chain-End Functionalized Boropolymer as Functional Glyco-Affinity Macroligand. *Reactive and Functional Polymers* **2010**, *70*, 471-476.
20. H. Zhang, Y. Ma, **Xue-Long Sun***, Chemical Selective Surface Glyco-Functionalization of Liposome through Staudinger Ligation. *Chemical Communications*, **2009**, 3032-3034.
21. **Xue-Long Sun**, Functional Glyco-Affinity Precipitation for Enhanced Glyco-Proteomics. *Current Proteomics*, **2008**, *5*, 202-210.
22. **Xue-Long Sun***, L. Yang, and E. L. Chaikof, Chemical Selective Immobilization of Biomolecules through Aqueous *Diels-Alder* and PEG Chemistry. *Tetrahedron Letter*, **2008**, *49*, 2510-2513.
23. C. Stabler, **Xue-Long Sun**, W. Cui, J. Wilson, C. Haller, and E. L. Chaikof, Surface Re-Engineering of Pancreatic Islets. *Bioconjugate Chemistry* **2007**, *18*, 1713-1715.
24. **Xue-Long Sun**, Recent Multivalent Sialyloligosaccharide and Sialylmimetics-Based Antiinfluenza Strategies. *Current Medicinal Chemistry* **2007**, *14*, 2304-2313.