

❖ **Peer-Reviewed Publications at Cleveland State University (Cleveland, OH)**

73. S. N. Narla and Xue-Long Sun\*, Immobilized Sialyloligo-Macroligand and Its Protein Binding Specificity. *Biomacromolecules* **2012**, in revision.
72. 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.
71. R. Jiang, J. Weingart and Xue-Long Sun\* End-Point Immobilization of Recombinant Thrombomodulin via Sortase-Mediated Ligation. *Bioconjugate Chem.* **2012**, in press, DOI: 10.1021/bc200661w.
69. 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**, in press.
70. S. N. Narla, Xue-Long Sun\*, Glyco-Macroligand Microarray with Controlled Orientation and Glycan Density. *Lab on a Chip* **2012**, 12, 1656-1663.
68. Y. Ma, R. Jiang, H. Zhang, V. Gruzdys and Xue-Long Sun\*, Chemoselective Functionalizable Tethered Bilayer Lipid Membrane for Versatile Membrane Mimetic Systems Fabrication. *Journal of Materials Chemistry* **2012**, 22, 6148-6155.
67. S. N. Narla, H. Nie, Y. Li, Xue-Long Sun\*, Recent Advances in Synthesis and Biomedical Applications of Chain-End Functionalized Glycopolymers. *J. Carbohydrate Chem.* **2012**, 31, 67-92.
66. 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.
65. Y. Ma, H. Zhang, V. Gruzdys and Xue-Long Sun\*, Azide-Reactive Liposome for Chemoselective and Biocompatible Liposomal Surface Functionalization and Glyco-Liposomal Microarray Fabrication. *Langmuir* **2011**, 27, 13097-13103
64. 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.
63. H. Zhang, Y. Ma, Xue-Long Sun\*, Chemical Selective and Biocompatible Liposome Surface Functionalization Approach Chapter 16 in *Methods in Molecular Biology Book Series: Bioconjugation Protocols*, 2nd Ed. Sonny S. Mark Editor (Humana Press/Springer Science), **2011**.
62. 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.
61. 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.

60. 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.
59. 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.
58. Xue-Long Sun, Preface for Special Issue of Carbohydrate Recognition and Applications for *Medicinal Research Reviews*, **2010**, 30 (2), 169-170.
57. H. Zhang, Y. Ma, Xue-Long Sun\*, Recent Carbohydrate Recognition Based Targeted Drug and Gene Delivery. *Medicinal Research Review*, **2010**, 30, 270-289.
56. 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.
55. H. Zhang, Y. Ma, Xue-Long Sun\*, Chemical Selective Surface Glyco-Functionalization of Liposome through Staudinger Ligation. *Chemical Communications* **2009**, 3032-3034.
54. Xue-Long Sun, Functional Glyco-Affinity Precipitation for Enhanced Glyco-Proteomics. *Current Proteomics* **2008**, 5, 202-210.
53. 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.
52. 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.
51. Xue-Long Sun, Recent Multivalent Sialyloligosaccharide and Sialylmimetics-Based Antiinfluenza Strategies. *Current Medicinal Chemistry* **2007**, 14, 2304-2313.

❖ **Peer-Reviewed Publications at Emory University (Atlanta, GA)**

50. J. T. Wilson, W. Cui, Xue-Long Sun, C. T. Tucker-Burden, C. J. Weber, E. L. Chaikof, In vivo biocompatibility and stability of a substrate-supported polymerizable membrane-mimetic film. *Biomaterials* **2007**, 28, 609-617.
49. S. W. Jordan, K. M. Faucher, J. Caves, R. A. Apkarian, S. M. Rele, Xue-Long Sun, S. R. Hanson E. L. Chaikof, Fabrication of a self-assembled membrane-mimetic thin film on a PTFE vascular graft surface. *Biomaterials* **2006**, 27, 3473-3481.
48. Xue-Long Sun\*, N. Biswas, T. Kai, K. Z. Dai, R. A. Dluhy, and Elliot L. Chaikof, Synthesis and Self-Assemblies of Asymmetric Lipid Bolaamphiphile. *Langmuir* **2006**, 22, 1201-1208.

47. P. Tseng, S. W. Jordan, Xue-Long Sun, E. L. Chaikof, Catalytic efficiency of a thrombomodulin-functionalized membrane-mimetic film in a flow model. *Biomaterials* **2006**, 27, 2768-2775.
46. P. Tseng, S. M. Rele, Xue-Long Sun, E. L. Chaikof, Fabrication and characterization of heparin functionalized membrane-mimetic assemblies. *Biomaterials* **2006**, 27, 2627-2636.
45. P. Tseng, S. M. Rele, Xue-Long Sun, E. L. Chaikof, Membrane-mimetic films containing thrombomodulin and heparin inhibit tissue factor induced thrombin generation in a flow model. *Biomaterials* **2006**, 27, 2637-2650.
44. E. L. Chaikof, P. Tseng, S.M. Rele, S.W. Jordan and Xue-Long Sun, Surface bound thrombomodulin and heparin inhibit tissue factor-induced thrombin generation in a flow model. *J. Surg. Res.* **2006**, 130, 203-204.
43. Xue-Long Sun\*, C. Stabler, C. Cazalis, E. L. Chaikof, Carbohydrates and Protein Immobilization onto Solid Surface by Sequential Diels-Alder and Azide-Alkyne Cycloaddition. *Bioconjugate Chem.* **2006**, 17, 52-57.
42. Xue-Long Sun\*, C. Haller, X. Wu, and Elliot L. Chaikof, One-Pot Glyco-Affinity Precipitation Purification: The Flexible Alignment of Solution-Phase Capture/Release and Solid-Phase Separation. *J. Proteome Res.* **2005**, 4, 2355-2359.
41. T. Kai, Xue-Long Sun\*, K. M. Faucher, and Elliot L. Chaikof, Design and Synthesis of Asymmetric Acyclic Phospholipid Bolaamphiphiles. *J. Org. Chem.* **2005**, 70, 2606-2615.
40. Xue-Long Sun, *ChemMedChem* (European Journal of Medicinal Chemistry, Wiley Interscience), 2005, 1, 159. Book Review: *Biopolymers for Medical and Pharmaceutical Applications*. Ed. Alexander Steinbüchel and Robert H. Marchessault, 1145pp, ISBN 3527311548, Wiley-VCH, **2005**.
39. M. Murphy, K. M. Faucher, Xue-Long Sun, E. L. Chaikof and R. A. Dluhy, Analysis of photoinitiated polymerization in a membrane mimetic film using infrared spectroscopy and near-IR Raman microscopy. *Colloids and Surface B: Biointerface* **2005**, 46, 226-232.
38. R. Guan, Xue-Long Sun, D. Grande, S. Baskaran, and E. L. Chaikof, A Glycopolymer Chaperone for Fibroblast Growth Factor-2. *Bioconjugate Chem.* **2004**, 15, 145-151.
37. C.-M. Dong, Xue-Long Sun, K. M. Faucher, R. P. Apkarian, and Elliot L. Chaikof, Design, Synthesis and Characterization of Glycopolymer-Polypeptide Triblock Copolymers. *Biomacromolecules*, **2004**, 5, 224-231.
36. Xue-Long Sun\*, W. Cui, T. Kai, and E. L. Chaikof, A Facile Synthesis of Bifunctional Phospholipids for Biomimetic Membrane Engineering. *Tetrahedron* **2004**, 60, 11765-11770.

35. Xue-Long Sun\*, W. Cui, C. Haller, and E. L. Chaikof, Site-Specific Multivalent Carbohydrate-Labeled Quantum Dots and Magnetic Beads. *ChemBioChem* **2004**, 5, 1593-1596.
34. S. Hou, Xue-Long Sun\*, C.-H. Dong, and E. L. Chaikof, Facile Synthesis of Chain-End Functionalized Glycopolymers for Site-Specific Bioconjugation. *Bioconjugate Chem.* **2004**, 15, 954-959.
33. K. Faucher, Xue-Long Sun, and E. L. Chaikof, Fabrication and Characterization of Glycocalyx-Mimetic Surface. *Langmuir* **2003**, 19, 1664-1670.
32. Xue-Long Sun,\* K. M. Faucher, M. Houston, D. Grande, and E. L. Chaikof, Design and Synthesis of Biotin-Terminated Glycopolymer for Surface Glycoengineering. *J. Am. Chem. Soc.* **2002**, 124, 7258-7259.
31. Xue-Long Sun, D. Grande, S. Baskaran, and E. L. Chaikof, Glycosaminoglycan-Mimetic Biomaterials 4: Synthesis of Sulfated Lactose-Based Glycopolymers that Exhibit Anticoagulant Activity. *Biomacromolecules* **2002**, 3, 1065-1070.
30. J. Feng, P. Y. Tseng, K. M. Faucher, J. M. Orban, Xue-Long Sun, and E. L. Chaikof, Functional Reconstitution of Thrombomodulin with a Substrated Membrane-Mimetic Polymer Film. *Langmuir* **2002**, 18, 9907-9913.
29. Xue-Long Sun, Keith M. Faucher and Elliot L. Chaikof, Cytomimetic Biomaterials: Fabrication, Characterization and Applications in *Biomimetic Materials and Design: Interactive Biointerfacial Strategies, Tissue Engineering, and Target Drug Delivery*. Chapter 5, pp139-157, Dillow, A. K. and Lowman, A. Eds. Marcel-Dekker, Inc. Publisher. August **2002**.
28. S. Baskaran, D. Grande, Xue-Long Sun, A. Yayon, and E. L. Chaikof, Glycosaminoglycan-Mimetic Biomaterials 3: Glycopolymers Prepared from Alkene-Derivatized Mono- and Disaccharide-Based Glycomonomers. *Bioconjugate Chem.* **2002**, 13, 1309-1313.
27. H. Liu, K. M. Faucher, Xue-Long Sun, J. Feng, J. M. Orban, and E. L. Chaikof, A Supported Lipid Bilayer as a Membrane-Mimetic Cell Encapsulation Barrier. *Langmuir* **2002**, 18,1332-1339.
26. Xue-Long Sun, H. Liu, J. M. Orban, L. Sun, and E. L. Chaikof, Synthesis and Terminal Functionalization of Polymerizable Phosphatidyl ethanolamine, *Bioconjugate Chem.* **2001**, 12, 673-677.

❖ **Peer-Reviewed Publications at Riken Institute (Wako, Japan)**

25. H. Hinou, Xue-Long Sun, and Y. Ito, Systematic Synthesis and Inhibitory Activity of Bisubstrate-Type Inhibitors of Sialyltransferases, *J. Org. Chem.* **2003**, 68, 5602-5613.
24. H. Hinou, Xue-Long Sun, and Y. Ito, Bisubstrate-Type Inhibitors of Sialyltransferase, *Tetrahedron. Lett.* **2002**, 43, 9147-9150.

23. C.-T. Guo, Xue-Long Sun, O. Kanie, K. F. Shorridge, T. Suzuki, D. Miyamoto, K. I.-P. Hidari, C.-H. Wong, and Y. Suzuki, A Discovery of An O-Glycoside of Sialic Acid Derivative That Inhibits both Hemagglutinin and Sialidase of Human Influenza Virus, *Glycobiology* **2002**, 12, 183-190.
22. Xue-Long Sun, Y. Kanie, C.-T. Guo, O. Kanie, Y. Suzuki, and C.-H. Wong, Syntheses of C-3 Modified Sialylglycosides as Inhibitors of Influenza Hemagglutinin and Neuraminidase. *Eur. J. Org. Chem.* **2000**, 14, 2643-2653.
21. Xue-Long Sun, *Pharmacia* (Journal of the Pharmaceutical Society of Japan), **1999**, 35, 1165-1166. Article Review: K. Oshima, Y. Aoyama, Regiospecific Glycosidation of Unprotected Sugars via Arylboronic Activation. *J. Am. Chem. Soc.* 1999, 121, 2315-2316.

❖ **Peer-Reviewed Publications at Kitasato University (Tokyo, Japan)**

20. Xue-Long Sun, N. Sato, T. Kai, and K. Furuhashi, Novel Practical Synthesis of 2,6-Anhydro-3-deoxy-D-glycero-D-galacto-non-2-enoic Acids (KDN2en) and Its C-4 Nitrogen-modifying Derivatives. *Carbohydr. Res.* **2000**, 323, 1-6.
19. Xue-Long Sun, T. Kai, H. Takayanagi, and K. Furuhashi, A Straightforward Synthesis of  $\alpha$ -Furyl Amide via Lewis Acid-mediated Allylic Substitution. *SYNLETT* **1999**, (9), 1399-1341.
18. Xue-Long Sun, T. Kai, N. Sato, H. Takayanagi, and K. Furuhashi, Synthesis of 4-Oxo- and 4-Hydroxyimino-KDN2en Derivatives. *J. Carbohydr. Chem.* **1999**, 18, 1131-1138.
17. Xue-Long Sun, T. Kai, H. Takayanagi, and K. Furuhashi, Synthesis of Sialic Acid Analogs with the Acylamino Groups at C-4 (N-Acyl Regioisomers of Sialic Acids). *Carbohydr. Res.* **1997**, 298, 181-189.
16. Xue-Long Sun, T. Kai, M. Tanaka, H. Takayanagi, and K. Furuhashi, Synthesis of 2,6-Anhydro-3-deoxy-D-glycero-D-galacto-non-2-enoic Acids (KDN2en) and its Hydrogenation Products. *J. Carbohydr. Chem.* **1997**, 16, 541-547.
15. T. Kai, Xue-Long Sun, H. Takayanagi, and K. Furuhashi, Oxidation Products of C-4 and C-7 Hydroxyls into the Methyl  $\zeta$ -Glycoside Derivatives of KDN. *J. Carbohydr. Chem.* **1997**, 16, 533-540.
14. T. Kai, Xue-Long Sun, Takayanagi, and K. Furuhashi, Synthesis of Sialic Acid Analogs with the Oxime Groups at C-4 or C-5 of KDN. *J. Carbohydr. Chem.* **1997**, 16, 521-532.
13. Xue-Long Sun, T. Kai, M. Takayanagi, and K. Furuhashi, A Novel Glycosylation of 3-Deoxy-D-glycero-D-galacto-2-nonulosonic Acids. *Chem. Pharm. Bull.* **1996**, 45, 795-798.
12. Xue-Long Sun, H. Takayanagi, K. Matsuzaki, H. Tanaka, K. Furuhashi, and S. Omura, Synthesis and Inhibitory Activities of Isochromophilone Analogues against gp120-CD4 binding. *J. Antibiotics* **1996**, 49, 689-692.

11. T. Kai, Xue-Long Sun, M. Tanaka, H. Takayanagi, and K. Furuhashi, Reaction products from Fisher's Methylation of 3-Deoxy-D-glycero-D-galacto-2-nonulosonic Acid (KDN). *Chem. Pharm. Bull.* **1996**, 44, 208-211.
10. M. Tanaka, T. Kai, Xue-Long Sun, H. Takayanagi, and K. Furuhashi, Synthesis of N-Glycosyl-8-O-Sulfoneuraminic Acid. *Chem. Pharm. Bull.* **1995**, 43, 2095-2098.
9. M. Tanaka, T. Kai, Xue-Long Sun, H. Takayanagi, and K. Furuhashi, Synthesis of Fluorescent 4-Methyl-7-Thiocoumaryl S-Glycosides of Sialic Acid. *Chem. Pharm. Bull.* **1995**, 43, 1844-1848.
8. Xue-Long Sun, T. Kai, M. Tanaka, H. Takayanagi, K. and Furuhashi, A Facile Synthesis of 4-Acylamino-2,6-anhydro-2,3,4-trideoxy-D-glycero-D-galacto-non-2-enoic Acids. *Chem. Pharm. Bull.* **1995**, 43, 1654-1658.
7. S-S, Li, Xue-Long Sun, H. Ogura, Y. Konda, T. Sasaki, Y. Toda, H. Takayanagi, and Y. Harigaya, Photocycloaddition of Benzoylated 2'-Deoxyribo-nucleoside to 2,3-Dimethyl-2-butene. *Chem. Pharm. Bull.* **1995**, 43, 144-146.
6. Y. Konda, T. Sasaki, Xue-Long Sun, X. Li, M. Onda, H. Takayanagi, and Y. Harigaya, Conformational Analysis of C3'-C8 Connected Biflavones. *J. Heterocyclic Chem.* **1995**, 32, 1531-1535.
5. Xue-Long Sun, N. Haga, H. Ogura, and H. Takayanagi, Synthesis of  $\beta$ -N-Glycoside of 3-Deoxy-D-glycero-D-galacto-2-nonulosonic Acid (KDN) using Nucleobase and Their Photocycloaddition to 2,3-Dimethyl-2-butene. *Chem. Pharm. Bull.* **1994**, 42, 2352-2356.
4. Y. Konda, T. Sasaki, Xue-Long Sun, X. Li, M. Onda, H. Takayanagi, and Y. Harigaya, Absolute Structure of 2'-Desacetoxyaustrospicatin Established by X-Ray Analysis and Circular Dichroism Spectroscopy. *Chem. Pharm. Bull.* **1994**, 42, 2621-2624.

❖ **Peer-Reviewed Publications at Shenyang Pharmaceutical University (Shenyang, China)**

3. Xue-Long Sun, L. -J. Wu, X. Li, Y. Konda, and M. Onda, Chemical Studies of *Tuxus cuspidata* Sieb et Zucc. *Chin. J. Med. Chem.* **1992**, 2, 31-34.
2. Xue-Long Sun and X. Li, Recent Chemical Studies on Pine Leaf Components. *J. ShenYang. Pharm. Univ.* **1991**, 8, 145-149.
1. Y. Harigaya, Y. Konda, M. Iguchi, M. Onda, X. Li, L. J. Wu, S. S. Li, and Xue-Long Sun, Spectroscopic Studies of Brusatol. *J. Nat. Prod.* **1989**, 52, 740-748.