

CURRICULUM VITAE**Xuefei Huang**August 29th, 2017DOB: Oct. 14th, 1973

MSU Foundation Professor
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https://scholar.google.com/citations?user=e_Pud9sAAAAJ&hl=en&oi=ao

I. EDUCATION HISTORY

B. S. 1994 (Chemistry)	University of Science and Technology of China (USTC)
M. A. 1995, M. Phil. 1998	Columbia University in the City of New York
Ph.D. 1999 (Chemistry)	Columbia University in the City of New York

II. PROFESSIONAL EXPERIENCE

1994 - 1999	Graduate Research Assistant, Columbia University
1999 - 2001	Postdoctoral Fellow, the Scripps Research Institute
2001 - 2002	Postdoctoral Fellow, Department of Chemistry, Columbia University
2002 - 2006	Assistant Professor, Department of Chemistry, University of Toledo
2006 - 2008	Associate Professor, Department of Chemistry, University of Toledo
2008 - 2012	Associate Professor, Department of Chemistry, Michigan State University
2012 - present	Professor, Department of Chemistry, Michigan State University
2013 - present	Associate Chair for Research, Dept. of Chemistry, Michigan State Univ.
2016 - present	Professor, Department of Biomedical Engineering, Michigan State Univ.
2016 - present	Member, Institute for Quantitative Health Science and Engineering, Michigan State University
2017 - present	MSU Foundation Professor, Michigan State Univ.

III. HONORS AND AWARDS RECEIVED

1990-1991	People's Fellowship, USTC
1992	Zhang Zhongzhi Award for Outstanding Undergraduates, USTC
1993	Yi Lida Award for Outstanding Laboratory Works, USTC

1994 – 1999 Faculty Fellowship, Columbia University
1999 Pegram Award for Excellent Graduate Studies, Columbia University
2006 – 2012 NSF CAREER award
2007 Dion D. Raftopoulos Outstanding Research Award, Sigma Xi, Univ. of Toledo
2008 Distinguished Faculty Award, Chinese-American Chemistry Prof. Association
2009 New Investigator Award, American Chemical Society Carbohydrate Division
2011 Horace S. Isbell Award, American Chemical Society Carbohydrate Division
2013 ACS Fellow
2017 Melville L. Wolfrom Award, American Chemical Society Carbohydrate Division

IV. PROFESSIONAL AFFILIATIONS

American Association for Advancement of Science
American Association for Cancer Research
American Chemical Society
American Chinese Chemistry Professor Association

V. COURSES TAUGHT

General Chemistry Laboratory
Organic Chemistry I & II
Advanced Organic Chemistry
Spectroscopic Methods & Analysis of Spectra
Organic Synthesis
Intermediate Organic Chemistry
Physical Organic Chemistry

VI. FUNDING

CURRENT SUPPORT

National Cancer Institute, NIH

Title: “*Virus-Like Particle Based Antigen Display as Multi-component Anticancer Vaccines*”

PI: Xuefei Huang, co-PIs: M.G. Finn (Georgia Institute of Technology), Lbachir BenMohammad (UC Irvine)

1/15/2011 – 12/31/2017. Award amount: **\$2,530,050** (R01 CA149451)

Award amount to PI: ~ \$1,400,000

National Institute of General Medical Sciences, NIH

Title: “*Homogeneous Heparan Sulfate Glycopeptides: Synthetic and Functional Studies*”

PI: Xuefei Huang, co-PI: Jian Liu (UNC, Chapel Hill)

6/1/2015 – 2/28/2019. Award amount: **\$1,157,264** (R01 GM72667)

Award amount to PI: ~ \$803,500

National Institute of General Medical Sciences, NIH

Title: “*Expedited Synthesis of Glycosaminoglycans Containing Defined Sulfation Domains*”

PI: Linda Hsieh-Wilson (California Institute of Technology, Contact PI) and Xuefei Huang, co-PI: Jian Liu (UNC, Chapel Hill)
7/1/2015 – 5/31/2019. Award amount: **\$2,481,666** (U01 GM116262)
Award amount to Xuefei Huang: ~ \$950,000

National Science Foundation

Title: “*Synthetic and Biological Studies of Chondroitin Sulfate Oligosaccharides and Glycopeptides*”

PI: Xuefei Huang

8/1/2015 – 7/31/2018. Award amount: **\$540,000** (CHE 1507226).

National Science Foundation

Title: “*Development of Functionalized Membranes to Enhance Antibody Sequencing and Screening*”

PI: Merlin Bruening (MSU), co-PI: Xuefei Huang,

9/1/2015 – 8/31/2018. Award amount: **\$450,000** (CHE 1506315).

COMPLETED SUPPORT

National Institute of General Medical Sciences, NIH

Title: “*Homogeneous Heparan Sulfate Glycopeptides: Synthetic and Functional Studies*”

PI: Xuefei Huang

3/1/2016 – 2/28/2017. Award amount: **\$103,458** (R01 GM72667-11S1)

Supplement for purchasing an Octet K2 detection system

National Institute of Allergy and Infectious Diseases, NIH

Title: “*Virus Like Particles as Carriers for Carbohydrate Based Anti-Salmonella Vaccines*”

PI: Xuefei Huang

8/1/2015 – 7/31/2017. Award amount: **\$153,500** (R03 AI111054)

Michigan State University Foundation, MSU

Title: “*Chemically Engineered Nanomaterials for Translational Biomedical Imaging*”

PI: Erik Shapiro (MSU); one of several co-PIs: Xuefei Huang

7/1/2014 – 6/30/2017. Award amount: ~ **\$400,000**

National Institute of General Medical Sciences, NIH

Title: “*Uncovering the Controlling Mechanisms in Heparan Sulfate Biosynthesis*”

PI: Jian Liu (UNC Chapel Hill); co-PIs: Robert J. Linhardt (Rensselaer Institute of Technology), Xuefei Huang

9/1/2013 – 5/31/2017. Award amount: ~ **\$1,160,000** (U01 GM102137)

Award amount to Xuefei Huang: ~ \$340,000

National Institute of Biomedical Imaging and Bioengineering, NIH

Title: “*MRI Contrast Agents for in vivo Monitoring of Stem Cell Differentiation*”

PI: Erik Shapiro (MSU); one of the two co-PIs: Xuefei Huang

7/1/2014 – 6/30/2016. Award amount: ~ **\$400,000** (R21 EB017881)
Award amount to Xuefei Huang: ~ \$20,000

National Institute of General Medical Sciences, NIH
Title: “*Chemoenzymatic Synthesis of Heparin and Heparan Sulfate Oligosaccharides*”
PI: Xuefei Huang, co-PI: Jian Liu (UNC, Chapel Hill)
6/1/2010 – 5/31/2015. Award amount: **\$1,150,000** (R01 GM72667)
Award amount to PI: ~ \$800,000

National Science Foundation
Title: “*Synthesis of Homogeneous Heparan Sulfate Proteoglycans*”
PI: Xuefei Huang, co-PI: Jian Liu (UNC, Chapel Hill)
8/15/2011 – 7/31/2014. Award amount: **\$390,000** (CHE 1111550)
Award amount to PI: ~ \$270,000

National Science Foundation
Title: “*CAREER Syntheses of Hyaluronan Oligosaccharides as Biological Probes*”
PI: Xuefei Huang, 6/1/2006 – 5/31/2012. Award amount: **\$525,000** (CHE 0547504).

American Chemical Society
Local Section Innovative Project Grant
Title: “*Science Café*”
PI: Xuefei Huang, 6/1/2011 – 5/31/2012. Award amount: **\$1,600**.

American Heart Association, Post-doctoral Fellowship
Title: “*Magnetic nanoparticles: Applications in atherosclerotic plaque imaging and targeted drug delivery*”
PI: Medha Kamat; Advisor: Xuefei Huang, 7/2009 – 10/2011
Award Amount: **\$95,224**

National Institute of General Medical Sciences, NIH
Title: “*Development of New Carbohydrate Synthesis Methodologies*”
PI: Xuefei Huang, 3/1/2005 – 5/31/2010. Award amount: **\$1,194,834** (R01 GM72667)

American Heart Association, Ohio Valley Affiliates Pre-doctoral Fellowship
Title: “*Design, Synthesis and Biological Evaluation of Hyaluronic Oligosaccharides as Potent Inhibitors of CD44*”
PI: Kheireddine El-boubbou; Advisor: Xuefei Huang, 7/2007 – 6/2009
Award Amount: **\$42,000**

National Science Foundation
Title: “*Ohio Consortium for Undergraduate Research: Research Experiences to Enhance Learning (REEL)*”
PI: Prabir Dutta (Ohio State University), UT PI: Xuefei Huang, 9/2005 – 8/2008. Award amount: **\$ 1,337,196** (CHE 0532250).

National Science Foundation

Title: “*A Novel Approach to Antibiotic and Anti-biofouling Activities of Natural Phenols*”

PI: Dong-Shik Kim, co-PI: Xuefei Huang, 9/1/2006 – 8/31/2008. Award amount: **\$185,471**

DARPA, DOD

Title: “*Novel Sensors for Chemical and Bio-Defense*”

PI: Jon Kirchhoff, one of several co-PIs: Xuefei Huang. 12/2006 – 8/2008

Award Amount: **\$970,000**

University of Toledo, Interdisciplinary Research Award

Title: “*Development towards Carbohydrate-Based Cancer Vaccines*”

PI: Steven Sucheck, one of four co-PIs: Xuefei Huang. 5/2007 – 8/2008

Award Amount: **\$50,000**

University of Toledo, Program for Academic Excellence

Title: “*Saturday Morning Science: A Community Outreach Program*”

PI: Xuefei Huang, co-PI: R. Alejandra Lukaszew. 9/2006 – 8/2008

Award Amount: **\$4,500**

National Institute of General Medical Sciences, NIH

Title: “*Development of New Carbohydrate Synthesis Methodologies – Minority Supplement*”

PI: Xuefei Huang, 1/1/2006 – 12/31/2007. Award amount: **\$86,983** (R01 GM72667-S1)

Pardee Foundation

Title: “*Syntheses of Tumor Associated Carbohydrate Antigens Using the Iterative One-pot Strategy*”

PI: Xuefei Huang, 12/9/2004 – 3/31/2006. Award Amount: **\$60,000**.

University of Toledo, Interdisciplinary Research Award

Title: “*Design of Novel Nano- to Microscale Sensors for Biochemical Applications*”

PI: Jon Kirchhoff, one of four co-PIs: Xuefei Huang. 6/2005 – 5/2006.

Award Amount: **\$30,000**

deArce Memorial Endowment Fund

Title: “*A Novel Synthesis of an Anticancer Glycolipid by Chemical Glycosylation in Water with Colloidal Dispersions*”

PI: Xuefei Huang, 5/2003 – 4/2004. Award Amount: **\$12,650**.

VII. SERVICE

A) Activities at the University of Toledo

Graduate recruiting committee, member	2002 - 2008
Colloquium committee, chair	2003 - 2004
Faculty search committee for chemistry department	2002 – 2005
Faculty search committee for medicinal chemistry dept.	2006
Graduate student examination committee	2002 – 2008

Departmental library liaison	2004 – 2008
Chair advisory committee	2004 – 2005, 2006 – 2008
Departmental personnel committee	2007 - 2008
Departmental merit committee	2007 - 2008
College of Arts & Sciences council, member	2004 – 2007

B) Activities at Michigan State University

Chair advisory committee	2008 – 2010, 2013 - present
Graduate student examination committee	2008 – present
Awards committee	2009 – 2011
Departmental colloquium committee chair	2011
Graduate admission committee	2010 – present
Departmental colloquium committee	2012 – 2013
Associate chair for research	2013 – present
Reappointment & promotion committee, chair	2013 – 2014
Awards committee, chair	2013 - present

C) Other Professional Activities

Oct. 2007	<i>Ad hoc</i> member, NIH study sections HT
June 2008	<i>Ad hoc</i> member, NIH study section SBCA
Oct. 2008	NSF CAREER proposal review panelist
June 2009	Member, NIH study section ZRG1 BCMB-B
July 2009	Member, NIH study section ZRG1 BCMB-A
July 2009	Member, NIH study section ZGM1 PPBC-3
Oct. 2009	Member, NIH study section ZRG1 BCMB
Mar. 2010	Member, NIH study section ZRG1 BCMB-B
May 2010	Member, NIH study section ZRG1 CB-B
Oct. 2011	Mail Reviewer, NIH K99 review panel
Mar. 2012	Mail Reviewer, NIH special emphasis panel ZCA1 SRLB-9
Feb. 2013	Member, NIH study section MSFE
Jan. 2014	Member, NIH study section ZAI1 SV-A (J3)
2014 – present	Member, NIH study section SBCA
2005	Organizer of the 1 st Annual Midwest Carbohydrate and Glycobiology Symposium, Toledo, OH
2006	Section chair, 2 nd Annual Midwest Carbohydrate and Glycobiology Symposium, Detroit, MI
2007	Discussion leader, Gordon Research Conference on Carbohydrates
2007	Section chair, 3 rd Annual Midwest Carbohydrate and Glycobiology Symposium, Columbus, OH
2008 – present	Board member of the Chinese-American Chemistry Professor Association
2009	Section chair, 5 th Annual Midwest Carbohydrate and Glycobiology Symposium, Cincinnati, OH
2010 – 2011	Secretary of the American Chemical Society Carbohydrate Division

2010	Organizer and Chair of “Petite and Sweet: Glyco-nanotechnology as a Bridge to New Medicines” symposium, ACS 240 th National Meeting, Boston, MA
2010	Chair-elect, American Chemical Society MSU local section
2010	Section chair, 6 th Annual Midwest Carbohydrate and Glycobiology Symposium, Toledo, OH
2011	Chair, American Chemical Society MSU local section
2011	Organizer of the 7 st Annual Midwest Carbohydrate and Glycobiology Symposium, East Lansing, MI
2011	One of the two editors for ACS Symposium book, “Glyco-nanotechnology as a Bridge to New Medicines” (Dr. Joseph Barchi from NCI is the other editor)
2011 – present	Member, Editorial Advisory Board, <i>Carbohydrate Research</i>
2012 – 2013	Program Chair of the American Chemical Society Carbohydrate Division
2012 – present	Associate Editor, <i>Journal of Carbohydrate Chemistry</i>
2014	Chair-elect, the American Chemical Society Carbohydrate Division
2015	Chair, the American Chemical Society Carbohydrate Division
2016	Past chair, the American Chemical Society Carbohydrate Division

Review proposals for

National Science Foundation

National Institutes of Health

Petroleum Research Foundation of the American Chemical Society

Bicentennial Program in Science and Technology of Chile

Natural Sciences and Engineering Research Council of Canada (NSERC)

Chilean National Commission for Science and Technology Research

North Carolina Biotechnology Center

Ohio Cancer Associate

Central Michigan University

Austrian Programme for Advanced Research and Technology

Danish Council for Independent Research

Israel Science Foundation

Research Cooperation

CUNY

Netherlands Organization for Scientific Research

Czech Science Foundation

New Zealand Genesis Oncology Trust

Review manuscripts for *J. Am. Chem. Soc.*, *J. Org. Chem.*, *Chem. Commun.*, *Org. Lett.*, *Angew. Chemie.*, *Tetrahedron*, *Tetrahedron Lett.*, *Eur. J. Org. Chem.*, *Synthesis*, *Adv. Synth. Catal.*, *Cancer Immun. Immunother.*, *Carbohydr. Res.*, *Chirality*, *Bioorg. Med. Chem.*, *Lett. Org. Chem.*, *Curr. Med. Chem.*, *J. Carbohydr. Chem.*, *Org. Biomol. Chem.*, *Biochemistry*, *Mol. Biosys.*, *Med. Chem. Rev.*, *J. Med. Chem.*, *Molecular Diversity*, *Science China Chemistry*, *Anal. Chem.*, *Analyst*, *Glycobiology*, *Proc. Nat. Acad. Sci. USA*, *Nanoscale*, *Appl. Microbiol. Biotech.*, *Adv. Func. Mater.*, *Int. J. Mol. Sci.*,

Review various faculties for tenure and/or promotion

D) Service to the Community

2003 - 2008	Give chemistry demos during National Chemistry Day
2005	Judge, Northwest District Science Day
2005 - 2008	Speaker and organizer, Saturday Morning Sciences, a community outreach seminar program
2011	<i>Frontiers in Science</i> program for secondary science teachers

VIII. Thesis Advisor and Postgraduate-Scholar Sponsor

Postdoctoral Associates

Dr. Kedar Baryal	8/15 - present
Dr. Qi Chen	9/07 – 5/08
Dr. Mohammad El-dakdouki	09/09 – 8/12
Dr. Lijun Huang	4/03 – 7/06
Dr. Chang-xin Huo	3/16 - present
Dr. Medha Kamat	12/07 – 10/10
Dr. Hao Li	11/15 – 10/16
Dr. Hongguang Li	10/10 – 9/11
Dr. Tianlu Li	1/17 - present
Dr. Sherif Ramadan	08/16 – present
Dr. Abhishek Santra	12/13 – 5/14
Dr. Balasubraminian Srinivasan	8/05 – 7/07
Dr. Bin Sun	7/06 – 6/09
Dr. Gopinath Tiruchinapally	11/08 – 5/11
Dr. Zhen Wang	8/08 – 6/09
Dr. Xuanjun Wu	7/15 - present
Dr. Jingguang Xia	11/11 – 7/13
Dr. Bo Yang	5/12 – 2/13
Dr. Weizhun Yang	1/13 - present
Dr. Zhaojun Yin	07/10 – 11/15
Dr. Keisuke Yoshida	4/11 – 3/13
Dr. Youlin Zeng	9/06 – 5/08
Dr. Yuetao Zhao	3/17 - present

Visiting Scientist

Dr. Isaac Bello	8/13 – 5/14
Prof. Hang Dai	11/10 – 10/11
Ms. Hui Li	10/14 – 5/16
Prof. Zheng Li	7/06 – 12/06
Mr. Sherif Ramadan	11/13 – 10/15

Graduate Students

Mr. Philip Bentley	M.S.	9/08 – 8/11
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Mr. Steven Dulaney	Ph.D.	9/08 – 7/13
Mr. Kheireddine El-Boubbou	Ph.D.	9/05 – 7/10
Mr. Jia Gao	Ph.D.	9/13 - present
Ms. Yuqing Jing	M.S.	1/03 – 12/05
Mr. Herbert Kavunja	Ph.D.	9/09 – 8/15
Mr. Hovig Kouyoumdjian	Ph.D.	5/08 – 8/14
Ms. Shuyao Lang	Ph.D.	9/13 - present
Mr. Xiaoning Li	M.S.	9/04 – 8/07
Ms. Xiaowei Lu	Ph.D.	9/05 – 7/12
Mr. Hunter Mcfall-Boegeman	Ph.D.	9/16 - present
Mr. Seyedmedhi Nasr	Ph.D.	9/12 – present
Ms. Qian Qin	Ph.D.	9/10 – present
Ms. Adeline Miermont	Ph.D.	9/03 – 8/08
Ms. Zahra Rashidjahanabad	Ph.D.	9/15 – present
Ms. Mengxia Sun	Ph.D.	9/16 - present
Mr. Zibin Tan	Ph.D.	9/16 - present
Mr. Suttipun Sungsuwan	Ph.D.	9/11 – 5/17
Mr. Nardos Teumelsan (minority)	M.S.	9/04 – 8/07
Mr. Zhen Wang	Ph.D.	9/03 – 7/08
Mr. Peng Wang	Ph.D.	9/11 – present
Mr. Gilbert Wasonga	M.S.	9/06 – 8/10
Mr. Bo Yang	Ph.D.	9/06 – 4/12
Mr. Jicheng Zhang	Ph.D.	9/12 – present
Mr. Zeren Zhang	Ph.D.	9/12 – present

IX. PUBLICATIONS

Journal articles (Corresponding authors are highlighted with a *. Peer reviewed articles are designated with a ^p after the full citation.)

From Work Conducted During Undergraduate, Graduate and Postdoctoral Periods

1. Li, J.*; Zhang, J.; Huang, X.; Du, S.; Wu, X. “Crystal Structure of An Unusual Four Coordinated Copper (II) Complex Containing 1, 10-Phenanthroline and Salicylic Acid” *Cryst. Res. Technol.* **1995**, *30*, 211-116.^p
2. Li, J.*; Xu, M.; Huang, X.; Zhang, Y. “Spectroscopic and Structural Properties of Dichloro-(L-histidine) Copper (II) Crystal” *Spec. Lett.* **1995**, *28*, 111-118.^p
3. Nakanishi, K.*; Huang, X.; Jiang, H.; Liu, Y.; Fang, K.; Huang, D.; Choi, S.-K.; Katz, E.; Eldefrawi, M.E. “Structure/binding Relation of Philanthotoxins from Nicotinic Acetylcholine Receptor Binding Assay” *Bioorg. Med. Chem.* **1997**, *5*, 1969-1988.^p
4. Huang, X.; Rickman, B.; Borhan, B.; Bevora, N.; Nakanishi, K.* “Zinc Porphyrin Tweezer in Host-guest Complexation: Determination of Absolute Configurations of Diamines, Amino Acids, and Amino Alcohols by Circular Dichroism” *J. Am. Chem. Soc.* **1998**, *120*, 6185-6186.^p

5. Huang, X.; Borhan, B.; Berova, N.; Nakanishi, K.* "UV-vis Spectral Changes in the Binding of Acyclic Diamines with a Zinc Porphyrin Tweezer" *J. Ind. Chem. Soc.* **1998**, *75*, 725-728. (Special issue for Prof. Sukh Dev's 75th birthday)^P
6. Berova, N.; Borhan, B.; Dong, J.-G.; Guo, J.; Huang, X.; Karnaukhova, E.; Kawamura, A.; Lou, J.; Matile, S.; Nakanishi, K.*; Rickman, B.; Su, J.; Tan, Q.; Zanze, I. "Solving Challenging Bioorganic Problems by Exciton Coupled CD" *Pure App. Chem.* **1998**, *70*, 377-383.^P
7. Huang, X.; Borhan, B.; Matile, S.; Nakanishi, K.* "Spectroscopic Studies of PhTX Facilitated Cation Movement Across Membranes" *Bioorg. Med. Chem.* **1999**, *7*, 811-814. (Special issue in memory of Sir. Derek H. Barton)^P
8. Jiang, H.; Huang, X.; Nakanishi, K.*; Berova, N.* "Nanogram Scale Absolute Configurational Assignment of Ceramides by Circular Dichroism" *Tetrahedron Lett.* **1999**, *40*, 7645-7649.^P
9. Huang, X.; Nakanishi, K.*; Berova, N.* "Porphyrins and Metalloporphyrins: Versatile Circular Dichroic Reporter Groups for Structural Studies" *Chirality* **2000**, *12*, 237-255.^P
10. Huang, X.; Borhan, B.; Rickman, B. H.; Berova, N.; Nakanishi, K.* "Zinc Porphyrin Tweezer in Host-Guest Complexation: Determination of Absolute Configurations of Primary Monoamines by Circular Dichroism" *Chem.-Eur. J.* **2000**, *6*, 216-224.^P
11. Tsai, C.-Y.; Huang, X.; Wong, C.-H.* "Design and Synthesis of Cyclic Sialyl Lewis X Mimetics: a Remarkable Enhancement of Inhibition by Pre-organizing All Essential Functional Groups" *Tetrahedron Lett.* **2000**, *41*, 9499-9503.^P
12. Huang, X.; Witte, K. L.; Bergbreiter, D. E.; Wong, C.-H.* "Homogenous Enzymatic Synthesis Using a Thermo-Responsive Water-Soluble Polymer Support" *Adv. Synth. Catal.* **2001**, *343*, 675-681.^P
13. Kurtán, T.; Nesnas, N.; Li, Y.-Q.; Huang, X.; Nakanishi, K.*; Berova, N.* "Chiral Recognition by CD-Sensitive Dimeric Zinc Porphyrin Host. 1. Chiroptical Protocol for Absolute Configurational Assignments of Monoalcohols and Primary Monoamines" *J. Am. Chem. Soc.* **2001**, *123*, 5962-5973.^P
14. Kozlov, I.A.; Mao, S.; Xu, Y.; Huang, X.; Lee, L.V.; Sears, P.S.; Gao, C.; Coyle, A.R.; Janda, K.D.; Wong, C.-H.* "Synthesis of Solid Supported Mirror-Image Sugars: A Novel Method for Selecting Receptors for Cellular Surface Carbohydrates" *ChemBioChem.* **2001**, *2*, 741-746.^P
15. Ye, X.-S.; Huang, X.; Wong, C.-H.* "Conversion of the Carboxy Group of Sialic Acid Donors to a Protected Hydroxymethyl Group Yields an Efficient Reagent for the Synthesis of the Unnatural β -linkage" *Chem. Commun.* **2001**, 974-975.^P
16. Solladié-Cavallo, A.*; Marsol, C.; Pescitelli, G.; Di Bari, L.; Salvadori, P.; Huang, X.; Fujioka, N.; Berova, N.; Cao, X.; Freedman, T. B.; Nafíé, L. A. "(R)-(+)- and (S)-(-)-1-(9-

- Phenanthryl)ethylamine: Assignment of Absolute Configuration by CD Tweezer and VCD Methods, and Difficulties Encountered with the CD Exciton Chirality Method” *Eur. J. Org. Chem.* **2002**, 1788-1796.^P
17. Huang, X.; Fujioka, N.; Pescitelli, G.; Koehn, F. E.; Williamson, R. T.; Nakanishi, K.*; Berova, N.* “Absolute Configurational Assignments of Secondary Amines by CD-Sensitive Dimeric Zinc Porphyrin Host” *J. Am. Chem. Soc.* **2002**, *124*, 10320-10335.^P
 18. Proni, G.; Pescitelli, G.; Huang, X.; Nakanishi, K.*; Berova, N.* “Configurational Assignment of α -chiral Carboxylic Acids by Complexation to Dimeric Zn-porphyrin: Host/Guest Structure, Chiral Recognition and Circular Dichroism” *Chem. Commun.* **2002**, 1590-1591.^P
 19. Zhang, Z.; Niikura, K.; Huang, X.; Wong, C.-H.* “A Strategy for the One-pot Synthesis of Sialylated Oligosaccharides” *Can. J. Chem.* **2002**, *80*, 1051-1054.^P
 20. Proni, G.; Pescitelli, G.; Huang, X.; Nakanishi, K.*; Berova, N.* “Magnesium Tetraarylporphyrin Tweezer: a Sensitive Host for Recognition of α -chiral Carboxylic Acids” *J. Am. Chem. Soc.* **2003**, *125*, 12914-12927.^P
 21. Hauschild, R.*; Riedel, G.; Zeller, J.; Balaban, T. S.; Prokhorenko, V. I.; Kalt, H.; Berova, N.; Huang, X.; Pescitelli, G.; Nakanishi, K. “Comparative Study of Energy-transfer Processes in Several Porphyrin-based Artificial Light-harvesting Molecules” *J. Luminescence* **2005**, *11*, 454-457.^P
 22. Balaban, T. S.; Berova, N.; Drain, C. M.; Hauschild, R.; Huang, X.; Kalt, H.; Lebedkin, S.; Lehn, J.-L.; Nifaitis, F.; Pescitelli, G.; Prokhorenko, V. I.; Riedel, G.; Smeureanu, G.; Zeller, J.* “Syntheses and Energy Transfer in Multiporphyrinic Arrays Self-Assembled with Hydrogen-Bonding Recognition Groups and Comparison with Covalent Steroidal Models” *Chem. Eur. J.* **2007**, *13*, 8411-8427.^P
- From Work Conducted After Starting Independent Research*
23. Jing, Y.; Huang, X.* “Fluorous Thiols in Oligosaccharide Synthesis” *Tetrahedron Lett.* **2004**, *45*, 4615-4618.^P
 24. Huang, L.; Wang, Z.; Huang, X.* “One-pot Oligosaccharide Synthesis: Reactivity Tuning by Post-synthetic Modification of Aglycon” *Chem. Commun.* **2004**, 1960-1961.^P
 25. Huang, X.*; Huang, L.; Wang, H.; Ye, X.-S.* “Iterative One-Pot Oligosaccharide Synthesis” *Angew. Chem. Int. Ed.* **2004**, *43*, 5221-5224.^P
 26. Huang, X.* “Mercuric Bromide” *Electronic Encyclopedia of Reagents in Organic Synthesis*, **2004**, RN00383.
 27. Wang, Y.; Huang, X.; Zhang, L.-H.; Ye, X.-S.* “A Four-Component One-Pot Synthesis of α -Gal Pentasaccharide” *Org. Lett.* **2004**, *6*, 4415-4417.^P

28. Huang, L.; Huang, X.* “Methyl Triflate” *Electronic Encyclopedia of Reagents in Organic Synthesis*, **2005**.
29. Huang, L.; Wang, Z.; Li, X.; Huang, X.* “Iterative One-Pot Synthesis of Chitotetraose”, *Carbohydr. Res.* **2006**, *341*, 1669-1679. PMC1994152.^P
30. Huang, L.; Teumelsan, N.; Huang, X.* “A Facile Method for Oxidation of Primary Alcohols to Carboxylic Acids and Its Application in Glycosaminoglycan Syntheses” *Chem. Eur. J.* **2006**, *12*, 5246 - 5252. PMC1986577.^P
31. Wang, C.; Wang, H.; Huang, X.; Zhang, L.-H.; Ye, X.-S.* “Benzenesulfinyl Morpholine: A New Promoter for One-Pot Oligosaccharide Synthesis Using Thioglycosides by Pre-Activation Strategy” *Synlett* **2006**, 2846 - 2850.^P
32. Huang, L.; Huang, X.* “Highly Efficient Syntheses of Hyaluronan Oligosaccharides” *Chem. Eur. J.* **2007**, *13*, 529-540. PMC1820888.^P
33. Wang, Z.; Huang, X.* “Strategies in Oligosaccharide Synthesis” in *Comprehensive Glycoscience. From Chemistry to Systems Biology* **2007**, Editor: J. P. Kamerling, Elsevier, p379-413. (Invited review).^P
34. Wang, Z.; Zhou, L.; El-boubbou, K.; Ye, X.-S.; Huang, X.* “Multi-Component One-Pot Synthesis of the Tumor-Associated Carbohydrate Antigen Globo-H Based on Preactivation of Thioglycoside Donors” *J. Org. Chem.* **2007**, *72*, 6409 - 6420. PMC2533580.^P
35. Teumelsan, N.; Huang, X.* “Synthesis of Branched Oligomannans and an Unusual Stereochemical Observation” *J. Org. Chem.* **2007**, *72*, 8976-8979. PMC2525796.^P
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11. Huang, X.; Huang, L.; Wang, Z.; Jing, Y.; "Development of New One-pot Oligosaccharide Synthesis Methodologies" *Gordon Research Conference on Carbohydrates*, **2005**, Tilton, NH.
12. Huang, L.; Huang, X.; "Highly Efficient Syntheses of Hyaluronan Oligosaccharides" *Gordon Research Conference on Carbohydrates*, **2005**, Tilton, NH.*
13. Huang, X.; Huang, L.; "Highly Efficient Syntheses of Hyaluronan Oligosaccharides" *232nd ACS National Meeting*, **2006**, San Francisco, CA.*
14. Teumelsan, N. H., Huang, X.; "Synthesis of Man5 and Man7 Oligomannoses" *232nd ACS National Meeting*, **2006**, San Francisco, CA.
15. Huang, X.; "Development of Novel One-Pot Oligosaccharide Synthesis Strategies" *2nd Annual Midwest Carbohydrate Symposium*, **2006**, Detroit, MI.*
16. Miermont, A.; Jing, Y.; Huang, X.; "Syntheses of Complex Oligosaccharides via the Iterative One-pot Method and Studies towards Carbohydrate Associated Cancer Antigens" *2nd Annual Midwest Carbohydrate Symposium*, **2006**, Detroit, MI. (Winner of the Best Oral Talk Award)
17. Li, X.; Teumelsan, N.; Huang, L.; Huang, X.; "Reactivity Independent Assembly of Man₅ and Investigation of Reactivity-tuning Through Aglycon Adjustment" *2nd Annual Midwest Carbohydrate Symposium*, **2006**, Detroit, MI.
18. Srinivasan, B.; Huang, X.; "Magnetic Iron Oxide Nanoparticles for Biological Applications: Evaluation of Surface Coverage and Influence of Linker Length on Loading" *2nd Annual Midwest Carbohydrate Symposium*, **2006**, Detroit, MI.
19. Wang, Z.; Zhou, L.; El-Boubbou, K.; Huang, X.; "Iterative One-pot Syntheses of the Tumor-associated Carbohydrate Antigen Globo-H" *2nd Annual Midwest Carbohydrate Symposium*, **2006**, Detroit, MI. (Winner of the Best Poster Award)
20. Wang, Z.; Zhou, L.; El-Boubbou, K.; Huang, X.; "Iterative One-pot Synthesis of the Tumor-associated Carbohydrate Antigen Globo-H" *233rd ACS National Meeting*, **2007**, Chicago, IL.
21. Sun, B.; Zeng, Y.; Huang, X.; "Highly Selective Sialylation and Total Syntheses of Tumor-related Antigens N3 by the Iterative One-pot Synthesis Strategy" *233rd ACS National Meeting*, **2007**, Chicago, IL.
22. Lu, X.; Huang, L.; Sun, B.; Huang, X.; "Highly Efficient Syntheses of Hyaluronic Acid Oligosaccharides" *233rd ACS National Meeting*, **2007**, Chicago, IL.
23. Miermont, A.; Jing, Y.; Huang, X.; "Syntheses of Complex Tumor Associated Carbohydrate Antigens" *233rd ACS National Meeting*, **2007**, Chicago, IL.

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25. Li, X.; Huang, L.; Huang, X.; "Investigation of Glycosylation Mechanisms: The Effects of Thioglycoside Aglycons on Anomeric Reactivities" *233rd ACS National Meeting*, **2007**, Chicago, IL.
26. Huang, X.; "Highly Efficient Synthesis of Hyaluronic Acid Oligosaccharides" The International Conference on Hyaluronan (HA-2007), **2007**, Charleston, SC.
27. Huang, X.; Lu, X.; Miermont, A.; Srinivasan, B.; Sun, B.; Teumelsan, N.; Zeng, Y.; "Pre-activation Based One-pot Synthesis of Complex Oligosaccharides" *Gordon Research Conference on Carbohydrates*, **2007**, Tilton, NH.*
28. Wang, Z.; Zhou, L.; Huang, X.; "Iterative One-pot Synthesis of the Tumor-associated Carbohydrate Antigen Globo-H" *Gordon Research Conference on Carbohydrates*, **2007**, Tilton, NH.
29. Wang, Z.; Huang, X.; "Iterative One-pot Syntheses of the Tumor-Associated Carbohydrate Antigen Globo-H and SSEA-3" *3rd Midwest Carbohydrate and Glycobiology Symposium*, **2007**, Columbus, OH. (Winner of the Best Oral Talk Award)
30. Miermont, A.; Wang, Q.; Wall, K. A.; Huang, X.; "Cow Pea Mosaic Virus Capsid: a Promising Protein Carrier for Carbohydrate Based Anti-Cancer Vaccine Studies" *3rd Midwest Carbohydrate and Glycobiology Symposium*, **2007**, Columbus, OH.
31. El-boubbou, K.; Gruden, C.; Huang, X.; "Magnetic Glyco-nanoparticles: A Unique Tool for Rapid Pathogen Detection, De-contamination and Strain Differentiation" *3rd Midwest Carbohydrate and Glycobiology Symposium*, **2007**, Columbus, OH. (Winner of the Best Oral Talk Award)
32. Sun, B.; Huang, X.; "Synthesis towards Fucosylated Bi-antennary Complex Type N-glycans" *3rd Midwest Carbohydrate and Glycobiology Symposium*, **2007**, Columbus, OH.
33. Lu, X.; Huang, L.; Huang, X.; "Highly Efficient Synthesis of Hyaluronic Acid Decasaccharide" *3rd Midwest Carbohydrate and Glycobiology Symposium*, **2007**, Columbus, OH.
34. Zhou, L.; Wang, Z.; Huang, X.; "Iterative One-pot Synthesis of the Tumor-Associated Carbohydrate Antigen Globo-H and SSEA-3" *3rd Midwest Carbohydrate and Glycobiology Symposium*, **2007**, Columbus, OH.
35. Zeng, Y.; Miermont, A.; Jing, Y.; Huang, X.; "Synthesis of Lewis Family Oligosaccharides and N₃ Antigen by a Combination of Pre-activation and Reactivity Based Chemoselective One-

- Pot Glycosylations” *3rd Midwest Carbohydrate and Glycobiology Symposium, 2007*, Columbus, OH. (Winner of Best Poster Award).
36. Huang, X.; “Carbohydrates, Sweet Molecules of Life” *4th Sino-US Chemistry Professor Conference, 2008*, Beijing, China.*
 37. Huang, X.; Zeng, Y.; Wang, Z. “Why Some Pre-activation Based Glycosylation Reactions Do Not Work and What Can Be Done About It” *4th Midwest Carbohydrate Symposium, 2008*, Cleveland, OH.*
 38. Lu, X.; Huang, L.; Huang, X.; “Total Synthesis of Hyaluronic Acid Decasaccharide” *4th Midwest Carbohydrate Symposium, 2008*, Cleveland, OH. (Winner of the best oral talk award).
 39. Wasonga, G.; Huang, X.; “Pre-activation Based Stereoselective Glycosylation” *4th Midwest Carbohydrate Symposium, 2008*, Cleveland, OH.
 40. Huang, X.; “Magnetic Glyco-nanoparticles, a Useful Tool for Pathogen Detection and Decontamination” *237th ACS National Meeting, 2009*, Salt Lake City, UT.*
 41. Huang, X.; “Magnetic Glyco-nanoparticles, a Useful Tool for Detection of Pathogens and Cancer Cells” *Gordon Research Conference on Bio-organic Chemistry, 2009*, Andover, NH.
 42. Huang, X.; “Development of Pre-activation Based One-pot Oligosaccharide Synthesis Methodology” *238th ACS National Meeting, 2009*, Washington DC.*
 43. Huang, X.; “Magnetic Glyco-nanoparticles, a Useful Tool for Detection and Differentiation of Bacteria and Cancer Cells” *238th ACS National Meeting, 2009*, Washington DC.*
 44. Huang, X.; “Magnetic Glyco-Nanoparticles, a Unique Tool for *In Vitro* and *In Vivo* Detection” nanoKAP Symposium (nano Knowledge, Application and Production) **2009**, Washington DC.*
 45. Huang, X.; “Development of CD44 Targeting Nano-probes for Molecular Imaging of Atherosclerosis” *8th International Conference on Hyaluronan, 2010*, Kyoto, Japan.*
 46. Huang, X.; “Magnetic Glyco-nanoparticles: Applications in Cancer Profiling” *6th Sino-US Chemistry Professor Conference, 2010*, Hangzhou, China.*
 47. El-boubbou, K.; Huang, X.; “Targeted Glyco-Magnetic Nanoprobes for Detection and Molecular Imaging of Atherosclerosis” *240th ACS National Meeting, 2010*, Boston, MA.*
 48. Huang, X.; “Magnetic Glyco-nanoparticles: Applications in Cancer Profiling” *240th ACS National Meeting, 2010*, Boston, MA.

49. El-dakdouki, M.; Huang, X. "Iron Oxide Nanoparticles for Targeted Cancer Therapy and Diagnosis" *The 6th Annual Midwest Carbohydrate and Glycobiology Symposium*, **2010**, Toledo, OH.*
50. Kouyoumdjian, H.; Kamat, K.; El-boubbou, K.; Huang, X.; "Development of Glyco-nanoparticles for Detection of Atherosclerosis and Amyloid Plaques" *The 6th Annual Midwest Carbohydrate and Glycobiology Symposium*, **2010**, Toledo, OH.
51. Huang, X.; "Magnetic glyco-nanoparticles, a tool for in vitro and in vivo detection" International Workshop on Nanobiotechnology Applied to Cancer, the Brazilian Congress of Pediatric Oncology, **2010**, Curitiba, Brazil.*
52. Huang, X.; "Magnetic Glyco-nanoparticles, a Tool for in vitro and in vivo Detection" *241st ACS National Meeting*, **2011**, Anaheim, CA.*
53. Huang, X.; "Virus-like Particles, a New Method to Boost the Immune Responses towards Tumor Associated Carbohydrate Antigens" *241st ACS National Meeting*, **2011**, Anaheim, CA.*
54. Huang, X.; El-dakdouki, M.; Kavunja, H.; El-boubbou, K.; Wang, J.; Zhu, D. C.; "Development of Glyco-nanoparticles for Cancer Cell Profiling and Imaging" *6th Annual Cancer Nanobiology Think Tank*, **2011**, Frederick, MD.
55. Huang, X.; "Development of Nanoparticles for Cancer Cell Imaging and Targeted Delivery" *NCI Cancer Imaging Camp*, **2011**, St. Louis, MO.
56. Huang, X.; Kavunja, H.; El-dakdouki, M.; Wang, J.; "Magnetic Glyco-nanoparticles, a New Tool for Profiling of Carbohydrate Binding Properties of Cancer Cells and Discovery of New Lectins" *Consortium for Functional Glycomics PI Meeting*, **2011**, Bethesda, MD.
57. Kouyoumdjian, H.; Zhu, D. C.; Li, W.; Huang, X. "Sialic Acid Functionalized Nanoparticles for β -Amyloid Detection" *The 7th Annual Midwest Carbohydrate and Glycobiology Symposium*, **2011**, East Lansing, MI.*
58. Yang, B.; Yoshida, K.; Yin, Z.; Hang, D.; El-dakdouki, M.; Huang, X. "Synthesis towards Homogenous Heparan Sulfate Proteoglycan" *The 7th Annual Midwest Carbohydrate and Glycobiology Symposium*, **2011**, East Lansing, MI. (Winner of the best oral talk award)*
59. Dulaney, S.; Wang, Z.; El-dakdouki, M.; Kathawa, J.; Huang, X. "Synthesis of Heparan Sulfate Oligosaccharides" *The 7th Annual Midwest Carbohydrate and Glycobiology Symposium*, **2011**, East Lansing, MI. (Winner of the best poster award)
60. Yin, Z.; Bentley, P.; Miermont, A.; Wang, Q.; Huang, X. "Tobacco Mosaic Virus (TMV) As a Promising Platform for Cancer Vaccine" *The 7th Annual Midwest Carbohydrate and Glycobiology Symposium*, **2011**, East Lansing, MI.

61. Kavunja, H.; El-dakdouki, M.; Wang, J.; Huang, X. "Magnetic Glyco-nanoparticles, a New Tool for Profiling of Carbohydrate Binding Properties of Cancer Cells and Discovery of New Lectins" *The 7th Annual Midwest Carbohydrate and Glycobiology Symposium*, **2011**, East Lansing, MI.
62. Huang, X. "Synthesis of Complex Oligosaccharides and Glyco-conjugates" *243rd ACS National Meeting*, **2012**, San Diego, CA.*
63. Huang, X.; "Magnetic Glyco-nanoparticles, a Tool for Cancer Cell Profiling and Targeted Drug Delivery" *243rd ACS National Meeting*, **2012**, San Diego, CA.*
64. Huang, X. "Magnetic Glyco-nanoparticles, a Tool for *in vitro* and *in vivo* Detections" *8th National Carbohydrate Symposium*, **2012**, Banff, Alberta, Canada.*
65. Huang, X.; El-Dakdouki, M. H.; Li, H.; Zhu, D. C.; Abela, G. S. "Iron Oxide Based Nanoparticles as Selective MR Contrast Agents for the Detection of Atherosclerotic Cholesterol Crystals" *244th ACS National Meeting*, **2012**, Philadelphia, PA.
66. Sheng, J.; Xu, Y.; Dulaney, S. B.; Huang, X.; Liu, J. "Uncovering a Biphasic Catalytic Mode of C5-epimerase in Heparan Sulfate Biosynthesis" *244th ACS National Meeting*, **2012**, Philadelphia, PA.
67. Yang, B.; Yoshida, K.; Yin, Z.; Huang, X.; "Chemical Synthesis of Homogeneous Heparan Sulfate Proteoglycan" *244th ACS National Meeting*, **2012**, Philadelphia, PA.
68. Yin, Z.; Bentley, P.; Wang, Q.; Finn, M. G.; Huang, X.; "Virus-like Particles (VLPs) as Promising Platform for Cancer Vaccine" *244th ACS National Meeting*, **2012**, Philadelphia, PA.
69. Kouyoumdjian, H.; Wang, P.; Huang, X. " β -Amyloids: Novel, MRI-Based Detection Method and Evaluation of the Soluble Tyrosine-Conjugated Glycopeptides via Mass Spectrometry" *The 8th Annual Midwest Carbohydrate and Glycobiology Symposium*, **2012**, Detroit, MI. (Winner of the best poster award)
70. Yang, B.; Yoshida, K.; Huang, X. "Chemical Synthesis of Homogenous Heparan Sulfate Proteoglycan" *The 8th Annual Midwest Carbohydrate and Glycobiology Symposium*, **2012**, Detroit, MI.
71. Dulaney, S.; Wang, Z.; El-dakdouki, M.; Kathawa, J.; Liu, J.; Huang, X. "Accessing a Heparin/HS Library through Chemical and Chemoenzymatic Strategies" *The 8th Annual Midwest Carbohydrate and Glycobiology Symposium*, **2012**, Detroit, MI.
72. Yin, Z.; Bentley, P.; Wang, Q.; Finn, M. G.; Huang, X. "Virus-like Particles as a Promising Platform for Cancer Vaccine" *The 8th Annual Midwest Carbohydrate and Glycobiology Symposium*, **2012**, Detroit, MI.

73. Huang, X.; Dulaney, S. B.; Xu, Y.; Yang, B.; Yoshida, K.; Wang, Z.; Liu, J. "Chemoenzymatic Synthesis of Heparan Sulfate Oligosaccharides" *245th ACS National Meeting*, **2013**, New Orleans, LA.*
74. Kouyoumdjian, H.; Zhu, D.; El-dakdouki, M.; Lorenz, K.; Chen, J.; Li, W.; Huang, X. "Glyconanoparticle Aided Detection of β Amyloid by Magnetic Resonance Imaging and Attenuation of β Amyloid Induced Cytotoxicity" *245th ACS National Meeting*, **2013**, New Orleans, LA.
75. Huang, X.; El-Dakdouki, M. H.; Pure, E. "Hyaluronan Coated Nanoparticles for Deep Tumor Penetration and Targeted Drug Delivery" *ACS Central Regional Meeting*, **2013**, Mount Pleasant, MI.*
76. Dulaney, S. B.; Wang, Z.; El-Dakdouki, M.; Kathawa, J.; Liu, J.; Huang, X. "Accessing a Heparin/HS Library through Divergent Chemical and Chemoenzymatic Means" *ACS Central Regional Meeting*, **2013**, Mount Pleasant, MI.
77. Kouyoumdjian, H.; Zhu, D.; El-dakdouki, M.; Lorenz, K.; Chen, J.; Li, W.; Huang, X. "Glyconanoparticle Aided Detection of β Amyloid by Magnetic Resonance Imaging and Attenuation of β Amyloid Induced Cytotoxicity" *ACS Central Regional Meeting*, **2013**, Mount Pleasant, MI.
78. Huang, X.; Yin, Z. "Virus-like Particles, a Powerful Platform to Boost the Immune Responses towards Tumor Associated Carbohydrate Antigens" *International Symposium on Chemical Glycobiology*, **2013**, Shanghai, China.*
79. Dulaney, S. B.; Kouyoumdjian, H.; Kathawa, J.; El-Dakdouki, M.; Liu, J.; Huang, X. "Elucidating the Structure Activity Relationship of Heparin using a Chemoenzymatically Prepared Glycan Microarray" *246th ACS National Meeting*, **2013**, Indianapolis, IN.
80. Huang, X.; Yin, Z.; Finn, M. G.; Wang, Q.; Gildersleeve, J.; BenMohamed, L. "Boosting the Immune Responses towards Weak Tumor Associated Carbohydrate Antigens by Organized display on Virus-like Particles" *246th ACS National Meeting*, **2013**, Indianapolis, IN.*
81. Yin, Z.; Finn, M. G.; Huang, X. "Bacteriophage Q β as a Promising Carrier for Anti-MUC1 Cancer Vaccine" *246th ACS National Meeting*, **2013**, Indianapolis, IN.
82. Huang, X.; El-Dakdouki, M. H.; Pure, E. "Receptor Mediated Transcytosis for Enhancement of Tumor Penetration by Hyaluronan Coated Nanoparticles" *246th ACS National Meeting*, **2013**, Indianapolis, IN.*
83. Huang, X.; Dulaney, S. B.; Xu, Y.; Yang, B.; Yoshida, K.; Wang, Z.; Liu, J. "Synthesis of Heparan Sulfate Oligosaccharides and Glycopeptides" *The 9th Annual Midwest Carbohydrate and Glycobiology Symposium*, **2013**, Toledo, OH (plenary lecture).*

84. Yin, Z.; Finn, M. G.; Huang, X. "Bacteriophage Q β as a Promising Platform for Anti-carbohydrate Cancer Vaccine" *The 9th Annual Midwest Carbohydrate and Glycobiology Symposium*, **2013**, Toledo, OH.
85. Baniel, C.; Dulaney, S. B.; Yin, Z.; Finn, M. G.; Huang, X. "Virus-like Particle Vaccines Targeting Tumor Associated Carbohydrate Antigens" *The 9th Annual Midwest Carbohydrate and Glycobiology Symposium*, **2013**, Toledo, OH.
86. Kouyoumdjian, H.; Wang, P.; Huang, X. "Serum Albumin and Heparin Functionalized Superparamagnetic Iron-oxide Nanoparticles for Enhanced Blood Brain Barrier Permeability and β -Amyloid Binding" *The 9th Annual Midwest Carbohydrate and Glycobiology Symposium*, **2013**, Toledo, OH.
87. Qin, Q.; Sungsuwan, S.; Huang, X. "Glycopolymers and Lipopeptide Coated Iron Oxide Nanoparticles as Antigen Presenting Platforms for Anti-cancer Vaccines" *The 9th Annual Midwest Carbohydrate and Glycobiology Symposium*, **2013**, Toledo, OH.
88. Hossaini Nasr, S.; Huang, X. "Nanoworms vs Nanoparticles: Strategies to Enhance CD44 Targeting by Hyaluronan Coated Nanoconstructs" *The 9th Annual Midwest Carbohydrate and Glycobiology Symposium*, **2013**, Toledo, OH.
89. Yang, W.; Huang, X. "Building Biomarker by Chemical Synthesis: Practical Preparation of Tetrabranched N-Linked Glycopeptides" *The 9th Annual Midwest Carbohydrate and Glycobiology Symposium*, **2013**, Toledo, OH.
90. Zhang, Z.; Zhang, J.; Huang, X. "Chemical Synthesis of Homogenous Heparan Sulfate Proteoglycan and Chondroitin Sulfate Proteoglycan" *The 9th Annual Midwest Carbohydrate and Glycobiology Symposium*, **2013**, Toledo, OH (Best poster award).
91. Huang, X.; El-Dakdouki, M. H.; Pure, E. "CD44 Mediated Transcytosis for Enhancement of Drug Delivery by Hyaluronan Coated Nanoparticles" *247th ACS National Meeting*, **2014**, Dallas, TX.
92. Huang, X.; Yin, Z.; Baniel, C.; Bentley, P.; Finn, M. G.; Gildersleeve, J. C.; BenMohamed, L. "To Click or Not to Click: the Design of a Carbohydrate Based Anticancer Vaccine for Effective and Long Term Antitumor Immunity" *248th ACS National Meeting*, **2014**, San Francisco, CA.*
93. El-Dakdouki, M. H.; Xia, J.; Zhu, D. C.; Kavunja, H.; Grieshaber, J.; O'Reilly, S.; McCormick, J. J.; Huang, X.; "Advanced Functional Magnetic Glyconanoparticles for the *in vivo* Treatment and Detection of Diseases" *248th ACS National Meeting*, **2014**, San Francisco, CA.
94. Qin, Q.; Yin, Z.; Bentley, P.; Huang, X.; "Glycopolymer Platform for Presentation of Tumor Associated Carbohydrate Antigens" *248th ACS National Meeting*, **2014**, San Francisco, CA.

95. Kavunja, H.; El-Dakdouki, M.; Wang, J.; Huang, X.; "Identification, Profiling, and Purification of Lectins from Cancer Cells using Magnetic Glyconanoparticles" *248th ACS National Meeting*, **2014**, San Francisco, CA.
96. Qin, Q.; Yin, Z.; Bentley, P.; Huang, X. "Glycopolymer Platform for Tumor-Associated Carbohydrate Antigen Presentation as Potential Anti-Cancer Vaccines" *The 10th Annual Midwest Carbohydrate and Glycobiology Symposium*, **2014**, Ann Arbor, MI.
97. Kavunja, H.; El-Dakdouki, M. H.; Wang, J.; Huang, X. "Identification, Profiling and Purification of Sugar-Binding Proteins from Cancer Cells using Magnetic Glyconanoparticles" *The 10th Annual Midwest Carbohydrate and Glycobiology Symposium*, **2014**, Ann Arbor, MI.
98. Allmon, A.; Yin, Z.; Huang, X. "Synthesis of BSA-MUC1 Conjugates for MUC1 Peptide Microarrays to Evaluate Serum Specificity" *The 10th Annual Midwest Carbohydrate and Glycobiology Symposium*, **2014**, Ann Arbor, MI.
99. Baniel, C.; Dulaney, S. B.; Yin, Z.; Finn, M. G.; Huang, X. "Virus-Like Particle Q β as a Carrier in GM2 Specific Anti-Cancer Vaccines" *The 10th Annual Midwest Carbohydrate and Glycobiology Symposium*, **2014**, Ann Arbor, MI.
100. Kouyoumdjian, H.; Huang, X. "To BBB or not to BBB: A β Detection via Delivering Glyco-Nanoparticles through BBB" *The 10th Annual Midwest Carbohydrate and Glycobiology Symposium*, **2014**, Ann Arbor, MI. (Best poster award).
101. Hossaini Nasr, S.; Huang, X. "Enhancing CD44 Targeting by Engineering Geometry of Nanocarriers: Nanoworms Address CD44 More Efficiently than Nanoparticles" *The 10th Annual Midwest Carbohydrate and Glycobiology Symposium*, **2014**, Ann Arbor, MI.
102. Ramadan, S. I.; Yang, W.; Huang, X. "Chemical Synthesis of Isotopically Labelled N- and O-Glycopeptides for Quantification of Tumor Associated Glycopeptides" *The 10th Annual Midwest Carbohydrate and Glycobiology Symposium*, **2014**, Ann Arbor, MI.
103. Sungsuwan, S.; Yin, Z.; Huang, X. "Lipopeptide Coated Iron Oxide Nanoparticles as a MUC1 Antigen Carrier Platform for Anti-Cancer Vaccine" *The 10th Annual Midwest Carbohydrate and Glycobiology Symposium*, **2014**, Ann Arbor, MI.
104. Yin, Z.; Huang, X. "Developing Bacteriophage Q β as Versatile Carrier for Anti-Carbohydrate Cancer Vaccine: Influence of Antigen Design on Antibody Responses" *The 10th Annual Midwest Carbohydrate and Glycobiology Symposium*, **2014**, Ann Arbor, MI. (Best poster award).
105. Wang, P.; Huang, X. "Synthesis Aided Structural Determination of Amyloid- β (1-15) Glycopeptide, a New Biomarker for Alzheimer's Disease" *The 10th Annual Midwest Carbohydrate and Glycobiology Symposium*, **2014**, Ann Arbor, MI.

106. Zhang, Z.; Zhang, J.; Huang, X. "Chemical Synthesis of Chondroitin Sulfate Oligosaccharides and Heparin Derivatives as Heparanase Inhibitors" *The 10th Annual Midwest Carbohydrate and Glycobiology Symposium*, **2014**, Ann Arbor, MI.
107. Huang, X.; "Fighting Cancer with a Sweet Bullet: The Development of Carbohydrate Based Anticancer Vaccines" *249th ACS National Meeting*, **2015**, Denver, CO.*
108. Huang, X. Dulaney, S. B.; Xu, Y.; Yoshida, K.; Yang, B.; Yang, W.; Liu, J.; "Synthesis of Heparan Sulfate Oligosaccharides and Glycopeptide" *249th ACS National Meeting*, **2015**, Denver, CO.*
109. Huang, X. "Development of Carbohydrate Based Anti-cancer Vaccines" *Gordon Research Conference on Carbohydrates*, **2015**, West Dover, VT.*
110. Ramadan, S.; Yang, W.; Eissa, A.-M.; Goldman, R.; Huang, X. "Chemical Synthesis of Isotopically Labeled *N*- and *O*- Glycopeptides for Quantification of Tumor Associated Glycopeptides" *250th ACS National Meeting*, **2015**, Boston, MA.
111. Sungsuwan, S.; Yin, Z.; Huang, X. "Lipopeptide Coated Iron Oxide Nanoparticles as a MUC1 Antigen Carrier Platform for Anticancer Vaccine" *250th ACS National Meeting*, **2015**, Boston, MA.
112. Wang, P.; Huang, X. "Heparin Nanoparticles for β Amyloid Binding and Mitigation of β Amyloid Associated Cytotoxicity" *250th ACS National Meeting*, **2015**, Boston, MA.
113. Huang, X. "Magnetic Glyconanoparticles for Disease Detection" *250th ACS National Meeting*, **2015**, Boston, MA.*
114. Qin, Q.; Huang, X. "Carbohydrate Density and Valency Matter: a Study of T Cell Independent Immune Response Triggered by Glycopolymers" *The 11th Annual Midwest Carbohydrate and Glycobiology Symposium*, **2015**, Cleveland, OH. (Best Oral Talk Award)
115. Yang, W.; Huang, X. "Chemical Synthesis of Human Syndecan-3 Glycopeptides Bearing two Heparan Sulfate Glycan Chains" *The 11th Annual Midwest Carbohydrate and Glycobiology Symposium*, **2015**, Cleveland, OH.
116. Gao, J.; Huang, X. "Chemoenzymatic Synthesis of a Novel Heparan Sulfate Glycopeptide" *The 11th Annual Midwest Carbohydrate and Glycobiology Symposium*, **2015**, Cleveland, OH.
117. Lang, S.; Huang, X. "pH Sensitive Nanoparticles for Foreign Antigen Delivery and Tumor Immunotherapy" *The 11th Annual Midwest Carbohydrate and Glycobiology Symposium*, **2015**, Cleveland, OH.
118. Li, H.; Huang, X. "GD2 and Its Derivative with Q β as Potential Anticancer Vaccines" *The 11th Annual Midwest Carbohydrate and Glycobiology Symposium*, **2015**, Cleveland, OH.

119. Nasr, S. H.; Huang, X. "Magnetic Resonance Imaging of Amyloid Plaques in Alzheimer's Disease Transgenic Mice by Targeted Glyconanoparticles" *The 11th Annual Midwest Carbohydrate and Glycobiology Symposium*, **2015**, Cleveland, OH.
120. Sungsuwan, S.; Huang, X. "Lipopeptide-Coated Iron Oxide Nanoparticles as Potential Glycoconjugate-Based Synthetic Anticancer Vaccines" *The 11th Annual Midwest Carbohydrate and Glycobiology Symposium*, **2015**, Cleveland, OH.
121. Wang, P.; Huang, X. "Interactions of Synthetic Heparan Sulfate Oligosaccharides with β -Amyloid" *The 11th Annual Midwest Carbohydrate and Glycobiology Symposium*, **2015**, Cleveland, OH.
122. Yin, Z.; Huang, X. "Mapping Bioconjugation Sites of Virus-like Particle Vaccines by a Bottom-up LC-MS/MS Approach" *The 11th Annual Midwest Carbohydrate and Glycobiology Symposium*, **2015**, Cleveland, OH.
123. Zhang, J.; Huang, X. "Chemical Synthesis of Heparin Derivatives as Heparanase Inhibitors" *The 11th Annual Midwest Carbohydrate and Glycobiology Symposium*, **2015**, Cleveland, OH.
124. Zhang, Z.; Huang, X. "Chemical Synthesis of Chondroitin Sulfate Oligosaccharides" *The 11th Annual Midwest Carbohydrate and Glycobiology Symposium*, **2015**, Cleveland, OH.
125. Huang, X. "Advanced Functional Magnetic Glyconanoparticles for Disease Detection" *Pacificchem-2015*, **2015**, Honolulu, HI.*
126. Huang, X.; Yang, W.; Dulaney, S.; Xu, Y.; Wang, P.; Yang, B.; Yoshida, K.; Liu, J. "Synthesis of Heparan Sulfate Oligosaccharides and Glycopeptides" *28th International Carbohydrate Symposium*, **2016**, New Orleans, LA.*
127. Huang, X.; "Development of Acid Responsive Microparticles for Delivery of Foreign Cytotoxic T-lymphocyte Epitopes to Tumor Tissues for Effective Antitumor Immunotherapy against Pre-established Solid Tumor" *2nd International CRI-CIMT-EATI-AACR International Cancer Immunotherapy Conference: Translating Science into Survival*, **2016**, New York City, NY.
128. Huo, C.; Huang, X. "Synthesis of a Trisaccharide Repeating Unit of the O-Antigen from Salmonella and Its Oligomer" *The 12th Annual Midwest Carbohydrate and Glycobiology Symposium*, **2016**, Mount Pleasant, MI.
129. Gao, J.; Huang, X. "Chemoenzymatic Synthesis of Heparan Sulfate Glycopeptides" *The 12th Annual Midwest Carbohydrate and Glycobiology Symposium*, **2016**, Mount Pleasant, MI. (Best poster award)
130. Zhang, J.; Huang, X. "Chemical Synthesis of Heparin Like Head to Tail Multimers" *The 12th Annual Midwest Carbohydrate and Glycobiology Symposium*, **2016**, Mount Pleasant, MI.

131. Baryal, K. N.; Huang, X. "Combinatorial Synthesis of HS Oligosaccharide Library" *The 12th Annual Midwest Carbohydrate and Glycobiology Symposium*, **2016**, Mount Pleasant, MI.
132. Ramadan, S.; Huang, X. "Chemical Synthesis towards Chondroitin Sulfate Oligosaccharide Library and Chondroitin Sulfate Proteoglycan" *The 12th Annual Midwest Carbohydrate and Glycobiology Symposium*, **2016**, Mount Pleasant, MI.
133. Sungsuwan, S.; Huang, X. "Evaluating Bacteriophage Q β Virus-like Particle and the Engineered Variants as Carriers for Tumor Associated Carbohydrate Antigen Based Anti-cancer Vaccine" *The 12th Annual Midwest Carbohydrate and Glycobiology Symposium*, **2016**, Mount Pleasant, MI.
134. Wang, P.; Huang, X. "Synthesis of Pentasaccharide from *Bordetella pertussis* for a New Bactericidal Vaccine" *The 12th Annual Midwest Carbohydrate and Glycobiology Symposium*, **2016**, Mount Pleasant, MI.
135. Yang, W.; Huang, X. "Homoserine as Aspartic Acid Surrogates for Synthesis of Proteoglycan Glycopeptide Containing Aspartic Acid and Sulfated Glycan Chain" *The 12th Annual Midwest Carbohydrate and Glycobiology Symposium*, **2016**, Mount Pleasant, MI.
136. Zhang, Z.; Huang, X. "Chemical Synthesis towards Chondroitin Sulfate Oligosaccharide Library and Chondroitin Sulfate Proteoglycan" *The 12th Annual Midwest Carbohydrate and Glycobiology Symposium*, **2016**, Mount Pleasant, MI.
137. Yang, W.; Huang, X. "Divergent Chemoenzymatic Synthesis of Isotopically Labeled N-Linked Glycopeptide from Haptoglobin" *The 12th Annual Midwest Carbohydrate and Glycobiology Symposium*, **2016**, Mount Pleasant, MI.
138. Nasr, S. H.; Kouyoumdjian, H.; Mallet, C.; Shapiro, E.; Huang, X. "*In vivo* Detection of Amyloid Plaques by Sialic Acid Decorated Nanoparticles in a Mouse Model of Alzheimer's Disease" *The 12th Annual Midwest Carbohydrate and Glycobiology Symposium*, **2016**, Mount Pleasant, MI.
139. Lang, S.; Kawunja, H.; Sungsuwan, S.; Yin, Z.; Huang, X. "Glycan Based pH Responsive Microparticles for Cytotoxic T Lymphocyte Epitopes Delivery for Cancer Immunotherapy" *The 12th Annual Midwest Carbohydrate and Glycobiology Symposium*, **2016**, Mount Pleasant, MI. (Best oral talk award)
140. Huang, X. "Fighting Cancer with a Sweet Bullet: The Development of Carbohydrate Based Anticancer Vaccines" *253rd ACS National Meeting*, **2017**, San Francisco, CA.*
141. Huang, X.; Yang, W.; Dulaney, S.; Xu, Y.; Wang, P.; Yang, B.; Yoshida, K.; Liu, J. "Synthesis of Heparan Sulfate Oligosaccharides and Glycopeptides" *253rd ACS National Meeting*, **2017**, San Francisco, CA.*

142. Huang, X.; Yang, W.; Dulaney, S.; Xu, Y.; Wang, P.; Yang, B.; Yoshida, K.; Liu, J. "Synthesis of Heparan Sulfate Oligosaccharides and Glycopeptides" *2nd Carbohydrate Synthesis Chemistry Youth Conference, 2017*, Jinan, China.*

Invited seminars at universities and institutes

- 2004 Department of Medicinal and Biological Chemistry, the University of Toledo
Department of Chemistry, Kenyon College
Department of Chemistry, Wright State University
- 2005 Department of Chemistry, Youngstown State University
Department of Chemical and Environmental Engineering, the University of Toledo
Department of Chemistry, University of Georgia
Department of Chemistry, Georgia State University
Department of Chemistry, Wayne State University
Department of Chemistry, University of Guelph
- 2006 Department of Chemistry, University of Akron
Department of Chemistry, University of California, Davis
Department of Chemistry, Cleveland State University
Department of Chemistry, Duke University
Department of Chemistry, University of South Carolina
Department of Chemistry, North Carolina State University
Department of Chemistry, West Virginia University
Department of Chemistry, Pennsylvania State University
Department of Chemistry, Michigan State University
Department of Chemistry, Columbia University
Department of Chemistry, Hunter College, City University of New York
- 2007 Department of Bioengineering, the University of Toledo
Department of Chemistry, John Carroll University
Department of Medicinal and Biological Chemistry, the University of Toledo
Department of Chemistry, Tulane University
National Institutes of Health, NIH Workshop on Carbohydrates
Faculty of Agriculture and Life Science, Hirosaki University, Japan
National Research Laboratory of Natural and Biomimetic Drug, Peking Univ., China
- 2008 Department of Chemistry, Oakland University
National Institutes of Health, NIH Glycoscience day
School of Chemistry and Materials Science, USTC, Hefei, China
Department of Chemistry, University of New Mexico
Department of Chemistry, University of Missouri, St. Louis
- 2009 Department of Chemistry and Chemical Biology, Cornell University
Department of Chemistry, Binghamton University

- Laboratory of Medicinal Chemistry, National Cancer Institute
National Institutes of Health, NIH Workshop on Carbohydrate Microarray Development
- 2010 Department of Chemistry, University of New Orleans
Department of Chemistry, Osaka University, Japan
Department of Biomedical Engineering, University of Michigan
Department of Medicinal Chemistry, University of North Carolina, Chapel Hill
- 2011 Department of Chemistry, Purdue University
Shanghai Institute of Organic Chemistry, China
Department of Chemistry, Shandong University, China
Department of Chemical Biology, Xiamen University, China
Department of Chemistry, Shanghai Jiaotong University, China
- 2012 Department of Chemistry, Central Michigan University
Department of Melanoma Medical Oncology Research, M. D. Anderson Cancer Center
Department of Chemistry, Brown University
- 2013 Department of Chemistry, University of Pittsburgh
Department of Chemistry, Hunan Normal University, China
National Research Laboratory of Natural and Biomimetic Drug, Peking Univ., China
Department of Chemistry, Columbia University
- 2015 Department of Chemistry, The Scripps Research Institute
Department of Chemistry, University of Michigan, Dearborn
College of Pharmacy, University of Wisconsin
Department of Chemistry, Binghamton University
Department of Chemistry, Wayne State University
- 2016 Department of Chemistry and Biochemistry, University of Notre Dame
Department of Chemistry, University of Colorado
Department of Chemistry, Rensselaer Polytechnic Institute
Department of Chemistry, Georgia State University
Department of Chemistry and Biochemistry, University of Arkansas
- 2017 Department of Chemistry, Northeastern University
Department of Chemistry, Old Dominion University
National Center for Carbohydrate Synthesis and Engineering, Jiangxi Normal University