

CURRICULUM VITAE

Xuefei Huang

July 21st, 2020

MSU Foundation Professor
 Departments of Chemistry and Biomedical Engineering
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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
2020	Fellow, the American Association for Advancement of Science
2020	William J. Beal Outstanding Faculty Award, Michigan State University

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
Special Topics in Chemical Biology
Chemistry and Biology of Pathogens
Molecular (Neuro) Imaging

VI. FUNDING

CURRENT SUPPORT

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 – 2/28/2020. Award amount: **\$1,157,264** (R01 GM72667)
Award amount to PI: ~ \$803,500

National Cancer Institute, NIH
Title: “*Engineering Bacteriophage Q β Conjugates with Tumor Associated Carbohydrate Antigens as Multi-component Anti-cancer Vaccines*”
PI: Xuefei Huang, co-PIs: Vilma Yuzbasiyan-Gurkan (MSU), Paulo Vilar Saavedra (MSU)
1/1/2018 – 12/31/2022. Award amount: **\$2,400,000** (R01 CA225105)
Award amount to PI: ~ \$2,000,000

https://www.eurekalert.org/pub_releases/2018-03/msu-vpc030218.php
<https://futurism.com/animal-cancer-vaccine-awarded-grant/>
<http://wearethecure.org/virus-like-particle-could-lead-to-new-canine-cancer-vaccine/>
<https://msutoday.msu.edu/news/2018/virus-like-particle-could-lead-to-new-cancer-vaccine/>
<https://aggregator.leafscience.org/virus-like-particle-could-lead-to-new-cancer-vaccine/>

National Cancer Institute, NIH

Title: “*Generation of Active Immunity against Cytotoxic Oligomeric Tau Species*”

PI: Xuefei Huang, co-PI: Rakez Kayed (Univ. of Texas, Medical Branch)

7/1/2019 – 12/31/2020. Award amount: **\$375,606** (R01 CA225105-02S1)

National Institute of General Medical Sciences, NIH

Title: “*Stereoselective Assembly of Challenging Glycosidic Linkages with Earth-Abundant Metal Catalysts*”

PI: Hao Xu (Georgia State Univ.); co-PI: Xuefei Huang

5/1/2018 – 4/30/2020. Award amount: ~ **\$432,650** (1R21GM128442-01)

Award amount to Xuefei Huang: ~ \$140,000

Michigan State University Foundation, MSU

Title: “*Preclinical Development of MUC1 Based Anti-cancer Immunotherapy*”

PI: Xuefei Huang (MSU); co-PIs: Vilma Yuzbasiyan-Gurkan, Paulo Vilar Saavedra, Tim Whitehead, Anas Al-janadi, Xiangshu Jin, Deimante Tamkus

7/1/2018 – 6/30/2021. Award amount: ~ **\$400,000**

National Institute of Allergy and Infectious Diseases, NIH

Title: “*Synthetic Glycan Conjugates with Bacteriophage Qbeta for Broad Spectrum Antisalmonella Vaccines*”

PI: Xuefei Huang, co-PI: Sharon Tennant (University of Maryland)

07/16/2019 – 06/30/2024. Award amount: **\$1,500,000** (R01AI146210)

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

National Institute of General Medical Sciences, NIH

Title: “*Diverse Heparan Sulfate Oligosaccharide Libraries for Understanding and Therapeutically Manipulating Glycosaminoglycans*”

PI: Vijayakanth Pagadala (Glycan Therapeutics), Subcontractor: Xuefei Huang, Linda Hsieh-Wilson (Caltech)

8/1/2019 – 1/31/2020. Award amount: **\$536,791** (R44 GM134738)

Award amount to Xuefei Huang: ~ \$82,500

COMPLETED SUPPORT

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 (University of Notre Dame), co-PI: Xuefei Huang

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

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

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 – 2018
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, Tenure & promotion committee, chair	2013 – 2014
Chemistry awards committee, chair	2013 - present
BME awards committee, chair	2018 – present
IQ Leadership Committee	2018 - present
Chinese Faculty Club, chair	2019 – 2020

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 – 2018	Member, NIH study section SBCA
Feb. 2019	Member, NIH special emphasis panel, U01 Technologies for Analysis of Glycans
March 2020	Member, NIH special emphasis panel, New Innovator DP2 Award
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
2018	Organizer of the 14 th Annual Midwest Carbohydrate and Glycobiology Symposium, East Lansing, MI

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 (~500 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.*, *Beilstein J. Org. Chem.*; *ACS Chem. Biol.* Etc.

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 – 8/18
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 – 12/18
Dr. Setare Nick	7/17 - 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 – 5/18

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. Patpanat Sermmmai	07/19 - present
Mr. Sherif Ramadan	11/13 – 10/15

Graduate Students

Mr. Philip Bentley	M.S.	9/08 – 8/11
Ms. Shivangi Chugh	Ph.D.	9/17 - present
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
Mr. Po-Han Lin	Ph.D.	9/18 - present
Mr. Kunli Liu	Ph.D.	9/17 - present
Ms. Xiaowei Lu	Ph.D.	9/05 – 7/12
Mr. Hunter Mcfall-Boegeman	Ph.D.	9/16 - present
Ms. Adeline Miermont	Ph.D.	9/03 – 8/08
Mr. Seyedmedhi Nasr	Ph.D.	9/12 – 11/18
Ms. Qian Qin	Ph.D.	9/10 – 7/16
Ms. Zahra Rashidjahanabad	Ph.D.	9/15 – present
Ms. Mengxia Sun	Ph.D.	9/16 - present
Mr. Suttipun Sungsuwan	Ph.D.	9/11 – 5/17
Mr. Zibin Tan	Ph.D.	9/16 - present
Mr. Nardos Teumelsan (minority)	M.S.	9/04 – 8/07
Mr. Peng Wang	Ph.D.	9/11 – 4/18
Mr. Zhen Wang	Ph.D.	9/03 – 7/08
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 – 1/20
Mr. Zeren Zhang	M.S.	9/12 – 12/18