

Hien M. Nguyen

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PERSONAL

Born: Ho Chi Minh City (Saigon), Vietnam
Citizenship: USA

RESEARCH INTERESTS

Structure-Based Design and Synthesis of Sugar Molecule Drugs for Cancer, Alzheimer's Disease, Vaccine Adjuvants for Immunotherapy, Medicinal Chemistry, Chemical Biology, and Organic chemistry.

EDUCATIONAL AND PROFESSIONAL HISTORY

Education

- 2003 – 2006 NIH Postdoctoral Fellow, Stanford University, Palo Alto, CA
Research: *Studies toward the Synthesis of Biologically Important Rameswaralide*
Advisor: Barry M. Trost
- 1998 – 2003 Ph.D. in Organic Chemistry, University of Illinois at Urbana-Champaign, Urbana, IL
Research: *Development of Glycosylation Methods for the Synthesis of Bioactive Oligosaccharides*
Advisor: David Y. Gin
- 1992 – 1996 B.S. Chemistry, *cum laude*, Tufts University, Medford, MA
Research: *Synthesis of myo-Inositol Compounds*
Advisor: Marc d'Alarcao

Professional Appointments

- 01/2018 – present Carl Johnson Professor, Department of Chemistry, Wayne State University
- 07/2013 – 11/2017 Associate Professor, Department of Chemistry, University of Iowa
- 08/2009 – 06/2013 Assistant Professor, Department of Chemistry, University of Iowa
- 08/2006 – 07/2009 Assistant Professor, Department of Chemistry, Montana State University

Professional Affiliations

- 1996 – present Member, American Chemical Society
- 1998 – present Member, American Chemical Society, Division of Organic Chemistry
- 2006 – present Member, American Chemical Society, Division of Carbohydrate Chemistry
- 2018 – present Member, American Chemical Society, Division of Medicinal Chemistry
- 2018 – present Member, Society of Glycobiology

SCHOLARSHIP

Research Grants

Active

R01GM098285

04/01/2012 – 05/31/2024

NIH/NIGMS

Total Amount Awarded: \$1,543,200

“Tailoring Structures of Sulfated Oligosaccharides for Modulating Heparanase Activity”

The goals of the proposal are (1) to combine organic chemistry and cancer biology for the development of small molecule heparanase-inhibiting sulfated oligosaccharides of high efficacy that could inhibit tumor growth and metastasis and (2) to develop new glycosylation methods for the assembly of bioactive carbohydrate molecules.

Role: PI

Co-Investigator: Israel Vlodavsky – Technion – Israel Institute of Technology

R01GM136968

04/01/2020 – 03/31/2024

NIH/NIGMS

Total Amount Awarded: \$1,372,140

“Strategies for Expedited Synthesis of Sulfated Aminoglycans”

Our goal is to develop cost-effective strategies for quickly transforming affordable positively charged aminoglycosides into novel classes of negatively charged sulfate aminoglycans, which no longer bind to bacterial ribosomal RNA and inhibit protein synthesis, but bind to heparin-binding proteins. In particular, we focus on the potential of these sulfate aminoglycans as binders of fibroblast growth factors and P-selectin.

Role: sole PI

R01AI169505

06/01/2022 – 05/31/2027

NIH/NIAID

Total Amount Awarded: \$3,298,550

“Synthesis and Evaluation of Carbohydrate Vaccine Adjuvants”

The goal of this grant application involves exploration of carbohydrate soyasaponin molecules as novel vaccine adjuvants for utilization in humans to combat a wide range of infectious diseases.

Role: PI

Multi-PI: Steve Varga (St. Jude’s Children Research Hospital).

R01GM098285-09S1

06/01/2022 – 05/31/2024

NIH/NIA

Total Amount Awarded: \$328,210

“Hyperphosphorylated Tau-Focused Therapeutics for Alzheimer’s Disease”

This administrative supplement for R01 GM098285 responds to PA-20-272 to establish a joint task force among three laboratories for the discovery of novel therapeutics candidates for Alzheimer’s disease. We wish to obtain high-quality molecular and functional data during this supplement, which will serve as the foundation for MPI R01 project centering on the control of ptau-mediated cell dysfunction and death.

Role: PI

Co-Investigator: Kezhong Zhang (Wayne State College of Medicine) and Min-Hao Kuo (Michigan State University)

R35GM149213

09/01/2023 – 08/31/2028

NIH/NIGMS

Total Amount Requested: \$4,118,275

“Catalytic Stereoselective Glycosylations for the Synthesis of Bioactive Carbohydrates”

The goal of the proposal is to develop new catalytic stereoselective glycosylation methods that enable efficient access to homogenous, structurally well-defined, biologically important carbohydrate molecules for advancing an understanding of their biological functions in disease processes.

Role: sole PI

This R35 grant is the combination of R01GM136968 grant and the glycosylation methodology section of R01GM098285 grant.

Pending

R01CA291877

07/01/2024 – 06/30/2029

NIH/NCI

“Rational Design of Heparan Sulfate Mimetics to Modulate Heparanase Activity”

The goal of this grant is to aim at developing and testing new class of anti-heparanase molecules from readily available aminoglycosides and exploring their efficacy against myeloma tumor growth and chemoresistance for the potential treatment of myeloma patients.

Role: PI (Hien Nguyen) and co-PI (Israel Vlodaysky at Technion – Israel Institute of Technology)

Complete

U01GM120293

09/01/2016 – 05/31/2020

NIH/NIGMS

“Catalytic Methods for Stereoselective 1,2-*Cis* Glycosylation”

The goal of this proposal is to develop a series of predictable and stereoselective 1,2-*cis* glycosylations via organocatalysis and visible-light-mediated copper catalysis for the synthesis of carbohydrates.

Role: sole PI

R01GM098285

04/01/2012 – 12/31/2018

NIH/NIGMS

“Synthesis of Complex Carbohydrates”

The goal of this proposal is to develop a new strategy for the construction of 1,2-*cis*-2-amino sugars via nickel-catalyzed stereoselective glycosylations for the synthesis of heparin oligosaccharides.

Role: sole PI

Mizutani Glycosciences Foundation

04/01/2016 – 3/31/2018

Immunological Studies of Zwitterionic Oligosaccharides

Role: PI

R21AI117379

01/15/2016 – 12/31/2018

NIH/NIAID

Synthesis and Evaluation of Zwitterionic Carbohydrate Immunostimulants

Role: PI

Honors and Awards

2018	Horace S. Isbell Award for Excellence in Research, ACS Division of Carbohydrates
2018	Endowed Chair: Carl Johnson/Pfizer Professor of Chemistry at Wayne State University
2016	Mizutani Glycosciences Innovation Award
2015	Visiting Professor, Northwestern University
2014	University of Iowa Faculty Career Development Award
2013	University of Iowa Dean's Scholar Award for Top Faculty Candidates for Promotion
2013	<i>Chemical Communications</i> Theme Issue on “Emerging Investigators”
2013	Thieme Chemistry Journal Award
2012	International Young Carbohydrate Investigators Symposium
2011	Academic Young Investigators Symposium, ACS Division of Organic Chemistry
2010	Glycobiology Young Investigators Symposium, ACS Division of Carbohydrates
2009	Dean Award for Excellence in Mentoring Undergraduate Students
2008	Professor of the Year Teaching Award in the Department of Chemistry
2004	NIH Postdoctoral Fellowship
2003	R. C. Fuson Organic Travel Award
2001	Roche Award for Excellence in Organic Chemistry
1996	Durkees Chemistry Award
1994	NSF-REU Summer Research
1994	Howard Hughes Summer Research Fellowship

Patents:

- 1) Silverman, R. B.; Mukherjee, M.; Nguyen, H. M. "2-Imidazolyl-pyrimidine scaffolds as potent and selective inhibitors of neuronal nitric oxide synthase and their preparation." PCT Int. Appl. **2016**, WO 2016007966 A2 20160114 (US Patent # 9,701,661).
- 2) Nguyen, H. M.; Loka, R. S.; Sletten, E.; Vlodayky, I. "Preparation of heparan sulfate-mimicking glycopolymers as heparanase inhibitors and their use as anti-cancer compounds." PCT Int. Appl. **2020**, WO 2020118103 A1 20200611.
- 3) Nguyen, H. M.; Zhang, K.; Loka, R. S. "Preparation of heparan sulfate-mimicking glycopolymers as heparanase inhibitors and their use as anti-diabetic compounds." U.S. Pat. Appl. Publ. **2021**, US 20210205350 A1 20210708.
- 4) Luo, L.; Nguyen, H. M. "Alternating current electrolysis for use in organic synthesis." U.S. Pat. Appl. Publ. **2021**, US 20210207274 A1 20210708.

Publications:

Independent Career: (Peer Reviewed Articles)

Contribution: * Corresponding Author, ** Equal, *** Undergraduate Students

- 73) Singh, K.; ** Sletten, E. T.; ** Loka, R. S.;** Neta, I.; Vlodayky, I.; Nguyen, H. M.* "Development of heparanase inhibiting polymeric heparan sulfate mimetics to attenuate myeloma tumor growth and the ability of myeloma cells to metastasize into bones and grow in the bone marrow." **2023** (manuscript in preparation).
- 72) Zhang, J.; Song, Z.; Singh, K.; Tapayan, A. W.; Wang, K.-W.; Chien, H. T.; Kuo, M.-H.;;* Zhang, K.;;* Nguyen, H. M.* "Effects of Heparan Sulfate Trisaccharide Containing Oleanolic Acid in Attenuating Hyperphosphorylated Tau-Induced Endoplasmic Reticulum Stress Apoptosis and Pro-inflammation Associated Alzheimer's Disease." **2023** (manuscript in preparation).
- 71) Ghorai, J.; Almounajed, L.; Noori, S.; Schlegel, H. B.; Nguyen, H. M. * "Protonated Phenanthroline-Catalyzed Stereoselective β -Glycosylation." **2023** (manuscript in preparation).
- 70) Li, C.-X.; English, C.; Almounajed, L.; Schlegel, H. B.; Nguyen, H. M.* "Phenanthroline-Catalyzed Stereoselective α -2-Deoxy Glycosylation." **2023** (manuscript in preparation).
- 69) Krishna Boddu, S. R.; Schlegel, H. B.; Nguyen, H. M.* "Phenanthroline-Catalyzed Stereoselective S-Linked Furanosylations." **2023** (manuscript in preparation).
- 68) Alom, N. E.; Almounajed, L; Schlegel, H. B.; Nguyen, H. M. * "Highly Stereoselective α -1,2-*cis* Glycosylated Carboxylic Acids by Phenanthroline Catalysis." **2023** (manuscript in preparation).
- 67) Wolak, T.; Islam, R.; Nguyen, H. M.; Chow, S. C.* "Antibacterial Evaluation of Truncated, Disubstituted Oncocin Peptides." **2023** (manuscript in preparation).
- 66) Usman, F.; ** Gogoi, A. R.; ** Mixdorf, J. C.; Gutierrez, O.;;* Nguyen, H. M.* "Rhodium-Catalyzed Asymmetric Synthesis of 1,2-Disubstituted Allylic Fluorides" *Angew. Chem. Int. Ed.* **2023**, *62*, e202314843.
- 65) Abdulsalam, H.;;** Li, J.;;** Loka, R. S.; Sletten, E. T.; Nguyen, H. M.* "Heparan Sulfate Mimicking Glycopolymers Bind SARS-CoV-2 Spike Protein in a Length and Sulfation Pattern Dependent Manner." *ACS Med. Chem. Lett.* **2023**, *14*, 1411-1418.
- 64) Rodrigo, S.; Hazra, A.; Mahajan, J. P.; Nguyen, H. M.;;* Luo, L.* "Overcoming the Potential Window-Limited Functional Group Compatibility by Alternating Current Electrolysis." *J. Am. Chem. Soc.* **2023** *145*, 21851-21859.
- 63) Arachchi, M. K.; Schaugaard, R. N.; Schlegel, H. B.;;* Nguyen, H. M.* "Asymmetric Synthesis of α -Trisubstituted- α -Tertiary Amines via Rhodium Catalysis" *J. Am. Chem. Soc.* **2023**, *145*, 19642-19654.

- 62) Wakpal, J.; Pathiranage, P.; Walker, A. Nguyen, H. M.* "Rational Design and Expedient Synthesis of Heparan Sulfate Mimetics from Natural Aminoglycosides for Structure and Activity Relationship Studies." *Angew. Chem. Int. Ed.* **2023**, *62*, e202304325.
- 61) Haisha, S.; *** Nguyen, H. M.; * Schlegel, H. S.* "Stereoselective Glycosylation Reactions with 2-Deoxyglucose: A Computational Study of Some Catalysts." *Comput. Theor. Chem.* **2023**, *1224*, 114122.
- 60) Li, J.; Nguyen, H. M.* "Phenanthroline Catalysis in Stereoselective 1,2-*cis* Glycosylations." *Acc. Chem. Res.* **2022**, *55*, 3738-3751.
- 59) Loka, R. S.; Song, Z.; Sletten, E. T. Kayal, Y.; Vlodvasky, I.; Zhang, K.*; Nguyen, H. M.* "Heparan Sulfate-Like Glycopolymer Prevents Pancreatic Beta Cell Destruction and Suppresses Islet Inflammation under the Challenge of Upregulated Heparanase." *ACS Chem. Biol.* **2022**, *17*, 1387-1400.
- 58) Xu, H.; Schaugaard, R. N.;** Li, J.;** Schlegel, H. B. ;* Nguyen, H. M.* "Phenanthroline-Catalyzed Stereoselective 1,2-*cis* Furanosylations." *J. Am. Chem. Soc.* **2022**, *144*, 7441-7456.
- 57) Arachchi, M. K.; Nguyen, H. M.* "Iridium-Catalyzed Enantioselective Allylic Substitutions of Racemic, Branched Trichloroacetimidates with Heteroatom Nucleophiles: Formation of Allylic C-O, C-N, and C-S Bonds" *Adv. Synth. Catal.* **2021**, *363*, 4239-4246.
- 56) Schaugaard, R. N.; Nguyen, H. M.;* Schlegel, H. B.* "Alkyl Radical-Free Cu(I) Photocatalytic Cross-Coupling: A Theoretical Study of Anomerically Specific Photocatalyzed Glycosylation of Pyranosyl Bromide." *Inorg. Chem.* **2021**, *60*, 12801-12812.
- 55) Li, J.; Nguyen, H. M.* "A Mechanistic Probe into 1,2-*cis* Glycoside Formation Catalyzed by Phenanthroline and Further Expansion of Scope." *Adv. Synth. Catal.* **2021**, *363*, 4054-4066.
- 54) Vlodavsky, I.; Barash, U.; Nguyen, H. M.; Yang, S.-M.; Ilan, N. "Biology of the Heparanase-Heparan Sulfate Axis and Its Role in Disease Pathogenesis." *Sem. Thrombosis Hemostasis* **2021**, *47*, 240-253.
- 53) DeMent, P. M.; Lu, C.; Wakpal, J.; Schaugaard, R. N.; Schlegel, H. B.; Nguyen, H. M.* "Phenanthroline-Catalyzed Stereoselective Formation of α -1,2-*cis*-2-Deoxy-2-Fluoro Glycosides." *ACS Catal.* **2021**, *11*, 2108-2120.
- 52) Sorlin, A. M.; Fuad, U. O.;** English, C. K.;** Nguyen, H. M.* "Advances in Nucleophilic Allylic Fluorination." *ACS Catal.* **2020**, *10*, 11980-12010.
- 51) Zhang, K.*; Liu, H.; Song, Z.; Jiang, Y.; Kim, H.; Samavati, L.; Nguyen, H. M.; Yang, Z.-Q. "The UPR Transducer IRE1 Promotes Breast Cancer Malignancy by Degrading Tumor Suppressor microRNAs." *iScience* **2020**, *23*, 101503.
- 50) Rodrigo, S.; Um, Chanchamnan, Mixdorf, J. C.; Gunasekera, D.; Nguyen, H. M.*; Luo, L.* "Alternating Current Electrolysis for Organic Electrosynthesis: Triluforomethylation of (Hetero)arenes" *Org. Lett.* **2020**, *22*, 6719-6723.
- 49) Zhu, S.; Li, J.; Loka, R. S.; Vlodavsky, I.; Zhang, K.; Nguyen, H. M.* "Modulating Heparanase Activity: Tuning Sulfation Pattern and Glycosidic Linkage of Oligosaccharides" *J. Med. Chem.* **2020**, *63*, 4227-4255.
- 48) Yu, F; Dickson, J. L.; ** Loka, R. S.; ** Xu, H; Schaugaard, R. N.; Schlegel, H. B; Luo, L.*; Nguyen, H. M.* Diastereoselective sp³ C-O Bond Formation via Visible Light-Induced, Copper-Catalyzed Cross Couplings of Anomeric Alkyl Bromides with Aliphatic Alcohols. *ACS Catal.* **2020**, *10*, 5990-6001.
- 47) Zhao, X.; Ranaweera, R.; Mixdorf, J.C.; Nguyen, H. M.*; Luo, L.* "Lowering Interfacial Dissolved Gas Concentration for Highly Efficient Hydrazine Oxidation at Platinum by Fluorosurfactant Modulation." *ChemElectroChem* **2020**, *7*, 55-58
- 46) Zhu, S.; Samala, G.; Sletten, E. T.; Stockdill, J. L.;* Nguyen, H. M.* "Facile Triflic Acid-Catalyzed α -1,2-*cis*-Thiol Glycosylations: Scope and Application to the Synthesis of S-Linked Oligosaccharides, Glycolipids, Sublancin Glycopeptides, and T_N/T_F Antigens." *Chem. Sci.* **2019**, *10*, 10475-10480.

- 45) Sorlin, A. M.;** Mixdorf, J. C.;** Rotella, M.; Martin, R.; Gutierrez, O.;* Nguyen, H. M.* "The Role of Trichloroacetimidate to Enable Iridium-Catalyzed Regio- and Enantioselective Allylic Fluorination." *J. Am. Chem. Soc.* **2019**, *143*, 14843-14882.
- 44) Yu, F.; Li, J.; DeMent, P. M.; Tu, Y.-T.; Schlegel, H. B.; Nguyen, H. M.* "Phenanthroline Catalyzes Stereoretentive Glycosylations." *Angew. Chem. Int. Ed.* **2019**, *58*, 6957-6961.
- 43) Sletten, E. T.; Tu, Y.-T.; Schlegel, H. B.;* Nguyen, H. M.* "Are Brønsted Acids the True Promoter of Metal Triflate Catalyzed Glycosylations? A Mechanistic Probe into 1,2-*cis*-Aminoglycoside Formation by Nickel Triflate." *ACS. Catal.* **2019**, *9*, 2110-2123.
- 42) Loka, R. S.;** Sletten, E. T.;** Barash, U.; Vlodaysky, I.; Nguyen, H. M.* "Specific Inhibition of Heparanase by Glycopolymer with Well-Defined Sulfation Pattern Prevents Breast Cancer Metastasis in Mice." *ACS Appl. Mater. Interfaces* **2019**, *11*, 244-254.
- 41) Mixdorf, J. C.;** Sorlin, A. M.;** Dick, D.;* Nguyen, H. M.* "Iridium-Catalyzed Radiosynthesis of Branched Allylic [¹⁸F]Fluorides." *Org. Lett.* **2019**, *21*, 60-64.
- 40) Mixdorf, J. C.;** Sorlin, A. M.;** Zhang, Q.; Nguyen, H. M.* "Asymmetric Synthesis of Allylic Fluorides via Fluorination of Racemic Allylic Trichloroacetimidates Catalyzed by a Chiral Diene-Iridium Complex." *ACS Catal.* **2018**, *8*, 790-801.
- 39) Sletten, E. T.;** Loka, R. S.;** Yu, F.; Nguyen, H. M.* "Glycosidase Inhibitors from Multivalent Presentation of Heparan Sulfate Saccharides on Bottlebrush Polymer." *Biomacromolecules* **2017**, *18*, 3387-3399.
- 38) Mwenda, E.; Nguyen, H. M.* "Enantioselective Synthesis of 1,2-Diamines via Rhodium-Catalyzed Enantioselective Dynamic Asymmetric Transformations of Racemic Allylic Trichloroacetimidates." *Org. Lett.* **2017**, *19*, 4814 – 4817.
- 37) Loka, R. S.;** Yu, F.;** Sletten, E. T.;** Nguyen, H. M.* "Design, Synthesis, and Evaluation of Heparan Sulfate Mimicking Glycopolymers for Inhibiting Heparanase Activity." *Chem. Commun.* **2017**, *53*, 9163-9166.
- 36) Sletten, E. T.; Loka, R. S.; Fairweather, A. E. R.; Nguyen, H. M.* "Nickel-Catalyzed Stereoselective Formation of 1,2-*cis*-2-Aminoglycosides" in *Selective Glycosylations: Synthetic Methods and Catalysts*, Edited By Clay S. Bennett, Wiley-VCH, **2017**, pp. 173-207.
- 35) Sletten, E. T.; Ramadugu, S. K.; Nguyen, H. M.* "Utilization of Bench-Stable and Readily Available Nickel(II) Triflate for Access to 1,2-*Cis*-2-Aminoglycosides." *Carbohydr. Res.* **2016**, *435*, 197-207.
- 34) Park, N. H.; Sletten, E. T.; McKay, M. J.; Nguyen, H. M.* "Palladium- and Nickel-Catalyzed Stereoselective Synthesis of Glycosyl Trichloroacetamides and Their Conversion to Alpha- and Beta-Urea Glycosides." in *Domino and Intramolecular Rearrangement Reactions as Advanced Synthetic Methods in Glycoscience*, Edited By Zbigniew J. Witczak and Roman Bielski, Wiley & Sons, **2016**, pp. 297-324.
- 33) Zhang, Q.; Stockdale, D. P.; Mixdorf, J. C.; Topczewski, J. J.; Nguyen, H. M.* "Iridium-Catalyzed Enantioselective Fluorination of Racemic. Secondary Trichloroacetimidates." *J. Am. Chem. Soc.* **2015**, *137*, 11912 – 11915.
- 32) Zhang, Q.;** Mixdorf, J. C.;** Reynders III, G. J.; Nguyen, H. M.* "Rh-Catalyzed Benzylic Fluorination of Trichloroacetimidates with Triethylamine Trihydrofluoride." *Tetrahedron.* **2015**, *71*, 5932 – 5938.
- 31) Loka, R.;** McConnell, M. S.;** Nguyen, H. M.* "Studies of Highly-Ordered Heterodiantennary Mannose/Glucose-Functionalized Polymers and Concanavalin A Protein Interactions Using Isothermal Titration Calorimetry." *Biomacromolecules* **2015**, *16*, 4013 – 4021.
- 30) Yu, F.; ** McConnell, M. S.; ** Nguyen, H. M.* "Scalable Synthesis of Fmoc-Protected GalNAc-Threonine Amino Acid and T_N Antigen via Nickel Catalysis." *Org. Lett.* **2015**, *17*, 2018 – 2021.
- 29) Sletten, E. T.; Svec, R. L.; *** Nguyen, H. M.* "Synthesis of a polymerizable, bivalent glycan mimetic of the HIV envelope spike gp120." *Tetrahedron Lett.* **2015**, *56*, 3473 – 3476.

- 28) Arnold, J. S.; Zhang, Q.; Nguyen, H. M.* "Transition-Metal Catalyzed Allylic Substitutions of Trichloroacetimidates." *Eur. J. Org. Chem.* **2014**, 4925 – 4948.
- 27) McKay, M. J.; Park, N. H.; *** Nguyen, H. M.* "Stereoselective Formation of Alpha-Glycosyl Ureas: Scope and Mechanism." *Chem. Eur. J.* **2014**, *20*, 8691 – 8701.
- 26) Arnold, J. S.;** Mwenda, E.;** Nguyen, H. M.* "Sequential Amination and Hydroacylation Reactions for the Enantioselective Synthesis of Seven-Membered Heterocycles." *Angew. Chem. Int. Ed.* **2014**, *53*, 3688 – 3692.
- 25) Zhang, Q.; Nguyen, H. M.* "Rhodium-Catalyzed Regioselective Ring Opening of Vinyl Epoxides with Et₃N·3HF: Formation of Allylic Fluorohydrins." *Chem. Sci.* **2014**, *5*, 291 – 296.
- 24) McKay, M. J.; Nguyen, H. M.* "Recent Development in the Synthesis of Glycosyl Ureas." *Carbohydr. Res.* **2014**, *385*, 18 –44.
- 23) McConnell, M. S.; Mensah, E. A.; Nguyen, H. M.* "Stereoselective α -Glycosylation of Myo-Inositols via Nickel Catalysis" *Carbohydr. Res.* **2013**, *381*, 146 –152.
- 22) Arnold, J. S.; Nguyen, H. M.* "Rhodium-Catalyzed Enantioselective Amination of Allylic Trichloroacetimidates." *Synthesis* **2013**, *45*, 2101 – 2108.
- 21) McConnell, M. S.; Yu, F.; Nguyen, H. M.* "Nickel-Catalyzed α -Glycosylation of C(1)-Hydroxyl Group of Inositol Acceptors: A Formal Synthesis of Mycothiol." *Chem. Commun.* **2013**, *49*, 4313 – 4315.
- 20) Arnold, J. S.; Cizio, G. T.;*** Heitz, D. R.;*** Nguyen, H. M.* "Rhodium-Catalyzed Enantioselective Amination of Racemic Secondary Allylic Trichloroacetimidates with *N*-Methyl Anilines." *Chem. Commun.* **2012**, *48*, 11531 – 11533.
- 19) Yu, F.; Nguyen, H. M.* "Studies on the Selectivity Between Nickel-Catalyzed 1,2-*Cis*-2-Amino Glycosylation of Hydroxyl Groups of Thioglycoside Acceptors with C(2)-Substituted Benzylidene *N*-Phenyl Trifluoroacetimidates and Intermolecular Aglycon Transfer of the Sulfide Group." *J. Org. Chem.* **2012**, *77*, 7330 – 7343.
- 18) McKay, M. J.; Nguyen, H. M.* "Recent Advances in Transition Metal-Catalyzed Glycosylation." *ACS Catal.* **2012**, *2*, 1563 – 1595.
- 17) Arnold, J. S.; Nguyen, H. M.* "Rhodium-Catalyzed Dynamic Kinetic Asymmetric Transformations of Racemic Tertiary Allylic Trichloroacetimidates with Aniline Nucleophiles." *J. Am. Chem. Soc.* **2012**, *134*, 8380 – 8383.
- 16) Topczewski, J. J.; Tewson, T. J.; Nguyen, H. M.* "Iridium-Catalyzed Allylic Fluorination of Trichloroacetimidates." *J. Am. Chem. Soc.* **2011**, *133*, 19318 – 19321.
- 15) Arnold, J. S.; Cizio, G. T.;*** Nguyen, H. M.* "Synthesis of α,α -Disubstituted Allylic Aryl Amines by Rhodium-Catalyzed Amination of Tertiary Allylic Trichloroacetimidates." *Org. Lett.* **2011**, *13*, 5576 – 5578.
- 14) Mensah, E. A.; Yu, F.; Nguyen, H. M.* "Nickel-Catalyzed Stereoselective Glycosylation with C(2)-*N*-Substituted Benzylidene D-Glucosamine and Galactosamine Trichloroacetimidates for the Formation of 1,2-*cis*-2-Amino Glycosides. Applications to the Synthesis of Heparin Disaccharides, GPI Anchor Pseudodisaccharides, and α -GalNAc." *J. Am. Chem. Soc.* **2010**, *132*, 14288 – 14302.
- 13) Arnold, J. A.; Stone, R. F.;*** Nguyen, H. M.* "Rhodium-Catalyzed Regioselective Amination of Secondary Allylic Trichloroacetimidates with Unactivated Aromatic Amines." *Org. Lett.* **2010**, *12*, 4580 – 4583.
- 12) Mensah, E. A.; Nguyen, H. M.* "Nickel-Catalyzed Stereoselective Formation of α -2-Deoxy-2-Amino-Glycosides." *J. Am. Chem. Soc.* **2009**, *131*, 8778 – 8780.
- 11) McKay, M. J.; Naab, B. D.;*** Mercer, G. J.; Nguyen, H. M.* "Selective Formation of β -O-Aryl Glycosides in the Absence of the C(2)-Ester Neighboring Group." *J. Org. Chem.* **2009**, *74*, 4705 – 4711.
- 10) Park, N. H.;*** Nguyen, H. M.* "Stereoselective Rearrangement of Glycosyl Trichloroacetimidates: Application to the Synthesis of Alpha-Glycosyl Ureas." *Org. Lett.* **2009**, *11*, 2433 – 2436.

- 9) Mensah, E. A.; Azzarelli, J. A.;*** Nguyen, H. M.* "Palladium-Controlled β -Selective Glycosylation in the Absence of the C(2)-Ester Participatory Group." *J. Org. Chem.* **2009**, *74*, 1650 – 1657.
- 8) Mercer, G. J.; Yang, J.; McKay, M. J.; Nguyen, H. M.* "Palladium(II)-Catalyzed Rearrangement of Glycal Trichloroacetimidates: Application to the Stereoselective Synthesis of Glycosyl Ureas." *J. Am. Chem. Soc.* **2008**, *130*, 11210 – 11218.
- 7) Yang, J.; Cooper-Vanosdell, C.;*** Mensah, E. A.; Nguyen, H. M.* "Cationic Palladium(II)-Catalyzed Stereoselective Glycosylation with α -Glycosyl Trichloroacetimidates" *J. Org. Chem.* **2008**, *73*, 794 – 800.
- 6) Yang, J.; Mercer, G. J.; Nguyen, H. M.* "Palladium-Catalyzed Glycal Imidate Rearrangement: Stereoselective Formation of α - and β -Glycosyl Trichloroacetamides." *Org. Lett.* **2007**, *9*, 4231 – 4234.
- 5) Schuff, B. P, Mercer, G. J, Nguyen, H. M.* "Palladium-Catalyzed Stereoselective Formation of Alpha-O-Glycosides." *Org. Lett.* **2007**, *9*, 3173 – 3176.

Supervised Career:

1. Trost, B. M.;* Nguyen, H. M.; Koradin, C. "Synthesis of a Tricyclic Core of Rameswaralide." Invited a Special Issue in Honor of Professor Harry Wasserman, *Tetrahedron. Lett.* **2011**, *52*, 2033 – 2036.
2. Nguyen, H. M.; Chen, Y.; Duron, S. G.; Gin, D. Y.* "Sulfide-Mediated Dehydrative Glycosylation." *J. Am. Chem. Soc.* **2001**, *123*, 8766 – 8772.
3. Nguyen, H. M.; Poole, J. L.; Gin, D. Y.* "Chemoselective Iterative Dehydrative Glycosylation." *Angew. Chem. Int. Ed.* **2001**, *40*, 414 – 417.
4. Rajopadhye, M.; Harris, A. R.; Nguyen, H. M.; Overoye, K. L.; Bartis, J.; Edwards, D. S.; Liu, S.; Onthank, D.; Barrett, J. A. "The Synthesis and Evaluation of the Tc-99m and In-111 Complexes of Cyclic RGD-Peptide Antagonists for the Integrin $\alpha v \beta 3$." *J. Nucl. Med.* **2000**, *41*, 259P.

Lecture and Conference Presentations

Invited Talks

1. 07/2007 Tufts University, Department of Chemistry, Medford, MA
2. 10/2007 University of Toledo, Department of Chemistry, Toledo, OH
3. 12/2007 University of Colorado, Department of Chemistry, Boulder, CO
4. 09/2008 GlaxoSmithKline, Hamilton, MT
5. 01/2009 University of Iowa, Department of Chemistry, Iowa City, IA
6. 02/2009 University of Alabama, Department of Chemistry, Birmingham, AL
7. 04/2009 Rensselaer Polytechnic Institute, Biocatalysis Center, Troy, NY
8. 05/2009 San Jose State University, Department of Chemistry, San Jose, CA
9. 08/2009 Acora Pharmaceutical Company, Somerville, MA
10. 11/2009 Wayne State University, Department of Chemistry, Detroit, MI
11. 01/2010 West Virginia University, Department of Chemistry, Morgantown, WV
12. 03/2010 ACS Young Glycobiology Investigators Symposium, San Francisco, CA
13. 04/2010 Vanderbilt University, Department of Chemistry, Nashville, TN
14. 09/2010 Midwest Carbohydrate Symposium, Toledo, OH
15. 11/2010 Brown University, Department of Chemistry, Providence, RI
16. 11/2010 University of Connecticut, Department of Chemistry, Storrs, CT
17. 11/2010 Macalester College, Department of Chemistry, St. Paul, MN
18. 03/2011 Merck Research Pharmaceutical Company, Rahway, NJ
19. 03/2011 University of Iowa College of Pharmacy, Iowa City, IA
20. 06/2011 Carbohydrate Gordon Conference, Colby College, NH
21. 08/2011 ACS Academic Young Investigator Symposium, Denver, CO
22. 09/2011 University of California at Santa Barbara, Department of Chemistry, Santa Barbara, CA
23. 09/2011 University of California at Irvine, Department of Chemistry, Irvine, CA
24. 09/2011 Indiana University, Department of Chemistry, Bloomington, IN
25. 11/2011 Northwestern University, Department of Chemistry, Evanston, IL
26. 12/2011 Iowa State University, Department of Chemistry, Ames, IA

27. 02/2012 University of Illinois at Urbana-Champaign, Department of Chemistry, Urbana, IL
28. 02/2012 University of Illinois at Chicago, Department of Chemistry, Chicago, IL
29. 02/2012 University of Massachusetts at Amherst, Department of Chemistry, Amherst, MA
30. 03/2012 Tufts University, Department of Chemistry, Medford, MA
31. 03/2012 Northeastern University, Department of Chemistry, Boston, MA
32. 03/2012 University of Texas, Department of Chemistry and Biochemistry, Austin, TX
33. 03/2012 Texas A&M University, Department of Chemistry, College Station, TX
34. 03/2012 ACS Division of Carbohydrate and Organic Chemistry, San Diego, CA
35. 04/2012 New York University, Department of Chemistry, New York City, NY
36. 04/2012 Sloan Kettering Center, Department of Pharmacology and Chemistry, New York City, NY
37. 05/2012 Canadian Chemical Society, Division of Carbohydrate, Calgary, CA
38. 05/2012 University of California at Davis, Department of Chemistry, Davis, CA
39. 05/2012 Theravance Pharmaceutical Company, San Francisco, CA
40. 07/2012 International Young Investigator Carbohydrate Award, Madrid, Spain
41. 07/2012 International Carbohydrate Symposium, Madrid, Spain
42. 08/2012 ACS Division of Carbohydrate, Philadelphia, PA
43. 09/2012 University of Iowa, Department of Chemistry, Iowa City, IA
44. 09/2012 University of Pennsylvania, Department of Chemistry, Philadelphia, PA
45. 09/2012 Rutgers University, Department of Chemistry, New Brunswick, NJ
46. 10/2012 Purdue University, Department of Chemistry, West Lafayette, IN
47. 11/2012 University of Wisconsin, College of Pharmacy, Madison, WI
48. 01/2013 University of Pittsburg, Department of Chemistry, Pittsburg, PA
49. 03/2013 University of North Carolina, Department of Chemistry, Chapel Hill, NC
50. 04/2013 Pennsylvania State University, Department of Chemistry, University Park, PA
51. 09/2013 Boston College, Department of Chemistry, Chestnut Hill, MA
52. 09/2013 SUNY-Stony Brook, Department of Chemistry, Stony Brook, NY
53. 11/2013 Baylor University, Department of Chemistry and Biochemistry, Waco, TX
54. 11/2013 ACS Southwest Regional Meeting, Waco, TX
55. 12/2013 University of Kansas, Department of Chemistry, Lawrence, KS
56. 01/2014 27th International Carbohydrate Symposium, Bangalore, India
57. 01/2014 Frontiers in Chemistry and Biology of Carbohydrates, Indian Institute of Science, Pune, India
58. 01/2014 Indian Institute of Technology at Bombay, Mumbai, India
59. 03/2014 New Directions in Carbohydrate Synthesis, ACS Meeting in Dallas
60. 04/2014 University of Kansas, Department of Chemistry, Lawrence, KS
61. 06/2014 ACS Northwest Regional Meeting, Missoula, MT
62. 08/2014 Domino and Rearrangement Reactions in Carbohydrates, ACS Meeting in San Francisco
63. 08/2014 Current Topics in Glycoscience, ACS Meeting in San Francisco
64. 10/2014 University of Massachusetts, Department of Chemistry, Lowell, MA
64. 11/2014 Brandeis University, Department of Chemistry, Waltham, MA
65. 11/2014 Corden Pharmaceutical Company, Woburn, MA
66. 11/2014 University of Copenhagen, Department of Chemistry, Copenhagen, Denmark
67. 11/2014 Technical University of Denmark, Department of Chemistry, Lyngby, Denmark
69. 02/2015 Northwestern University, Department of Chemistry, Evanston, IL
70. 03/2015 Frontiers in Glycoscience Symposium, ACS Meeting in Denver, CO
71. 05/2015 Loyola University of Chicago, Department of Chemistry, Chicago, IL
72. 12/2015 Chemical Glycosylation Symposium, Pacificchem, Honolulu, Hawaii
73. 12/2015 Fluorine Chemistry Symposium, Pacificchem, Honolulu, Hawaii
74. 03/2016 University of Texas at El Paso, Department of Chemistry, El Paso, TX
75. 04/2016 University of Nebraska, Department of Chemistry, Lincoln, TX
76. 04/2016 USDA-National Animal Disease Center, Ames, IA
77. 06/2016 NIH Glycoscience Symposium, Bethesda, MD
78. 10/2016 University of South Florida, Department of Chemistry, Tampa, FL
79. 10/2016 University of Maryland, Department of Chemistry, College Park, MD
80. 11/2016 University of Missouri, Department of Chemistry and Biochemistry, Saint Louis, MO
81. 11/2016 Washington University, Department of Chemistry, Saint Louis, MO

82. 11/2016 SUNY – Stony Brook, Department of Chemistry, Stony Brook NY
83. 03/2017 University of Florida, Department of Chemistry, Gainesville, FL
84. 04/2017 University of Texas at El Paso, Department of Chemistry, El Paso, TX
85. 05/2017 Wayne State University, Department of Chemistry, Detroit, MI
86. 08/2017 NIH Glycoscience Symposium, Bethesda, MD
87. 08/2107 Frontiers in Carbohydrates Symposium, ACS Meeting in Washington DC
88. 10/2017 ACS Midwest Regional Meeting, Lawrence, KS
89. 01/2018 Georgia State University, Department of Chemistry, Atlanta, GA
90. 03/2018 Carbohydrates Catalysis Symposium, ACS Meeting in New Orleans
91. 03/2018 ACS Horace Isbell Award Symposium, ACS Meeting in New Orleans
92. 07/2018 Amgen, Thousand Oak, CA
93. 07/2018 International Fluorine Conference, Oxford University, England
94. 07/2018 NIH Glycoscience Symposium, Bethesda, MD
95. 08/2018 Photoredox Symposium, ACS Meeting in Boston
96. 08/2018 Carbohydrates Drug Discovery Symposium, ACS Meeting in Boston
97. 09/2018 Midwest Carbohydrates Symposium, Michigan State University
98. 10/2018 Bowling Green State University, Department of Chemistry, Bowling Green, OH
99. 03/2019 Opportunities and Challenges in Carbohydrates, ACS Meeting in Orlando
100. 04/2019 University of Southern California, Department of Chemistry, Los Angeles, CA
101. 05/2019 Miami University, Department of Chemistry, Oxford, OH
102. 05/2019 NIH Glycoscience Symposium, Bethesda, MD
103. 08/2019 Photoredox Chemistry Symposium, ACS San Diego
104. 09/2019 27th Glycosyaminoglycan Symposium, Milan, Italy
105. 02/2020 University of Virginia, Department of Chemistry, Charlottesville, VA
106. 02/2020 Old Dominion University, Department of Chemistry, Norfolk, VA
107. 03/2020 University of Houston, Department of Chemistry, Houston, TX
108. 03/2020 University of Texas at San Antonio, Department of Chemistry, San Antonio, TX
109. 03/2020 Tufts University, Department of Chemistry, Medford, MA (cancelled – CoVID-19)
110. 04/2020 Michigan State University, Department of Chemistry, Lansing, MI (cancelled – CoVID-19)
111. 05/2020 NIH Glycoscience Symposium, Bethesda, MD
112. 07/2020 Peking University, China (cancelled – CoVID-19)
113. 07/2020 Tianjin University (cancelled – CoVID-19)
114. 07/2020 Academia Sinica, Taiwan (cancelled – CoVID-19)
115. 07/2020 International Carbohydrates Symposium, Shanghai, China (cancelled – CoVID-19)
116. 08/2020 Catalytic Carbohydrates Methodology Symposium, ACS San Francisco (cancelled)
117. 08/2020 Carbohydrate-Protein Interaction Symposium, ACS San Francisco (cancelled)
118. 08/2020 Preparative Carbohydrate Chemistry - State of the Art, ACS San Francisco (cancelled)
119. 12/2020 Advances in Glycan Engineering and Glycans from the Microbial World, Pacific Chem
120. 01/2021 GlycoNet/ACS Carbohydrates Division (virtual)
121. 01/2021 NIH Common Fund – Frontiers in Carbohydrate Synthesis (virtual)
122. 08/2021 Chemistry and Biology of Heparan Sulfates – ACS Atlanta (virtual)
123. 12/2021 Sichuan University, China
124. 03/2022 Future Leaders in Glycoscience Symposium, ACS San Diego
125. 03/2022 University of Illinois at Chicago, Department of Chemistry
126. 04/2022 University of Mississippi, Department of Pharmaceutical Sciences
127. 05/2022 NIH Common Fund Glycoscience Symposium
128. 06/2022 Memorial Sloan Kettering Cancer Center, Division of Chemical Biology, New York
129. 06/2022 New York University, Department of Chemistry, New York
130. 08/2022 Bert Fraser-Reid Symposium, ACS Chicago
131. 08/2022 Catalytic Functionalization of Carbohydrates, ACS Chicago
132. 12/2022 The 11th Singapore International Chemistry Conference
133. 03/2023 ACS National Meeting in Indianapolis
134. 04/2023 University of Cincinnati, Department of Chemistry, Cleveland, OH
135. 04/2023 Cleveland State University, Department of Chemistry, Cleveland, OH
136. 06/2023 ACS Northeast Regional Meeting (NERM) – Northeastern University, Boston, MA

137. 06/2023 GRC Carbohydrates – New Hampshire
 138. 08/2023 Advances in Carbohydrate Synthesis – ACS San Francisco
 139. 09/2023 European Glycoscience Community (EGC)
 140. 10/2023 Midwest Carbohydrates and Glycobiology Symposium – Purdue University
 141. 10/2023 University of Notre Dame, Department of Chemistry and Biochemistry, Indiana
 142. 10/2023 Purdue University, Department of Chemistry, West Lafayette, Indiana

TEACHING AND RESEARCH GROUP

Summary of Teaching Assignment at Wayne State University

<u>Semester/Year</u>	<u>Course No. and Title</u>	<u>Enrollment</u>	<u>Median</u>
Fall 2023	5510 Chemical Synthesis Laboratory	25	
Winter 2023	7220 Organic Reaction and Synthesis	12	4.85/5.00
Fall 2022	5510 Chemical Synthesis Laboratory	23	4.00/5.00
Winter 2022	7220 Organic Reaction and Synthesis	8	5.00/5.00
Fall 2021	5510 Chemical Synthesis Laboratory	27	5.00/5.00
Winter 2021	7220 Organic Reactions and Synthesis	8	4.50/5.00
Fall 2020	5510 Chemical Synthesis Laboratory	15	4.50/5.00
Winter 2020	7220 Organic Reactions and Synthesis	13	N/A
Fall 2019	1240 Organic Chemistry I	168	4.10/5.00
Winter 2019	7220 Organic Reactions and Synthesis	10	4.20/5.00
Fall 2018	1240 Organic Chemistry I	450	4.00/5.00

Summary of Teaching Assignments at the University of Iowa

<u>Semester/Year</u>	<u>Course No. and Title</u>	<u>Enrollment</u>	<u>Median</u>
Fall 2017	4372 Advanced Organic Chemistry	44	5.30/6.00
Spring 2017	2220 Organic Chemistry II	229	5.50/6.00
Fall 2016	4372 Advanced Organic Chemistry	18	5.83/6.00
Fall 2015	5328 Mechanism of Organic Reactions	16	5.59/6.00
Fall 2015	4372 Advanced Organic Chemistry	15	6.00/6.00
Fall 2014	4:172 Advanced Organic Chemistry	23	5.91/6.00
Spring 2014	4:124 Organic Chemistry II for Majors	58	5.00/6.00
Fall 2013	4:172 Advanced Organic Chemistry	33	5.83/6.00
Spring 2013	4:124 Organic Chemistry II for Majors	34	5.75/6.00
Fall 2012	4:172 Advanced Organic Chemistry	52	5.80/6.00
Spring 2012	4:124 Organic Chemistry II for Majors	43	5.76/6.00
Fall 2011	4:172 Advanced Organic Chemistry	34	5.81/6.00
Spring 2011	4:124 Organic Chemistry II for Majors	42	5.93/6.00
Fall 2010	4:141 Organic Chemistry Laboratory	128	5.71/6.00
Spring 2010	4:124 Organic Chemistry II for Majors	44	5.88/6.00
Fall 2009	4:141 Organic Chemistry Laboratory	152	5.29/6.00

CURRENT GROUP MEMBERS

	<u>Student Names</u>	<u>Degree</u>	<u>Position</u>
1.	Dr. Chun-Xiao Li	PhD at Nanjing Univ.	Postdoctoral Fellow
2.	Dr. Jayanta Ghorai	PhD at IIT Madras	Postdoctoral Fellow
3.	Dr. Raman Krishna Boddu	PhD at IIT Kanpur	Postdoctoral Fellow
4.	Dr. Nur-E Alom	PhD at Univ. of Toledo	Postdoctoral Fellow
5.	Dr. Kartikey Singh	PhD at IIT Bombay	Postdoctoral Fellow
6.	Dr. Neha Rani	PhD at IIT Jammu	Postdoctoral Fellow (co-advise with Schlegel)
7.	Connor English	11/2019	Graduate Student
8.	Joseph Wakpal	11/2019	Graduate Student
9.	Fuad Usman	11/2019	Graduate Student
10.	Hawau Abdulsalam	11/2020	Graduate Student

11.	Teresa Wolak	11/2020	Graduate Student (co-advise with Chow)
12.	Joseph Lange	12/2021	Graduate Student
13.	Suendues Noori	12/2021	Graduate Student
14.	Leila Almounajed	12/2022	Graduate Student
15.	Felix Chukwu	12/2022	Graduate Student
16.	Michael Hotor	12/2022	Graduate Student
17.	Livia Philip	12/2022	Graduate Student
18.	April Tapayan	12/2022	Graduate Student

ALUMNI

FORMER GRADUATE STUDENTS

<u>Student Names</u>	<u>Graduation Dates</u>	<u>Current Position</u>
1. Enoch Mensah	Ph.D. – 05/2012	Associate Prof. Indiana Univ. Southeast
2. Matthew McKay	Ph.D. – 05/2014	Patent Agent, Cabot Microelectronics
3. Jeffrey Arnold	Ph.D. – 05/2014	Associate Director, Navidea Biopharm
4. Matthew McConnell	Ph.D. – 08/2015	Assist. Prof. at Western Illinois University
5. Qi Zhang	Ph.D. – 05/2016	Senior Scientist, WuXi Shanghai
6. Edo Mwenda	Ph.D. – 12/2017	Patent Agent, Viknins Harris Padys Malon
7. Eric Sletten	Ph.D. – 12/2018	Postdoc, Max Planck with Seeberger
8. Jason Mixdorf	Ph.D. – 12/2019	Staff Scientist in the Cyclotron Group at Wisconsin
9. Alexandre Sorlin	Ph.D. – 08/2020	Senior Scientist at Amgen – San Francisco
10. Paul DeMent	Ph.D. – 12/2021	Postdoc, NIH Molecular Imaging with Vic Pike
11. Jiayi Li	Ph.D. – 07/2022	Postdoc, MIT with Prof. Alison Wendlandt
12. Sachini Rodrigo	Ph.D. – 09/2023	Postdoc with Prof. Long Luo
13. Madhawe Arachchi	Ph.D. – 11/2023	Senior Scientist at TCP Pharmaceutical

1. Patrick Ndungu	M.S. – 05/2013	PharmD, Clinical Pharmacist
2. Alex Suihkonen	M.S. – 05/2012	3M Analytical Group, MN
3. Brandon Schuff	M.S. – 05/2007	Pfizer, Groton, CT
4. Greg Jenson	M.S. – 05/2018	Gilead
5. Grant Shiver	12/2016 – 12/2017	PhD with Chris Pigge at Iowa
6. Grant Forsyth	12/2016 – 12/2017	PhD with Lou Messerle at Iowa
7. Jalen Dickson	12/2016 – 03/2018	PhD with Greg Friestad at Iowa
8. Reza Samarbakhsh	M.S. – 05/2020	Graduate Student in Pharmaceutical Science
9. Chenlu Liu	M.S. – 08/2021	Graduate Student in Computer Science
10. Christopher Harnadeck	M.S. – 08/2023	

FORMER UNDERGRADUATE STUDENTS

<u>Student Names</u>	<u>Dates in the Group</u>	<u>Current Position</u>
1. Cyrus Alan-Lee	05/2020 – 07/2023	Graduate Student at NYU
1. Chris Carter	03/2019 – 05/2021	Ohio State Medical School
2. Aldrin Trompeta	01/2018 – 05/2020	Wayne State Medical School
3. Michael Vinyard	10/2012 – 05/2016	Graduate Student at Harvard
4. Riley Svec	08/2012 – 05/2015	Senior Scientist at Jansen Pharm
5. Kathleen White	08/2011 – 05/2013	Consultant at Simon-Kucher
6. Drew Heitz	08/2011 – 05/2013	Scientist at Vertex
7. Nathan Oldenhuis	08/2011 – 05/2012	Assist. Prof. at Univ. of New Hampshire
8. Gregory Cizio	09/2010 – 07/2012	Scientist at Gilead
9. Robert Stone	05/2010 – 08/2010	PharmD, Pharmacist
10. Joseph Azzarelli	01/2008 – 05/2010	CEO at Azztech
11. Benjamin Naab	09/2008 – 05/2010	Senior Scientist at Dow Chemical
12. Nathan Park	09/2007 – 07/2009	Senior Scientist at IBM, San Jose

FOMER POSTDOCS OR SCIENTISTS

<u>Student Names</u>	<u>Dates in the Group</u>	<u>Current Position</u>
1. Richard Schauggaard	07/2019 – 07/2022	Assist. Prof. at Sam Houston State Univ.
2. Hengfu Xu	05/2019 – 02/2022	Scientist at Asymchem in China
3. Ravi Loka	08/2012 – 01/2022	Senior Scientist at UGA
4. Jicheng Zhang	04/2020 – 05/2021	Senior Scientist, Organix
5. Chanchamnan Um	01/2019 – 02/2020	Professor in Cambodia
6. Sanyong Zhu	05/2018 – 05/2020	Assoc Prof., ChongQing Medical Univ., China
7. Huy V. Le	05/2019 – 08/2020	Prof. at Nong Lam University, Vietnam
8. Fei Yu	05/2010 – 05/2019	Senior Scientist, Asymchem in Cambridge, MA
9. Swati Nigudkar	04/2018 – 03/2019	Research Chemist II, Bayer CropScience
10. Benjamin Ayela	04/2018 – 01/2019	Postdoc at University of Paris
11. Russ Pesavento	08/2012 – 05/2016	Assist. Prof. at Univ of Illinois at Chicago
12. Joseph Topczewski	01/2011 – 05/2013	Corteva Agriscience
13. Gregory Mercer	01/2007 – 12/2008	Senior Scientist, Moderna
14. Jaemoon Yang	08/2006 – 08/2008	Senior Scientist, Cambridge Isotope

SERVICE

KEY SERVICES:

- 1) I chaired endowed chair faculty search at Wayne State University
- 2) I have chaired faculty search at Wayne State University
- 3) I chaired the Graduate Admissions Committee at Wayne State University
- 4) I chaired the Faculty Award Committee and the Frontiers Seminars at Wayne State
- 5) I serve as a Council Member for Honors College at Wayne State University
- 6) I serves as a CLAS Faculty Council at Wayne State University
- 7) I serve as Associate Editor for Journal - the Frontiers in Chemistry: Organic Chemistry
- 8) I have served as Guest Editor for Carbohydrate Research Virtual Special Issue entitled "Recent Advances in Chemical and Enzymatic Catalysis for Carbohydrate Synthesis"
- 9) I have served as an Alternate Councilor for ACS Carbohydrates Division
- 10) I am a Councilor for ACS Carbohydrates and Chemical Glycobiology Division
- 11) I have organized many national ACS symposia
- 12) I have organized the Midwest Carbohydrate Symposium in 2022.
- 13) I have served as a Co-Director for Beckman Scholar Program at University of Iowa
- 14) I have served and chaired on the Diversity Committee at Wayne State University

Federal Government Grant Review

2006 – 2007	Ad hoc Reviewer, NSF, Division of Chemistry
10/2008	NSF Organic Synthesis Panelist, Division of Chemistry
10/2011	NSF Synthesis Proposal Panel Reviewer, Division of Chemistry
2011	ACS-PRF Proposal Reviewer
2012	ACS-PRF Proposal Reviewer
2012	NIH, Chemistry Study Section, Special Emphasis Panel

2012, 2016	NIH, K-99 Panel Review
2015 and 2021	NSF Panelist for Center of Chemical Evolution and Synthesis
2015 – 2018, 2020, 2021	NIH Ad Hoc Member, SBCA Study Section
2018, 2019, 2021	NIH Ad Hoc Member, Pre-doctoral and Postdoctoral Fellowship Study Section
2022	NIH Ad Hoc Member, MRAB Study Section

Editorship

2016 – present	Associate Editor for Journal - the Frontiers in Chemistry: Organic Chemistry
2017 – 2018	Guest Editor for Carbohydrate Research Virtual Special Issue entitled “Recent Advances in Chemical and Enzymatic Catalysis for Carbohydrate Reaction Development”

ACS Carbohydrate Executive Committee

2014 – 2019	Alternate Councilor
2019 – present	Councilor

Journal Reviews

2006 – present	Organic Letters
	Angewandte Chemie International Edition
	Journal of American Chemical Society
	Journal of Organic Chemistry
	ACS Applied Materials and Interfaces
	Chemistry – A European Journal
	Chemical Sciences
	Nature Communications
	Sciences
	ACS Catalysis
	Nature
	Biomacromolecules
	Macromolecules
	Chemical Communications
	Organic and Biomolecular Chemistry
	European Journal of Organic Chemistry

University of Iowa Activities

2009 – 2015	Served on Chemistry Graduate Admissions Committee
2009 – 2015	Served on Chemistry Graduate Recruiting Committee
2009 – present	Invited Speakers for Organic Seminar and Departmental Colloquium
2010	Organized the Wawzonek Lectureship (Speaker: Dale Boger)
2011– 2012	Served on the Departmental Website Redesign Committee
2013	Organized the Organic Division Seminar
2014	Organized the Wawzonek Lectureship (Speaker: Gary Molander)
2011– 2015	Served on the NMR/Mass Spectroscopy Committee
2011 – 2017	Serve on Graduate Student Thesis Committee
2015 – 2017	Serve on the Departmental Colloquium Committee
2014 – 2016	Served on the Departmental Instrument Facilities Committee
2015 – 2016	Served as the Chair of Departmental Instrument Facilities
2016	Organized the Wawzonek Lectureship (Speaker: Rich Silverman)
2016	Served on Faculty Review Committee for Prof. Nicole Becker
2016	Served on Faculty Salary Committee
2016 – 2017	Serve on Graduate Student Awards/Fellowship Committee
2016 – 2017	Serve on Faculty and Staff Awards/Honors Committee
2017	Serve on Faculty Review Committee for Prof. Scott Daly
2017	Organized the Wawzonek Lectureship (Speaker: Veronique Gouverneur)
2009 – 2014	Served on Biosciences Program Admissions Committee

2009 – 2014	Served on Biosciences Program Recruiting Committee
2013 – 2017	Serve on Diversity and Sloan Fellowship Committee
2013 – 2017	Serve as Faculty Sloan Mentor
2014	Served on Undergraduate Commencement Speaker Selection Committee
2014	Participated in the University Commencement Ceremony
2015	Participated in the University Commencement Ceremony
2015 – 2016	Participated in Student Success Task Force Committee Charged by the Office of the Provost
2016	Worked as Co-Director to apply for an institutional funding for supporting undergraduate students to participate in research through Beckman Scholars Program
2016	Worked to establish the University NSF Center of Glycoscience Phase I through collaboration with UC-Davis.
2017	Participated in recruiting MD-PhD students for College of Medicine.

Wayne State University Activities

2018 – present	Serve on Graduate Student Thesis Committee
2018 – 2021	Served on Graduate Admissions Committee
2018 – 2021	Served on Inclusion and Diversity Committee
2018 – 2022	Served as Endowed Professor Search Committee Chair
2018 – present	Serve on NMR Committee
2018 – present	Serve as a Council Member for Honors College
2020 – present	Serve as CLAS Faculty Council
2022 – present	Serve as a Faculty Award Chair

National and International Activities

07/2011 – 03/2012	Organized and Raised Funding for the Symposium in Honor of the late Professor David Y. Gin at the ACS Meeting, San Diego, CA, 03/2012
05/2013	Served on Graduate Student Ph.D. Defense Thesis Committee at Institute of Chemical Science, Pune, India
11/2013	Served on Graduate Student Ph.D. Defense Thesis Committee at University of Copenhagen, Denmark
08/2014	External reviewer for tenure promotion for a chemistry faculty member at
03/2014	Organized New Direction in Carbohydrate Synthesis Symposium at the ACS Meeting in Dallas, Texas
09/2017	External reviewer for tenure promotion for a chemistry faculty member
03/2017	External reviewer for Austrian Erwin Schrodinger postdoctoral fellowships
09/2017	External reviewer for tenure promotion for a chemistry faculty member.
03/2018	Organized Advances in Catalytic Glycosylation Reactions Symposium at the ACS National Meeting in New Orleans
03/2019	Organized Opportunities and Challenges in Carbohydrates at the ACS Meeting in Orlando.
09/2020	External reviewer for tenure promotion for a chemistry faculty member.
08/2021	Organized Chemistry and Biology of Heparan Sulfate Proteoglycans at the ACS Meeting in Atlanta.
09/2021	External reviewer for tenure promotion for a chemistry faculty member.
09/2022	Organized and Chaired the 17th Midwest Carbohydrate and Glycobiology Symposium at Wayne State University.
09/2022	External reviewer for tenure promotion for a chemistry faculty member.
03/2023	Organized the David Y Gin Memorial Symposium, ACS Indianapolis
08/2023	Organizing the Carbohydrate Synthesis and Tools, ACS San Francisco

REFERENCES

- (1) Professor David Crich
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- (3) Professor Jim Paulson
Cecil H. and Ida Green Professor
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- (4) Professor Jeff Aube
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- (5) Professor Xuefei Huang
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