

Nicola L. Pohl

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I. EDUCATION

Stanford University, October 1997-July 2000. National Institute of General Medical Sciences Postdoctoral Fellow, Department of Chemical Engineering, Stanford, CA. Advisor: Prof. Chaitan Khosla.

University of Wisconsin-Madison, August 1991-September 1997. Ph.D. granted in December 1997. Department of Chemistry, Madison, WI. Thesis advisor: Prof. Laura L. Kiessling. Thesis title: Synthesis of Carbohydrate-Based Ligands for the Selectins and Galectins.

Harvard-Radcliffe College, September 1987-June 1991. A.B. (*cum laude*) granted in June 1991 in English and American Literature and Languages with the Comparative Study of Religions, Cambridge, MA. Thesis title: Disease as a Metaphor for Sin and Guilt in the Works of Flannery O'Connor and Walker Percy.

II. PROFESSIONAL POSITIONS

Associate Professor with tenure and Caldwell Chair of Chemistry, Iowa State University Department of Chemistry and the Plant Sciences Institute, Ames, IA, August 2006-present.

Assistant Professor, Iowa State University Department of Chemistry and the Plant Sciences Institute, Ames, IA, August 2000-July 2006.

Visiting Professor, University of Zurich Institute of Organic Chemistry, Department of Chemistry, Zurich (Switzerland), May-June 2005.

Graduate Research Assistant, University of Wisconsin-Madison Department of Chemistry, Madison, WI, October 1991-September 1997.

Teaching Assistant, Organic Lab Course and First Semester Organic Chemistry, University of Wisconsin-Madison Department of Chemistry, Madison, WI, August 1991-May 1992. Supervisor: Dr. Paul Schatz.

Undergraduate Research Assistant, Harvard University Department of Chemistry, Cambridge, MA, December 1989-June 1991. Research Advisor: Joseph J. Grabowski.

III. AWARDS AND HONORS

LAS Mid-Career Achievement in Research Award, Iowa State University, 2008.
 LAS Master Teacher Award, Iowa State University, 2008.
 Editorial Board Member, *Chemistry Central Journal*, 2007-present.
 Elected to Co-Chair the 2011 (co-Vice Chair 2009) Carbohydrates Gordon Research Conference, 2007.
 Editorial Advisory Board, *Carbohydrate Research*, 2007-present.
 Co-Chair, NSF Workshop on Complexity and Emergent Phenomena, 2007.
 Golden Goggles Invitational Lecture, Middle Tennessee State University, 2007.
 Caldwell Chair of Chemistry, Iowa State University, 2006-present.
 Alfred P. Sloan Foundation Research Fellow, 2005-2007.
 Robert O'Malley Visiting Scholar, Boston College, 2006.
 National Science Foundation CAREER Award, 2004-2009.
 Cottrell Scholar Award of Research Corporation, 2003-2008.
 NIH Postdoctoral Fellowship, 1998-2000.
 Christine Kohler Fellowship, 1994-1997.
 Department of Education Fellowship, 1993-1994.
 Harvard College Scholarship, 1987-1991.
 J. S. Serrine Scholarship, 1987-1991.
 Robert C. Byrd Scholarship, 1987-1988.

IV. INVITED PRESENTATIONS**2000**

Natural Products Chemistry Gordon Research Conference, Plymouth, NH, 31 July.

2001

Truman State University, Department of Chemistry, Kirksville, MO, 2 November.

2003

Carbohydrates Gordon Research Conference, Tilton, NH, 24 June.
 University of Iowa, Department of Medicinal Chemistry, Iowa City, IA, 9 September.
 University of Toledo, Department of Chemistry, Toledo, OH, 22 September.
 St. Olaf's College, Department of Chemistry, Northfield, MN, 9 October.

2004

Iowa State University, Analytical chemistry seminar series, Ames, IA, 30 January.
 University of Nebraska at Lincoln, Department of Chemistry, Lincoln, NE, 16 February.
 Clemson University, Department of Chemistry, Clemson, SC, 8 April.
 NSF Workshop on Organic Synthesis and Natural Products, Squam Lake, NH, 11 June.
 Bioorganic Gordon Research Conference, Andover, NH, 15 June.
 University of Alberta, Department of Chemistry, Edmonton, AB (Canada), 12 August.
 Emory University, Department of Chemistry, Atlanta, GA, 29 September.
 West Virginia University, Department of Chemistry, Morgantown, WV, 13 October.

University of Pittsburgh, Department of Chemistry, Pittsburgh, PA, 14 October.

Boston University, Department of Chemistry, Boston, MA, 25 October.

University of Calgary, Department of Biochemistry and Molecular Biology, Calgary, AB (Canada), 5 November.

Princeton University, Department of Chemistry, Princeton, NJ, 22 November.

Iowa State University, Department of Biochemistry, Biophysics, and Molecular Biology, Ames, IA, 2 December.

University of Illinois at Urbana-Champaign, Department of Chemistry, Urbana, IL, 9 December.

2005

University of California at Irvine, Department of Molecular Biology and Biochemistry, Irvine, CA, 7 January.

Northwestern University, Department of Chemistry, Evanston, IL, 20 January.

University of Washington, Department of Chemistry, Seattle, WA, 28 January.

University of North Carolina, Department of Chemistry, Chapel Hill, NC, 11 February.

Biophysical Society National Meeting, Long Beach, CA, 13 February.

Duke University, Department of Chemistry, Durham, NC, 15 February.

University of Arkansas, Department of Chemistry, Fayetteville, AR, 28 February.

Iowa State University College of Veterinary Medicine, Department of Biomedical Sciences, Ames, IA, 9 March.

American Chemical Society National Meeting, Hudson Award Symposium, San Diego, CA, 14 March.

Michigan Technological University, Department of Chemistry, Houghton, MI, 8 April.

National Institutes of Health (NIH), Laboratory of Experimental and Computational Biology, National Cancer Institute, Frederick, MD, 22 April.

Iowa State University, Biorenewable Resources and Technology seminar series, Ames, IA, 26 April.

Carbohydrate Symposium, Alberta Ingenuity Centre for Carbohydrate Science, Lake Louis, AB (Canada), 29 April.

University of California at Los Angeles, Department of Chemistry and Biochemistry, Los Angeles, CA, 5 May.

Institut de Chimie des Substances Naturelles (ICSN), CNRS, Gif-sur-Yvette (France), 12 May.

University of Berne, Department of Chemistry and Biochemistry, Berne (Switzerland), 31 May.

F. Hoffmann-La Roche Ltd., Basel (Switzerland), 6 June.

University of Konstanz, Department of Chemistry, Konstanz (Germany), 6 June.

University of Milan, Department of Organic and Industrial Chemistry, Milan (Italy), 9 June.

Carbohydrates Gordon Research Conference, Tilton, NH, 22 June.

Iowa State University, REU in Computational Chemistry seminar series, Ames, IA, 28 June.

Cottrell Scholars Conference, Research Corporation, Tuscon, AZ, 8 July.

Natural Products Gordon Research Conference, Tilton, NH, 26 July.

American Chemical Society National Meeting, Fluorous Chemistry Symposium, Washington, DC, 29 August.

California Institute of Technology, Department of Chemistry, Pasadena, CA, 14 September.

Georgia Institute of Technology, School of Chemistry and Biochemistry, Atlanta, GA, 27 September.

University of California at Davis, Department of Chemistry, Davis, CA, 29 September.
University of Wisconsin, Department of Chemistry, Madison, WI, 6 October.
Edgewood College, Department of Natural Science, Madison, WI, 7 October.
University of California at Los Angeles, California NanoSystems Institute (CNSI), Los Angeles, CA, 11 October.
Iowa State University, Organic/inorganic chemistry seminar series, 21 October.
University of Rochester, Department of Chemistry, Rochester, NY, 28 October.
University of Texas at Austin, College of Pharmacy, Medicinal Chemistry Program, Austin, TX, 3 November.
Texas A&M University, Department of Chemistry, College Station, TX, 4 November.
University of Oklahoma ACS PROGRESS Lecture, Department of Chemistry and Biochemistry, Norman, OK, 14 November.
Massachusetts Institute of Technology (MIT), Department of Chemistry, Cambridge, MA, 22 November.
ArQule, Inc., Woburn, MA, 23 November.
University of Georgia, Department of Chemistry, Athens, GA, 1 December.
8th Japanese-American Frontiers of Science Symposium, Shonan Village Center, Kanagawa (Japan), 9-12 December.

2006

ACS-CSIR Indo-US Workshop on Organic Chemistry and Chemical Biology, Pune and Hyderabad (India), 6-12 January.
Creighton University, Department of Chemistry, Omaha, NE, 19 January.
University of Michigan, Department of Biological Chemistry, Ann Arbor, MI, 31 January.
University of California-Berkeley, Department of Chemistry, Berkeley, CA, 7 February.
Louisiana State University, Department of Chemistry, Baton Rouge, LA, 17 February.
Tulane University, Department of Chemistry, New Orleans, LA, 20 February.
Iowa State University College of Veterinary Medicine, Departments of Veterinary Microbiology and Pathology, Ames, IA, 28 February.
Indianapolis University School of Medicine, Department of Biochemistry and Molecular Biology, Indianapolis, IN, 6 March.
4th International Microwaves in Chemistry Conference, Orlando, FL, 8-11 March.
Syracuse University, Life Sciences Retreat, Syracuse, NY, 14 March.
American Chemical Society National Meeting, Carbohydrate Recognition Symposium, Atlanta, GA, 27-28 March.
Oberlin College, Department of Chemistry and Biochemistry, Oberlin, OH, 5 April.
Vanderbilt University, Institute of Chemical Biology, Nashville, TN, 12 April.
Brown University, Department of Chemistry, Providence, RI, 12 May.
University of California at Santa Barbara, Department of Chemistry and Biochemistry, Santa Barbara, CA, 16 May.
University of California at San Francisco, Biophysics/Chemistry and Chemical Biology seminar series, San Francisco, CA, 1 June.
XXIIIrd International Carbohydrate Symposium, Keynote Lecture, Whistler, BC (Canada), 23-28 July.
Society for Industrial Microbiology Annual Meeting, Emerging Areas and Systems in Biocatalysis session, Baltimore, MD, 2 August.

Iowa State University Molecular Parasitology Minisymposium, Ames, IA, 26 August.
University of Northern Iowa, Department of Chemistry, Cedar Falls, IA, 31 August.
American Chemical Society National Meeting, Carbohydrate Division Symposium, San Francisco, CA, 11 September.
Boston College, Robert O'Malley Visiting Scholar, Department of Chemistry, Chestnut Hill, MA, 26 and 28 September.
2nd Annual Midwest Carbohydrate Symposium, Plenary Lecture, Wayne State University, Detroit, MI, 30 September.
University of California at Santa Barbara, Materials Research Laboratory, Santa Barbara, CA, 27 October.
University of Nebraska at Lincoln, Department of Chemistry, Departmental Colloquium, Lincoln, NE, 10 November.
University of Colorado, Department of Chemistry and Biochemistry, Boulder, CO, 14 November.
Society for Glycobiology National Meeting, Los Angeles, CA, 16 November.

2007

University of California at Los Angeles, Department of Chemistry and Biochemistry, Los Angeles, CA, 12 January.
Bachem Holding AG, Bubendorf (Switzerland), 24 January.
ABC Technologies Conference, Plenary Lecture, Basel (Switzerland), 26 January.
The College of St. Catherine, Department of Chemistry, St. Paul, MN, 23 February.
Danforth Plant Sciences Center, St. Louis, MO, 14 March.
American Chemical Society National Meeting, Francis P. Garvan-John M. Olin Award Symposium, Chicago, IL, 28 March.
Middle Tennessee State University, Golden Goggles Lecture, Department of Chemistry, Murfreesboro, TN, 6 April.
5th International Microwaves in Chemistry Conference, Imperial College, London (UK), 19 April.
7th Carbohydrate Bioengineering Meeting, Keynote Lecture, Braunschweig (Germany), 23 April.
Combinatorial Chemistry Gordon Research Conference, New London, NH, 3-8 June.
Momenta Pharmaceuticals, Inc., Cambridge, MA, 22 June.
2nd International Symposium on Fluorous Technologies, Plenary Lecture, Yokohama (Japan), 31 July.
The University of Tokyo, Graduate School of Pharmaceutical Sciences, Tokyo (Japan), 2 August.
New York University, Department of Chemistry, New York, NY, 7 September.
Auburn University, Department of Chemistry and Biochemistry, Auburn, AL, 20 September.
University of Missouri-St. Louis, Department of Chemistry and Biochemistry, St. Louis, MO, 1 October.
Kansas State University, Department of Biochemistry, Manhattan, KS, 10 October.
University of California at Irvine, Department of Chemistry, Departmental Colloquium, Irvine, CA, 2 November.
Yale University, Department of Chemistry, New Haven, CT, 14 November.
Boehringer Ingelheim, Ridgefield, CT, 15 November.
National Institutes of Health, Inter-Institute NIH Chemistry Seminar Series, Bethesda, MD, 14 December.

2008

Biochemistry Undergraduate Club, Iowa State University, Ames, IA, 23 January.
 University of Pennsylvania, Department of Chemistry, Philadelphia, PA, 28 January.
 Temple University, Department of Chemistry, Philadelphia, PA, 29 January.
 University of Minnesota, Department of Chemistry, Minneapolis, MN, 5 February.
 European Conference on Carbohydrates, Killarney (Ireland), 9-13 March.
 Winthrop University, Department of Chemistry, Physics, and Geology, Rock Hill, SC, 26 March.
 American Chemical Society National Meeting, ACS Award for Creative Work in Fluorine
 Chemistry Award Symposium, New Orleans, LA, 7 April.
 State University of New York-ESF, Department of Chemistry, Syracuse, NY, 25 April.
 6th International Microwaves in Chemistry Conference, Cambridge, MA, 14 May.
 Alnylam Pharmaceuticals, Inc., Cambridge, MA, 16 May.
 ZuChem, Inc., Chicago, IL, 9 June.
 Cottrell Scholars Conference, Research Corporation, Tuscon, AZ, 11 July.
 Iowa State University/University of Iowa Vaccine Meeting, Newton, IA, 20 August.
 University of Tennessee at Knoxville, Department of Chemistry, Knoxville, TN, 11 September.
 University of Missouri at Kansas City, Department of Chemistry, Kansas City, MO, 2 October.
 Iowa State University, Organic/inorganic chemistry seminar series, 10 October.
 Calvin College, Department of Chemistry and Biochemistry, Grand Rapids, MI, 23 October.
 Hope College, Department of Chemistry, Holland, MI, 24 October.

**V. PUBLICATIONS FROM GRADUATE AND POSTDOCTORAL WORK (* =
 CORRESPONDING AUTHOR)**

- 1) Manning, D. D.; Bertozzi, C. R.; Pohl, N. L.; Rosen, S. D.; Kiessling, L. L.*
 Selectin—Saccharide Interactions: Revealing Structure—Function Relationships with
 Chemical Synthesis. *J. Org. Chem.* **1995**, *60*, 6254-6255.
- 2) Kiessling, L. L.*; Pohl, N. L. Strength in numbers: non-natural polyvalent carbohydrate
 derivatives. *Chem. Biol.* **1996**, *3*, 71-77. (invited review)
- 3) Pohl, N. L.; Kiessling, L. L.* *Para*-Chlorobenzyl Protecting Groups as Stabilizers of the
 Glycosidic Linkage: Synthesis of the 3'-O-Sulfated Lewis X Trisaccharide. *Tetrahedron
 Lett.* **1997**, *38*, 6985-6988.
- 4) Pohl, N. L.; Gokhale, R. S.; Cane, D. E.; Khosla, C.* Synthesis and Incorporation of an *N*-
 Acetylcysteamine Analogue of Methylmalonyl-CoA by a Modular Polyketide Synthase. *J.
 Am. Chem. Soc.* **1998**, *120*, 11206-11207.
- 5) Richardson, M. T.; Pohl, N. L.; Kealey, J. T.; Khosla, C.* Tolerance and Specificity of
 Recombinant 6-Methylsalicylic Acid Synthase. *Metabolic Engineering* **1999**, *1*, 180-187.
- 6) Pohl, N. L.; Kiessling, L. L.* Scope of Multivalent Ligand Function: Lactose-Bearing
 Neoglycopolymers By Ring-Opening Metathesis Polymerization. *Synthesis*, **1999**, 1515-
 1519.

- 7) Marti, T.; Hu, Z.; Pohl, N.; Shah, A.; Khosla, C.* Cloning, Nucleotide Sequence, and Heterologous Expression of the Biosynthetic Gene Cluster for RI 128, a Non-Steroidal Estrogen Receptor Antagonist. Insights into an Unusual Priming Mechanism. *J. Biol. Chem.* **2000**, 275, 33443-33448.
- 8) Pohl, N. L.; Hans, M.; Lee, H. Y.; Kim, Y. S.; Cane, D. E.; Khosla, C.* Remarkably Broad Substrate Tolerance of Malonyl-CoA Synthetase, an Enzyme Capable of Intracellular Synthesis of Polyketide Precursors. *J. Am. Chem. Soc.* **2001**, 123, 5822-5823.

VI. PUBLICATIONS FROM INDEPENDENT CAREER (* = CORRESPONDING AUTHOR)

- 1) Pohl, N. L.* Developing New Antibiotics With Combinatorial Biosynthesis. *J. Chem. Educ.* **2000**, 77, 1421-1423. (invited review)
- 2) Pohl, N.*; Clague, A.; Schwarz, K. Chiral Compounds and Green Chemistry in Undergraduate Organic Laboratories: Reduction of a Ketone By Sodium Borohydride And Baker's Yeast. *J. Chem. Educ.* **2002**, 79, 727-728.
- 3) Pohl, N. L.* Nonnatural Substrates for Polyketide Synthases and their Associated Modifying Enzymes. *Curr. Opin. Chem. Biol.* **2002**, 6, 773-778. (invited review)
- 4) Ko, K.-S.; Kruse, J.; Pohl, N. L.* Synthesis of Isobutyl-C-galactoside (IBCG) as an Isopropylthiogalactoside (IPTG) Substitute for Increased Induction of Protein Expression. *Org. Lett.* **2003**, 5, 1781-1783.
- 5) Jaipuri, F. A.; Bower, B. D.; Pohl, N. L.* Protic Acid-Catalyzed Polymerization of β -Lactones for the Synthesis of Chiral Polyesters. *Tetrahedron: Asymmetry* **2003**, 14, 3249-3252.
- 6) Zea, C. J.; MacDonell, S. W.; Pohl, N. L.* Discovery of the Archaeal Chemical Link Between Glycogen (Starch) Synthase Families Using a New Mass Spectrometry Assay. *J. Am. Chem. Soc.* **2003**, 125, 13666-13667.
- 7) Zea, C. J.; Pohl, N. L.* Kinetic and Substrate Binding Analysis of Phosphorylase *b* Via Electrospray Ionization Mass Spectrometry: A Model for Chemical Proteomics of Sugar Phosphorylases. *Anal. Biochem.* **2004**, 327, 107-113.
- 8) Jaipuri, F. A.; Jofre, M. F.; Schwarz, K.; Pohl, N. L.* Microwave-assisted cleavage of Weinreb amide for carboxylate protection in the synthesis of a (*R*)-3-hydroxyalkanoic acid. *Tetrahedron Lett.* **2004**, 45, 4149-4152.
- 9) Zea, C. J.; Pohl, N. L.* General Assay for Sugar Nucleotidyltransferases Using Electrospray Ionization Mass Spectrometry. *Anal. Biochem.* **2004**, 328, 196-202.

- 10) Yu, Y.; Ko, K.-S.; Zea, C. J.; Pohl, N. L.* Discovery of the Chemical Function of Glycosidases: Design, Synthesis, and Evaluation of Mass-differentiated Carbohydrate Libraries. *Org. Lett.* **2004**, *6*, 2031-2033.
- 11) Pohl, N.* Cellular Addresses: Step One in Creating a Glycocode. *Chem. Biol.* **2004**, *11*, 891-892. (invited commentary)
- 12) Ko, K.-S.; Zea, C. J.; Pohl, N. L.* Surprising Bacterial Nucleotidyltransferase Selectivity in the Conversion of Carbaglucose-1-phosphate. *J. Am. Chem. Soc.* **2004**, *126*, 13188-13189.
- 13) Mizanur, R. M.; Zea, C. J.; Pohl, N. L.* Unusually Broad Substrate Tolerance of a Heat-Stable Archaeal Sugar Nucleotidyltransferase for the Synthesis of Sugar Nucleotides. *J. Am. Chem. Soc.* **2004**, *126*, 15993-15998.
- 14) Mizanur, R. M.; Jaipuri, F. A.; Pohl, N. L.* One-Step Synthesis of Labeled Sugar Nucleotides for Protein O-GlcNAc Modification Studies by Chemical Function Analysis of an Archaeal Protein. *J. Am. Chem. Soc.* **2005**, *127*, 836-837.
- 15) Pohl, N. L.* Functional Proteomics for the Discovery of Carbohydrate-Related Enzyme Activities. *Curr. Opin. Chem. Biol.* **2005**, *9*, 76-81. (invited review)
- 16) Ko, K.-S.; Zea, C. J.; Pohl, N. L.* Strategies for the Chemoenzymatic Synthesis of Deoxysugar Nucleotides: Substrate Binding Versus Catalysis. *J. Org. Chem.* **2005**, *70*, 1919-1921.
- 17) Dutca, L.-M.; Ko, K.-S.; Pohl, N. L.; Kostic, N. M.* Platinum(II) Complex as an Artificial Peptidase: Selective Cleavage of Peptides and a Protein by *cis*-[Pt(en)(H₂O)₂]²⁺ Ion under Different Irradiations. *Inorg. Chem.* **2005**, *44*, 5141-5146.
- 18) Zea, C. J.; Pohl, N. L.* Unusual Sugar Nucleotide Recognition Elements of Mesophilic Versus Thermophilic Glycogen Synthases. *Biopolymers*, **2005**, *79*, 106-113.
- 19) Ko, K.-S.; Jaipuri, F. A.; Pohl, N. L.* Fluorous-Based Carbohydrate Microarrays. *J. Am. Chem. Soc.* **2005**, *127*, 13162-13163.
- 20) Pohl, N.* Acyclic Peptide Inhibitors of Amylases. *Chem. Biol.* **2005**, *12*, 1257-1258. (invited commentary)
- 21) Choi, D. W.; Zea, C. J.; Do, Y. S.; Semrau, J. D.; Antholine, W. E.; Hargrove, M. S.; Pohl, N. L.; Boyd, E. S.; Geesey, G. G.; Hartsel, S. C.; Shafe, P. H.; McEllistrem, M. T.; Kisting, C. J.; Campbell, D.; Rao, V.; de la Mora, A. M.; DiSpirito, A. A.* Spectral, Kinetic, and Thermodynamic Properties of Cu(I)- and Cu(II)-binding by Methanobactin from *Methylosinus trichosporium* OB3b, *Biochemistry*, **2006**, *45*, 1442-1453.

- 22) Pohl, N. L.* Array methodology singles out pathogenic bacteria. *Nature Chem. Biol.* **2006**, *2*, 125-126. (invited commentary)
- 23) Pohl, N. L.* Building a Bridge to New Antibiotics. *ACS Chem. Biol.* **2006**, *1*, 14-16. (invited commentary)
- 24) Wacker, M.; Feldman, M. F.; Callewaert, N.; Kowarik, M.; Clarke, B. R.; Pohl, N. L.; Hernandez, M.; Vines, E. D.; Valvano, M. A.; Whitfield, C.; Aebi, M.* Substrate Specificity of Bacterial Oligosaccharyltransferase Suggests a Common Transfer Mechanism for the Bacterial and Eukaryotic Systems, *Proc. Natl Acad. Sci., USA*, **2006**, *103*, 7088-7093.
- 25) Mamidyala, S. K.; Ko, K.-S.; Jaipuri, F. A.; Park, G.; Pohl, N. L.* Noncovalent Fluorous Interactions for the Synthesis of Carbohydrate Microarrays. *J. Fluorine Chem.* **2006**, *127*, 571-579. (special issue)
- 26) Choi, D. W.; Do, Y. S.; Zea, C. J.; McEllistrem, M. T.; Lee, S.-W.; Semrau, J. D.; Pohl, N. L.; Kisting, C. J.; Scardino, L. L.; Hartsel, S. C.; Boyd, E. S.; Gessey, G. G.; Riedel, T. P.; Shafe, P. H.; Kranski, K. A.; Tritsch, J. R.; Antholine, W. W.; DiSpirito, A. A.* Spectral and Thermodynamic Properties of Ag(I), Au(III), Cd(II), Co(II), Fe(III), Hg(II), Mn(II), Ni(II), Pb(II), U(IV), and Zn(II) Binding by Methanobactin from *Methylosinus trichosporium* OB3b. *J. Inorg. Biochem.* **2006**, *100*, 2150-2161. (special issue)
- 27) Pohl, N. L.* Carbohydrate Microarrays and Fluorous-Phase Synthesis: Interfacing Fluorous-Phase Tags with the Direct Formation of Glycoarrays. In *Current Fluoroorganic Chemistry: New Synthetic Directions, Technologies, Materials, and Biological Applications*; Soloshonok, V. A.; Mikami, K.; Yamazaki, T.; Welch, J. T.; Honek, J. F., Eds. ACS Symposium Series 949; American Chemical Society: Washington, DC, **2007**, pp. 261-270. (invited book chapter)
- 28) Mizanur, R. M.; Pohl, N. L.* Cloning and characterization of a heat-stable CMP-N-acetylneuraminic acid synthetase from *Clostridium thermocellum*. *Appl. Microbiol. Biotechnol.* **2007**, *76*, 827-834.
- 29) Mizanur, R. M.; Griffin, A. K. K.; Pohl, N. L.* Recombinant production and biochemical characterization of a hyperthermostable α -glucan/maltodextrin phosphorylase from *Pyrococcus furiosus*. *Archaea*, **2007**, *2*, 169-176.
- 30) Pohl, N. L.* Automated Solution-Phase Oligosaccharide Synthesis and Carbohydrate Microarrays: Development of Fluorous-Based Tools for Glycomics. In *Chemical Glycobiology*; Chen, X.; Halcomb, R.; Wang, G. P., Eds. ACS Symposium Series 990; American Chemical Society: Washington, DC, **2008**, pp. 272-287. (invited book chapter)

- 31) Yu, Y.; Mizanur, R. M.; Pohl, N. L.* Glycosidase activity profiling for bacterial identification by a chemical proteomics approach. *Biocatal. Biotransform.* **2008**, *26*, 25-31. (special issue)
- 32) Mizanur, R. M.; Pohl, N. L.* A thermostable promiscuous glucose-1-phosphate uridylyltransferase from *Helicobacter pylori* for the synthesis of nucleotide sugars. *J. Mol. Catal. B: Enzymatic.* **2008**, *50*, 13-19.
- 33) Jaipuri, F. A.; Collet, B. Y. M.; Pohl, N. L.* Synthesis and Quantitative Evaluation of Glycero-D-manno-heptose Binding to Concanavalin A by Fluorous-tag Assistance. *Angew. Chem. Int. Ed.* **2008**, *47*, 1707-1710.
- 34) Pohl, N.*; Schwarz, K. Polymer-Supported Reagents and ¹H-¹⁹F NMR Couplings: The Synthesis of 2-Fluoroacetophenone. *J. Chem. Educ.* **2008**, *85*, 834-835.
- 35) Chen, G.-S.; Pohl, N. L.* Synthesis of Fluorous Tags for Incorporation of Reducing Sugars into a Quantitative Microarray Platform. *Org. Lett.* **2008**, *10*, 785-788.
- 36) Pohl, N. L.* Fluorous Tags Catching on Microarrays. *Angew. Chem. Int. Ed.* **2008**, *47*, 3868-3870. (invited review)
- 37) Jaipuri, F. A.; Pohl, N. L.* Fluorous-tag Assisted Solution-Phase Synthesis of Linear and Branched Mannose Oligomers, *Org. Biomol. Chem.* **2008**, *6*, 2686-2691.
- 38) Hui, Z.; Brokman, S.; Fang, N.; Pohl, N.; Yeung, E.* Linkage Position and Residue Identification of Disaccharides by Tandem MS and Linear Discriminant Analysis, *Rapid Commun. Mass Spectrom.* **2008**, *22*, 1579-1586.
- 39) Park, G.; Ko, K.-S.; Zakharova, A.; Pohl, N. L.* Mono- Vs. Di-fluorous Tagged Glucosamines for Iterative Oligosaccharide Synthesis. *J. Fluorine Chem.* **2008**, *129*, 978-982. (special issue)
- 40) Zea, C. J.; Camci-Unal, G.; Pohl, N. L.* Thermodynamics of Binding of Divalent Magnesium and Manganese to Uridine Phosphates: Implications for Diabetes-Related Hypomagnesaemia and Carbohydrate Biocatalysis. *Chem. Cent. J.*, **2008**, *2*, 15.
- 41) Mizanur, R. M.*; Pohl, N. L.* Bacterial CMP-Sialic Acid Synthetases: Production, Properties and Applications. *Appl. Microbiol. Biotechnol.* **2008**, *80*, 757-765. (invited review)
- 42) Ko, K.-S.; Park, G.; Yu, Y.; Pohl, N. L.* Protecting Group-based Colorimetric Monitoring of Fluorous-phase and Solid-phase Synthesis of Oligoglucosamines. *Org. Lett.* **2008**, *10*, 5381-5384.