CURRICULUM VITAE

Yvonne Marie Gindt

EDUCATION:

Ph.D., 1993	University of California at Berkeley Thesis: Spectroscopic Studies of *Synechococcus* sp PCC 7002 Phycobilisome Core Mutants, Advisor: Prof. Kenneth Sauer
B.S., 1988	University of Wisconsin-Eau Claire, ACS-accredited degree

EXPERIENCE:

Sept, 2015 – Present	Montclair State University, Professor
Sept., 2012 – Aug., 2015	Montclair State University, Associate Professor
Aug. 2008 – July, 2012	Lafayette College, Associate Professor
July, 2001 – Aug., 2008	Lafayette College, Assistant Professor
Aug., 2000 – July, 2001	Associate Professor, University of Nebraska at Kearney
Aug., 1995 - July, 2000	Assistant Professor, University of Nebraska at Kearney
Sept., 1993 - Aug., 1995	Postdoctoral Research Associate Michigan State University (Prof. Gerald Babcock)
Apr., 1993 - Aug., 1993	Postdoctoral Research Associate Lawrence Berkeley Laboratory (Prof. Kenneth Sauer)
Aug., 1988 - Apr., 1993	Research Assistant, Graduate Teaching Assistant, University of California at Berkeley and Lawrence Berkeley Laboratory (Prof. Kenneth Sauer)
Jan., 1986 - Aug., 1988	Research Assistant, University of Wisconsin-Eau Claire (Prof. Jack Pladziewicz)

PROFESSIONAL HONORS:

National Merit Scholarship, 1984-88
Krause Scholarship, University of Wisconsin-Eau Claire, 1988
American Chemical Society Region V Scholarship, 1987
Designated by UNK as "Profiles in Excellence" Faculty, 1998
Member of the University of Nebraska Graduate College, 1998
Mortar Board Outstanding Faculty Member, 1999
Phi Eta Sigma Honorary Member (UNK Freshmen Honor Society), 1999
Voted "Outstanding Faculty" by Honors College Student Body, 1999
Mortar Board Outstanding Faculty Member, 2000
Mortar Board Citation for outstanding contributions to the University, 2000
Mortar Board Outstanding Faculty Member, 2001
Delta Upsilon Distinguished Mentoring and Teaching Award, 2004
Thomas Ray and Lura Forrest Jones Lecture Award, 2008
Marquis Distinguished Teaching Award, 2011
College of Science & Mathematics Montclair State University Faculty Teaching Award, 2014

PEER REVIEWED PUBLICATIONS (* indicates undergraduate coauthor)

Gindt, Y.M., Connolly, G., Vonder Haar, A.L., Kikhwa, M., and Schelvis, J.P.M. (2021) "Investigation of the pH-dependence of the oxidation of FAD in VcCRY-1, a member of the cryptochrome-DASH family" Photochemical & Photobiological Sciences, **20**, 831-841.

Schelvis, J.P.M. and Gindt, Y.M. (2017) "A Review of Spectroscopic and Biophysical-Chemical Studies on the Complex of Cyclobutane Pyrimidine Dimer Photolyase and Cryptochrome DASH with Substrate DNA" *Photochem. Photobiol.* **93**, 26-36.

Gindt, Y.M., Edani*, B.H. , Olegnikova*, A., Roberts*, A.N., Munshi, S., and Stanley, R.J.(2016) "The Missing Electrostatic Interactions between DNA Substrate and *Sulfolobus solfataricus* DNA Photolyase: What is the Role of Charged Amino Acids in Thermophilic DNA Binding Proteins?" *J. Phys. Chem. B* **120**, 10234-10242.

Schelvis, J.P.M., X. Zhu, and Gindt, Y.M. (2015) "Enzyme-Substrate Binding Kinetics Indicate That Photolyase Recognizes an Extrahelical Cyclobutane Thymidine Dimer" *Biochemistry* **54**, 6176-6185.

Gindt, Y.M., A. Messyasz*, and Jumbo*, P.I. (2015) "Binding of substrate locks the electrochemistry of CRY-DASH into DNA repair" *Biochemistry*, **54** 2802-2805.

Wilson*, T.J., Crystal*, M.A., Rohrbaugh*, M.C., Sokolowsky*, K.P., and Gindt, Y.M. (2011) "Evidence from Thermodynamics that DNA Photolyase Recognizes a Solvent-Exposed CPD Lesion" *J. Phys. Chem. B* **115**, 13746-13754.

Zieba, A.A., Richardson*, C., Lucero, C., Dieng, S.D., Gindt, Y.M., and J.P.M. Schelvis, "Evidence for concerted electron proton transfer in charge recombination between $FADH^-$ and $306Trp^\cdot$ in Escherichia coli photolyase" *J. Am. Chem. Soc.*, 2011, **133**, 7824-7836.

Sokolowsky*, K., Newton*, M., Lucero*, C., Wertheim*, B., Freedman*, J., Cortazar*, F., Czochor*, J., Schelvis, J.P.M., and Y.M. Gindt, "Spectroscopic and Thermodynamics Comparisons of *Escherichia coli* DNA Photolyase and *Vibrio cholerae* Cryptochrome1" *J. Phys. Chem. B,* 2010, **114**, 7121-7130.

Murphy, A.K., Tammaro*, M., Cortazar*, F., Gindt, Y.M., and J.P.M. Schelvis, "Effect of the Cyclobutane Cytidine Dimer on the Properties of Escherichia coli DNA Photolyase". *J. Phys. Chem. B*, 2008, **112**, 15217-15226.

T.H. Huang, G. Salter, S. Kahn*, and Y.M. Gindt, "Redox Titration of Ferricyanide to Ferrocyanide with Ascorbic Acid: Illustrating the Nernst Equation and Beer's Law", *Journal of Chemical Education,* 2007, **84**, 1461-1463.

O. Sokolova, C. Cecala, A. Gopal, F. Cortazar *, C. McDowell-Buchanan, A. Sancar, Y.M. Gindt, and J.P.M. Schelvis, "Resonance Raman Spectroscopic Investigation of the Light-Harvesting Chromophore in Escherichia coli Photolyase and Vibrio cholerae Cryptochrome-1", *Biochemistry,* 2007, **46** (12), 3673-3681.

K.T. Thoren*, K. B. Connell*, T.E. Robinson*, D.D. Shellhamer*, M.S. Tammaro*, and Y.M. Gindt, "The Free Energy of Dissociation of Oligomeric Structure in Phycocyanin is not Linear with Denaturant", *Biochemistry* , 2006, **45** (39), 12050-12059.

Y.M.Gindt, J.P.M. Schelvis, K.T. Thoren*, and T.H. Huang, "Substrate Binding Modulates the Reduction Potential of DNA Photolyase", *J. Am. Chem. Soc.*, 2005, **127** (30), 10472-10473.

S. M. Kapetanaki, M. Ramsey*, Y.M. Gindt, and J.P.M. Schelvis, "Substrate Electric Dipole

Moment Exerts of pH-Dependent Effect on Electron Transfer in Escherichia coli Photolyase", *J. Am. Chem. Soc.*, 2004, **126** (20), 6214-14.

J.P.M. Schelvis, M. Ramsey*, O. Sokolova, C. Tavares, C. Cecela, K. Connell*, S. Wagner*, and Y.M. Gindt, "Resonance Raman and UV-Vis Spectroscopic Characterization of $FADH^{\cdot}$ in the Complex of Photolyase with UV-Damaged DNA", *J. Phys. Chem. B.*, 2003, **107**, 12352 – 62.

S.A. Darveau, J. Mueller*, A. Vaverka*, C. Barta*, J. Juszenski*, A. Fitch*, Y.M. Gindt, "A Modular Laser Apparatus for Polarimetry, Nephelometry, and Fluorimeter in General Chemistry", *J. Chem. Ed.* , 2004, **81** (3) 401-5.

R. Bowen*, R. Hartung, and Y.M. Gindt, "A Simple Protein Purification and Folding Experiment for General Chemistry Laboratory", *J. Chem. Ed.*, **77** (2000) 1456-1457.

B. Heller and Y.M. Gindt, " A Biochemical Study of Noncovalent Forces in Proteins using Phycocyanin from *Spirulina*", *J. Chem. Ed.,* **77** (2000) 1458-1459.

Y. M. Gindt , E. Vollenbroek, K. Westphal, H. Sackett*, A. Sancar, and G.T. Babcock, "Origin of the transient electron paramagnetic resonance signals in DNA photolyase", *Biochemistry.,* **38** (1999) 3857-3866.

Y. M. Gindt, J. Zhou, D.A. Bryant, and K. Sauer, "Spectroscopic Studies of Phycobilisome Subcore Preparations Lacking Key Core Chromophores: Assignment of Excited State Energies to the L_{cm}, β^{18}, and $\alpha^{AP\text{-}B}$ Chromophores", *Biochimica et Biophysica Acta*, **1186** (1994) 153-62.

A.N. Glazer, Y.M. Gindt, C. Chan, and K. Sauer, "Selective Disruption of Energy Flow From Phycobilisomes to Photosystem I", *Photosynthesis Research*, **40** (1994) 167-173.

Y. M. Gindt, J. Zhou, D.A. Bryant, and K. Sauer, "Core Mutations of *Synechococcus* sp PCC 7002 Phycobilisomes: a Spectroscopic Study", *Journal of Photochemistry and Photobiology, B: Biology*, **15** (1992) 75-89.

STUDENT PRESENTATIONS AND PUBLICATIONS:

Connolly, G. and Gindt, Y.M. Poster at 2017 Montclair State University Research Symposium.

Michalchik, M. and Gindt, Y.M. Oral Presentation at 2017 Montclair State University Research Symposium.

Connolly, G. and Gindt, Y.M. Poster at 2016 Montclair State University Research Symposium.

Vercellini, J., Li, M., Munshi, S., Stanley, R. and Gindt, Y.M. Poster presentation of "Investigation of pH effects on the formation and degradation of unusual oxidation states in *Sufolobus solfataricus* photolyase" Biophysical Society Meeting, 2016.

Jumbo, P., Konas, D., Darby, D., and Gindt, Y.M. Poster presentation of "Binding of KL001 to Cry-DASH as a function of FAD oxidation state." Biophysical Society Meeting, 2016.

Li, M. and Gindt, Y.M. Oral Presentation at 2016 Montclair State University Research Symposium.

Vercellini, J. and Gindt, Y.M. Oral Presentation at 2016 Montclair State University Research Symposium.

Li, M. and Gindt, Y.M. Poster at 2015 Montclair State University Research Symposium.

Jumbo, P. and Gindt, Y.M. Poster at 2015 Montclair State University Research Symposium.

Ahmad, R. and Gindt, Y.M. Research talk at 2014 Montclair State University Research Symposium.

Edani, B. and Gindt, Y.M. Research talk at 2014 Montclair State University Research Symposium.

Ahmad, R. and Gindt, Y.M. Poster at 2013 Montclair State University Research Symposium.

Velez, J. and Gindt, Y.M. Poster at 2013 Montclair State University Research Symposium.

Kosciuszko, D. and Gindt, Y.M. Poster at 2013 Montclair State University Research Symposium.

Chalet, G.M. and Gindt, Y.M. Poster at 2013 Montclair State University Research Symposium.

Flowers*, A.M, and Gindt, Y.M. "Kinetics of oligomerization and dissociation reactions between the trimer and monomer forms of Phycocyanin" 243rd ACS National Meeting & Exposition, San Diego, CA, United States, March 25-29, 2012.

Wilson*, T.J. and Gindt, Y.M. "Osmotic stress analysis of the effects of water on a protein DNA interaction" 243rd ACS National Meeting & Exposition, San Diego, CA, United States, March 25-29, 2012.

M. Newton*, J.P.M Schelvis, and Y.M. Gindt, "Comparison of the enzymatic and spectroscopic properties of DNA photolyase and Cry-DASH enzymes", Abstracts of Papers, 239th ACS National Meeting, San Francisco, CA, United States, March 21-25, 2010.

C. Richardson*, J.P.M. Schelvis, and Y.M. Gindt, "pH dependent redox measurements of DNA Photolyase", Abstracts of Papers, 239th ACS National Meeting, San Francisco, CA, United States, March 21-25, 2010.

K.P. Sokolowsky*, J.P.M. Schelvis, and Y.M. Gindt, "Comparison of the spectrochemical and physiochemical properties of DNA photolyase and cryptochrome-DASH", Abstracts of Papers, 239th ACS National Meeting, San Francisco, CA, United States, March 21-25, 2010.

S. Rodriguez*, Y.M. Gindt, and T. Huang, "Toxicity of functionalized single-walled carbon nanotubes on cyanobacteria", Abstracts of Papers, 235th ACS National Meeting, New Orleans, LA, United States, April 6-10, 2008.

M. Tammaro*, S. Sykes*, D. Shellhamer*, and Y.M. Gindt, "Stopped flow studies of hexamer formation and dissociation in phycocyanin", Abstracts of Papers, 235th ACS National Meeting, New Orleans, LA, United States, April 6-10, 2008.

J. Freedman*, B.M. Wertheim*, F. Cortazar*, J. Schelvis, and Y.M. Gindt, "Investigation of the spectroscopy and reduction potential chemistry of VcCry1 cryptochrome", Abstracts of Papers, 235th ACS National Meeting, New Orleans, LA, United States, April 6-10, 2008.

K.E. Murray*, L. Bochner*, and Y.M. Gindt, "Investigation of oligomeric structure formation in phycocyanin", Abstracts of Papers, 235th ACS National Meeting, New Orleans, LA, United States, April 6-10, 2008.

T. Robinson*, D. Shellhamer*, and Y.M. Gindt, "Thermodynamic studies of phycocyanin oligomerization**",** Abstracts of Papers, 231st ACS National Meeting, Atlanta, GA, United States, March 26-30, 2006.

H. Tuson*, and Y.M. Gindt, "Effect of the Hofmeister series on phycocyanin oligomerization", Abstracts of Papers, 231st ACS National Meeting, Atlanta, GA, United States, March 26-30, 2006.

K.L. Thoren*, K. Connell*, T. Robinson*, D. Shellhamer*, H. Tuson* and Y.M. Gindt, "Steady state thermodynamics of Phycocyanin folding and oligomerization**".** Abstracts of Papers, 229th AC National Meeting, San Diego, CA, United States, March 13-17, 2005.

I. DeVries*, J.P.M. Schelvis, and Y.M.Gindt, "Characterization of long wavelength emission from DNA Photolyase", Abstracts of Papers, 229th ACS National Meeting, San Diego, CA, United States, March 13-17, 2005.

K. L. Thoren* and Y.M. Gindt, "Stopped Flow Kinetics of Phycocyanin Subunit Refolding", Proceedings for the 227th ACS National Meeting, Anaheim, CA, March 28 – April 1, 2004.

M. A. Ferguson*, Y.M. Gindt, and C. Nataro, "Use of Ru^{2+} to Investigate the Chromophore Binding Site in Phycocyanin" , Proceedings for the 227th ACS National Meeting, Anaheim, CA, March 28 – April 1, 2004.

M. Ramsey*, J.Schelvis, and Y.M. Gindt, "Binding Kinetics of Damaged DNA to DNA Photolyase", Proceedings for the 227th ACS National Meeting, Anaheim, CA, March 28 – April 1, 2004.

S. Wagner*, and Y.M. Gindt, "Refolding Studies on Phycocyanin", NCUR, April, 2003.

K.B. Connell* and Y.M. Gindt, "Measurement of oligomeric structure formation in phycocyanin using stopped flow kinetics", Proceedings for the 226th ACS National Meeting, New York, NY, September 7-11, 2003.

Connell, K.* and Gindt, Y.M., "Investigation of the Kinetics of Quaternary Structure Formation in Phycocyanin", Intercollegiate Student Chemist's Convention 2002, Lebanan Valley College, April, 2002.

Ramsey, M.*, Gopal, A., Sololva, O., Schelvis, J., and Gindt, Y.M., "Photodecomposition of the Methenyltetrahydrofolate Cofactor in DNA Photolyase", Intercollegiate Student Chemist's Convention 2002, Lebanan Valley College, April, 2002.

Wagner, S.*, Schelvis, J., and Gindt, Y.M., "Stabilization Studies on DNA Photolyase as a Function of Solvent", Intercollegiate Student Chemist's Convention 2002, Lebanan Valley College, April, 2002.

C. Barta, A. Vaverka, and Y.M.Gindt, "Using Fluorescence Spectroscopy to Study Free Radical Denaturation and Antioxidant Protection of Phycocyanin", Proceedings for the 223th ACS Meeting, San Francisco, April, 2002

Peterson, A.* and Gindt, Y.M., "Determination of Spectral Signatures Through the Use of Covalent Crosslinking of Proteins", 121th Proceedings of The Nebraska Academy of Sciences, Lincoln, NE, April, 2001.

Barta, C.*, Myers, C.M.*, and Gindt, Y.M., "The Thermodynamics of Protein Quaternary Structure Formation in Phycocyanin", 121th Proceedings of The Nebraska Academy of Sciences, Lincoln, NE, April, 2001.

Garnett, K.* and Gindt, Y.M., "Use of Resonance Raman Spectroscopy to Probe the Chromophore Binding Pocket of Phycocyanin", 121th Proceedings of The Nebraska Academy of Sciences, Lincoln, NE, April, 2001.

Vaverka, A.*, Darveau, S., and Gindt, Y.M., "Quantification of Antioxidants in Fruit Juices Through the Use of Fluorescence Spectroscopy", 121th Proceedings of The Nebraska Academy of Sciences, Lincoln, NE, April, 2001.

Fitch, A.*, Gindt, Y.M., and Darveau, S.A., "Measurement of sulfate ion concentration in natural waters: A novel general chemistry experiment" 120th Proceedings of The Nebraska Academy of Sciences, Lincoln, NE, April, 2001.

Bowen, R.*, Hartung, R., and Gindt, Y.M., "A General Chemistry Experiment: Easy Isolation of a Colored Protein for use in Simple Protein-Folding Experiments", 119th Proceedings of The Nebraska Academy of Sciences, Lincoln, NE, April, 1999.

Garnett, K.A.*, Myers, C.M., and Gindt, Y.M., "The Quaternary Structure of Phycocyanin as a Function of Cations Present", 119th Proceedings of The Nebraska Academy of Sciences, Lincoln, NE, April, 1999.

Barber, B.I.*, and Gindt, Y.M., "The Measurement of Kinetics for the Shifts Between the Aggregation States of Phycocyanin Protein Induced by Small Polyol Cosolvents", 119th Proceedings of The Nebraska Academy of Sciences, Lincoln, NE, April, 1999.

Myers, C.M.* and Gindt, Y.M., "The Study of Protein Destabilization in Phycocyanin", 119th Proceedings of The Nebraska Academy of Sciences, Lincoln, NE, April, 1999.

OTHER NONPEER REVIEWED PUBLICATIONS:

Y.M. Gindt, Ban Edani, Sudipto Munshi, and Robert Stanley, "DNA repair under extreme conditions: The redox chemistry and thermodynamics of substrate binding of an extremophilic DNA photolyase" Oral Presentation to the Extreme Biochemistry from Small Molecules to Large Proteins: Formation, Stability, Structure and Function, Aug. 10-13, 2014. 248th National ACS Meeting, San Francisco.

Y.M. Gindt, Rohe Ahmad, GeorgeMarie Chalet, Ban Abdulrazaq, Sudipto, Munshi, and Robert Stanley, "Binding Thermodynamics of DNA Photolyases: How do extremophilic and single-strand DNA photolyases work?" GRC: Enzymes, Coenzymes, and Metabolic Pathways, Waterville Valley, NH July 14 – 19, 2013

Y.M. Gindt, T. Wilson, M. Crystal, M. Rohrbaugh, K. Sokolowsky, "The influence of the FAD oxidation state on substrate binding to photolyase", International Symposium on Flavins and Flavoproteins, Berkeley, CA United States, July 24- 29, 2011.

A.A. Zieba, C. Richardson, S.D. Dieng, Y.M. Gindt, J.P.M. Schelvis, "Evidence for concerted electron proton transfer in charge recombination between FADH- and 306Trp· in DNA photolyase" Abstracts of Papers, 240th ACS National Meeting, Boston, MA, United States, August 22-26, 2010.

J.P.M. Schelvis, A. Murphy, M. Tammaro, and Y.M. Gindt, "Effect of cytidine cyclobutane dimer on the physiochemical properties of DNA photolyase", Abstracts of Papers, 236th ACS National Meeting, Philadelphia, PA, United State, August 17-21, 2008

J.P.M. Schelvis, X. Zhu, A. Gartman, and Y.M. Gindt, "Application of resonance energy transfer to study binding of DNA photolyase to UV-damaged DNA", Abstracts, 39th Middle Atlantic Regional Meeting of the American Chemical Society, Collegeville, PA, United States, May 16-18, 2007.

A. Murphy, Y. Gindt, and J.P.M. Schelvis, "The effect of the electric dipole moment of cis,syn cyclobutane cytidine dimer on the active site flavin of DNA photolyase", Abstracts, 39th Middle Atlantic Regional Meeting of the American Chemical Society, Collegeville, PA, United States, May 16-18, 2007.

Y.M. Gindt, T.H. Huang, M. Coughlin*, W. McNamara*, K. Thoren*, and J.P.M. Schelvis, "Reduction potential of DNA Photolyase is modulated by substrate binding", Abstracts of Papers, 229th ACS National Meeting, San Diego, CA, United States, March 13-17, 2005

J.P.M. Schelvis, Y.M. Gindt, S. Kapetanaki, and U. Gurudas, "Modification of the active site properties in the photolyase/damaged-DNA complex", Abstracts of Papers, 230th ACS National Meeting, Washington, DC, United States, Aug. 28-Sept. 1, 2005

J.P.M. Schelvis, U. Gurudas, S. Kapetanaki, and Y.M. Gindt, "Time-resolved resonance Raman characterization of a neutral tryptophan radical in DNA photolyase and the effet of the substrate electric field on its lifetime", Abstracts of Papers, 228th ACS National Meeting, Philadelphia, PA, United States, Aug. 22-Aug. 26, 2004

C. Cecala, O. Sokolova, K. Connell*, Y.M. Gindt, and J.P.M. Schelvis, "Reconstitution of 5, 10-methenyltetrahydrofolate in *E. coli* DNA photolyase to determine its structural role", Proceedings for the 226th ACS National Meeting, New York, NY, September 7-11, 2003.

O. Sokolova, C. Cecala, M. Ramsey*, Y.M. Gindt, and J.P.M. Schelvis, "Role of the second chromophore in *Escherichia coli* DNA photolyase", Proceedings for the 226th ACS National Meeting, New York, NY, September 7-11, 2003.

J.P.M. Schelvis, M. Ramsey*, S. Kapetanaki, and Y.M. Gindt, "Substrate binding perturbs the properties of the flavin neutral radical semiquinone in DNA photolyase", Proceedings for the 226th ACS National Meeting, New York, NY, September 7-11, 2003.

O. Sokolova, A. Gopal, S. Wagner, M. Ramsey, Y. Gindt, and J. Schelvis, "Resonance Raman investigation of structural properties of DNA photolyase", Proceedings for the 224th ACS National Meeting, Boston, MA, Aug. 18 – Aug. 22, 2002.

Y.M. Gindt and R.C. Hartung, "Investigating the Intermolecular Forces that Control Protein Folding", CER Lab Modular Laboratory Program in Chemistry, Henry D. Schreiber, ed., Brooks/Cole Publishers, ISBN 0-534-4761-6.

J. Schelvis, O. Sokolova, A. Gopal , N. Goyal, S. Wagner*, K. Connell*, and Y. Gindt, "Resonance Raman Investigation of DNA Photolyase", Proceedings for the 18th Annual Conference on Raman Spectroscopy, Budapest, August 2002.

O. Sololva, A. Gopal, M. Ramsey*, S. Wagner*, Y. Gindt, and J. Schelvis, "Resonance Raman Investigation of DNA Photolyase", Proceedings for the 224th ACS Meeting, Boston, August 2002.

Y. M. Gindt, "Spectroscopic Studies of *Synechococcus* sp PCC 7002 Phycobilisome Core Mutants", Ph. D. Thesis, University of California, Berkeley, Lawrence Berkeley Laboratory Report (1993), LBL-33932.