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Date of Birth: May 21, 1961

Education:

New York University, B. S. Chemistry, June 1982

The Cooper Union School of Engineering, B. E. Chemical Engineering, June 1982

Yale University, Ph.D. in Chemistry, May 1988

Thesis Title: Studies on Heterocyclic Derivatives of Tetramethyleneethane

Thesis Advisor: Professor Jerome A. Berson

California Institute of Technology 1988-1990
American Cancer Society Postdoctoral Fellow
Advisor: Professor Peter B. Dervan

Professional Experience:

Assistant Professor, Department of Chemistry 1990-1996
Colorado State University

Associate Professor, Department of Chemistry 1996-1999
Colorado State University

Professor, Department of Chemistry 1999-2002
Colorado State University

Professor, Department of Chemistry 2002-2015
The Johns Hopkins University

Vernon K. Kriable Professor of Chemistry 2016-present
The Johns Hopkins University

Professor, Department of Biology (secondary appointment) 2015-present
The Johns Hopkins University

Professor, Department of Oncology (secondary appointment) 2015-present
The Johns Hopkins University School of Medicine

Member, Sidney Kimmel Comprehensive Cancer Center 2015-present
Cancer Chemical and Structural Biology Program
The Johns Hopkins University School of Medicine

Society Memberships:

American Chemical Society, 1982-present
American Association for the Advancement of Science, 1989-present
Radiation Research Society, 2007-present

Scholarships and Honors:

Brenner Research Award in Chemistry, New York University, 1982
American Institute of Chemists Award, New York University, 1982
Dox Fellowship, Yale University, 1986-1987
American Cancer Society Postdoctoral Fellowship, 1988-1990
Alfred P. Sloan Foundation Fellowship, 1996-2000
American Association for the Advancement of Science Fellow, 2010
American Chemical Society, Arthur C. Cope Scholar, 2016

Advisory Experience:

Cortech Inc.; Consultant; 1992-1993
NSF/EPA Partnership in Science Review Panel; Panel member; June 1995
NSF Research Experience for Undergraduates Review Panel; Panel member; November 1995
NSF/EPA Partnership in Science Review Panel; Panel member; May 1997
NSF Organic Chemistry CAREER Program Review Panel; Panel member; November 1997
NSF/EPA Partnership in Science Review Panel; Panel member; May 1998
DOE E. O. Lawrence Award in Chemistry; Jury Panel; May 1998
NIH Bioorganic and Natural Products Study Section; Ad hoc member; June 1998
Howrey Simon Arnold & White Attorneys at Law; Consultant; June 1998-November 2002
NIH Biological and Physiological Sciences Special Emphasis Panel; August 1998
NIH-NCI Site Visit Panel; September 1998
NIH Center for Scientific Review Special Emphasis Panel; August 1999
Kalow & Springut LLP Attorneys at Law; Consultant; January 2001-2002
NIH Bioorganic and Natural Products Study Section; Ad hoc member; February 2002
NIH Study Section (SSS-B01); member; July 2002
NIH Center for Scientific Review Special Emphasis Panel; November 2002
Editorial Advisory Board, *Journal of Organic Chemistry*; January 2003-2010
NIH Study Section (SSS-L); member; March 2003
NIH Bioorganic and Natural Products Study Section; member; October 2003–October 2004
NIH Synthetic and Biological Chemistry A Study Section, member; October 2004–June 2007
(This study section replaced Bioorganic and Natural Products.)
Governing Board, Reaction Mechanisms Conference; July 2004– June 2008
Director, Chemistry-Biology Interface Graduate Program, Johns Hopkins University; September 2005–2013
NIH NIEHS Special Emphasis Panel; March 2006
External Advisory Committee, Vanderbilt University; NIH Program Project Grant (Director: Professor Michael Stone); September 2007-2022
Editorial Advisory Board, *Chemical Research in Toxicology*; January 2008 - 2010
NIH Mentoring Workshop; Dallas, TX; May 4-6, 2008
NIH Mentoring Workshop; Irvine, CA; October 18-20, 2009
Editorial Advisory Board, *Biochemistry*; January 2010-2015
NSF Chemistry of Life Sciences Review Panel; April 2010

NIH Genes, Genomes, and Genetics - SBIR/STTR review panel; March 2011
External Advisory Committee; Chemistry Ph.D. Program, City University of New York; March 2011
NIH Center for Scientific Review Special Emphasis Panel; June 2011
NIH IMST Cell, Computational, and Molecular Biology - SBIR/STTR review panel; September 2011
NIH Center for Scientific Review Special Emphasis Panel; November 2011
American Cancer Society; Cancer Drug Discovery Review Panel; January 2012
NSF Chemistry of Life Sciences Review Panel; April 2012
Wilmer Hale; Consultant; January 2013 – January 2016
External Review Committee for Laboratory of Chemistry, Division of Therapeutic Programs, Office of Biotechnology Products, FDA; January 24, 2013
NIH Synthetic and Biological Chemistry A Study Section, ad hoc member; October 2015
NIH Mentoring Workshop; Dallas, TX; May 22-24, 2016
NCI Special Emphasis Panel – NCI Predoctoral to Postdoctoral Fellow Transition Award (F99/K00); May 2017
NIH New Innovator Award Review (DP2); ZRG1 MOSS-R70; November 2017
Fish & Richardson P.C.; Consultant; January 2018 – 2019
CBI Advisory Committee; University of Delaware; October 2018 – 2022
Chairperson; NIH Center for Scientific Review Special Emphasis Panel; Biological Chemistry and Macromolecular Biophysics Chemistry; 2019/01 ZRG1 BCMB-H (02) M; November 9, 2018
Chairperson; NIH Center for Scientific Review Special Emphasis Panel; Biological Chemistry and Macromolecular Biophysics Chemistry Fellowships; 2019/01 ZRG1 F04A-H (20) L; November 15, 2018
NIEHS Special Emphasis Panel: Revolutionizing Innovative, Visionary Environmental Health Research (RIVER R35) Award Review Meeting; November 14, 2019
Powell Gilbert, LLC; Consultant; March 2020 – December 2020
NSF Chemistry of Life Sciences Review Panel; April 2023
NIH Center for Scientific Review - Fellowships: Chemistry, Biochemistry and Biophysics A – F04A Study Section; July 11-12, 2023

Publications:

1. Identification of the Reactive Electronic State in the Photocycloaddition of Alkenes to Cyclic Enones.
Schuster, D. I.; Greenberg, M. M.; Nunez, I. M.; Tucker, P. C. *J. Org. Chem.* **1983**, *48*, 2615.
2. 3,4-Dimethylenefuran, and 3,4-Dimethylenethiophene, Heterocyclic Analogues of the Disjoint Non-Kekulé Hydrocarbon Tetramethyleneethane.
Stone, K. J.; Greenberg, M. M.; Goodman, J. L.; Peters, K. S.; Berson, J. A. *J. Am. Chem. Soc.* **1986**, *108*, 8088.
3. The First Magic Angle Spinning NMR Spectrum of a Captive Intermediate: Direct Observation of a Singlet Ground State Biradical, 3,4-Dimethylenefuran.
Zilm, K. W.; Merrill, R. A.; Greenberg, M. M.; Berson, J. A. *J. Am. Chem. Soc.* **1987**, *109*, 1567.

4. Identity of 3,4-Dimethylenethiophene Reactive Intermediates From Diazene and Bis-Allene Precursors. Correlation of Singlet Biradical Reactivity in the Tetramethyleneethane and Trimethylenemethane Series.
Greenberg, M. M.; Blackstock, S. C.; Berson, J. A. *Tetrahedron Lett.* **1987**, 28, 4263.
5. Two Dimensional Solid-State NMR of a Captive Intermediate: Structure of the Radical Centers in 3,4-Dimethylenethiophene.
Zilm, K. W.; Merrill, R. A.; Webb, G. G.; Greenberg, M. M.; Berson, J. A. *J. Am. Chem. Soc.* **1989**, 111, 1533.
6. Ground State Multiplicities of 3,4-Dimethylenefuran and 3,4-Dimethylenethiophene. Experimental Tests of Ab Initio and Semiempirical Theories of Heteroatom-Bridged Disjoint Biradicals.
Greenberg, M. M.; Blackstock, S. C.; Stone, K. J.; Berson, J. A. *J. Am. Chem. Soc.* **1989**, 111, 3671.
7. Heterocyclic Aromatic Non-Kekulé Molecules. Synthesis and Solution-Phase Chemistry of the Singlet Biradicals 3,4-Dimethylenefuran and 3,4-Dimethylenethiophene.
Stone, K. J.; Greenberg, M. M.; Blackstock, S. C.; Berson, J. A. *J. Am. Chem. Soc.* **1989**, 111, 3659.
8. Structure of the Carrier of the CPMAS ¹³C NMR Signal Assigned to 3,4-Dimethylenethiophene. Multiple Position Labeling and Chemical Trapping in Annealed Glasses.
Greenberg, M. M.; Blackstock, S. C.; Berson, J. A.; Merrill, R. A.; Duchamp, J. C.; Zilm, K. W. *J. Am. Chem. Soc.* **1991**, 113, 2318.
9. Independent Generation of the Major Adduct of Hydroxyl Radical and Thymidine. Examination of Intramolecular Hydrogen Atom Transfer in Competition With Thiol Trapping.
Barvian, M. R.; Greenberg, M. M. *Tetrahedron Lett.* **1992**, 33, 6057.
10. Photochemical Cleavage of Oligonucleotides From Solid Phase Supports.
Greenberg, M. M. *Tetrahedron Lett.* **1993**, 34, 251.
11. Diastereoselective Synthesis of Hydroxylated Products of Thymidine Resulting from Oxidative Stress.
Barvian, M. R.; Greenberg, M. M. *J. Org. Chem.* **1993**, 58, 6151.
12. Cleavage of Oligonucleotides from Solid Phase Supports Using *o*-Nitrobenzyl Photochemistry.
Greenberg, M. M.; Gilmore, J. L. *J. Org. Chem.* **1994**, 59, 746.
13. Site Specific Incorporation of the Alkaline Labile, Oxidative Stress Product (5*R*)-5,6-Dihydro-5-hydroxythymidine in an Oligonucleotide.
Matray, T. J.; Greenberg, M. M. *J. Am. Chem. Soc.* **1994**, 116, 6931.
14. Kinetic Analysis of the Rearrangement of a Conformationally Constrained α -Cyclopropyl Benzyl Radical.

- Venkatesan, H.; Greenberg, M. M. *J. Org. Chem.* **1994**, *59*, 3514.
15. A General Method for the Synthesis of C2'-Deuteriated Ribonucleosides
Cook, G. P.; Greenberg, M. M. *J. Org. Chem.* **1994**, *59*, 4704.
 16. Photochemical Release of Protected Oligonucleotides Containing 3'-Glycolate Termini.
Greenberg, M. M. *Tetrahedron* **1995**, *51*, 29.
 17. Benzylic Stabilization as a Mechanistic Tool for Studying Radical Rearrangements.
Venkatesan, H.; Greenberg, M. M. *J. Org. Chem.* **1995**, *60*, 1053.
 18. Reactivity of the Major Adduct of Thymidine and Hydroxyl Radical Generated Via Photoinduced Single Electron Transfer, and the Role of 1,4-Cyclohexadiene in the Photodeoxygenation Process.
Barvian, M. R.; Barkley, R. M.; Greenberg, M. M. *J. Am. Chem. Soc.* **1995**, *117*, 4894.
 19. Independent Generation of 5,6-Dihydrothymid-5-yl, and Investigation of Its Ability to Effect Nucleic Acid Strand Scission Via Hydrogen Atom Abstraction.
Barvian, M. R.; Greenberg, M. M. *J. Org. Chem.* **1995**, *60*, 1916.
 20. Synthesis of Oligonucleotides Containing 3'-Alkyl Carboxylic Acids Using Universal, Photolabile Solid Phase Supports.
Yoo, D. J.; Greenberg, M. M. *J. Org. Chem.* **1995**, *60*, 3358.
 21. Independent Generation and Reactivity of 5,6-Dihydrothymid-5-yl in Single Stranded Polythymidylate. O₂ is Necessary for Strand Scission.
Barvian, M. R.; Greenberg, M. M. *J. Am. Chem. Soc.* **1995**, *117*, 8291.
 22. The Effects of the Ring Fragmentation Product of Thymidine C5-Hydrate on Phosphodiesterases and Klenow (Exo⁻) Fragment.
Matray, T. J.; Haxton, K. J.; Greenberg, M. M. *Nucleic Acids Research* **1995**, *23*, 4642.
 23. Independent Generation and Reactivity of Deoxyurid-1'-yl.
Goodman, B. K.; Greenberg, M. M. *J. Org. Chem.* **1996**, *61*, 2.
 24. Improved Efficiency and Utility of Photolabile Solid Phase Oligonucleotide Synthesis Supports.
Venkatesan, H.; Greenberg, M. M. *J. Org. Chem.* **1996**, *61*, 525.
 25. Synthesis of Oligonucleotides Containing 3'-Alkyl Amines Using Universal, Photolabile Solid Phase Supports.
McMinn, D. L.; Greenberg, M. M. *Tetrahedron* **1996**, *52*, 3827.
 26. A Novel Mechanism for the Formation of Direct Strand Breaks Upon Anaerobic Photolysis of Duplex DNA Containing 5-Bromodeoxyuridine.
Cook, G. P.; Greenberg, M. M. *J. Am. Chem. Soc.* **1996**, *118*, 10025.
 27. DNA Damage Induced Via 5,6-Dihydrothymid-5-yl in Single Stranded Oligonucleotides.

- Greenberg, M. M.; Barvian, M. R.; Cook, G. P.; Goodman, B. K.; Matray, T. J.; Tronche, C.; Venkatesan, H. *J. Am. Chem. Soc.* **1997**, *119*, 1828.
28. Synthesis of Oligonucleotides Containing 3'-Alkyl Carboxylic Acids Using a Palladium Labile Solid Phase Synthesis Support.
Matray, T. J.; Yoo, D. J.; McMinn, D. L.; Greenberg, M. M. *Bioconjugate Chemistry* **1997**, *8*, 99.
 29. C1' Acylated Derivatives of 2'-Deoxyuridine. Photolabile Precursors of 2'-Deoxyuridin-1'-yl.
Greenberg, M. M.; Yoo, D. J.; Goodman, B. K. *Nucleosides & Nucleotides* **1997**, *16*, 33.
 30. Synthesis of Oligonucleotides Containing 3'-Alkyl Amines Using *N*-Isobutyryl Protected Deoxyadenosine Phosphoramidite.
McMinn, D. L.; Greenberg, M. M. *Tetrahedron Lett.* **1997**, *38*, 3123.
 31. Inhibition of Klenow Fragment (exo⁻) Catalyzed DNA Polymerization By (5*R*)-5,6-Dihydro-5-hydroxythymidine and Structural Analogue 5,6-Dihydro-5-methylthymidine.
Greenberg, M. M.; Matray, T. J. *Biochemistry* **1997**, *36*, 14071.
 32. Efficient Solution Phase Synthesis of Oligonucleotide Conjugates Using Protected Biopolymers Containing 3'-Terminal Alkyl Amines.
McMinn, D. L.; Matray, T. J.; Greenberg, M. M. *J. Org. Chem.* **1997**, *62*, 7074.
 33. Stereoselective Synthesis of 3'-Deuterated Pyrimidine Nucleosides Via Stereoselective Reduction of a Protected 3-Oxoribose.
Chen, T.; Greenberg, M. M. *Tetrahedron Lett.* **1998**, *39*, 1103.
 34. The Ring Fragmentation Product of Thymidine C5-Hydrate When Present in DNA is Repaired by the *Escherichia Coli* Fpg and Nth Proteins.
Jurado, J.; Sapparbaev, M.; Matray, T. J.; Greenberg, M. M.; Laval, J. *Biochemistry* **1998**, *37*, 7757.
 35. Post-Synthetic Conjugation of Protected Oligonucleotides Containing 3'-Alkylamines.
McMinn, D. L.; Greenberg, M. M. *J. Am. Chem. Soc.* **1998**, *120*, 3289.
 36. Model Studies Indicate That Copper-Phenanthroline Induces Direct Strand Breaks Via β -Elimination of the 2'-Deoxyribonolactone Intermediate Observed in Enebyne Mediated DNA Damage.
Chen, T.; Greenberg, M. M. *J. Am. Chem. Soc.* **1998**, *120*, 3815.
 37. Release of Superoxide From Nucleoside Peroxyl Radicals, A Double Edged Sword?
Tronche, C.; Tallman, K. A.; Yoo, D. J.; Greenberg, M. M. *J. Am. Chem. Soc.* **1998**, *120*, 4903.
 38. Optimization and Mechanistic Analysis of Oligonucleotide Cleavage From Palladium Labile Solid Phase Synthesis Supports.

- Greenberg, M. M.; Matray, T. J.; Kahl, J. D.; Yoo, D. J.; McMinn, D. L. *J. Org. Chem.* **1998**, *63*, 4062.
39. An Orthogonal Solid Phase Support for the Synthesis of Oligonucleotides Containing 3'-Phosphates and Its Application in the Preparation of Photolabile Hybridization Probes.
McMinn, D. L.; Hirsch, R.; Greenberg, M. M. *Tetrahedron Lett.* **1998**, *39*, 4155.
 40. A High Yielding Method For On-Column Derivatization of Protected Oligodeoxynucleotides and its Application to the Convergent Synthesis of 5',3'-Bis-conjugates.
Kahl, J. D.; McMinn, D. L.; Greenberg, M. M. *J. Org. Chem.* **1998**, *63*, 4870.
 41. DNA Damage Induced Via Independent Generation of the Radical Resulting From Formal Hydrogen Atom Abstraction From the C1'-Position of a Nucleotide.
Tronche, C.; Goodman, B. K.; Greenberg, M. M. *Chemistry & Biology* **1998**, *5*, 263.
 42. Direct Evidence For Bimodal DNA Damage Induced By Tirapazamine.
Daniels, J. S.; Gates, K. S.; Tronche, C.; Greenberg, M. M. *Chem. Res. Toxicol.* **1998**, *11*, 1254.
 43. Solution Phase Bioconjugate Synthesis Using Protected Oligonucleotides Containing 3'-Alkyl Carboxylic Acids.
Kahl, J. D.; Greenberg, M. M. *J. Org. Chem.* **1999**, *64*, 507.
 44. Convergent Solution-Phase Synthesis of a Nucleopeptide Using a Protected Oligonucleotide.
McMinn, D. L.; Greenberg, M. M. *Bioorganic & Med. Chem. Lett.* **1999**, *9*, 547.
 45. Introducing Structural Diversity in Oligonucleotides Via Photolabile, Convertible C5-Substituted Nucleotides.
Kahl, J. D.; Greenberg, M. M. *J. Am. Chem. Soc.* **1999**, *121*, 597.
 46. The Effects of Secondary Structure and O₂ on the Formation of Direct Strand Breaks Upon UV-Irradiation of 5-Bromodeoxyuridine-Containing Oligonucleotides.
Cook, G. P.; Chen, T.; Koppisch, A. T.; Greenberg, M. M. *Chemistry & Biology* **1999**, *6*, 451.
 47. Kinetics and Stereoselectivity of Thiol Trapping of Deoxyuridin-1'-yl in Biopolymers and Their Relationship to the Formation of Premutagenic α -Deoxynucleotides.
Hwang, J. -T.; Greenberg, M. M. *J. Am. Chem. Soc.* **1999**, *121*, 4311.
 48. The Effects of 5R-5,6-Dihydro-5-hydroxythymidine on Duplex DNA Stability and Structure.
Sambandam, A.; Greenberg, M. M. *Nucleic Acids Research* **1999**, *27*, 3597.
 49. Photosensitization of Guanine-Specific DNA Damage by a Cyano-Substituted Quinoxaline Di-N-Oxide.
Fuchs, T.; Gates, K. S.; Hwang, J. -T.; Greenberg, M. M. *Chem. Res. Toxicol.* **1999**, *12*,

1190.

50. The Reactivity of the 2-Deoxyribonolactone Lesion in Single Stranded DNA and its Implication in Reaction Mechanisms of DNA Damage and Repair.
Hwang, J. -T.; Tallman, K. T.; Greenberg, M. M. *Nucleic Acids Research* **1999**, *19*, 3805.
51. Reaction of the Hypoxia-Selective Antitumor Agent Tirapazamine with a C1'-Radical in Single-Stranded and Double-Stranded DNA: The Drug and Its Metabolites Can Serve as Surrogates for Molecular Oxygen in Radical-Mediated DNA-Damage Reactions.
Hwang, J. -T.; Greenberg, M. M.; Fuchs, T.; Gates, K. S. *Biochemistry* **1999**, *38*, 14248.
52. Synthesis of Modified Oligodeoxyribonucleotides on a Solid-Phase Support Via Derivatization of a Selectively Revealed 2'-Amino-2'-deoxyuridine.
Hwang, J. -T.; Greenberg, M. M. *Organic Letters* **1999**, *1*, 2021.
53. Investigation of the Origin of the Sequence Selectivity for the 5-Halo-2'-deoxyuridine Sensitization of DNA to Damage by UV-Irradiation.
Chen, T.; Cook, G. P.; Koppisch, A. T.; Greenberg, M. M. *J. Am. Chem. Soc.* **2000**, *122*, 3861.
54. Independent Generation and Reactivity of 2'-Deoxy-5-methyleneuridin-5-yl, a Significant Reactive Intermediate Produced From Thymidine as a Result of Oxidative Stress.
Anderson, A. S.; Hwang, J. -T.; Greenberg, M. M. *J. Org. Chem.* **2000**, *65*, 4648.
55. Chemical Evidence for Thiyl Radical Addition to the C6-Position of a Pyrimidine Nucleoside and its Possible Relevance to DNA Damage Amplification.
Carter, K. N.; Taverner, T.; Schiesser, C. H.; Greenberg, M. M. *J. Org. Chem.* **2000**, *65*, 8375.
56. AlkA Protein is the Third Escherichia Coli Protein Excising a Ring Fragmentation Product of Thymine.
Privezentzev, C. V.; Saparbaev, M.; Sambandam, A.; Greenberg, M. M.; Laval, J. *Biochemistry* **2000**, *39*, 14263.
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Chen, T. C.; Fu, J.; Greenberg, M. M. *Organic Letters* **2000**, *2*, 3691.
58. Synthesis of 2'-Modified Oligodeoxynucleotides via On-Column Conjugation.
Hwang, J. -T.; Greenberg, M. M. *J. Org. Chem.* **2001**, *66*, 363.
59. The 2-Deoxyribonolactone Lesion Produced in DNA by Neocarzinostatin and Other Damaging Agents Forms Cross-Links with the Base-Excision Repair Enzyme Endonuclease III.
Hashimoto, M.; Greenberg, M. M.; Kow, Y. W.; Hwang, J.-T.; Cunningham, R. P. *J. Am. Chem. Soc.* **2001**, *123*, 3161.
60. Product Studies and Laser Flash Photolysis on Alkyl Radicals Containing Two Different β -Leaving Groups are Consonant with the Formation of an Olefin Cation Radical.

- Bales, B. C.; Horner, J. H.; Huang, X.; Newcomb, M.; Crich, D.; Greenberg, M. M. *J. Am. Chem. Soc.* **2001**, *123*, 3623.
61. Oxygen Dependent DNA Damage Amplification Involving 5,6-Dihydrothymidin-5-yl in a Structurally Minimal System.
Tallman, K. A.; Greenberg, M. M. *J. Am. Chem. Soc.* **2001**, *123*, 5181.
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Zhu, Q.; Delaney, M. O.; Greenberg, M. M. *Bioorganic & Med. Chem. Lett.* **2001**, *11*, 1105.
63. Direct Measurement of Pyrimidine C6-Hydrate Stability.
Carter, K. N.; Greenberg, M. M. *Bioorganic & Med. Chem.* **2001**, *9*, 2341.
64. Synthesis of Oligonucleotides Containing Fapy•dG (*N*6-(2-Deoxy- α,β -D-erythro-pentofuranosyl)-2,6-diamino-4-hydroxy-5-formamidopyrimidine).
Haraguchi, K.; Greenberg, M. M. *J. Am. Chem. Soc.* **2001**, *123*, 8636.
65. Template Free Segmental Synthesis of Oligonucleotides Containing Nonnative Linkages.
Greenberg, M. M.; Kahl, J. D. *J. Org. Chem.* **2001**, *66*, 7151.
66. Studies on *N*4-(2-Deoxy-D-pentofuranosyl)-4,6-diamino-5-formamidopyrimidine (Fapy•dA) and *N*6-(2-Deoxy-D-pentofuranosyl)-6-diamino-5-formamido-4-hydroxypyrimidine (Fapy•dG)
Greenberg, M. M.; Hantosi, Z.; Wiederholt, C. J.; Rithner, C. D. *Biochemistry* **2001**, *40*, 15856.
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Haraguchi, K.; Delaney, M. O.; Wiederholt, C. J.; Sambandam, A.; Hantosi, Z.; Greenberg, M. M. *J. Am. Chem. Soc.* **2002**, *124*, 3263.
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DeMott, M. S.; Beyret, E.; Bales, B. C.; Hwang, J. T.; Greenberg, M. M.; Demple, B. J. *Biol. Chem.* **2002**, *277*, 7637.
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Delaney, M. O.; Wiederholt, C. J.; Greenberg, M. M. *Angew. Chem. Int. Ed.* **2002**, *41*, 771.
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72. A Minor Groove Binding Copper-Phenanthroline Conjugate Produces Direct Strand Breaks Via β -Elimination of 2-Deoxyribonolactone.
Bales, B. C.; Pitie, M.; Meunier, B.; Greenberg, M. M. *J. Am. Chem. Soc.* **2002**, *124*, 9062.
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Delaney, M. O.; Greenberg, M. M. *Chem. Res. Toxicol.* **2002**, *15*, 1460.
74. Interaction of DNA Containing Fapy•dA or its C-Nucleoside Analogues with Base Excision Repair Enzymes. Implications for Mutagenesis and Enzyme Inhibition.
Wiederholt, C. J.; Delaney, M. O.; Greenberg, M. M. *Biochemistry* **2002**, *41*, 15838.
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Xu, Y.; DeMott, M. S.; Hwang, J. T.; Greenberg, M. M.; Demple, B. *DNA Repair* **2003**, *2*, 175.
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Hwang, J. T.; Baltasar, F. E.; Cole, D.; Sigman, D. S.; Chen, C. B.; Greenberg, M. M. *Bioorganic & Med. Chem.* **2003**, *11*, 2321.
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Kroeger, K. M.; Hashimoto, M.; Kow, Y. W.; Greenberg, M. M. *Biochemistry* **2003**, *42*, 2449.
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79. Synthesis of 5,12-Dioxocyclam Nickel (II) Complexes Having Quinoxaline Substituents at the 6 and 13 Positions as Potential DNA Bis-Intercalating and Cleaving Agents.
Hegedus, L. S.; Greenberg, M. M.; Wendling, J. J.; Bullock, J. P. *J. Org. Chem.* **2003**, *68*, 4179.
80. Synthesis and Characterization of Oligonucleotides Containing the C4'-Oxidized Abasic Site Produced by Bleomycin and Other DNA Damaging Agents
Kim, J.; Gil, J. M.; Greenberg, M. M. *Angew. Chem. Int. Ed. Engl.* **2003**, *42*, 5882.
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82. Tandem Lesions are the Major Products Resulting From a Pyrimidine Nucleobase Radical.
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83. In Vitro Effects of a C4'-Oxidized Abasic Site on DNA Polymerases.
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Weng, L.; Zhou, C.; Greenberg, M. M. *ACS Chem. Biol.* **2015**, *10*, 622-630. "Spotlighted" in *Chem. Res. Toxicol.* **2015**, *28*, 3. (PMC: 4336632)
179. Double Strand Breaks From a Radical Commonly Produced by DNA Damaging Agents.
Taverna Porro, M. L.; Greenberg, M. M. *Chem. Res. Toxicol.* **2015**, *28*, 810-816. (PMC: 4415041) Selected by the American Chemical Society as an ACS Editors' Choice paper. "ACS Editors' Choice is an initiative wherein, based on recommendations from Editors, one article from across the portfolio is selected each day of the year and upon publication is made immediately available as open access sponsored by ACS Publications." The manuscript was also highlighted on the journal cover. The manuscript was also included in the 2015 "Editorial Advisory Board Members' Favorite CRT Articles" of *Chem. Res. Toxicol.* (<http://pubs.acs.org/page/crtoec/vi/eab-favorites.html>)
180. Unlike Catalyzing Error-Free Bypass of 8-OxodGuo, DNA Polymerase λ Is Responsible for a Significant Part of Fapy•dG-Induced G→T Mutations in Human Cells.
Pande, P.; Haraguchi, K.; Jiang, Y.-L.; Greenberg, M. M.; Basu, A. K. *Biochemistry* **2015**, *54*, 1859-1862. (PMC: 4630799)
181. Light-Triggered RNA Annealing by an RNA Chaperone.
Panja, S.; Paul, R.; Greenberg, M. M.; Woodson, S. A. *Angew. Chem. Int. Ed.* **2015**, *54*, 7281-7284. (PMC: 4478220)
182. Sequence Selective Tagging of 8-Oxo-7,8-dihydro-2'-deoxyguanosine (8-oxodGuo) Using PNAs.
Hong, I. S.; Greenberg *Bioorg. & Med. Chem. Lett.* **2015**, *25*, 4918-4921. Invited submission for a special Symposium-in-Print issue entitled "Recent Advances in Medicinal Chemistry and Chemical Biology" to commemorate 25 years since *Bioorg. & Med. Chem. Lett.* began publishing.
183. Rapid Histone Catalyzed DNA Lesion Excision and Accompanying Protein Modification in Nucleosomes and Nucleosome Core Particles.
Weng, L.; Greenberg, M. M. *J. Am. Chem. Soc.* **2015**, *137*, 11022-11031. (PMC: 4612368)
184. Correlation of Thermal Stability and Structural Distortion of DNA Interstrand Cross-links Produced From Oxidized Abasic Sites Explain Their Selective Formation and Repair.
Ghosh, S.; Greenberg, M. M. *Biochemistry* **2015**, *54*, 6274-6283. (PMC: 4623589)
185. Bromopyridone Nucleotide Analogues, Anoxic Selective Radiosensitizing Agents that are Incorporated in DNA by Polymerases.
Rudra, A.; Hou, D.; Zhang, Y.; Coulter, J.; Zhao, H.; DeWeese, T. L.; Greenberg, M. M. *J. Org. Chem.* **2015**, *80*, 10675-10685. (PMC: 4877698)

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Xu, W.; Ouellette, A.; Ghosh, S.; O'Neill, T. C.; Greenberg, M. M.; Zhao, L. *Biochemistry* **2015**, *54*, 7409-7422. (PMC: 4700817)
187. Mechanistic Studies on RNA Strand Scission From a C2'-Radical.
Paul, R.; Greenberg, M. M. *J. Org. Chem.* **2016**, *81*, 9199-9205. (PMC: 5055465)
188. Structural Basis for Excision of 5-Formylcytosine by Thymine DNA Glycosylase.
Pidugu, L. S.; Flowers, J.; Coey, C. T.; Pozharski, E.; Greenberg, M. M.; Drohat, A. C. *Biochemistry* **2016**, *53*, 6205-6208. (PMC: 5148694)
189. Probing Enhanced Double Strand Break Formation at Abasic Sites Within Clustered Lesions in Nucleosome Core Particles.
Banerjee, S.; Chakraborty, S.; Jacinto, M. P.; Paul, M. D.; Balster, M. V.; Greenberg, M. M. *Biochemistry* **2017**, *54*, 14-21. (PMC: 5372979)
190. Identification of Proximal Sites for Partially Unwound DNA Substrate in *Escherichia coli* Topoisomerase I With Oxidative Crosslinking.
Cheng, B.; Zhou, Q.; Weng, L.; Leszyk, J. D.; Greenberg, M. M.; Tse-Dinh, Y. *FEBS Lett.* **2017**, *591*, 28-38. (PMC: 5235945)
191. Aminyl Radical Generation via Tandem Norrish Type I Photocleavage, β -Fragmentation: Independent Generation and Reactivity of the 2'-Deoxyadenosin-N6-yl Radical.
Zheng, L.; Griesser, M.; Pratt, D. A.; Greenberg, M. M. *J. Org. Chem.* **2017**, *82*, 3571-3580. (PMC: 5494259)
192. Thiol Specific and Tracelessly Removable Bioconjugation via Michael Addition to 5-Methylene Pyrrolones.
Zhang, Y.; Zhou, X.; Xie, Y.; Greenberg, M. M.; Xi, Z.; Zhou, C. *J. Am. Chem. Soc.* **2017**, *139*, 6146-6151. (PMC: 5491101)
193. EC-Tagging Allows Cell Type-Specific RNA Analysis.
Hida, N.; Aboukilila, M. Y.; Burow, D. A.; Paul, R.; Greenberg, M. M.; Fazio, M.; Beasley, S.; Spitale, R. C.; Cleary, M. D. *Nucleic Acids Res.* **2017**, *45*, e138. (PMC: 5587779)
194. The A-Rule and Deletion Formation During Abasic and Oxidized Abasic Site Bypass by DNA Polymerase θ .
Lavery, D. J.; Averill, A. M.; Doublié, S.; Greenberg, M. M. *ACS Chem. Biol.* **2017**, *12*, 1584-1592. (PMC: 5499511)
195. Synergistic Effects of an Irreversible DNA Polymerase Inhibitor and DNA Damaging Agents on HeLa Cells.
Paul, R.; Banerjee, S.; Greenberg, M. M. *ACS Chem. Biol.* **2017**, *12*, 1576-1583. Correction: *ACS Chem. Biol.* **2018**, *13*, 832-832. (PMC: 5492961) (Highlighted ("Spotlight") in *Chem. Res. Toxicol.* **2017**, *30*, 1367-1368.)

196. 5-Formylcytosine Yields DNA-Protein Crosslinks in Nucleosome Core Particles.
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197. Independent Generation and Reactivity of Thymidine Radical Cations.
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Designated as a Very Important Paper (VIP) by the Editor.
207. Facile Synthesis of 5-Methylene-2-pyrrolones.
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213. Reactivity of the Major C5'-Oxidative DNA Damage Product in Nucleosome Core Particles.
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214. Effect of Histone Lysine Methylation on DNA Lesion Reactivity in Nucleosome Core Particles.
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216. Reactivity of 3-Methyl-2'-Deoxyadenosine in Nucleosome Core Particles.
Yang, K.; Sun, H.; Lowder, L.; Varadarajan, S.; Greenberg, M. M. *Chem. Res. Toxicol.* **2019**, *32*, 2118-2124. Selected to be Editor's Choice by the American Chemical Society; September 30, 2019. (PMC: 6803048)
217. DNA-Protein Cross-link Formation in Nucleosome Core Particles Treated with Methyl Methanesulfonate.
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218. Mutagenic Effects of a 2-Deoxyribonolactone – Thymine Glycol Tandem Lesion in Human Cells.
Naldiga, S.; Huang, H.; Greenberg, M. M.; Basu, A. K. *Biochemistry* **2020**, *59*, 417-424. (PMC: 7003646)
219. Solid-Phase Synthesis of Oligonucleotides Containing the N^6 -(2-Deoxy- α,β -D-erythropentofuranosyl)-2,6-diamino-4-hydroxy-5-formamidopyrimidine (Fapy•dG) Oxidative Damage Product Derived from 2'-Deoxyguanosine.
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220. Light-Controlled Twister Ribozyme With Single Molecule Detection Resolves RNA Function in Time and Space.
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221. Independent Generation and Time-Resolved Detection of 2'-Deoxyguanosin-N2-yl Radicals.
Zheng, L.; Dai, X.; Su, H.; Greenberg, M. M. *Angew. Chem. Int. Ed.* **2020**, *59*, 13406-13413. Designated by the editor as a *Hot Paper*. (PMC: 7395871)
222. Independent Generation and Reactivity of 2'-Deoxyguanosin-N1-yl Radical.
Zheng, L.; Greenberg, M. M. *J. Org. Chem.* **2020**, *85*, 8665-8672. (PMC: 7334105)
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Dasovich, M.; Beckett, M. Q.; Bailey, S.; Ong, S.; Greenberg, M. M.; Leung, A. K. L. *J. Am. Chem. Soc.* **2021**, *143*, 3037-3042. (PMC: 8109396)
224. Selective Inhibition of DNA Polymerase β by a Covalent Inhibitor.
Yuhas, S. C.; Laverty, D. J.; Lee, H.; Greenberg, M. M. *J. Am. Chem. Soc.* **2021**, *143*, 8099-8107. Correction: *J. Am. Chem. Soc.* **2022**, *144*, 2825. (PMC: 8284926)

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Bacurio, J. H.; Yang, H.; Naldiga, S.; Powell, B. V.; Ryan, B. J.; Freudenthal, B. D.; Greenberg, M. M. Basu, A. K. *DNA Repair* **2021**, *108*, 103213. (PMC: 8616820)
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Yuhas, S. C.; Majumdar, A.; Greenberg, M. M. *ChemBioChem* **2021**, *22*, 2619-2623.
Designated by the editor as a *Very Important Paper*. (PMC: 8373715)
227. Suppression of DNA Polymerase β Activity is Synthetically Lethal in BRCA1-Deficient Cells.
Yuhas, S. C.; Mishra, A.; DeWeese, T. L.; Greenberg, M. M. *ACS Chem. Biol.* **2021**, *16*, 1339-1343. Correction: *ACS Chem. Biol.* **2022**, *17*, 492. (PMC: 8380700)
228. Reactivity and DNA Damage by Independently Generated 2'-Deoxycytidin-N4-yl Radical.
Peng, H.; Jialong, J.; Mortimer, I. P.; Zehan, M.; Su, H.; Greenberg, M. M. *J. Am. Chem. Soc.* **2021**, *143*, 14738-14747. (PMC: 8728764)
229. Intracellular Formation of A DNA Damage-Induced, Histone Post-Translational Modification Following Bleomycin Treatment.
Jacinto, M. P.; Fried, S. D.; Greenberg, M. M. *J. Am. Chem. Soc.* **2022**, *144*, 7600-7605. (PMC: 9121625)
230. Structural Dynamics of a Common Mutagenic Oxidative DNA Lesion in Duplex DNA and During DNA Replication.
Ryan, B. J.; Yang, H.; Bacurio, J.H.; Smith, M. R.; Basu, A. K.; Greenberg, M. M.; Freudenthal, B. D. *J. Am. Chem. Soc.* **2022**, *144*, 8054-8065. (PMC:9097547)
231. Local Alteration of Ionic Strength in a Nucleosome Core Particle and its Effect on N7-Methyl-2'-deoxyguanosine Depurination.
Wen, T.; Yang, K.; Greenberg, M. M. *Biochemistry* **2022**, *61*, 2221-2228. (PMC: 9670023)
232. Covalent Modification of Bromodomain Proteins by Peptides Containing a DNA Damage-Induced, Histone Post-Translational Modification.
Jacinto, M. P.; Heidenreich, D.; Müller, S.; Greenberg, M. M. *ChemBioChem* **2022**, *23*, e202200373. (PMC: 9675715)
233. Histone Deacetylase 1 Inhibition by Peptides Containing a DNA Damage-Induced, Non-enzymatic, Histone Covalent Modification.
Jacinto, M. P.; Greenberg, M. M. *Biochemistry* **2023**, *62*, 1388-1393. (PMC: 10124317)
234. 8-Oxo-2'-deoxyguanosine Replication in Mutational Hot Spot Sequences of the p53 Gene in Human Cells is Less Mutagenic Than That of the Corresponding Formamidopyrimidine.
Stanio, S.; Bacurio, J. H.; Yang, H.; Greenberg, M. M.; Basu, A. K. *Chem. Res. Toxicol.* **2023**, *36*, 782-789. (PMC: 10192040)

235. Photochemical and Single Electron Transfer Generation of 2'-Deoxycytidin-N4-yl Radical From Oxime Esters.
Peng, H.; Vu, S.; Retes, P.; Ward, S.; Kumar, A.; Sevilla, M. D.; Adhikary, A.; Greenberg, M. M. *J. Org. Chem.* **2023**, *88*, 7381-7390. (PMC: 10308854)
236. Deoxyguanosine-Linked Bifunctional Inhibitor of SAMHD1 dNTPase Activity and Nucleic Acid Binding.
Egleston, M.; Dong, L.; Howlader, A. H.; Bhat, S.; Orris, B.; Bianchet, M.; Greenberg, M. M.; Stivers, J. T. *ACS Chem. Biol.* doi.org/10.1021/acscchembio.3c00118.
237. Synergistic Effects on the Mutagenicity of Tandem Lesions Containing 8-Oxo-7,8-dihydro-2'-deoxyguanosine or Fapy•dG Flanked by a 3' 5-Formyl-2'-deoxyuridine in Human Cells.
Bacurio, J. H.; Gao, S.; Yang, H.; Basu, A. K.; Greenberg, M. M. *DNA Repair* **2023**, *129*, 103527.

Invited Reviews and Book Chapters

- Investigating Nucleic Acid Damage Processes Via Independent Generation of Reactive Intermediates.
Greenberg, M. M. *Chem. Res. Toxicol.* **1998**, *11*, 1235.
- The Chemistry of DNA Damage
Greenberg, M. M. in *Comprehensive Natural Products Chemistry, Vol. VII, DNA and Aspects of Molecular Biology*; Editor: E. T. Kool; Pergammon Press, Oxford, 1999, pp. 371-426.
- Attachment of Reporter and Conjugate Groups to the 3'-Termini of Oligonucleotides.
Greenberg, M. M. in *Current Protocols in Nucleic Acid Chemistry, Supplement 2*, Editors: Beaucage, S. L.; Bergstrom, D.; Glick, G.; Jones, R.; John Wiley & Sons, New York, 2000. (PMID: 18428852)
- In Vitro and In Vivo Effects of Oxidative Damage to Deoxyguanosine.
Greenberg, M. M. *Biochemical Society Transactions* **2004**, *32*, 46.
- Elucidating DNA Damage and Repair Processes by Independently Generating Reactive and Metastable Intermediates.
Greenberg, M. M. *Org. & Biomol. Chem.* **2007**, *5*, 18-27. (PMID: 17164902)
- Pyrimidine Nucleobase Radical Reactivity.
Greenberg, M. M. In *Reactive Intermediates in Chemistry and Biology: Radical and Radical Ion Reactivity in Nucleic Acid Chemistry*. Greenberg, M. M., Editor; John Wiley & Sons, Hoboken, 2009.
- The Formamidopyrimidines: Purine Lesions Formed in Competition With 8-Oxopurines From Oxidative Stress.
Greenberg, M. M. *Acc. Chem. Res.* **2012**, *45*, 588-597. (PMC: 3292677)
- Biologically Relevant Oxidants and Terminology, Classification and Nomenclature of Oxidatively Generated Damage to Nucleobases and 2-Deoxyribose in Nucleic Acids.

- Cadet, J.; Loft, S.; Olinski, R.; Evans, M. D.; Bialkowski, K.; Wagner, J. R.; Dedon, P. C.; Moller, P.; Greenberg, M. M.; Cooke, M. S. *Free Rad. Res.* **2012**, *46*, 367-381. (PMC: 3864884)
9. Abasic and Oxidized Abasic Site Reactivity in DNA: Enzyme Inhibition, Cross-linking, and Nucleosome Catalyzed Reactions.
Greenberg, M. M. *Acc. Chem. Res.* **2014**, *47*, 646-655. (PMC: 3944396)
 10. Looking Beneath the Surface to Determine What Makes DNA Damage Deleterious.
Greenberg, M. M. *Current Opinion in Chemical Biology* **2014**, *21*, 48-55. (PMC: 4149920)
 11. Reactivity of Nucleic Acid Radicals.
Greenberg, M. M. *Advances in Physical Organic Chemistry* **2016**, *50*, 119-202. (PMC: 5435387)
 12. Pyrimidine Nucleobase Radical Reactivity in DNA and RNA.
Greenberg, M. M. *Radiation Physics and Chemistry* **2016**, *128*, 82-91. (PMC: 5087805)
 13. Tandem and Clustered Lesions from Radicals in Nucleic Acids from a Single Initial Chemical Event.
Greenberg, M. M. In *DNA Damage, Repair and Disease: Volume 1*, Editors: Dizdaroglu, M. and Lloyd, R. S.; Royal Society of Chemistry, **2021**, pp. 27-60.
 14. Participation of Histones in DNA Damage and Repair Within Nucleosome Core Particles: Mechanism and Applications.
Ren, M.; Greenberg, M. M.; Zhou, C. *Acc. Chem. Res.* **2022**, *55*, 1059-1073. (PMC: 8983524)

Books Edited

1. *Reactive Intermediates in Chemistry and Biology: Radical and Radical Ion Reactivity in Nucleic Acid Chemistry*. John Wiley & Sons, Hoboken, 2009.

Nonrefereed Manuscripts

1. Synthesis and Characterization of Oligonucleotides Containing Formamidopyrimidine Lesions (Fapy•dA, Fapy•dG) at Defined Sites.
Haraguchi, K.; Delaney, M. O.; Wiederholt, C. J.; Sambandam, A.; Hantosi, Z.; Greenberg, M. M. *Nucleic Acids Research Supplement No. 1* **2001**, 129.
2. DNA Interstrand Cross-Links From Modified Nucleotides: Mechanism and Application.
Greenberg, M. M. *Nucleic Acids Research Symposium Series No. 49* **2005**, 57.
3. Mechanistic Studies and Applications of DNA Damage Using Nucleotide Probes.
Greenberg, M. M. *Collection Symposium Series: Chemistry of Nucleic Acid Components* **2008**, *10*, 17-24.
4. Recommendations for Standardized Description of and Nomenclature Concerning Oxidatively Damaged Nucleobases in DNA.
Cooke, M. S.; Loft, S.; Olinski, R.; Evans, M. D.; Bialkowski, K.; Wagner, J. R.; Dedon, P.

C.; Møller, P.; Greenberg, M. M.; Cadet, J. *Chem. Res. Toxicol.* **2010**, *23*, 705-707. (PMID: 20235554)

5. Jerome A. Berson 1924-2017; Biographical Memoirs; National Academy of Sciences; 2021. Bergman, R.; Greenberg, M. <http://www.nasonline.org/publications/biographical-memoirs/memoir-pdfs/berson-jerome.pdf>

Plenary and Award Lectures:

- 28th Annual Nucleic Acids Symposium; Yokohama, Japan; November 7-9, 2001.
5th Cambridge Symposium Nucleic Acids Chemistry and Biology; Cambridge, England; August 31 – September 3, 2003.
Lubomir S. Hnilica Memorial Lecture; Department of Biochemistry; Vanderbilt University School of Medicine; Nashville, TN; June 9, 2005.
4th International Symposium on Nucleic Acids Chemistry; Fukuoka, Japan; September 20-22, 2005.
14th Symposium on Chemistry of Nucleic Acid Components; Cesky Krumlov; Czech Republic; June 8-12, 2008.
Keynote Speaker, Chemistry-Biology Interface Program Symposium; Ohio State University; Columbus, OH; April 7-8, 2009.
Dean's Speakers Series in Chemical Biology; SUNY Binghamton; Binghamton, NY; April 12, 2013
Keynote Speaker: 16th International Congress of Radiation Research (ICRR); Manchester, England; August 25-29, 2019.
Keynote Speaker: 7th Elemental Organic Chemistry Symposium; Tianjin, China; July 10-11, 2021.
Presidential Symposium; 67th Annual International Meeting, Radiation Research Society; San Juan, Puerto Rico; October 3 -6, 2021.

Invited Presentations:

- Department of Chemistry, Adams State College; Alamosa, CO; January 21, 1992.
Physical Organic Chemistry Gordon Research Conference; Plymouth, NH; June 1993. (short talk)
National Science Foundation Workshop in Organic Synthesis and Natural Product Chemistry; Flat Rock, NC; July 13-17, 1994.
Merck Research Laboratories; Rahway, NJ; October 11, 1994.
Ciba Geigy; Pharmaceuticals Division; Summit, NJ; October 12, 1994.
Department of Chemistry, State University of New York at Stonybrook; Stonybrook, NY; October 13, 1994.
Jerome A. Berson Symposium, Yale University; New Haven, CT; October 14, 1994.
Department of Chemistry, Syracuse University; Syracuse, NY; November 3, 1994.
Department of Chemistry, University of Rochester; Rochester, NY; November 4, 1994.
Department of Chemistry, University of Colorado at Boulder; Boulder, CO; November 28, 1994.
Department of Chemistry, University of Wyoming; Laramie, WY; December 2, 1994.
Department of Chemistry, University of Missouri-Columbia; Columbia, MO; December 7, 1994.
Department of Chemistry, University of Kansas; Lawrence, KS; December 8, 1994.
Department of Chemistry, Florida State University; Tallahassee, FL; March 6, 1995.
Department of Chemistry, Furman University; Greenville, SC; March 7, 1995.
Department of Chemistry, Emory University; Atlanta, GA; March 8, 1995.

Department of Chemistry, Georgia Institute of Technology; Atlanta, GA; March 9, 1995.
Department of Chemistry, University of Florida; Gainesville, FL; March, 10, 1995.
Department of Chemistry, Ohio State University; Columbus, OH; March 16, 1995.
Department of Chemistry, University of Pittsburgh; Pittsburgh, PA; March 17, 1995.
Department of Chemistry, Wayne State University; Detroit, MI; March 27, 1995.
Parke-Davis Pharmaceuticals; Ann Arbor, MI; March 28, 1995.
Department of Chemistry, Michigan State University; East Lansing, MI; March 29, 1995.
Scripps Research Institute; La Jolla, CA; March 31, 1995.
Department of Chemistry, University of California at San Diego; San Diego, CA; April 10, 1995.
Department of Chemistry, University of California at Irvine; Irvine, CA; April 12, 1995.
Department of Chemistry, University of California at Los Angeles; Los Angeles, CA; April 13, 1995.
Department of Chemistry, Utah State; Logan, UT; May 24, 1995.
Department of Chemistry, University of Utah; Salt Lake City, UT; May 25, 1995.
Northwest and Rocky Mountain Region American Chemical Society; Symposium on Reactive Intermediates; Park City, UT; June 14-17, 1995.
Colorado Center for RNA Chemistry Minisymposium; University of Colorado at Boulder; Boulder, CO; June 20, 1995.
National Science Foundation Workshop on Reactive Intermediates; Tahoe, CA; August 19-23, 1995.
Department of Chemistry, University of California at Berkeley; Berkeley, CA; April 23, 1996.
Department of Chemistry, Stanford University; Palo Alto, CA; April 24, 1996.
Department of Chemistry, Santa Clara University; Santa Clara, CA; April 25, 1996.
Department of Chemistry, Louisiana State University; Baton Rouge, LA; October 31, 1996.
Beckman Research Institute of the City of Hope; Duarte, CA; November 18, 1996.
Free Radical Reactions Gordon Research Conference; Holderness School, NH; July 13-18, 1997.
Department of Chemistry, Vanderbilt University; Nashville, TN; August 19-20, 1997.
Colorado RNA Minisymposium; Boulder, CO; September 23, 1997.
BioStar Inc.; Boulder, CO; October 27, 1997.
Symposium on Reactive Intermediates; Fifth Chemical Congress of North America; Cancun, Mexico; November 11-15, 1997.
Department of Chemistry, Texas Tech University; Lubbock, TX; January 28, 1998.
Department of Chemistry, Cornell University; Ithaca, NY; February 16, 1998.
Department of Chemistry, Mississippi State University; Hattiesburg, MS; February 26, 1998.
Department of Chemistry, University of Alabama; Tuscaloosa, AL; February 27, 1998.
Department of Chemistry, Texas A & M University; College Station, TX; April 23, 1998.
Department of Chemistry, University of Denver; Denver, CO; November 5, 1998.
Boston University (Department Colloquium); Boston, MA; November 9, 1998.
University of Pittsburgh (Department Colloquium); Pittsburgh, PA; November 16, 1998.
University of Chicago (Department Colloquium); Chicago, IL; November 23, 1998.
Department of Chemistry, University of Illinois at Chicago; Chicago, IL; January, 19, 1999.
University of Missouri-Columbia (Department Colloquium); Columbia, MO; February 5, 1999.
Department of Chemistry, Rice University; Houston, TX; April 12, 1999.
Department of Chemistry, University of Houston; Houston, TX; April 13, 1999.
Department of Chemistry, University of Pennsylvania; Philadelphia, PA; May 14, 1999.
Dupont Central Research and Development; Wilmington, DE; May 20, 1999.
Twelfth Annual Colorado Biotechnology Symposium; Boulder, CO; September 14, 1999.

2000 Annual Meeting of the Radiation Research Society; Albuquerque, NM; April 29-May 3, 2000.
Reaction Mechanisms Conference; Madison, WI; June 24-29, 2000.
Thirteenth Annual Colorado Biotechnology Symposium; Ft. Collins, CO; September 14, 2000.
Department of Chemistry, University of Maryland; College Park, MD; November 9, 2000.
Department of Chemistry, New York University (Department Colloquium); New York, NY; November 17, 2000.
Miller Conference on Radiation Chemistry; Windermere, England; April 7-12, 2001.
Department of Chemistry, Johns Hopkins University; Baltimore, MD; June 5, 2001.
Chemical Mechanisms of Oxidative DNA Damage and Repair; 222nd National Meeting of the American Chemical Society; Chicago, Illinois; August 29th, 2001
VIIth International Workshop Radiation Damage to DNA; Orléans-Nouan le Fuzelier, France; September 2-7, 2001.
Tokyo Medical and Dental University; Tokyo, Japan; November 5, 2001.
Nagoya University; Nagoya, Japan; November 6, 2001.
Department of Chemistry, Clemson University; Clemson, SC; April 18, 2002.
Department of Chemistry, Emory University; Atlanta, GA; April 19, 2002.
Department of Chemistry, North Carolina State University; Raleigh, NC; December 6, 2002
Department of Biochemistry, Albert Einstein Medical School; Bronx, NY; January 14, 2003.
National Institutes of Health, Institute of Aging, Baltimore, MD; February 28, 2003.
NIEHS Sealy Center, University of Texas Medical Branch, Galveston, TX; March 3, 2003.
Department of Chemistry, Wake Forest University; Winston-Salem, NC; March 26, 2003.
Department of Chemistry and Chemical Biology, Stevens Institute of Technology; Hoboken, NJ; September 17, 2003.
Department of Chemistry, Duke University; Durham, NC; October 17, 2003.
Department of Chemistry, Ohio State University; Columbus, OH; November 13, 2003.
Department of Chemistry and Biochemistry; Ohio University; Athens, OH; November 14, 2003.
Department of Chemistry, University of Pennsylvania; Philadelphia, PA; December 8, 2003.
Center in Molecular Toxicology, Vanderbilt University; Nashville, TN; January 23, 2004.
Department of Chemistry, University of California at Riverside; Riverside, CA; March 3, 2004.
Baltimore Area Repair Symposium; Towson, MD; March 17, 2004.
Department of Chemistry, College of the Holy Cross; Worcester, MA; April 2, 2004.
Department of Chemistry, University of Illinois; Urbana-Champaign, IL; April 15, 2004.
Department of Chemistry; Salisbury University; September 23, 2004.
Department of Chemistry; George Mason University; September 30, 2004.
Department of Biochemistry and Molecular Biology; Johns Hopkins University School of Public Health; November 15, 2004.
Department of Chemistry; Stanford University; Palo Alto, CA; February 2, 2005.
Frontiers in Bio-organic Chemistry and Chemical Biology; 229th National American Chemical Society Meeting; San Diego, CA; March 14, 2005.
Department of Biochemistry & Molecular Biology; Penn State College of Medicine; Hershey, PA; April 4, 2005.
David I. Schuster Chemistry Symposium; New York University; New York, NY; June 3, 2005.
The Chemistry of Mutagenesis; 230th National American Chemical Society Meeting; Washington, D.C.; August 28, 2005.
Department of Chemistry; Fairmont State University; Fairmont, WV; November 29, 2005.
Department of Chemistry; Drexel University; Philadelphia, PA; January 18, 2006.
Department of Chemistry; Oakland University; Rochester, MI; January 26, 2006.

Department of Chemistry; Wayne State University; Detroit, MI; January 27, 2006.

Department of Chemistry & Biochemistry; University of Maryland Baltimore County; Baltimore, MD; March 14, 2006.

Division of Medicinal Chemistry-Division of Molecular Pharmaceutics; School of Pharmacy; University of North Carolina-Chapel Hill; Chapel Hill, NC; March 22, 2006.

IXth International Workshop Radiation Damage to DNA; Tekirova, Turkey; May 14-18, 2006.

Radicals in the Rockies V; Telluride Scientific Research Conferences; Telluride, CO; July 17-21, 2006.

Department of Medicinal Chemistry; University of Minnesota; Minneapolis, MN; September 19, 2006.

Presidential Symposium, 34th National Radiation Research Society Meeting; Philadelphia, PA; November 7, 2006.

Chemical Biology Conversations; New York Academy of Sciences; New York, NY; November 9, 2006.

Gordon Research Conference on Radicals and Radical Ions in Chemistry and Biology; Holderness School, Plymouth, NH; July 1–5, 2007.

13th International Congress of Radiation Research; San Francisco, CA; July 8-12, 2007.

DNA-Based Biomarkers; 234th National American Chemical Society Meeting; Boston, MA; August 19, 2007.

Department of Chemistry; Wilkes University; Wilkes-Barre, PA; September 26, 2007.

3rd Baltimore Area Repair Symposium; Baltimore, MD; March 27, 2008.

Morgan State University; Baltimore, MD; April 10, 2008.

Department of Pharmacology; Case Western Reserve University; Cleveland, OH; May 13, 2008.

2008 Telluride Workshop on Nucleic Acid Chemistry; Telluride, CO; August 3-8, 2008.

Department of Chemistry; Roanoke College; Salem, VA; October 3, 2008.

Department of Chemistry; University of Bern; Bern, Switzerland; January 16, 2009.

8th Winter Research Conferences Oxidative DNA Damage: From Chemical Aspects to Biological Consequences; Les Houches, France; January 18-23, 2009.

Department of Chemistry Colloquium; Duke University; Durham, NC; March 3, 2009.

Organic Free Radicals Ottawa 2009; University of Ottawa; Ottawa, Canada; July 26 – 30, 2009.

2009 Eli Lilly Award in Biological Chemistry Symposium; 238th National American Chemical Society Meeting; Washington, D.C.; August 19, 2009.

Complex DNA Damage: From Theory to Biological Consequences; 55th Annual Meeting of the Radiation Research Society; Savannah, GA; October 4-7, 2009.

Department of Chemistry; The College of William and Mary; Williamsburg, VA; November 13, 2009.

Department of Chemistry; Northwestern University; Evanston, IL; January 14, 2010.

Department of Chemistry; College of Staten Island, City University of New York; New York, NY; February 17, 2010.

Department of Chemistry; William Paterson University; Wayne, NJ; February 18, 2010.

Department of Chemistry; Ruprecht-Karls Universität Heidelberg; Heidelberg, Germany; May 7, 2010.

Evolving DNA Polymerases: Chemistry Meets Biology; Centro Stefano Franscini, Monte Verità; Switzerland; May 9-14, 2010.

NSF Workshop in the Chemical Sciences, Nucleic Acid Chemistry – Core of Living Systems; Atlanta, GA; May 24-28, 2010.

2010 Telluride Workshop on Nucleic Acid Chemistry; Telluride, CO; August 2-6, 2010.

Effects of Ionizing Radiation on Nucleic Acids: Inspiration for Analytical and Mechanistic Investigations; 56th Annual Meeting of the Radiation Research Society; Maui, HI; September 26-29, 2010.

Department of Chemistry; The College of New Jersey; Ewing, New Jersey; December 1, 2010.

Department of Chemistry Colloquium; Brown University; Providence, RI; April 15, 2011.

Department of Chemistry Colloquium; University of Maryland; College Park, MD; September 23, 2011.

Department of Chemistry; Frostburg State University; Frostburg, MD; October 20, 2011.

Department of Chemistry Colloquium; New York University; New York, NY; November 4, 2011.

Department of Chemistry; McDaniel College; Westminster, MD; February 10, 2012.

Institut Für Chemie Humboldt-Universität zu Berlin; Berlin, Germany; March 7, 2012.

Department of Chemistry; Phillips University – Marburg; Marburg, Germany; March 9, 2012.

9th Winter Research Conference, Oxidative DNA Damage and Repair: Chemistry and Biology, Health Consequences and Applications; Les Houches, France; March 11-16, 2012.

Department of Chemistry; Carnegie Mellon University; April 12, 2012.

2012 Telluride Workshop on Nucleic Acid Chemistry; Telluride, CO; July 30-August 3, 2012.

Beckwith Memorial Symposium on Free Radical Chemistry; 244th National American Chemical Society Meeting; Philadelphia, PA, August 19-23, 2012.

Chemical Research in Toxicology Young Investigator Award Symposium in honor of Professor Yinsheng Wang; 244th National American Chemical Society Meeting; Philadelphia, PA, August 19-23, 2012.

4th EuCheMS Chemistry Congress; Prague, Czech Republic; August 26-30, 2012.

Department of Chemistry; Ludwig-Maximilians-Universität; Munich, Germany; August 31, 2012.

58th Annual Meeting of the Radiation Research Society; Rio Del Mar, Puerto Rico; September 29 - October 3, 2012.

Department of Chemistry; North Carolina A & T State University; Greensboro, NC; October 16, 2012.

Department of Chemistry; Elizabeth City State University; Elizabeth City, NC; October 17, 2012.

Department of Chemistry; University of Cincinnati; Cincinnati, OH; November 16, 2012.

Department of Biochemistry; University of Maryland School of Medicine; Baltimore, MD; March 4, 2013.

Department of Biochemistry and Molecular Biology; Bloomberg School of Public Health, Johns Hopkins University; Baltimore, MD; April 1, 2013.

Department of Chemistry; Indiana University Purdue University of Indiana; Indianapolis, IN; April 24, 2013.

Technology Center for Networks and Pathways of Lysine Modification; School of Medicine, Johns Hopkins University; May 14, 2013.

6th Pacific Symposium on Radical Chemistry; Vancouver, Canada; June 16 - 20, 2013.

Gordon Research Conference, Nucleosides, Nucleotides, and Oligonucleotides; Salve Regina College, June 30 – July 5, 2013.

59th Annual Meeting of the Radiation Research Society; New Orleans, LA; September 15 - 18, 2013.

Department of Chemistry & Biochemistry; Florida International University; Miami, FL; April 4, 2014.

Department of Chemistry; University of Georgia; Athens, GA; April 24, 2014.

XIIIth International Workshop on Radiation Damage to DNA; Cambridge, MA; June 14-18, 2014.

22nd IUPAC International Conference on Physical Organic Chemistry; Ottawa, CA; August 10-15, 2014.

Department of Chemistry; Colby College; Waterville, ME; October 10, 2014.

Department of Chemistry; Sweet Briar College; Sweet Briar, VA; November 12, 2014.

ACS-Kanawha Valley and Central Ohio Valley Sections; Huntington, WV; November, 17, 2014.

Department of Chemistry; West Virginia State University; Charleston, WV; November 18, 2014.

Tri-Institutional Chemical Biology Seminar Series; Memorial Sloan-Kettering Cancer Center; New York, NY; January 13, 2015.

Department of Chemistry; St. John's University; New York, NY; March 12, 2015.

Division of Organic Chemistry; Symposium in honor of Professor Eric Kool, recipient of the Ronald Breslow Award in Biomimetic Chemistry; 249th National American Chemical Society Meeting; Denver, CO, March 22, 2015.

Institute for Biophysical Research; Department of Biophysics and Biophysical Chemistry; Johns Hopkins University; Baltimore, MD; April 1, 2015.

61st Annual Meeting of the Radiation Research Society; Weston, FL; September 19 - 22, 2015.

Department of Chemistry; University of Ottawa; Ottawa, CA; February 2, 2016.

7th Baltimore Area Repair Symposium; University of Maryland School of Medicine; Baltimore, MD; March 4, 2016.

Department of Chemistry; St. Francis University; Loretto, PA; March 18, 2016.

Division of Chemical Toxicology; Chemical Research in Toxicology Young Investigator Award Symposium in honor of Professor Yimon Aye; 252nd National American Chemical Society Meeting; Philadelphia, PA, August 21, 2016.

Division of Organic Chemistry; Arthur C. Cope Symposium; 252nd National American Chemical Society Meeting; Philadelphia, PA, August 23, 2016.

Department of Chemistry; University of California – Davis; Davis, CA; May 16, 2017.

International Symposium on Reactive Intermediates and Unusual Molecules (ISRIUM); Sorrento, Italy; June 18 – 22, 2017.

63rd Annual Meeting of the Radiation Research Society; Cancun, Mexico; September 19 - 22, 2017.

Department of Chemistry; Shippensburg St. University; Shippensburg, PA; November 3, 2017.

Division of Organic Chemistry; James Flack Norris Award in Physical Organic Chemistry; Symposium in Honor of Cynthia J. Burrows; 255th National American Chemical Society Meeting; New Orleans, LA; March 19, 2018.

XVth International Workshop on Radiation Damage to DNA; Aussois, France; May 27 – June 1, 2018.

Pharmaron Inc.; Beijing, China; July 19, 2018.

Department of Pharmaceutical Sciences; Peking University; Beijing, China; July 20, 2018.

Department of Chemistry; Beijing Normal University; Beijing, China; July 20, 2018.

Department of Chemistry; Nankai University; Tianjin, China; July 24, 2018.

Department of Chemistry; Wuhan University; Wuhan, China; July 31, 2018.

Department of Chemistry; Huazhong Agricultural University; Wuhan, China; July 31, 2018.

Department of Chemistry; Nanjing University; Nanjing, China; August 3, 2018.

2019 Mesilla Chemistry Workshop on Protein-Nucleic Acid Interactions; Mesilla, New Mexico; February 10 - 12, 2019.

Department of Chemistry and Biochemistry; Bloomsburg University of Pennsylvania; Bloomsburg, PA; October 4, 2019.

Department of Chemistry; St. John Fisher College; Rochester, NY; October 10, 2019.
Department of Chemistry; SUNY Geneseo; Geneseo, NY; October, 11, 2019.
Department of Chemistry; University of California – Riverside; Riverside, CA; November 1, 2019.
65th Annual Meeting of the Radiation Research Society; San Diego, CA; November 3 - 6, 2019.
Department of Chemistry; New York University; New York, NY; January 31, 2020.
Department of Chemistry; University of North Carolina – Wilmington; Wilmington, NC; September 24, 2021.
Department of Chemistry; Oakland University; Rochester, MI; March 23, 2022.
3rd International Conference on Ionizing Processes; Idaho National Laboratory Center for Radiation Chemistry Research; July 11-14, 2022.
2022 Telluride Workshop on Nucleic Acid Chemistry; Telluride, CO; July 25-29, 2022.
Tom Tullius 70th Birthday Symposium; Department of Bioinformatics; Boston University; September 30, 2022.
Department of Chemistry and Biochemistry; University of Delaware; Newark, DE; October 17, 2022.
Laboratoire de Chimie, CNRS ENS de Lyon; Lyon, France; March 16, 2023.
CEA (Department of Atomic Energy and Alternative Energies) Grenoble; Grenoble, France; March 17, 2023.

Invited Participation at Conferences:

Session Chair, American Chemical Society Division of Organic Chemistry, 205th ACS National Meeting, Denver, CO, March 1993.
Session Chair, Physical Organic Chemistry Gordon Research Conference, Plymouth NH, July 1993.
Session Chair, American Chemical Society Division of Organic Chemistry, 209th ACS National Meeting, Anaheim CA, April 1995.
Session Chair, Free Radical Reactions Gordon Research Conference, Plymouth NH, July 1995.
4th Annual German-American Frontiers of Science Symposium, Co-sponsored by the U.S. National Academy of Sciences, Alexander Von Humboldt Foundation, and the Max Planck Society; Arnold and Mabel Beckman Center, Irvine, CA; June 4-6, 1998.
Vice Chairperson, Free Radical Reactions Gordon Research Conference, Plymouth NH, July 1999.
Chairperson, Free Radical Reactions Gordon Research Conference, Plymouth NH, July 2001.
Governing Board, Reaction Mechanisms Conference (2004-2008).
Organizing Committee, David I. Schuster Chemistry Symposium; New York University; New York, NY; June 3, 2005.
International Scientific Committee, IXth International Workshop on Radiation Damage to DNA; Tekirova, Turkey; May 14-18, 2006.
Co-Organizer, 1st Frontiers at the Chemistry and Biology Interface Symposium; University of Maryland College Park, MD; April 12, 2008.
Co-Founder and Co-Organizer, 2008 Telluride Workshop on Nucleic Acid Chemistry; Telluride, CO; August 3-9, 2008.
Organizer of Jerome A. Berson Tribute Session at Reaction Mechanisms Conference; Amherst, MA; June 23-27, 2010.
Co-Organizer, 2010 Telluride Workshop on Nucleic Acid Chemistry; Telluride, CO; August 2-6, 2010.

Program Committee, 56th Annual Meeting of the Radiation Research Society; Maui, HI; September 25-29, 2010.

Organizer, 2012 Telluride Workshop on Nucleic Acid Chemistry; Telluride, CO; July 30-August 3, 2012.

Session Chair, 58th Annual Meeting of the Radiation Research Society: Rio Del Mar, Puerto Rico; September 29- October 3, 2012.

International Scientific and Program Committee, XIIIth International Workshop on Radiation Damage to DNA; Boston, MA; June 14-18, 2014.

Co-Organizer, Jerome A. Berson Memorial; Yale University; New Haven, CT; April 15, 2019.

Submitted Presentations at Meetings:

1. Mechanistic Studies of DNA Damage Via Independent Generation of Reactive Intermediates.
Barvian, M. R.; Greenberg, M. M. *American Chemical Society Division of Organic Chemistry*, 203rd ACS National Meeting, San Francisco, CA, April 1992.
2. Independent Generation of the Predominant Reactive Intermediate Formed Upon Reaction Between Hydroxyl Radical and Thymidine.
Barvian, M. R.; Greenberg, M. M. *CU-Syntex Symposium*, Boulder, CO, June 1992.
3. Structural Effects on Cyclopropylmethyl Radical Equilibria.
Venkatesan, H.; Greenberg, M. M. *American Chemical Society Division of Organic Chemistry*, 204th ACS National Meeting, Washington, DC, August 1992.
4. Diastereoselective Synthesis of the Major Products Resulting From the Interaction Between Ionizing Radiation and Thymidine.
Barvian, M. R.; Greenberg, M. M. *American Chemical Society Division of Organic Chemistry*, 205th ACS National Meeting, Denver, CO, March 1993.
5. Photochemical Cleavage of Oligonucleotides from Solid Phase Supports.
Gilmore, J. L.; Greenberg, M. M. *American Chemical Society Division of Organic Chemistry*, 205th ACS National Meeting, Denver, CO, March 1993.
6. Generation and Study of Reactive Intermediates Involved in Nucleic Acid Cleavage Processes. Free Radical Reactions Gordon Research Conference, July 1993.
7. Reactivity of the Adducts of Hydroxyl Radical and Pyrimidine Nucleosides.
Barvian, M. R.; Greenberg, M. M. *American Chemical Society Division of Organic Chemistry*, 206th ACS National Meeting, Chicago, IL, August 1993.
8. Studies on the Mechanism of UV-Sensitization of DNA Damage by 5-Bromodeoxyuridine.
Cook, G. P.; Greenberg, M. M. *American Chemical Society Division of Organic Chemistry*, 206th ACS National Meeting, Chicago, IL, August 1993.
9. Independent Generation and Study of the Major Adduct of Thymidine and Hydrogen Atom.
Barvian, M. R.; Greenberg, M. M. *American Chemical Society Division of Organic Chemistry*, 206th ACS National Meeting, Chicago, IL, August 1993.
10. Mechanistic Studies of Nucleic Acid Damage
Greenberg, M. M. *Bioorganic Gordon Research Conference*, June 1994.
11. Orthogonal Linkers in Oligonucleotide Synthesis
Greenberg, M. M. *Bioorganic Gordon Research Conference*, June 1994.
12. Regioselectivity of the Rearrangement of a Conformationally Constrained-Cyclopropyl Benzyl Radical.
Venkatesan, H.; Greenberg, M. M. *American Chemical Society Division of Organic Chemistry*, 208th ACS National Meeting, Washington, D.C., August 1994.

13. Orthogonal Linkers in Oligonucleotide Synthesis.
Yoo, D. J.; Greenberg, M. M. American Chemical Society Division of Organic Chemistry, 208th ACS National Meeting, Washington, D.C., August 1994.
14. Independent Generation of Reactive Intermediates Involved in Nucleic Acid Damage Utilizing Norrish Type I Photochemistry.
Barvian, M. R.; Goodman, B. K.; Yoo, D. J.; Greenberg, M. M. American Chemical Society Division of Organic Chemistry, 208th ACS National Meeting, Washington, D.C., August 1994.
15. Incorporation of the Alkaline Labile, Oxidative Stress Product, 5R-5,6-Dihydro-5-hydroxythymidine in an Oligonucleotide.
Matray, T. J.; Greenberg, M. M. American Chemical Society Division of Organic Chemistry, 208th ACS National Meeting, Washington, D.C., August 1994.
Matray, T. J.; Greenberg, M. M. American Chemical Society Division of Organic Chemistry, 208th ACS National Meeting, Washington, D.C., August 1994.
16. Site Specific Generation and Reactivity of 5,6-Dihydrothymid-5-yl in Oligonucleotides.
Barvian, M. R.; Greenberg, M. M. American Chemical Society Division of Organic Chemistry, 209th ACS National Meeting, Anaheim, CA, April 1995.
17. Mechanistic Investigation of UV Sensitization of Nucleic Acid Strand Scission by 5-Bromodeoxyuridine.
Cook, G. P.; Greenberg, M. M. American Chemical Society Division of Organic Chemistry, 209th ACS National Meeting, Anaheim, CA, April 1995.
18. Mechanistic Studies of Radical Processes Involved in Nucleic Acid Damage. Greenberg, M. M. Free Radical Reactions Gordon Research Conference, July 1995.
19. Palladium Labile Oligonucleotide Synthesis Supports.
Matray, T. J.; Yoo, D. J.; Greenberg, M. M. American Chemical Society Division of Organic Chemistry, 211th ACS National Meeting, New Orleans, LA, March 1996.
20. Enzymatic Inhibition by Modified Forms of Thymidine.
Matray, T. J.; Greenberg, M. M. American Chemical Society Division of Organic Chemistry, 211th ACS National Meeting, New Orleans, LA, March 1996.
21. Investigation of Nucleic Acid Strand Scission Involving 5-Bromodeoxyuridine.
Cook, G. P.; Greenberg, M. M. CU-Syntex Symposium, Boulder, CO, May 1996
22. Bioconjugate Synthesis Using Protected Oligonucleotides.
McMinn, D. L.; Matray, T. J.; Greenberg, M. M. American Chemical Society Division of Organic Chemistry, 213th ACS National Meeting, San Francisco, April 1997.
23. Generation and Reactivity of Nucleoside Peroxyl Radicals.
Tallman, K. A.; Tronche, C.; Greenberg, M. M. American Chemical Society Division of Organic Chemistry, 216th ACS National Meeting, Boston, August 1998.
24. Nonphotochemical Electron Transfer Induced Decomposition of an Alkylphenyl Selenide by Tris[3-methoxyethoxy]propylstannane.
Tallman, K. A.; Greenberg, M. M. American Chemical Society Division of Organic Chemistry, 216th ACS National Meeting, Boston, August 1998.
25. Oxygen Transfer From Tirapazamine to DNA Radicals.
Fuchs, T. E.; Daniels, J. S.; Greenberg, M. M.; Gates, K. S. American Chemical Society Division of Chemical Toxicology, 216th ACS National Meeting, Boston, August 1998.
26. Investigation of Cation Radical Formation by Heterolysis β to a Radical Center.
Bales, B. ; Greenberg, M. M. American Chemical Society Division of Organic Chemistry, 219th ACS National Meeting, San Francisco, April 2000.
27. Independent Generation and Reactivity of the 5,6-Dihydro-2'-deoxyuridin-6-yl Radical.

- Carter, K. N.; Greenberg, M. M. American Chemical Society Division of Organic Chemistry, 221st ACS National Meeting, San Diego, April 2001.
28. Synthesis and Study of Homo-C-Nucleotide Analogues of Deoxyadenosine Formamidopyrimidine (Fapy•dA).
Delaney, M. O.; Greenberg, M. M. American Chemical Society Division of Organic Chemistry, 221st ACS National Meeting, San Diego, April 2001.
 29. The Repair and Mutagenesis of Formamidopyrimidines.
Wiederholt, C. J.; Delaney, J. C.; Essigmann, J. M.; Greenberg, M. M. Gordon Research Conference, Mutagenesis; August 2002.
 30. Biological Effects of 2-Deoxyribonolactone and the C4-Oxidized Abasic Site.
Kroeger, K. M.; Kow, Y. W.; Goodman, M. F.; Greenberg, M. M. Gordon Research Conference, Mutagenesis & Carcinogenesis; March 2004.
 31. The Biochemical Properties of *N*6-(2-Deoxy-D-pentofuranosyl)-6-diamino-5-formamido-4-hydroxypyrimidine (Fapy•dG).
Wiederholt, C. J.; Delaney, J. C.; Kalam, M. A.; Pope, M. A.; Basu, A. K.; Essigmann, J. M.; David, S. S.; Greenberg, M. M. National Organic Symposium, Salt Lake City, UT; June, 2005.
 32. Analysis of 2-Deoxyribonolactone in DNA Using Cysteine Conjugates.
Xue, L.; Sato, K.; Greenberg, M. M. 230th ACS National Meeting; Washington, DC, Aug 28-Sept 1, 2005.
 33. Efficient DNA Interstrand Cross-link Formation From a Nucleotide Radical.
Hong, I. S.; Ding, H.; Greenberg, M. M. 230th ACS National Meeting; Washington, DC, Aug 28-Sept 1, 2005.
 34. Biochemical Characterization of Formamidopyrimidine Lesions.
Patro, J. N.; Wiederholt, C. J.; Jiang, Y. L.; Haraguchi, K.; Greenberg, M. M. 230th ACS National Meeting; Washington, DC, Aug 28-Sept 1, 2005.
 35. Repair of Oxidized Guanines by OG Glycosylases.
Krishnamurthy, N.; Haraguchi, K.; Wiederholt, C. J.; Muller, J. G.; Burrows, C. J.; Greenberg, M. M.; David, S. S. 230th ACS National Meeting; Washington, DC, Aug 28-Sept 1, 2005.
 36. Interstrand Cross-link (ICL) Formation by the C4'-Oxidized Abasic Site in DNA.
Sczepanski, J. T.; Jacobs, A.; Greenberg, M. M. 236th ACS National Meeting, Philadelphia, PA, August 17-21, 2008.
 37. DNA Interstrand Cross-linking by Modified Nucleotides: Mechanism and Applications.
Peng, X.; Hong, I. S.; Greenberg, M. M. 236th ACS National Meeting, Philadelphia, PA, August 17-21, 2008.
 38. Replication of an Oxidized Abasic Site: The Structural Basis for Breaking the A-Rule.
Huang, H.; Greenberg, M. M. 236th ACS National Meeting, Philadelphia, PA, August 17-21, 2008.
 39. Formation of the 5,6-Dihydrouridin-6-yl Radical in RNA Results in Direct Strand Scission.
Resendiz, M. J.; Jacobs, A. C.; Greenberg, M. M.; 240th ACS National Meeting, Boston, MA, August 22-26, 2010.
 40. Processing of 8-Oxo-7,8-Dihydroguanine and 2-Deoxyribonolactone When Present Within a Clustered DNA Damage Site.
Cuniffe, S.; Shah, V.; O'Neill, P.; Greenberg, M. M.; Lomax, M.; 14th International Congress of Radiation Research, Warsaw, Poland, August 28 – September 1, 2011.
 41. Modified Thymidine for Imaging HSV1-TK Expression with CEST-MRI.

- Bar-Shir, A.; Liu, G.; Yadav, N. N.; McMahon, M. T.; Pomper, M. G.; Tallman, K. A.; Greenberg, M. M.; van Zijl, P. C.M.; Bulte, W. M. J.; Gilad, A. A.; 2011 World Molecular Imaging Congress, San Diego, CA, September 7-10, 2011.
42. Reactivities of Reactive Intermediates in Nucleosome Core Particle.
Weng, L.; Greenberg, M.; 244th ACS National Meeting, Philadelphia, PA, August 19-23, 2012.
 43. Rapid DNA Strand Scission at Abasic Sites in Nucleosome Core Particles.
Zhou, C.; Sczepanski, J. T.; Greenberg, M. M.; 244th ACS National Meeting, Philadelphia, PA, August 19-23, 2012.
 44. Interstrand DNA Cross-Link Formation from a Pyrimidine Cation Radical.
San Pedro, J. M. N.; Greenberg, M. M.; 244th ACS National Meeting, Philadelphia, PA, August 19-23, 2012.
 45. Interstrand DNA-DNA Cross-Link Generated by the Reaction of an Adenosine Residue with an Opposing Abasic Site in Duplex DNA.
Price, N.; Johnson, K.; Fekry, M.; Wong, R.; Greenberg, M. M.; Gates, K. S.; 244th ACS National Meeting, Philadelphia, PA, August 19-23, 2012.
 46. Probing For the Interactions Between Nucleosomal DNA and N-terminal Histone Tails Within a Nucleosome Core Particle.
Weng, L.; Greenberg, M. M.; 247th ACS National Meeting, Dallas, TX, March 16-20, 2014.
 47. Self-Catalyzed Modification of Histone Proteins in Nucleosome Core Particles Containing Damaged DNA.
Weng, L.; Greenberg, M. M.; 247th ACS National Meeting, Dallas, TX, March 16-20, 2014.
 48. Replication Dependent DNA Repair of DNA Interstrand Cross-Links by Human Translesion DNA Polymerases.
Xu, W.; Ghosh, S.; Ouellette, A.; Greenberg, M. M.; Zhao, L.; 250th ACS National Meeting, Boston, MA, August 16-20, 2015.
 49. Rapid RNA Cleavage From a C2' Radical.
Paul, R.; Greenberg, M. M.; Nucleosides, Nucleotide, and Oligonucleotides Gordon Research Conference; Newport, R.I.; July, 2015.
 50. Chemistry of Independently Generated Thymidine Radical Cation: DNA Hole Transfer and Other Competing Processes.
Sun, H.; Greenberg, M. M.; 254th ACS National Meeting, Washington, D.C., August 20-24, 2017.
 51. Abasic and Oxidized Abasic Lesion Bypass by DNA Polymerase Theta Yields One- and Two-Nucleotide Deletions.
Lavery, D.; Greenberg, M. M.; 254th ACS National Meeting, Washington, D.C., August 20-24, 2017.
 52. Independent Generation of 2'-Deoxyadenosine-N6-yl Radical and its Reactivity in DNA.
Zheng, L.; Greenberg, M. M.; 254th ACS National Meeting, Washington, D.C., August 20-24, 2017.
 53. Independent Generation of Neutral Purine Radicals Involved in DNA Damage.
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Invention Disclosures:

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2. Universal Orthogonal Linkers for Solid Phase Oligonucleotide Synthesis; April 1994. (Licensed by Glen Research Inc., Sterling VA.)
3. Universal Solid Phase Oligonucleotide Synthesis Supports for the Synthesis of Oligonucleotides Containing 3'-Alkyl Amines; June 1995. (Licensed by Glen Research Inc., Sterling VA.)
4. An Efficient Photolabile Solid Phase Oligonucleotide Synthesis Support that Releases Oligonucleotides Containing 3'-Hydroxyl Groups; June 1995.
5. Adaptation of o-Nitrobenzyl Photolabile Solid Phase Oligonucleotide Synthesis Supports to Commonly Available Irradiation Sources; August 1995.
6. Palladium Labile Orthogonal Solid Phase Oligonucleotide Synthesis Supports, November 1995. (Provisional Patent filed; First stage licensing by Research Corporation.)
7. Bioconjugate Formation of Protected Oligonucleotides Containing Alkyl Amines In Aprotic Solvents, November 1996. (Provisional Patent filed.)
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23. Extra- and Intracellular Selective, Covalent Inactivation of DNA Polymerase Beta. (Provisional patent application filed; May 17, 2021.)
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