

Curriculum Vitae

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Birth Date: July 24, 1946
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Marital Status: Married to Joanna B. Olmsted; one child, Richard
Military Status: Captain, U. S. Army Reserve, inactive

Education:

1967 Harvard College, A.B. cum laude in Chemistry
1972 Columbia University, Ph.D., Physical Chemistry,
Advisors, G. W. Flynn and N. Sutin (Brookhaven National Labs)
1973-74 University of California, Berkeley, Postdoctoral Fellow,
Biophysical Chemistry, with I. Tinoco, Jr.

Professional Experience:

1975-81 Assistant Professor of Chemistry, University of Rochester
1981-85 Associate Professor of Chemistry, University of Rochester
1986- Professor of Chemistry, University of Rochester
1999-09 Professor of Pediatrics, University of Rochester,
School of Medicine and Dentistry

Honors:

National Institutes of Health Predoctoral Fellowship	1968-1972
Alfred P. Sloan Fellow	1979-1983
NIH Senior Fellowship, University of Colorado, Boulder	1984-1985
Member, Biomedical Sciences Study Section, NIH	1984-1988
Member, Editorial Board of <i>Biophysical Journal</i>	1992-1995, 1997-2003
Guggenheim Fellow and American Cancer Society Scholar	1993-1994
Co-chair, Nucleic Acids Gordon Conference	1995
Member, BBKA Study Section, NIH	1995-1999
Member, Editorial Board of <i>Folding and Design</i>	1996-1998
Associate-director, University of Rochester M.D./Ph.D. Program	1998-2013
Bridging Fellowship to Department of Pediatrics, University of Rochester	1999
Fellow, American Association for the Advancement of Science	1999
Member, International Advisory Board of the Institute of Bioorganic Chemistry, Polish Academy of Sciences, Poznan	2002-
Member, Biomedical Research and Research Training Subcommittee A, NIH	2004-2008

Gordon Hammes Lectureship sponsored by the journal, <i>Biochemistry</i> , and the Biological Chemistry Section of the American Chemical Society	2011
University of Rochester Doctoral Commencement Award for Lifetime Achievement in Graduate Education	2014
American Association for the Advancement of Science Poland – US Science Award (shared with Ryszard Kierzek)	2016
Honorary member, Phi Beta Kappa, Harvard College	2017
Total publications exceed 250	2022
Total citations exceed 20,000 (H-index > 70)	2022
RNA Society / Cold Spring Harbor Laboratory Press Distinguished Research Mentor Award	2023

Publications

1. "The Stimulated Raman Effect. A New Source of Laser Temperature-Jump Heating," J. V. Beitz, G. W. Flynn, D. H. Turner, and N. Sutin, *J. Am. Chem. Soc.*, 92, 4130-4132 (1970).
2. "Laser Raman Temperature-Jump Study of the Kinetics of the Triiodide Equilibrium. Relaxation Times in the 10^{-7} - 10^{-8} Second Range," D. H. Turner, G. W. Flynn, N. Sutin, and J. V. Beitz, *J. Am. Chem. Soc.*, 94, 1554-1559 (1972).
3. "Dimerization of Proflavin by the Laser Raman Temperature-Jump Method," D. H. Turner, G. W. Flynn, S. K. Lundberg, L. D. Faller, and N. Sutin, *Nature*, 239, 215-217 (1972).
4. "Raman Laser Temperature-Jump Studies," Ph.D. Thesis, Columbia University (1972).
5. "Rate of Intersystem Crossing between 1A and 5A States of an Iron(II) Complex in Solution," J. K. Beattie, N. Sutin, D. H. Turner and G. W. Flynn, *J. Am. Chem. Soc.*, 95, 2052-2054 (1973).
6. "Fluorescence Detected Circular Dichroism," D. H. Turner, I. Tinoco, Jr., and M. Maestre, *J. Am. Chem. Soc.*, 96, 4340-4342 (1974).
7. "Kinetics of the Stacking of Ethidium Bromide by the Raman Laser Temperature-Jump Method," D. H. Turner, R. Yuan, G. W. Flynn and N. Sutin, *Biophysical Chemistry*, 2, 385-389 (1974).
8. "The Kinetics of Codon-Anticodon Interaction in Yeast Phenylalanine Transfer RNA," K. Yoon, D. H. Turner, and I. Tinoco, Jr., *J. Mol. Biol.*, 99, 507-518 (1975).
9. "Fluorescence Detected Circular Dichroism Study of the Anticodon Loop of Yeast tRNA^{Phe}," D. H. Turner, I. Tinoco, Jr., and M. Maestre, *Biochemistry*, 14, 3794-3799 (1975).
10. "Some Very Rapid Reactions of Porphyrins in Aqueous Solution," R. F. Pasternack, N. Sutin, and D. H. Turner, *J. Am. Chem. Soc.*, 98, 1908-1913 (1976).
11. "Fluorescence Detected Circular Dichroism. Theory," I. Tinoco, Jr. and D. H. Turner, *J. Am. Chem. Soc.*, 98, 6453-6456 (1976).
12. "The Kinetics of Binding of U-U-C-A to a Dodecanucleotide Anticodon Fragment from Yeast tRNA^{Phe}," K. Yoon, D. H. Turner, I. Tinoco, Jr., F. von der Haar, and F. Cramer, *Nucleic Acids Research*, 3, 2233-2241 (1976).
13. "Solvent Effects on Stacking: A Kinetic and Spectroscopic Study of Thionine Association in Aqueous Alcohol Solutions," T. G. Dewey, P. S. Wilson, and D. H. Turner, *J. Am. Chem. Soc.*, 100, 4550-4554 (1978).
14. "Fluorescence-Detected Circular Dichroism," D. H. Turner, *Methods in Enzymology*, Vol. 49G, ed. by C. H. W. Hirs and S. N. Timasheff, Chapter 8, Academic Press, 1978.
15. "Raman Laser Temperature-Jump Kinetics," T. G. Dewey and D. H. Turner, *Adv. Molec. Relaxation*, 13, 331-350 (1978).
16. "Comparative Biophysical Analysis of Monoclonal Cryo and Noncryoprecipitable IgG1, IgG2 and IgG3 Globulins," C. D. Scoville and D. H. Turner, *Fed. Proc.*, 37, 1853 (1978).

17. "Photoslected Fluorescence Detected Circular Dichroism," E. W. Lobenstine and D. H. Turner, *J. Am. Chem. Soc.*, 101, 2205-2207 (1979).
18. "Laser Temperature Jump Study of Solvent Effects on Proflavin Stacking," T. G. Dewey, D. A. Raymond,* and D. H. Turner, *J. Am. Chem. Soc.*, 101, 5822-5826 (1979).
19. "Spectroscopic and Kinetic Analysis of a Monoclonal IgG Cryoglobulin. Effect of Mild Reduction on Cryoprecipitation," C. D. Scoville, G. N. Abraham, and D. H. Turner, *Biochemistry*, 18, 2610-2615 (1979).
20. "Raman Laser Temperature Jump Study of Solvent Effects on Simple Stacking Systems," T. G. Dewey and D. H. Turner, "NATO Adv. Study Inst. Ser., Techniques and Applications of Fast Reactions in Solution," ed. by E. Wyn-Jones, D. Reidel, Pub., p. 235-238 (1979).
21. "Laser Temperature-Jump Study of Stacking in Adenylic Acid Polymers," T. G. Dewey and D. H. Turner, *Biochemistry*, 18, 5757-5762 (1979).
22. "Laser Temperature Jump Study of Solvent Effects on Poly (adenylic acid) Stacking," T. G. Dewey and D. H. Turner, *Biochemistry*, 19, 1681-1685 (1980).
23. "Study of the Kinetic and Structural Properties of a Monoclonal Immunoglobulin G Cryoglobulin," C. D. Scoville, D. H. Turner, J. L. Lippert, and G. N. Abraham, *J. Biol. Chem.*, 255, 5847-5852 (1980).
24. "Intersystem-Crossing Dynamics and Coordination Geometry Changes Observed by Ultrasonic and Laser Temperature-Jump Relaxation of the 2T_6A Spin Equilibrium of Hexadentate Iron (III) Complexes in Solution," R. A. Binstead, J. K. Beattie, T. G. Dewey and D. H. Turner, *J. Am. Chem. Soc.*, 102, 6442-6451 (1980).
25. "Further Verification of Fluorescence-Detected Circular Dichroism," E. W. Lobenstine and D. H. Turner, *J. Am. Chem. Soc.*, 102, 7786-7787 (1980).
26. "Thermodynamics of (dG-dC)₃ Double-Helix Formation in H₂O and D₂O," D. D. Albergo, L. A. Marky, K. J. Breslauer, and D. H. Turner, *Biochemistry*, 20, 1409-1413 (1981).
27. "Solvent Effects on Thermodynamics of Double-Helix Formation in (dG-dC)₃," D. D. Albergo and D. H. Turner, *Biochemistry*, 20, 1413-1418 (1981).
28. "Solvent Effects on the Kinetics and Thermodynamics of Stacking in Poly (cytidylic acid)," S. M. Freier, K. O. Hill, T. G. Dewey, L. A. Marky, K. J. Breslauer, and D. H. Turner, *Biochemistry*, 20, 1419-1426 (1981).
29. "Fluctuation in Optical Activity: A Probe of Fast Reactions Using Light Scattering," T. G. Dewey, D. H. Turner, and M. G. Sceats, *J. Chem. Phys.*, 74, 6592-6602 (1981).
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31. "Why Do Nucleic Acids Form Helices?" D. H. Turner, M. Petersheim, D. D. Albergo, T. G. Dewey, and S. M. Freier, in "Bimolecular Stereodynamics," ed. by R. H. Sarma, pp. 429-438 (1981).

32. "Laser Crosslinking of *E. coli* RNA Polymerase and T7 DNA," C. A. Harrison, D. H. Turner, and D. C. Hinkle, *Nucleic Acids Res.*, 10, 2399-2414 (1982).
33. "Base-Stacking and Pairing Contributions to Helix Stability: Thermodynamics of Double Helix Formation with CCGG, CCGGp, ACCGGp, CCGGAp CCGGUp, and ACCGGUp," M. Petersheim and D. H. Turner, *Biochemistry*, 22, 256-263 (1983).
34. "Nuclear Overhauser Studies of CCGGAp, ACCGGp, and ACCGGUp," M. Petersheim and D. H. Turner, *Biochemistry*, 22, 264-268 (1983).
35. "Proton Magnetic Resonance Melting Studies of CCGGp, CCGGAp, CCGGUp, ACCGGp, and ACCGGUp," M. Petersheim and D. H. Turner, *Biochemistry*, 22, 269-277 (1983).
36. "Solvent Effects on the Dynamics of (dG-dC)₃," S. M. Freier, D. D. Albergo, and D. H. Turner, *Biopolymers*, 22, 1107-1131 (1983).
37. "Effects of 3' Dangling End Stacking on the Stability of GGCC and CCGG Double Helices," S. M. Freier, B. J. Burger*, D. Alkema, T. Neilson, and D. H. Turner, *Biochemistry*, 22, 6198-6206 (1983).
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40. "Fluorescence-Detected Circular Dichroism of Ethidium in Vivo and Bound to Deoxyribonucleic Acid in Vitro," M. L. Lamos and D. H. Turner, *Biochemistry*, 24, 2819-2822 (1985).
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46. "Temperature-Jump Methods," D. H. Turner, in "Investigation of Rates and Mechanisms of Reactions, vol. VI, Part II," 4th edition, ed. by C. F. Bernasconi, Chapter 3, Techniques of Chemistry series, Wiley-Interscience, (1986).
47. "Fluorescence-Detected Circular Dichroism of Ethidium Bound to Poly(dG-dC) and Poly(dG-m⁵dC) under B- and Z-Form Conditions," M. L. Lamos, G. T. Walker, T. R. Krugh, and D. H. Turner, *Biochemistry*, 25, 687-691 (1986).
48. "Free Energy Contributions of G•U and Other Terminal Mismatches to Helix Stability," S. M. Freier, R. Kierzek, M. H. Caruthers, T. Neilson, and D. H. Turner, *Biochemistry*, 25, 3209-3213 (1986).
49. "Stability of XGCGCp, GCGCYp, and XGCGCYp Helices: An Empirical Estimate of the Energetics of Hydrogen Bonds in Nucleic Acids," S. M. Freier, N. Sugimoto, A. Sinclair, D. Alkema, T. Neilson, R. Kierzek, M. H. Caruthers, and D. H. Turner, *Biochemistry*, 25, 3214-3219 (1986).
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51. "Energetics of Internal GU Mismatches in Ribooligonucleotide Helices," N. Sugimoto, R. Kierzek, S. M. Freier, and D. H. Turner, *Biochemistry*, 25, 5755-5759 (1986).
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53. "Improved Free Energy Parameters for Prediction of RNA Duplex Stability," S. M. Freier, R. Kierzek, J. A. Jaeger, N. Sugimoto, M. H. Caruthers, T. Neilson, and D. H. Turner, *Proc. Natl. Acad. Sci. U.S.A.*, 83, 9373-9377 (1986). [by 9/2021 cited by 1900]
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56. "Sequence Dependence for the Energetics of Dangling Ends and Terminal Base Pairs in Ribonucleic Acid," N. Sugimoto, R. Kierzek, and D. H. Turner, *Biochemistry*, 26, 4554-4558 (1987).
57. "Sequence Dependence for the Energetics of Terminal Mismatches in Ribooligonucleotides," N. Sugimoto, R. Kierzek, and D. H. Turner, *Biochemistry*, 26, 4559-4562 (1987).
58. "RNA Structure Prediction," D. H. Turner, N. Sugimoto and S. M. Freier, *Ann. Rev. Biophysics and Biophysical Chem.*, 17, 167-192 (1988). [9/2012 cited by 846]
59. "Kinetics for Reaction of a Circularized Intervening Sequence with CU, UCU, CUCU, and CUCUCU: Mechanistic Implications from the Dependence on Temperature, and on Oligomer and Mg²⁺ Concentrations," N. Sugimoto, R. Kierzek, and D. H. Turner, *Biochemistry*, 6384-6392 (1988).

60. "Hydrogen Bonding and Stacking Contributions to Nucleic Acid Stability," D. H. Turner, N. Sugimoto, S. D. Dreiker, S. M. Freier, and R. Kierzek, in *Structure and Expression, Vol. 1: From Proteins to Ribosomes*, ed. by R. H. Sarma and M. H. Sarma, p. 249-259 (1988).
61. "Effects of Substrate Structure on the Kinetics of Circle Opening Reactions of the Self-Splicing Intervening Sequence from *Tetrahymena thermophila*: Evidence for Substrate and Mg^{2+} Binding Interactions," N. Sugimoto, M. Tomka*, R. Kierzek, P. Bevilacqua, and D. H. Turner, *Nucleic Acids Research*, 17, 355-371 (1989).
62. "Laser Temperature-Jump, Spectroscopic and Thermodynamic Study of Salt Effects on Duplex Formation by dGCATGC," A. P. Williams, C. E. Longfellow, S. M. Freier, R. Kierzek, and D. H. Turner, *Biochemistry*, 28, 4283-4291 (1989).
63. "Binding of a Fluorescent Oligonucleotide to a Circularized Intervening Sequence from *Tetrahymena thermophila*," N. Sugimoto, M. Sasaki, R. Kierzek, and D. H. Turner, *Chemistry Letters*, 2223-2226 (1989).
64. "Improved Predictions of Secondary Structures for RNA," J. A. Jaeger, D. H. Turner, and M. Zuker, *Proc. Natl. Acad. Sci. U.S.A.*, 86, 7706-7710 (1989).
65. "Predicting Optimal and Suboptimal Secondary Structure for RNA," J. A. Jaeger, D. H. Turner, and M. Zuker, *Methods in Enzymology*, Vol. 183, 280-305 (1990).
66. "Thermodynamic and Spectroscopic Study of Bulge Loops in Oligoribonucleotides," C. E. Longfellow, R. Kierzek, and D. H. Turner, *Biochemistry*, 29, 278-285 (1990).
67. "Thermodynamics and Kinetics of Base-Pairing and of DNA and RNA Self-Assembly and Helix-Coil Transition," D. H. Turner, N. Sugimoto, and S. M. Freier, in "Nucleic Acids," Vol. 1c by W. Saenger, Landolt-Bornstein series, Springer-Verlag, Berlin, p. 201-227 (1990).
68. "Effects of GA Mismatches on the Structure and Thermodynamics of RNA Internal Loops," J. SantaLucia, Jr., R. Kierzek, and D. H. Turner, *Biochemistry*, 29, 8813-8819 (1990).
69. "Melting and Chemical Modification of a Cyclized Self-Splicing Group I Intron: Similarity of Structures in 1 M Na^+ , in 10 mM Mg^{2+} , and in the Presence of Substrate," J. A. Jaeger, M. Zuker, and D. H. Turner, *Biochemistry*, 29, 10147-10158 (1990).
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73. "Stabilities of Consecutive A•C, C•C, G•G, U•C, and U•U Mismatches in RNA Internal Loops: Evidence for Stable Hydrogen Bonded U•U and C•C+ Pairs," J. SantaLucia, Jr., R. Kierzek, and

- D. H. Turner, *Biochemistry*, 30, 8242-8251 (1991).
74. "Comparison of Binding of Mixed Ribose-Deoxyribose Analogues of CUCU to a Ribozyme and to GGAGAA by Equilibrium Dialysis: Evidence for Ribozyme Specific Interactions with 2' OH Groups," P. C. Bevilacqua and D. H. Turner, *Biochemistry*, 30, 10632-10640 (1991).
 75. "Nearest Neighbor Parameters for GU Mismatches: 5'GU3' is Destabilizing in the Contexts CGUG UGUA, and AGUU, but Stabilizing in GGUC, " L. He, R. Kierzek, J. SantaLucia, Jr., GUGC' AUGU', UUGA', CUGG'," A. Walter, and D. H. Turner, *Biochemistry*, 30, 11124-11132 (1991).
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 77. "Association of 2'-5' Oligoribonucleotides," R. Kierzek, L. He, and D. H. Turner, *Nucleic Acids Res.*, 20, 1685-1690 (1992).
 78. "Bulges in Nucleic Acids," D. H. Turner, invited review for *Current Opinion in Structural Biology*, 2, 334-337 (1992).
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 81. "Thermodynamic Considerations for Evolution by RNA," D. H. Turner and P. C. Bevilacqua, invited chapter in *The RNA World*, ed. by R. F. Gesteland and J. F. Atkins, Cold Spring Harbor Press, p. 447-464 (1993).
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 83. "5' -Amino Pyrene Provides a Sensitive, Non-Perturbing Fluorescent Probe of RNA Secondary and Tertiary Structure Formation," R. Kierzek, D. H. Turner, Y. Li, and P. C. Bevilacqua, *J. Am. Chem. Soc.*, 115, 4985-4992 (1993).
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- Predictions,” Y. Lerman*, S. D. Kennedy, N. Shankar, M. Parisien, F. Major, and D. H. Turner, *RNA*, 17, 1664-1677 (2011).
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231. "Secondary Structure of a Conserved Domain in an Intron of Influenza A mRNA," T. Jiang, S. D. Kennedy, W. N. Moss, E. Kierzek, and D. H. Turner, *Biochemistry* 53, 5236-5248 (2014).
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235. "The Influenza A PB1-F2 and N40 Start Codons Are Contained within an RNA Pseudoknot," S. F. Priore, A. D. Kauffmann, J. R. Baman, and D. H. Turner, *Biochemistry* 54, 3413-3415 (2015).
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256. "Nuclear Magnetic Resonance Reveals a Two Hairpin Equilibrium near the 3'-Splice Site of Influenza A Segment 7 mRNA that can be Shifted by Oligonucleotides," A.D. Kauffmann, S.D. Kennedy, W.N. Moss, E. Kierzek, R. Kierzek, and D.H. Turner, *RNA* 28, 508-522. (2022).
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Research Support

American Chemical Society - Petroleum Research Fund, Type G Grant, "The Kinetics and Thermodynamics of Stacking Reactions", \$9,000, 1975-1977.

Research Corporation, "Fluorescence Detected Circular Dichroism Studies", \$16,790, 1975-1976.

National Science Foundation Department Equipment Grant, "Circular Dichroism Instrumentation", coauthored with T. R. Krugh, \$37,200, 1975-1976.

American Cancer Society Institutional Research Grant, "Sequence Specificity of Drug-Nucleic Acid Complexes", \$1,966, 1975-1976.

Alfred P. Sloan Fellowship, \$20,000, 1979-1983.

Biomedical Research Support Grant, "Laser Cross Linking of Nucleic Acids and Proteins, coauthored with D. C. Hinkle, \$5,000, 1979-1980.

National Institutes of Health, "Laser Cross Linking of Proteins and Nucleic Acids", \$79,765 (direct cost), 1980-1983.

National Institutes of Health, "Fluorescence Detected CD Studies of Nucleic Acids", \$81,006 (direct cost), 1981-1984.

Biomedical Research Support Grant, “Temperature Control for Absorption Spectroscopy”, \$4,040, 1984-1985.

National Institutes of Health (National Research Service Award for Senior Fellowship), “Studies of Self Splicing RNA”, \$30,140, 1984-1985.

National Institutes of Health, “Effects of Drugs on Nucleic Acids”, \$94,346 (direct cost), 1984-1987.
National Institutes of Health, “500 MHz NMR Spectrometer” (DRR BRS Shared Instrumentation), \$300,000 (equipment only), Co-P.I. with T. R. Krugh, 1987.

Office of Naval Research, “Molecular Basis of RNA Catalysis,” \$155,337 (direct cost), 1988-1991.

National Institutes of Health, “Computer Graphics Equipment” (DRR BRS Shared Instrumentation), \$172,000 (equipment only).

National Institutes of Health, GM22939, “Kinetic and Spectroscopic Studies of Nucleic Acids”,

\$128,415 (direct cost), 1976-1979.

\$154,759 (direct cost), 1979-1982.

\$423,255 (direct cost), 1982-1987.

\$691,574 (direct cost), 1987-1992.

National Institutes of Health, GM22939, “Folding RNA: from AIDS to the Human Genome”.

\$753,829 (direct cost), 1992-1996 (funded with priority score in top 2%)

\$876,545 (direct cost), 1996-2000, (funded with priority score in top 1%)

\$1,059,037 (direct cost), 2000-2004 (funded with priority score in top 6%)

\$1,211,970 (direct cost), 2004-2008 (funded with priority score in top 7%)

\$1,252,046 (direct cost), 2008-2013 (funded with priority score in top 10%)

\$ 110,000 (direct cost), 2012-2013 (funded supplement)

\$2,356,955 (total cost), 2013-2017 (funded with priority score in top 16%)

National Institutes of Health, 1 R03 TW 01068-01, “Folding RNA with Modified Oligonucleotides,” (Fogarty International Research Collaboration Award to fund Dr. Ryszard Kierzek’s synthesis program at the Polish Academy of Sciences, Institute of Bioorganic Chemistry in Poznan, Poland) \$82,285 (direct cost), 1999-2002, \$96,000 (direct costs), 2002-2005.

National Institutes of Health, 1 R03 AI 45398-01, “RNA Targeting with Tertiary Interactions,” (Innovative Drug Discovery Research in AIDS Opportunistic Infections) \$100,000, 1999-2001.

National Institutes of Health, 1 RO3 TW008739, “Folding RNA: Influenza,” (Fogarty International Research Collaboration Award to fund Dr. Elzbieta Kierzek (Institute of Bioorganic Chemistry in Poznan, Poland) to work on determining structures of domains in influenza RNA and to discover oligonucleotides that could potentially serve as therapeutics. \$174, 509 (direct cost), 2011-2014 (priority score in top 2%).

Research Students

Research Associates

Susan M. Freier
Ph.D., University of California, Berkeley, 1976

Subsequent positions:

Scientist at Molecular Biosystems Inc., San Diego, CA.
Director of Structural Biology at ISIS Pharmaceuticals, Carlsbad, CA.
Vice President and Distinguished Research Fellow, IONIS Pharmaceuticals

Naoki Sugimoto
Ph.D., Kyoto University, 1985
Current position: Professor of Chemistry, Konan University, Kobe, JAPAN
Director, Frontier Institute of Biomolecular Engineering Research
(FIBER)

Sean Moran
Ph.D., University of Colorado, Boulder, 1987

Subsequent positions:

Postdoctoral Fellow with E. Kool, University of Rochester
Research Associate with E. Nikonowicz, Rice University
NMR Facility Manager, Rice University
Director, Structural Biology Core Facility, Uniform Services University of the Health
Sciences

Matthew Fountain
Ph.D., University of Rochester, 1994
Current position: Professor and Chair of Chemistry, State University College at Fredonia
NY

Stephen M. Testa (NIH Postdoctoral Fellow)
Ph.D., Purdue University, 1994
Current position: Associate Professor of Chemistry, University of Kentucky

Sherry Spinelli
Ph.D., University of Rochester, 1999
Current position: Research Assistant Professor of Pathology and Laboratory Medicine and
Environmental Medicine, University of Rochester

Irina Catrina
Ph.D., Utah State University, 2001
Current Position: Research Associate, Hunter College
Clinical Assistant Professor of Chemistry, Yeshiva University

Elzbieta Kierzek
Ph.D., Institute for Bioorganic Chemistry, Poznan, Polish Academy of Sciences
Current position: Professor, Institute of Bioorganic Chemistry, Poznan

Elzbieta Lenartowicz

Ph.D. Students - graduated

1979 T. Gregory Dewey

“Laser Temperature Jump Kinetics of Solvent Effects on Stacking Reactions in Dyes and Nucleic Acids”

Subsequent positions:

NIH Postdoctoral Fellow in laboratory of G. G. Hammes, Cornell University
Professor of Chemistry (Department Chairman), University of Denver,
Senior Vice President for Academic Affairs, Dean of Faculty, Finnigan Professor,
Keck Graduate Institute for Applied Life Science (Claremont Consortium of Colleges)
Provost, University of La Verne
President, Albany College of Pharmacy and Health Sciences

1980 Craig D. Scoville

“Studies on a Monoclonal IgG Cryoglobulin”, joint student with G. N. Abraham
(Department of Microbiology)

Current position: Practicing Physician

1981 Eric W. Lobenstine

“Fluorescence Detected Circular Dichroism: Verification and Applications to Proteins”

Subsequent positions:

NIH postdoctoral fellow in laboratory of T. G. Spiro, Princeton University
Scientist at Jarrell-Ash
Research Associate at Laboratory for Laser Energetics, University of Rochester
Manager of Computers and Network, Chemistry Department, University of
Rochester

1981 Diane DePrisco Albergo

“Solvent Effects on the Thermodynamics and Kinetics of Double Helix Formation in Nucleic Acids”

Subsequent positions:

American Cancer Society fellow in laboratory of P. Modrich, Duke University
Scientist at Abbott Laboratories, Irving, Texas

1982 Matthew Petersheim (deceased)

“Stabilization of Ribonucleic Acid Double Helices by 'Dangling' Bases: Optical and NMR Studies”

Subsequent positions:

Postdoctoral Fellow in laboratory of J. H. Prestegard, Yale University (turned down NIH fellowship)
Associate Professor and Chair of Chemistry, Seton Hall University,
South Orange, NJ

1984 Catherine A. Harrison

“Photochemistry of Nucleic Acids Including Crosslinking to Proteins”

Subsequent positions:

Postdoctoral Fellow in laboratory of M. T. Record, University of Wisconsin,
Madison
Scientist at Eastman Kodak Company, Rochester, NY

David R. Hickey

“Thermodynamic Effects of Solvent and Terminal Mismatches on Oligoribonucleotide Stability”

Subsequent positions:

Postdoctoral Fellow in laboratory of F. Sherman, University of Rochester
Instructor, Department of Chemistry, University of Rochester

1985 Michael Lamos

“Fluorescence Detected Circular Dichroism of Ethidium-Nucleic Acid Complexes”

Subsequent positions:

Scientist at Abbott Laboratories, Irving, Texas
Scientist at Becton-Dickinson, Sparks, Maryland
Scientist at Sienna Biotech, Stillwater, MN

1988 Alison Williams

“Raman Laser Temperature-Jump, Spectroscopic and Thermodynamic Studies of Salt Effects on Duplex Formation by dGCATGC”

Subsequent positions:

Assistant Professor of Chemistry, Swarthmore College, PA
Research Associate Professor, Wesleyan University, Middletown, CT
Research Associate Professor, Rutgers University, New Brunswick, NJ
Director of Studies, Princeton University
Lecturer, Department of Chemistry, Princeton University
Vice President for Equity and Inclusion, Wesleyan University

1989 Carl Longfellow

“Thermodynamic and Spectroscopic Studies of Bulge Loop Structures Formed by Oligoribonucleotides”

Subsequent position:

Scientist at Wyeth-Ayerst Labs, Rouses Point, NY

1989 John Jaeger

“RNA Secondary Structure: Prediction, Melting, and Chemical Modification”

Subsequent positions:

NIH Postdoctoral Fellow in laboratory of I. Tinoco, Jr., University of California, Berkeley
Scientist at Genta, San Diego, CA
Database Administrator for Informatics at Trega, San Diego, CA
Database Administrator for Informatics at Lion Bioscience, Inc., San Diego, CA
Database Administrator for Discovery Partners, San Diego, CA
Information Technology Business Partner for Research, Bristol Myers Squibb

1991 John SantaLucia, Jr.

“The Role of Hydrogen Bonding in the Thermodynamics and Structure of Mismatches in

RNA Oligonucleotides”

Subsequent positions:

NIH Postdoctoral Fellow in laboratory of I. Tinoco, Jr., University of California,
Berkeley

Professor of Chemistry, Wayne State University, Detroit, MI

CEO and Founder, DNA Software, Ann Arbor, MI

1993 Adam E. Peritz

“Studies of Symmetric and Asymmetric Internal Loops in RNA”

Subsequent positions:

Postdoctoral Fellow in laboratory of K. Hall, Washington University

Postdoctoral Fellow in laboratory of E. Wickstrom, Jefferson Medical School

Research Associate in laboratory of K. Yoon, Jefferson Medical School

Nucleic Acid Core Facility, Jefferson Medical School

Nucleic Acid Facility, University of Pennsylvania

Philip C. Bevilacqua

“Dynamics of Substrate-Ribozyme Interaction: Binding, Conformational Changes, and Catalysis”

Subsequent positions:

Jane Coffin Childs Postdoctoral Fellow in laboratory of T. Cech, University of
Colorado, Boulder

Professor of Chemistry (Department Chairman), Pennsylvania State
University, University Park, PA

Liyan He

“Thermodynamic and Structural Studies of G•U Mismatches in RNA”

Subsequent positions:

Postdoctoral Fellow in laboratory of W. Dynan, University of Colorado, Boulder

Scientist at Chromagen Inc., San Diego, CA

Scientist at Sequenom, San Diego, CA

Associate Research Professor, Arizona State University

Vice President, XL TechGroup, Melbourne, FL

Sr. Technology Commercialization and Liaison Officer at Weill Cornell Medical
College, New York City

1994 Amy E. Walter

“Thermodynamic Studies of the Sequence Dependence of Stability for Interfaces of
Coaxially Stacked Helices and Tandem GA Mismatches in RNA”

Subsequent positions:

Postdoctoral Fellow in laboratory of K. Johnson, Pennsylvania State University

Programmer, A-LIFE Medical, Inc., San Diego, CA

Aloke Raj Banerjee

“Investigation of the Folding Pathway of a Group I Ribozyme: Melting, Chemical
Modification and Kinetics Studies”

Subsequent positions:

Postdoctoral Fellow in laboratory of J. Burke, University of Vermont
Scientist, Gen-Probe, San Diego, CA
Scientist, Biosite, San Diego, CA
Manager, Assay Research, Nanosphere

1996 Ming Wu

“Structure and Thermodynamic Stability of Symmetric Tandem Mismatches in RNA”

Subsequent positions:

Postdoctoral Fellow in laboratory of I. Tinoco, Jr., University of
California, Berkeley
Scientist, Bayer Diagnostics
Director of Genomics Group, DiscoverX Corp., Fremont, CA
Scientist, Quantum Dot Corporation, Hayward, CA
Associate Director, Caliper Life Sciences, CA
Manager, PRTM, Mountain View, CA
Manager, Gilead Sciences Inc., Foster City, CA

Jeffrey A. McDowell

“Investigation of the Structural Basis of the Thermodynamic Stability of Symmetric,
Tandem GU Mismatches in RNA”

Subsequent positions:

Senior Bioinformatics Scientist, Abbott Laboratories, Chicago, IL
Senior Manager – Research Informatics, Amgen, South San Francisco, CA
Senior Manager – The Janssen Pharmaceutical Companies of Johnson & Johnson,

Greater Philadelphia Area

1997 James Kim

“The Thermodynamics of Coaxial Stacking and Its Effect on RNA Secondary Structure”

Subsequent positions:

Medical Student and Resident, University of Rochester
Oncology/Hematology Fellow, Johns Hopkins University
Oncology/Hematology Fellow, Stanford University
Assistant (now Associate) Professor of Internal Medicine, University of Texas
Southwestern Medical School

Yi Li

“Effects of Temperature, Mg²⁺ and the 2' OH of Guanosine on Substrate Binding and
Reactivity with the Tetrahymena Ribozyme”

Subsequent positions:

Postdoctoral Fellow in laboratory of L. Rothberg, University of Rochester
Scientist, Johnson and Johnson, Rochester, NY
Scientist, Alza Pharmaceuticals, Mountain View, CA

1998 Louis Profenno

“Conformational Rearrangements in the Catalytic Mechanism of the *Tetrahymena*
Ribozyme”

Subsequent positions:

Medical Student, University of Rochester
Resident, Columbia Presbyterian Medical Center and University of Rochester
Instructor, Geriatric Neurology, University of Rochester
Instructor, Psychiatry, University of Rochester
Psychiatrist, Syracuse, NY

1999 Tianbing Xia

“Sequence Dependence of Stabilities and Structures of Tandem Mismatches and Watson-Crick Base Pairs in RNA”

Subsequent positions:

Postdoctoral Fellow in laboratories of R. Roberts and A. Zewail, California Institute of Technology
Assistant Professor, Department of Molecular and Cell Biology, University of Texas at Dallas
Systems Engineer, Abbott Labs, Dallas

2000 Xiaoying Chen

“Stability and Structure of Guanosine-Uridine and Isoguanosine-Isocytidine Pairs”

Subsequent positions:

Postdoctoral Fellow in laboratory of H. Noller, University of California, Santa Cruz
Senior Bioinformatics Scientist, Roche Molecular Systems, Inc., Alameda, CA
Manager, Bioinformatics, Roche Molecular Systems, Inc., Pleasanton, CA
Bioinformatics Programmer 4, University of California, San Francisco

Mark E. Burkard

“Base Stacking Interactions and the Thermodynamics and Structure of Guanine-Guanine Pairs in RNA”

Subsequent positions:

Medical student, University of Rochester
Medicine resident, New York-Presbyterian Hospital, Cornell University
Medical Oncology/Hematology Fellow, Memorial Sloan-Kettering Cancer Center
Professor of Medicine and Oncology, University of Wisconsin, Madison

2001 David H. Mathews

“Prediction of RNA Secondary Structure”

Subsequent positions:

Medical student, University of Rochester
Maquat Distinguished Professor of RNA Biology, Department of Biochemistry and Biophysics, University of Rochester

Thomas W. Barnes III

“The Impact of Long-Range Cooperativity, Base Composition and Structure on the Molecular Recognition of RNA by C5-(1-Propynyl) Pyrimidine-Containing Oligodeoxynucleotides”

Subsequent positions:

Patent Attorney, Oblon, Spivak, McClelland, Maier, & Neustadt, P.C.

- 2002 Susan J. Schroeder
“Exploring the Thermodynamic Stabilities and Structures of Asymmetric Internal Loops in RNA”
- Subsequent positions:
NIH Postdoctoral Fellow in laboratory of P. Moore, Yale University
Associate Professor, Departments of Chemistry and of Microbiology and Plant Biology, University of Oklahoma
- Matthew D. Disney
“*In vitro* and *in vivo* Targeting of RNA in Fungal Pathogens with Oligonucleotides and Small-Molecules”
- Subsequent positions:
Novartis Postdoctoral Fellow in laboratory of P. Seeberger, ETH, Switzerland
Assistant Professor of Chemistry, SUNY Buffalo
Professor and Chair of Chemistry, Scripps Research Institute - Florida
- 2003 Jessica Childs-Disney
“Oligonucleotide Directed Misfolding of RNAs”
- Subsequent positions:
Postdoctoral Fellow in laboratory of P. Seeberger, ETH
Instructor, SUNY Buffalo
Assistant Professor of Chemistry, Canisius College
Senior Staff Scientist, University of Florida, Scripps
- 2004 Brent Znosko
“Thermodynamic and Structural Properties of RNA Oligomers Containing Purine Rich Internal Loops and DNA:RNA Hybrids with C5-Propynyl Substitutions”
- Subsequent position:
Professor of Chemistry, St. Louis University
- 2005 Gang Chen
“Expanded Sequence Dependence Improves Prediction of RNA Internal Loop Stability and NMR Reveals Molecular Recognition Interactions Accounting for Stability, Structure and Dynamics”
- Subsequent positions:
Postdoctoral Fellow in laboratory of I. Tinoco, University of California, Berkeley
Assistant Professor, Nanyang Technological University, Singapore
Associate Professor, School of Life and Health Sciences, The Chinese University of Hong Kong, Shenzhen
- 2006 Shenghua Duan
“Applying Oligonucleotide Microarrays in Determining RNA Secondary Structure”
- Subsequent position:
Postdoctoral Fellow in laboratory of Craig Mello, University of Massachusetts Medical School

Bioinformatics Analyst II, Center for Cancer Computational Biology, Dana Farber Cancer Institute

Blanton Tolbert

“The Solution NMR Structures of Model RNA Duplexes Containing Non-Canonical GA Pairs: Insights into the Factors Affecting Thermodynamic Stability of RNA 2X2 Nucleotide Internal Loops”

Subsequent Positions:

Postdoctoral Fellow in laboratory of Mike Summers, Howard Hughes Medical Institute, University of Maryland, Baltimore County

Assistant Professor of Chemistry, Miami University, Oxford, Ohio

Professor of Chemistry, Case Western Reserve University

Howard Hughes Medical Institute Vice President of Science Leadership and

Culture

2007

Neelaabh Shankar

“NMR Studies of Two Conserved RNA Internal Loops Found in Ribosomes”

Subsequent Positions:

Postdoctoral Fellow in laboratory of Victoria D’Souza, Harvard University

Patent Associate, Nixon Peabody LLP, Rochester, NY

Patent Associate, LeClairRyan, P.C., Washington, DC

2008

Ilyas Yildirim

“Free Energy Calculations of RNA Duplexes with Tandem GA Base Pairs Using the Thermodynamic Integration Approach”

Subsequent Positions:

Postdoctoral Fellow in Turner group, University of Rochester

Postdoctoral Fellow with George Schatz, Northwestern University

Postdoctoral Fellow with David Wales, Cambridge University

Assistant Professor of Chemistry, Florida Atlantic University

2009

James M. Hart

“NMR-Assisted Prediction of RNA Secondary Structure”

Subsequent Positions:

Systems Engineer IV, Abbott Labs, Dallas, Texas

Medical Director at Abbott Core Diagnostics

2010

Ruiting Liang

“RNA Secondary Structure Determination: Isoenergetic Oligonucleotide Microarray Compared with Chemical Mapping and MALDI MS Detection of Chemical Mapping”

Subsequent Positions:

Analytical Chemist, Avecia Biotechnology, Inc.

Chemist, Biogen

Biao Liu

“Fluorescence Competition Assay Measurements of Thermodynamics for RNA Pseudoknots and Multibranch Loops”

Subsequent Positions:

Postdoctoral Fellow in laboratory of Matthew Disney, Scripps – Florida
Postdoctoral Fellow, Roswell Park Cancer Institute
Principal Computational Scientist, Intellia Therapeutics, Inc.

2011 Walter N. Moss
“RNA Secondary Structure Discovery and Characterization”

Subsequent Positions:

American Cancer Society Postdoctoral Fellow with NIH K-99 Pathway to
Independence Award in laboratory of Joan Steitz, Yale University
Associate Professor of Molecular Biology and Biophysics, Iowa State
University

Nicolas Hammond

“Investigating the mechanism of Hoechst 33258 inhibition of *Candida* spp. growth
and II. RNA internal loops with tandem AG pairs: the structure of the 5'GAGU/3'UGAG loop
can be dramatically different from others, including 5'AAGU/3'UGAA”

Subsequent Position:

Assistant Director of University of Rochester Workshop Program

2013 Jason Tubbs
“Computational and Experimental Advances in the RNA Therapeutic Pipeline”

Subsequent Positions:

Scientist, SynDaver Labs, Tampa, FL
Project Manager, CoreRX, Clearwater, FL

Salvatore Priore

“Discovery and Characterization of Influenza Virus RNA Secondary Structures”

Subsequent Positions:

Resident, University of Pennsylvania
Assistant Professor of Clinical Pathology and Laboratory Medicine, University
of Pennsylvania

Indee Dela-Moss

“Analysis of RNA Secondary Structure: Common Themes in Spliced Segments of
Influenza A, B, and C”

Subsequent Positions:

Postdoctoral Fellow, Yale University
Postdoctoral Fellow, Iowa State University

2015 David Condon
“Nucleic Acid Force Fields in Prediction of Ensemble NMR Properties”

Subsequent Positions:

Postdoctoral Fellow, University of Pennsylvania
Assistant Professor of Internal Medicine, University of South Dakota, Lead
Computational Bioinformatics Analyst at Sanford Health, Sioux Falls, South Dakota

Jonathan Chen

“Two- and Three-Dimensional Modeling of RNA Structures with NMR and
Thermodynamics Methods”

Subsequent Positions:

Postdoctoral Fellow in laboratory of Matthew Disney, Scripps – Florida
Staff Scientist, University of Rochester, Department of Biochemistry &
Biophysics

2016?

Tian Jiang

“RNA Structure and Function of Influenza Virus”

Subsequent Position:

Systems Engineer, Abbott Labs, Dallas

2018

Kyle Berger

“Thermodynamic and Structural Studies of RNA Internal Loops Closed by GU
Pairs”

Subsequent Position:

Postdoctoral Fellow in laboratory of David MacLean, University of Rochester
School of Medicine and Dentistry

2019

Andrew Kauffmann

“Structures of RNA Sequences from Influenza”

Subsequent Position:

Assistant Professor of Chemistry, Truman State University, Missouri

2020

Jianbo Zhao

“Molecular Dynamics and Quantum Mechanics Studies of RNA Structures”

Subsequent Positions:

Research Associate then Senior Research Scientist for Computer-Aided Drug
Discovery, Albany Molecular Research Inc. (now named Curia Global Inc.)
Senior Scientist, Nested Therapeutics, Boston, MA

Visiting Scientists

Dr. Ryszard Kierzek, Professor, Institute of Bioorganic Chemistry, Poznan, Poland

Dr. Elzbieta Kierzek, Professor, Institute of Bioorganic Chemistry, Poznan, Poland

Dr. Peter Müller, Scientist, Dr. Karl Thomae, GmbH, Bieberach, Germany

Head, Department of Chemical Research, Dr. Karl Thomae, GmbH, Biebrach, Germany
Senior Vice President, Research and Development, Boehringer Ingelheim
Pharmaceuticals, Ridgefield, CT
Chief Scientific Officer & Senior Vice President, Vertex Pharmaceuticals

Dr. Martin J. Serra, Paul E. and Mildred L. Hill Professor of Chemistry, Allegheny College

Dr. Janet Morrow, Professor of Chemistry, SUNY at Buffalo

Dr. Neena Grover, Associate Professor of Chemistry, Colorado College

Teaching

For most of my career, I primarily taught a graduate Biophysical Chemistry course, and either lecture or lab for first year General Chemistry. The first year chemistry courses ranged from 50-600 students, and included applications to biological problems. A small part of the grade was based on writing a poem or song with content relative to anything taught in the course. This was meant to alert the students that success in many fields depends on creativity as well as knowledge. I graded each submission.

Service

Department Committees

Graduate Recruiting (1975-1983, 1999, 2005), Chair (1985, 1994-1996)
Safety (1975-1978), Chair (1976-1978)
Undergraduate Curriculum (1979-1982), (1987-1990)
Undergraduate Advising (1981)
Services and Space (1986, 1995), Chair (1986, 1997-2002)
Graduate Curriculum (1990-1994, 1996-1998)
Grants and Contracts (1997- ?)
Faculty Recruiting, Co-Chair (1988, 2003-2004)
Biological Chemistry Cluster, Founding Director (2003-2011)

University Committees

Biosafety (1976)
Student Employment (1981-1983)
Health Professions Advisory Committee (1981-1984)
Faculty Senate (1987-1990)
M.D.-Ph.D. Executive Committee (1987- ?), Associate Director (1998- ?)

Professional Committees

Harrison Howe Award Committee
Rochester Section, American Chemical Society (1977, 1982, 1984)

Invited Seminars

- 1975 University of Rochester - Department of Biology, May
Ithaca College, October
University of Toronto, November
- 1976 Northwestern University, February
Northern Illinois University, March
University of Texas at Dallas - Department of Biology, October
- 1977 Rochester Institute of Technology, October
- 1978 Carleton College, January
- 1979 University of Texas Health Science Center at San Antonio - Department of
Biochemistry, January
Earlham College, February
Rutgers University, October
- 1980 Syracuse University, January
- 1981 University of Colorado, April
State University College at Geneseo, October
- 1982 University of Illinois, Chicago Circle, January
Sixth Rochester Condensed Matter Symposium, May
Washington University, June
Biopolymers Gordon Conference, July
University of Delaware, October
Rochester Institute of Technology, October
Merrimack College, December
Lowell University, December
- 1983 Syracuse University, Department of Biology, January
Smith-Kline Beckman, February
Swarthmore College, February
Abbott Labs, May
- 1984 Goucher College, February
Roswell Park Memorial Institute, Biophysics Department, April
Workshop on Applications of Circularly Polarized Radiation, University of New Mexico,
May
Molecular Basis of Cancer, Roswell Park Memorial Institute, May
University of Colorado, November
- 1985 McMaster University, April
Colorado State University, May
University of Denver, May
NATO Workshop, (Renesse, The Netherlands), on 3D Structure and Dynamics of RNA,
August
Max-Planck-Institut fur Biophysikalische Chemie, Göttingen, Germany, August
Electrochemical Society Meeting, Symposium on Organic Luminescence, Las Vegas,
October

- Polish Academy of Sciences, Poznan, Institute of Bioorganic Chemistry, November
- 1986 University of California, Berkeley, Structural Biology Symposium, January
Nashville Section, American Chemical Society, March
Rutgers University, March
Georgetown University, April
- 1987 College of Wooster, January
National Research Council, Ottawa, February
Cold Spring Harbor Symposium on Evolution of Catalytic Function, May
Fifth Conversation in Biomolecular Stereodynamics, Albany, June
- 1988 University of Pennsylvania, March
UCLA Symposium on the Molecular Biology of RNA; Keystone, Colorado, April
Biopolymers Gordon Conference, June
- 1989 Roswell Park Memorial Institute, Biophysics Department, January
University of New Hampshire, Mobay Lecture, January
Texas A & M, Biochemistry Department, February
Applied Biosystems Inc., April
State University of New York, Buffalo, Biochemistry Department
Bowling Green University, September
University of Minnesota, Training Grant Symposium on Thermodynamics of Proteins
and Nucleic Acids, September
Sterling Drug, Great Valley, PA, November
- 1990 University of California, Berkeley, Structural Biology Symposium, January
Biophysical Society Meeting, Baltimore, on Advances in Nucleic Acid Structure
Symposium, February
University of Delaware, May
National Cancer Institute, Frederic, Maryland, June
- 1991 UCLA Symposium on Translational Control; Tamarron, Colorado, February
Yale University, Department of Chemistry, April
Structural Biology Symposium in honor of I. Tinoco, Jr., Lake Tahoe, June
University of Colorado, Boulder, Department of Molecular, Cellular, and Developmental
Biology, June
Sterling Drug, Great Valley, PA, July
American Society of Microbiology Conference on RNA Processing and mRNA Decay in
Procaryotic Cells, October
Allegheny College, November
- 1992 Columbia University, Department of Biochemistry and Biophysics, February
Dr. Karl Thomae GmbH, Bieberach, Germany, June
RNA Biochemie Meeting, Turnau, Germany, July
Appolon Inc., Great Valley, PA, November
Rutgers University, December
- 1993 University of Pittsburgh, Department of Biological Sciences, January
Boston College, January
Johns Hopkins University, Department of Biophysics, February
State University of New York at Stony Brook, Department of Microbiology, April
Nucleic Acids Gordon Conference, June

- Calorimetry Conference, Duke University, July
 Brookhaven National Labs, September
 Nexagen, Boulder, CO, October
 North Carolina State, Glaxo Lecture, November
 University of Colorado, Boulder, December
- 1994 University of Denver, January
 University of Texas Health Sciences Center at San Antonio, Department of Biochemistry,
 February
 University of Wisconsin at Madison, American Chemical Society Lecture, March
 University of Colorado Health Sciences Center, Program in Molecular Biology, April
 Genecore International, San Francisco, May
 Colorado State University, Department of Biochemistry, May
 Parke-Davis, Ann Arbor, Michigan, August
 RNA Editing Meeting (sponsored by Nucleic Acids Foundation), Rensselaer, NY, October
 Rochester Institute of Technology, October
 University of Maryland, November
 Princeton, December
- 1995 University of Rochester, Department of Biochemistry, January
 Wayne State University, Frontiers in Chemistry Lecture, January
 Cornell University Medical School, Department of Biochemistry, March
 University of Chicago, Department of Biochemistry, May
 University of Buffalo, November
 Duke University, Becton-Dickinson Memorial Lecture in Memory of Dr. O. Elmo Millner,
 November
- 1996 Colgate University, March
 Modified Nucleic Acids: Chemistry and Applications, Banbury Center Meeting,
 Cold Spring Harbor, March
 University of Chicago, March
 University of Rochester, Biophysics Department, May
 Society of Photochemistry & Photobiology, Atlanta, June
 Biopolymers Gordon Conference, June
 Cornell, November
 4th Swedish-German Nucleic Acids Symposium, Reisenburg Castle, keynote
 lecture, November
 Karl Thomae, GmbH, Biberach, Germany, November
 Washington University, December
- 1997 Syracuse University, January
 4th Cambridge Symposium on Oligonucleotide Chemistry and Biology, August
 CECAM Workshop on Nucleic Acid Structure, Lyon, France, September
 State University of New York at Buffalo, Biological Sciences, October
 University of Maryland, Baltimore County, Biological Sciences, December
- 1998 ISIS Pharmaceuticals, San Diego, CA, April
 Nucleic Acids and their Constituents: Chemical Evolution Underlying Biological
 Evolution, Polish Academy of Sciences, Poznan, Poland, May
 Geron Corporation, Menlo Park, CA, August
 25th Symposium on Nucleic Acids Chemistry, Kobe, Japan, September
 University of Colorado Health Sciences Center, Biomolecular Structure Program,
 December

- 1999 Boehringer Ingelheim, Danbury, CT, January
 Institute Pasteur, Paris, Bioinformatics Conference, June
 University of Vermont, July
 University of Rochester, Dedication of Levine Pavilion and Kornberg Medical
 Research Building, September
 Swarthmore College, October
 Messiah College, October
 Rice University, November
 Bayer Diagnostics, Emeryville, CA, November
 Geron Corporation, Foster City, CA, November
- 2000 The Millennium Conference on Nucleic Acid Therapeutics, Clearwater Beach, FL, January
 University of Kentucky, January
 University of Colorado, Boulder, April
 American Chemical Society Northeast Regional Meeting, Bioorganic Symposium,
 Storrs, Connecticut, June
 University of California, Berkeley, Tinoco Symposium, July
 Motorola BiochipSystems, Chicago, Illinois, July
 Third Wave Technologies, Madison, Wisconsin, July
 American Chemical Society Meeting, Washington, DC, Physical Chemistry of Nucleic Acids
 Symposium, August
 Pennsylvania State University, RNA and Protein Folding Symposium, August
- 2001 Florida State University, Tallahassee, March
 Clemson University, March
 University of Michigan, March
 Nature Biotechnology sponsored meeting: Antisense 2001, Advances in Epi Genetic
 Medicine, Tokyo, Japan, May
 Upstate New York NMR Conference, October
 Robert Wood Johnson Medical School (Rutgers University), November
 Keck Institute of Applied Biology, December
- 2002 Rensselaer Polytechnic Institute, February
 University of Texas, Austin, Texas, March
 American Chemical Society Meeting, Symposium on Molecular Modeling of Nucleic
 Acids, Orlando, FL, April
 Niagara University, October
- 2003 University of Colorado, Boulder, March
 American Chemical Society Northeast Regional Meeting, Saratoga Springs, NY,
 Chemical Biology Symposium, June
 Williams College, October
- 2004 SUNY, College at Geneseo, October
 American Chemical Society Northeast Regional Meeting, Rochester, NY, November
 Grinnell College, December
 Colorado College, December
- 2005 Engineering a DNA World Workshop, Cal Tech, January
 Northeastern University, November
 Pacific Basin Chemical Societies, Honolulu, Hawaii, December

- 2006 Nucleic Acids Gordon Conference, poster, June 2006
SUNY Albany, October 2006
- 2007 Masaryk University, Brno, Czech Republic, May
Institute for Bioorganic Chemistry, Polish Academy of Sciences, Poznan, May
RNA Ontology Meeting, Montreal, September
Canisius College, September
Konan University, Kobe, Japan, December
- 2008 Rutgers University, March
RNA Ontology Meeting, Berlin, July
Carnegie Mellon University, September
University of Oklahoma, Karcher Lecturer, October
Binghamton University, November
- 2009 SUNY Albany, Chemistry Graduation Speaker, May
SUNY Buffalo, October
- 2010 University of California, Berkeley, Tinoco Symposium, June
- 2011 RNA Dynamics Meeting, Telluride, Colorado, July
American Chemical Society, Hammes Lecture, Denver, August
University of Colorado, Boulder, August
- 2012 LeMoyne College, Chemistry, Biology, Physics Seminar, February
American Chemical Society, Symposium to honor Matt Disney as recipient of New Investigator Award of the Carbohydrate Division, March
Alnylam Pharmaceuticals, August
8th Annual Meeting of the Oligonucleotide Therapeutics Society, October
Konan University, Kobe, Japan, November
39th International Symposium on Nucleic Acid Chemistry, Nagoya University, Japan, November
University of Maryland, Institute for Bioscience & Biotechnology Research, November
- 2013 RNA Dynamics Meeting, Telluride, Colorado, July
American Chemical Society, Symposium to honor Matt Disney as recipient of Eli Lilly Award in Biological Chemistry, September
City College of New York, September
Institute of Bioorganic Chemistry, Polish Academy of Sciences, Poznan, Poland, November
- 2014 Computational Chemistry Gordon Conference, Vermont, July
Penn State, Chemistry Dept., October
Albany College of Pharmacy and Health Sciences, September
- 2015 University of Rochester, Second Friday Science Social, February
From Genome to Function, Societa Italiana di Biofisica e Biologia Molecolare, Turin, July
RNA Dynamics, Telluride, Colorado, July
Geometric and Topological Modeling of Biomolecules, Ohio State, September
Upstate NY NMR Symposium, Syracuse University, October
University of Rochester, Wednesday Virology Seminar Series, October

- 2016 Tinoco Celebration, Berkeley, March
Case Western Reserve University, March
Ceremony for Poland-US Science Award, Warsaw, November
Institute of Bioorganic Chemistry, Poznan, November
- 2017 University of Rochester, Laboratory for Laser Energetics, April
RNA Dynamics, Telluride, July
- 2019 RNA Dynamics, Telluride, Colorado, July
Florida Atlantic University, November
- 2021 RNA Goes Viral, Institute of Bioorganic Chemistry, Polish Academy of Sciences,
Poznan, Poland