Brian R. Gibney

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PROFESSIONAL APPOINTMENTS

The Graduate Center, The City University of New York

Interim Dean for the Sciences	2023–present
Founding Director, M.S. Program in Nanoscience	2019–2020
Executive Officer, Ph.D. Program in Chemistry	2014–2020
Deputy Executive Officer, Ph.D. Program in Chemistry	2011–2014, 2020–2021
Member, Doctoral Faculty in Biochemistry and Chemistry	2008–present

Brooklyn College, The City University of New York

Chair, Department of Chemistry and Biochemistry	2023–2023
Associate Director for Education, Brooklyn College Cancer Center	2020–2023
Professor, Department of Chemistry	2019–present
Associate Professor, Department of Chemistry	2008–2019

Columbia University

Associate Professor, Department of Chemistry	2005–2008
Assistant Professor, Department of Chemistry	2000–2005

EDUCATION

University of Pennsylvania

NRSA Postdoctoral Fellow, Department of Biochemistry and Biophysics 1995–2000
Advisor: Prof. P. Leslie Dutton, FRS

University of Michigan

Ph.D. in Chemistry, Department of Chemistry 1994
Advisor: Prof. Vincent L. Pecoraro

Florida State University

B.S. in Chemistry (ACS Certified, Honors) 1990

AWARDS & HONORS

Best Activity or Program Stimulating Member Involvement ChemLuminary Award	2022
E. Ann Nalley Regional Award for Volunteer Service to the ACS	2020
Outstanding Chemistry Teacher Award, New York Local Section of the ACS	2019
Outstanding Service Award, New York Local Section of the ACS	2019
Outreach Volunteer of the Year, New York Local Section of the ACS	2019
Chemists with Disabilities Inclusion ChemLuminary Award	2019
American Chemical Society Fellow	2018

Stanley C. Israel Regional Award for Advancing Diversity in the Chemical Sciences	2017
Jacques Edward Levy Professor of Analytical Chemistry	2010–2011, 2013–2015
Paul Saltman Lecturer, Gordon Research Conference Metals in Biology	2007
Gold Nugget Teaching Award, Columbia University Listing of Professor Ability	2006
Camille Dreyfus Teacher-Scholar Award	2005–2010
Young Bioenergeticist Award, Biophysical Society	1997
Individual National Research Service Award, NIH Postdoc	1995–1997
Smeaton Research Fellowship to mentor undergraduate	1993
Baer Teaching Fellowship	1990
Phi Eta Sigma (Freshman honor society, *President*)	1987
Florida Junior Classical League Scholarship	1986

ACADEMIC STANDING

Refereed Publications	62
Citations	4,827
Book Chapters	11
h-index	42
i10-index	62
Grant funding	$1.8M individual grant funds from $7.9M total awarded

PUBLICATIONS

78. Alexandratos, S.D.; Barak, N.; Bauer, D.; Gibney, B.R.; Hubbard, S.S.; Taft, H.; Webber, M.E.; Westerhoff, P."Sustaining Water Resources: Environmental and Economic Impact" ACS Sustainable Chem. Eng., **2019**, vol. 7, 2879-2888. [Impact factor: 6.1, 49 citations].

77. Gibney, B.R. "Equilibrium Studies of Designed Metalloproteins", Methods in Enzymology, Peptide, Protein and Enzyme Design, Pecoraro, V.L. Ed, **2016**, vol. 580, 417-438. Contributed chapter to the Book Series. [3 citations]

76. Aussignargues, C.; Pandelia, M.-E.; Sutter, M.; Plegaria, J.S.; Zarzycki, J.; Turmo, A.; Huang, J.; Ducat, D.C.; Hegg, E.L.; Gibney, B.R.; Kerfeld, C.A. "Structure and Function of a Baterial Microcompartment Shell Protein Engineered to bind a [4Fe-4S] Cluster", R, **J. Am. Chem. Soc. 2016**, 138, 5262-5270. (Issue Cover, Spotlight, ACS Editors Choice) [Impact factor: 14.4; 65 citations]

75. Reddi, A.R.; Pawlowska, M.; Gibney, B.R.; "Evaluation of the Intrinsic Zn(II) Affinity of a Cys_3His_1 Site in the Absence of Protein Folding Effects", R, **Inorg. Chem., 2015**, 54, 5942-5948. [Impact factor: 4.7; 11 citations]

74. Chan, K.L.; Bakman, I.; Marts, A.R.; Batir, Y.; Dowd. T.L.; Tierney, D.L.; Gibney, B.R.; "Characterization of the Zn(II) Binding Properties of the Wilms' Tumor Suppressor Protein C-terminal Zinc Finger Peptide", R, **Inorganic Chemistry**, **2014**, 53, 6309-6320. [Impact factor: 4.7; 32 citations]

73. Gibney, B.R. "Heme" Encyclopedia of Biophysics, Gordon Roberts, Ed. Springer, **2013**. 965-968. Contributed article to the Encyclopedia.

72. Gibney, B.R."Metallopeptides as Tools to Understand Metalloprotein Folding and Stability", in Protein Folding and Metal Ions - Mechanisms, Biology and Disease, Gomes, C. and Wittung-Stafshede, P. Eds., Taylor & Francis, London, **2011**, 227-245. Contributed chapter to book. [6 citations]

71. Deng, B.; Parthasarathy, S.; Wang, W.; Gibney, B.R.; Battaile, K.P.; Lovell, S.; Benson, D.R.; Zhu, H. "Unique Heme Pocket in Human Ncb5or and Structural Basis for Intra-Domain Electron Transfer", R, **J. Biol. Chem. 2010**, 285, 30181-30191. [Impact factor: 4.1; 38 citations]

70. Westerlund, K.; Moran, S.D.; Privett, H.K.; Hay, S.; Jarvet, J.; Gibney, B.R.; Tommos, C.T. "Making a single-chain four-helix bundle for redox chemistry studies", R, **Proteins: Engineering, Design and Selection**, **2008**, 21, 645-652. [Impact factor: 2.0; 11 citations]

69. Reedy, C.J.; Elvekrog, M.M.; Gibney, B.R. "Development and Analysis of a Heme Protein Structure-Electrochemical Function Database" R, **Nucleic Acids Research**, **2008**, 36, D307-D313. [Impact factor: 10.2; 151 citations]

68. Reddi, A.R.; Guzman, T.; Breece, R.M.; Tierney, D.L.; Gibney, B.R. " Deducing the Energetic Cost of Protein Folding in Zinc Finger Proteins Using Designed Metallopeptides", R, **J. Am. Chem. Soc.**, **2007**, 129, 12815-12827. [Impact factor: 14.4; 106 citations]

67. Thompson, A. M.; Reddi, A.R.; Shi, X.; Goldbeck, R.A.; Moenne-Loccoz, P.; Gibney, B.R.; Holman, T.R. "Characterization of the Role of Heme-binding in the Yeast Protein Dap1p", R, **Biochemistry**, **2007**, 46, 14629-12637. [Impact factor: 3.0; 37 citations]

66. Reddi, A.R.; Gibney, B.R. " The Role of Protons in the Thermodynamic Contribution of a Zn(II)-Cys_4 Site Toward Protein Stability", R, **Biochemistry**, **2007**, 46, 3745-3758. [Impact factor: 3.0; 52 citations]

65. Reddi, A.R.; Reedy, C.J.; Mui, S.; Gibney, B.R. "Thermodynamic Investigation into the Mechanisms of Proton-Coupled Electron Transfer in Heme Protein Maquettes" R, **Biochemistry**, **2007**, 46, 291-305. [Impact factor: 3.0; 52 citations]

64. Gibney, B.R.; Franklin, S.J. "Preface: Forum on Biomolecular Design in Inorganic Chemistry", L, **Inorg. Chem.**, **2006**, 45, 9927-9929. [Impact factor: 4.7; 1 citation]

63. Petros, A.K.; Reddi, A.R.; Kennedy, M.L.; Hyslop, A.G.; Gibney, B.R. "Femtomolar Zn(II) Affinity in a Peptide Ligand Designed to Model Thiolate-Rich Metalloprotein Active Sites", R, **Inorg. Chem.**, **2006**, 45, 9941-9958. [Impact factor: 4.7; 64 citations]

62. Riley, E.A.; Petros, A.K.; Smith, K.A.; Gibney, B.R.; Tierney, D.L. "Frequency-Switching Inversion-Recovery: Application to Severely Hyperfine Shifted NMR in aqueous Solution",R, **Inorg. Chem.**, **2006**, 45, 10016-10018. [Impact factor: 4.7; 14 citations]

61. Zhuang, J.; Reddi, A.R.; Wang, Z.; Khodaverdian, B.; Hegg, E.L.; Gibney, B.R. "Evaluating the Roles of the Heme *a* Sidechains in Cytochrome *c* Oxidase Using Designed Heme Proteins", R, **Biochemistry**, **2006**, 45, 12530-12538. [Impact factor: 3.0; 43 citations]

60. Hong, J.; Kharenko, O.A.; Petros, A.K.; Gibney, B.R.; Ogawa, M.Y. "A Miniature Cu(I) Metalloprotein Displays Unusual Electron-transfer Reactivity: Collisional Electron-transfer in the

Inverted Marcus Region", R, **Angew. Chem. Intl. Ed.**, **2006**, 45, 6137-6140. [Impact factor: 12.1; 23 citations]

59. Zhuang, J.; Amoroso, J.H.; Kinloch, R.; Dawson, J.H.; Baldwin, M.J.; Gibney, B.R. "Evaluation of electron-withdrawing group effects on heme binding in designed proteins: Implications for heme *a* in cytochrome *c* oxidase",R, **Inorg. Chem.**, **2006**, 45, 4685-4694. [Impact factor: 4.7; 32 citations]

58. Yu, B.; Edstrom, W.C.; Benach, J.; Hamuro, Y.; Weber, P.C., Gibney, B.R.; Hunt, J.F. "Substrate Recognition and Redox Chemistry of AlkB Repair Enzyme Revealed by Crystal Structures", R, **Nature**, **2006**, 439, 879-884. [Impact factor: 40.2; 260 citations]

57. Gibney, B.R.; Tommos, C.T. "De novo Protein Design in Respiration and Photosynthesis", **Adv. in Photosynthesis and Respiration**, Rev., T. Wydrzynski and K. Satoh, eds., Springer, New York, **2006**, Ch. 22, 729-751.[4 citationw]

56. Eichenbaum, K.D.; Thomas, A.A.; Eichenbaum, G.M.; Gibney, B.R.; Needham, D.; Kiser, P.F. "Oligo- a-hydroxy Ester Cross-linkers: Impact of Cross-Linker Structure on Biodegradable hydrogel Networks", R, **Macromolecules**, **2005**, 38, 10757-10762. [Impact factor: 5.9; 26 citations]

55. Zhuang, J.; Amoroso, J.H.; Kinloch, R.; Dawson, J.H.; Baldwin, M.J.; Gibney, B.R. "Design of a Five- coordinate Heme Protein Maquette: A Spectroscopic Model of deoxyMyoglobin", R, **Inorg. Chem.**, **2004**, 43, 8218-8220. [Impact factor: 4.7; 42 citations]

54. Petros, A.K.; Shaner, S.E.; Costello, A.L.; Tierney, D.L.; Gibney, B.R. "Comparison of Cysteine and Penicillamine Ligands in a Co(II) Maquette ", R, **Inorg. Chem.**, **2004**, 43, 4793-4795. [Impact factor: 4.7; 33 citations]

53. Strazalka, J.; Kneller, L.R.; Gibney, B.R.; Satija, S.; Majkrzak, C.F.; Blaise, J.K. "Specular Neutron Reflectivity and the Structure of Artificial Protein Maquettes Vectorally Oriented at Interfaces" R, **Phys. Rev. E**, **2004**, 70, 061905-01-061905-10. [Impact factor: 2.4; 10 citations]

52. Reedy, C.J.; Gibney, B.R. "Heme-Protein Assemblies", Rev., **Chem. Rev. 2004**, 101, 617-649. [Impact factor: 52.6; 470 citations]

51. Kennedy, M.L.; Petros, A.K.; Gibney, B.R. "Cobalt(II) and Zinc(II) Binding to a Ferredoxin Maquette" R, **J. Inorg. Biochem.**, **2004**, 98, 727-732. [Impact factor: 3.3; 17 citations] (ICBIC 11 Special Issue).

50. Gibney, B.R. "Ferredoxin and Ferredoxin-Heme Maquettes / Proton Coupling to $[4Fe\text{-}4S]^{2+/+}$ and $[4Fe\text{-}4Se]^{2+/+}$ Oxidation/Reduction in a Designed Protein ", Rev., **ChemTracts-Inorganic Chemistry**, **2003**, 16, 263-271. [1 citation] (Invited Group Highlight)

49. Reedy, C.J.; Kennedy, M.L.; Gibney, B.R. "Thermodynamic Characterization of Ferric and Ferrous Haem Binding to a Designed Four-a-Helix Protein" R, **Chem. Commun.**, **2003**, 570-571. [Impact factor: 6.3; 37 citations]

48. Privett, H.K.; Reedy, C.J.; Kennedy, M.L.; Gibney, B.R. "Nonnatural Amino Acid Ligands in Heme Protein Design", R, **J. Am. Chem. Soc.**, **2002**, 124, 6828-6829. [Impact factor: 14.4; 56 citations]

47. Kennedy, M.L.; Gibney, B.R. "Proton Coupling to $[4Fe\text{-}4S]^{2+/+}$ and $[4Fe\text{-}4Se]^{2+/+}$ Oxidation/Reduction in a Designed Protein" R, **J. Am. Chem. Soc., 2002**, 124, 6826-6827. [Impact factor: 14.4; 64 citations]

46. Daugherty, R.G.; Wasowicz, T.; Gibney, B.R.; DeRose, V.J. "Design and Spectroscopic Characterization of Peptide Models for the Plastocyanin Copper-binding Loop", R, **Inorg. Chem. 2002**, 41, 2623-2632. [Impact factor: 4.7; 52 citations] (Featured on Cover of Issue)

45. Kennedy, M.L.; Gibney, B.R. "Metalloprotein and Redox Protein Design" Rev. **Curr. Opin. Struct. Biol. 2001**, 11, 485-490. [138 citations]

44. Huang, S.S.; Gibney, B.R.; Stayrook, S.E.; Dutton, P.L.; Lewis, M. "X-ray Structure of a Maquette Scaffold" R, **J. Mol. Biol.**, **2003**, 326, 1219-1225. [Impact factor: 4.9; 69 citations]

43. Gibney, B.R.; Pecoraro, V.L. "Use of Salicyl- and Napthoylhydroxamate Complexes in Preparation of Manganese and Copper 12-Metallacrown-4 Complexes: $Mn(II)(Acetate)_2$ $[Mn(III)(Salicylhydroximate)]_4$ and $(tetramethylammonium)_2$ $[Cu(II)_5(napthoylhydroximate)_4]$," R, **Inorganic Syntheses**, vol. 33**,** McGraw-Hill Book Company, Inc., New York, **2002**, 70-74.

42. Chen, X.; Discher, B.M.; Pilloud, D.L.; Gibney, B.R.; Moser, C.C.; Dutton, P. L. "De novo Design of a Cytochrome *b* Maquette for Electron Transfer and Coupled Reactions on Electrodes", R, **J. Phys, Chem. B**, **2002**, 106, 617-624. [Impact factor: 3.2; 49 citations]

41. Gibney, B.R.; Huang, S.S.; Skalicky, J. J.; Fuentes, E.J.; Wand, A. J.; Dutton, P. L. "Hydrophobic Modulation of Heme Properties in Heme Protein Maquettes", R, **Biochemistry**, **2001**, 40, 10550-10561. [Impact factor: 3.0; 51 citations]

40. Ugulava, N.B.; Gibney, B.R.; Jarrett, J.T. "Biotin Synthase Contains Two-Distinct Iron-Sulfur Cluster Binding Sites: Chemical and Spectroelectrochemical Analysis of Iron-Sulfur Cluster Interconversions", R, **Biochemistry**, **2001**, 40, 8343-8451. [Impact factor: 3.0; 194 citations]

39. Kennedy, M.L.; Silchenko, S.; Houndonougbo, N.; Gibney, B.R.; Dutton, P.L.; Rodgers, K. R.; Benson, D. R. "Model Hemoprotein Reduction Potentials: The Effects of Histidine to Iron Coordination Equilibrium ", R, **J. Am. Chem. Soc., 2001**, 123, 4635-4636. [Impact factor: 14.4; 46 citations]

38. Grosset, A.M.; Gibney, B.R.; Rabanal, F.; Moser, C.C.; Dutton, P.L "Proof of Principle in a De Novo Designed Synthetic Protein Maquette: An Allosterically Regulated, Charge Activated Conformational Switch in a Tetra-α-Helix Bundle", R, **Biochemistry**, **2001**, 40, 5474-5487. [Impact factor: 3.0; 34 citations]

37. Gibney, B.R.; Dutton, P.L. "*De novo* Design and Synthesis of Heme Proteins" **Adv. Inorg. Chem.**, Rev., Mauk, A. G.; Sykes, A. G. eds., Academic Press, New York, **2001**, vol 51, 409-455. [Impact factor: 3.1; 71 citations]

36. Shifman, J.M; Gibney, B.R.; Sharp, R.E.; Dutton, P.L. "Heme Redox Potential Control in *de novo* Designed Four--Helix Bundle Proteins", R, **Biochemistry**, **2000**, 39, 14813-14821. [Impact factor: 3.0; 183 citations]

35. Dutton, P.L.; Ohnishi, T.; Darrouzet, E.; Leonard, M.A.; Sharp, R.E.; Gibney, B.R.; Daldal, F.; Moser, C.C. "Coenzyme Q Oxidation-Reduction Reactions in Mitochondrial Electron Transport",

Rev., Chapter 4 in **Coenzyme Q: Molecular Mechanisms in Health and Disease**, Quinn, P.E.; Kagan, V.J. eds., CRC Press, Boca Raton, Fl., **2000**, 65-82. Contributed book chapter.

34. Gibney, B.R.; Isogai, Y.; Reddy, K. S.; Rabanal, F.; Grosset, A. M.; Moser, C. C.; Dutton, P. L. "Self-Assembly of Heme A and Heme B in a designed four-α-helix bundle: Implications for a Cytochrome *c* Oxidase Maquette", R, **Biochemistry**, **2000**, 39, 11041-11049. [Impact factor: 3.0; 98 citations]

33. Ugulava, N.B.; Gibney, B.R.; Jarrett, J.T. "Iron-Sulfur Cluster Interconversion in Biotin Synthase: Dissassociation and Reassociation of Iron is Required for Conversion of [2Fe-2S] to [4Fe-4S] Clusters" R, **Biochemistry**, **2000**, 39, 5206-5214. [Impact factor: 3.0; 116 citations]

32. Sharp, R.E.; Palmitessa, A.; Gibney, B.R.; White, J.L.; Wan, J. T.; Moser, C.C.; Daldal, F.; Dutton, P. L. "Probing the cytochrome bc_1 complex Q_O site mechanism using weak binding inhibitors", in **Photosynthesis: Mechanisms and Effects**, **1999**, G. Garab, Ed., Kluwer Academic Publishers, Dordrecht. Published conference abstract. [25 citations]

31. Moser, C.C.; Sharp, R.E.; Gibney, B.R.; Isogai, Y.; Dutton, P. L. "Synthetic protein maquette design for light activated intraprotein electron transfer" in **Photosynthesis: Mechanisms and Effects**, **1999**, G. Garab, Ed., Kluwer Academic Publishers, Dordrecht. Published conference abstract.

30. Sharp, R.E.; Gibney, B.R.; Palmitessa, A.; White, J.L.; Dixon, J.; Moser, C.C.; Daldal, F.; Dutton, P. L. "Effect of Inhibitors on the Ubiquinone Binding Capacity of the Primary Energy Conversion Site in *Rhodobacter capsulatus* Cytochrome bc_1 Complex", R., **Biochemistry**, **1999**, 38, 14973-14980. [Impact factor: 3.0; 43 citations]

29. Chen, X.; Moser, C. C.; Pilloud, D.L.; Gibney, B.R.; Dutton, P. L. "Engineering Oriented Heme Protein Maquette Monolayers Through Surface Charge Distribution Patterns", R, **J. Phys. Chem. B**, **1999**, 103, 9029-9037. [Impact factor: 3.1; 16 citations]

28. Sharp, R.E.; Palmitessa, A.; Gibney, B.R.; Moser, C.C.; Dutton, P. L. "Probing the ubiquinone primary energy conversion site in the *Rhodobacter capsulatus* cytochrome bc_1 complex", R, **Biochemical Society Transactions**, **1999**, 27, 572-576. [3 citations]

27. Sharp, R.E.; Moser, C.C.; Gibney, B.R.; Dutton, P. L. "Primary Steps in the Energy Conversion Reactions of the Cytochrome bc_1 Complex Q_O Site", Rev., **J. Bioenerg. Biomembr.**, **1999**, 31, 225-233. [31 citations]

26. Gibney, B.R.; Dutton, P. L. "Histidine Placement in *De novo* Designed Heme Proteins", R **Protein Science**, **1999**, 8, 1888-1898. [Impact factor: 2.4; 51 citations]

25. Mulholland, S. E.; Gibney, B.R.; Rabanal, F.; Dutton, P. L. "Determination of Non-Ligand Amino Acids Critical to $[4Fe\text{-}4S]^{2+/+}$ Assembly in Ferredoxin Maquettes", R, **Biochemistry**, **1999**, 38, 10442-10448. [Impact factor: 3.0; 81 citations]

24. Skalicky, J. J.; Gibney, B.R.; Rabanal, F.; Bieber-Urbauer, R. J.; Dutton, P. L.; Wand, A. J. "Solution Structure of a designed four-α-helix bundle maquette scaffold", R, **J. Am. Chem. Soc.**, **1999**, 121, 4941- 4951. [Impact factor: 14.4; 93 citations]

23. Gibney, B.R.; Rabanal, F.; Skalicky, J. J.; Wand, A. J.; Dutton, P. L. "Iterative Protein Redesign", R, **J. Am. Chem. Soc.**, **1999**, 121, 4952-4960. [Impact factor: 14.4; 95 citations]

22. Sharp, R. E.; Palmitessa, A.; Gibney, B.R.; Moser, C. C.; Daldal, F; Dutton, P. L. "Correlation Between Cytochrome bc_1 Structure and Function: Kinetic and Spectroscopic Observations on Q_o Site Occupancy and Dynamics", **The Phototrophic Prokaryotes - Proceedings of the IX Int. Symp. on Phototrophic Prokaryotes**, Peschek, G. A.; Loefflhardt, W.; Schmetterer, G. eds., Plenum, New York, **1999**, 241-250. Published conference abstract.

21. Sharp, R. E.; Palmitessa, A.; Gibney, B.R.; White, J.L.; Moser, C. C.; Daldal, F; Dutton, P. L. "Ubiquinone Binding Capacity of *Rhodobacter capsulatus* Cytochrome bc_1 Complex: Effect of Diphenylamine, A Weak Q_o site Inhibitor", R, **Biochemistry**, **1999**, 38, 3440-3446. [Impact factor: 3.0; 36 citations]

20. Daniels, S.B.; Hantman, S.F.; Solé, N. A.; Gibney, B.R.; Rabanal, F.; Kates, S.A. "Pioneer^{TM}: A Continuous-flow Peptide Synthesis System", **Peptides 1996**, Ramage, R.; Epton, R. eds.; Mayflower Scientific, Ltd.; Kingswinford, England, **1998**, 323-324. Published conference abstract.

19. Valkova-Valchanova, M.; Saribas, A.S.; Gibney, B.R.; Dutton, P. L.; Daldal, F. "Isolation and Characterization of a Two Subunit Cytochrome b-c_1 Subcomplex from *Rhodobacter capsulatus* and Reconstitution of its Ubiquinone Oxidation (Q_o) Site with purified Fe-S Protein Subunit", R, **Biochemistry**, **1998**, 37, 16242-16251. [Impact factor: 14.4; 79 citations]

18. Mulholland, S. E.; Gibney, B.R.; Rabanal, F.; Dutton, P. L. "Characterization of the Fundamental Protein Ligand Requirements of $[4Fe\text{-}4S]^{2+/+}$ Clusters Using Sixteen Amino Acid Peptide Maquettes", R, **J. Am. Chem. Soc.**, **1998**, 120, 10296-10302. [Impact factor: 14.4; 94 citations]

17. Sharp, R. E.; Palmitessa, A.; Gibney, B.R.; Moser, C. C.; Daldal, F; Dutton, P. L. "Non-inhibiting perturbation of the primary energy conversion site (Q_o site) in *Rhodobacter capsulatus* ubiquinol: cytochrome *c* oxidoreductase", R, **FEBS Lett.**, **1998**, 431, 423-426. [Impact factor: 4.5; 22 citations]

16. Skalicky, J. J.; Bieber, R. J.; Gibney, B.R.; Rabanal, F.; Dutton, P. L.; Wand, A. J. "Sequence-Specific Resonance Assignments for a Designed Four-α-Helix Bundle Protein", R, **Journal of Biomolecular NMR**, **1998**, 11, 227-228. [Impact factor: 2.5; 13 citations]

15. Johansson, J. S.; Gibney, B.R.; Skalicky, J. J.; Wand, A. J.; Dutton, P. L. "A Native-Like Three-α-Helix Bundle Protein From Structure Based Redesign: A Novel Maquette Scaffold", R, **J. Am. Chem. Soc.**, **1998**, 120, 3881-3886. [Impact factor: 14.4; 63 citations]

14. Gibney, B.R.; Rabanal, F.; Reddy, K. S.; Dutton, P. L. "Effect of Four Helix Bundle Topology on Heme Binding and Redox Properties", R, **Biochemistry**, **1998**, 37, 4635-4643. [Impact factor: 3.0; 94 citations]

13. Pilloud, D.L.; Rabanal, F.; Gibney, B.R.; Farid, R. S.; Moser, C. C.; Dutton, P. L. "Self-Assembled Monolayers of Synthetic Hemoproteins on Silanized Quartz", R, **J. Phys. Chem. B**, **1998**, 102, 1926- 1937. [Impact factor: 3.1; 39 citations]

12. Gibney, B.R.; Rabanal, F.; Dutton, P. L. "Synthesis of Novel Proteins", Rev., **Curr. Opin. Chem. Biol.**, **1997**, 1, 537-542. [Impact factor: 7.5; 51 citations]

11. Gibney, B.R.; Johansson, J. S.; Rabanal, F.; Skalicky, J. J.; Wand, A. J.; Dutton, P. L. "Global Topology & Stability, Local Structure & Dynamics in a Synthetic Spin-Labeled Four-Helix Bundle Protein", R, **Biochemistry**, **1997**, 36, 2798-2806. [Impact factor: 3.0; 66 citations]

10. Gibney, B.R.; Skalicky, J. J.; Rabanal, F.; Wand, A. J.; Dutton, P. L. "Design of a Unique Scaffold for Maquettes", R, **J. Am. Chem. Soc.**, **1997**, 119, 2323-2324. [Impact factor: 14.4; 93 citations]

9. Pecoraro, V. L.; Stemmler, A. J.; Gibney, B.R.; Bodwin, J. J.; Wang, H.; Kampf, J. W.; Barwinski, A. "Metallacrowns: A New Class of Molecular Recognition Agents", Rev., **Prog. Inorg. Chem.**, K. Karlin, ed., Vol. 45, Chapter 2, Pergamon Press, **1996**, 83-177. [Impact factor: 4.7; 272 citations]

8. Gibney, B.R.; Wang, H.; Kampf, J. W.; Pecoraro, V. L."Structural Evaluation and Solution Integrity in the Manganese 12-MC-4 Structural Type", R, **Inorg. Chem.**, **1996**, 35, 6184-6193. [Impact factor: 4.7; 122 citations]

7. Gibney, B.R.; Mulholland, S. E.; Rabanal, F.; Dutton, P. L. "Ferredoxin and Ferredoxin-Heme Maquettes", R, **Proc. Nat. Acad. Sci. U.S.A.**, **1996**, 93, 15041-15046. [Impact factor: 9.6; 241 citations]

6. Pecoraro, V. L.; Gibney, B.R. "Structural Aspects of Selectivity in Metal-Ligand Interactions In Vivo", **Handbook on Metal-Ligand Interactions in Biological Fluids**, Berthon, G., Ed., Vol. 1, Marcel-Dekker, New York, **1995**, 597. Contributed book chapter.

5. Gibney, B.R.; Pecoraro, V.L. "Theoretical Aspects of Metal Ion Interactions with Synthetic Carrier Ligands", **Handbook on Metal-Ligand Interactions in Biological Fluids**, Berthon, G., Ed., Vol. 1, Marcel-Dekker, New York, **1995**, 62. Contributed book chapter.

4. Gibney, B.R.; Mulholland, S.E.; Rabanal, F.; Dutton, P.L. "Design of Synthetic Iron-Sulfur Proteins", **Photosynthesis: from Light to Biosphere**, P. Mathis, Ed., Vol. II, Kluwer Press, Boston, **1995**, 645- 648. Published conference abstract.

3. Gibney, B.R.; Kessissoglou, D.P.; Kampf, J.W.; Pecoraro, V.L. "Copper(II) 12-Metallacrown-4: Synthesis, Structure, Ligand Variability and Solution Dynamics in the 12-MC-4 Structural Motif" R, **Inorg. Chem. 1994**, 33, 4840-4849. [Impact factor: 4.7; 171 citations]

2. Gibney, B.R.; Stemmler, A.J.; Pilotek, S.; Kampf, J.W.; Pecoraro, V.L. "Generalizing the Metallacrown Analogy: Ligand Variation and Solution Stability of the V(V)O 9-Metallacrown-3 Structure Type" R, **Inorg. Chem. 1993**, 32, 6008-6015. [Impact factor: 4.7; 109 citations]

1. Lah, M.S.; Gibney, B.R.; Tierney, D.L.; Penner-Hahn, J.E.; Pecoraro, V.L. "The Fused Metallacrown Anion $Na_2\{[Na_{0.5}[Ga(salicylhydroximate)]_4]_2(\mu_2\text{-}OH)_4\}^-$ is An Inorganic Analogue of a Cryptate" R, **J. Am. Chem. Soc. 1993**, 115, 5857-5858. [Impact factor: 14.4; 113 citations]

INVITED SEMINARS & CONFERENCE PRESENTATIONS

Invited Lectures	Twenty-nine invited lectures at international, national, and regional conferences with sixty-three invitations to speak at colleges and universities since 2000.	
Conferences	Frances S. Sterrett Environmental Chemistry Symposium	11/2023
	11th International Conference in Biological Inorganic Chemistry	8/2019
	Sigma Xi Research Showcase (Keynote)	5/2019

	Inorganic and Organometallic Symposium, New York ACS	10/2017
	Frontiers in Inorganic and Organometallic Chemistry	9/2017
	German Center for Research and Innovation	1/2017
	Middle Atlantic Regional Meeting of the ACS	6/2016
	251st Annual Meeting of the American Chemical Society	3/2016
	New York Nanoscience Discussion Group	2/2015
	European Union PEPDIODE Project Annual Meeting	5/2014
	German Center for Research and Innovation	3/2014
	European Union PEPDIODE Project Annual Meeting	11/2013
	European Union PEPDIODE Project Annual Meeting	10/2012
	European Union PEPDIODE Project Kick-off Meeting	10/2011
	Protein Design Mega Meeting at City College of New York.	5/2010
	Trace-Elements in Man and Animals – TEMA 13	10/2008
	Mid-Atlantic Regional Meeting	5/2008
	2nd Latin American Protein Society Meeting	11/2007
	Boston Regional Inorganic Conference	7/2007
	Gordon Research Conference, Metals in Biology	1/2007
	Metalloprotein and Protein Design	7/2005
	New York Academy of Science Inorganic Minisymposium	12/2004
	Northeast Regional Meeting of the American Chemical Society	11/2004
	Chairmen of the European Research Council's Chemistry Committees (CERC3) Young Chemist's Workshop on Biocatalysis	3/2004
	11th International Conference on Bioinorganic Chemistry (ICBIC)	7/2003
	DARPA Workshop on Protein Folding and Design	10/2002
	Graduate Research Seminar on Metals in Biology	1/2002
	12th International Congress on Photosynthesis	8/2001
	National Science Foundation Inorganic Workshop	4/2002
	221st Annual Meeting of the American Chemical Society	4/2001
Colleges & Universities	New College of Florida, Department of Chemistry	5/2021
	Brooklyn College Cancer Center	10/2020
	Lehman College, Department of Chemistry	2/2019
	University of Pennsylvania, Department of Biochemistry and Biophysics	5/2019
	St. Francis College, Department of Chemistry and Physics	10/2018
	City College of New York, Department of Chemistry	4/2018
	University of Idaho, Department of Chemistry	10/2017
	St. Joseph's College, 22nd Annual H.S. Poster Session (Keynote)	2/2017
	St. John's University, Institute for Biotechnology	9/2015
	College of Staten Island, Department of Chemistry	11/2014
	St. John's University, Department of Chemistry	6/2014
	City College of New York, Department of Chemistry	3/2014
	Iona College, Department of Chemistry	10/2013
	Hofstra University, Department of Chemistry	9/2013
	Aix-Marseille Universite, Department of Chemistry	10/2012
	Weizmann Institute of Science, Plant Sciences Department	10/2011
	University of Nevada – Reno, Department of Chemistry	10/2011
	City University of New York, Graduate Center	6/2011

Long Island University, Department of Biology	4/2010
SUNY – Potsdam, Department of Chemistry	9/2009
St. Lawrence University, Department of Chemistry	9/2009
Yeshiva University, Department of Chemistry	4/2009
St. John's University, Department of Chemistry	3/2009
University of Western Ontario, Department of Chemistry	5/2007
Indiana University, Department of Chemistry	3/2007
New York University, Department of Chemistry	11/2006
Pace University, Department of Chemistry	10/2006
Utah State University, Department of Chemistry	10/2006
University of Utah, Department of Chemistry	10/2006
University of Massachusetts, Department of Chemistry	3/2006
Haverford College, Department of Chemistry	1/2006
University of Miami (Ohio), Department of Chemistry	12/2005
Boston University, Department of Chemistry	11/2005
Massachusetts Institute of Technology, Department of Chemistry	10/2005
University of Illinois, Department of Chemistry	9/2005
Cornell University, Department of Chemistry	9/2005
University of California – Davis, Department of Chemistry	5/2005
University of California – Santa Cruz, Department of Chemistry	5/2005
Stanford University, Department of Chemistry	5/2005
Columbia University, Department of Chemistry	4/2005
Iowa State University, Department of Chemistry	4/2005
University of Iowa, Department of Chemistry	4/2005
Purdue University, Department of Chemistry	3/2005
University of Pennsylvania, Department of Chemistry	2/2005
University of Delaware, Department of Chemistry	12/2004
Wayne State University, Department of Chemistry	11/2004
University of Michigan, Department of Chemistry	11/2004
Michigan State University, Department of Chemistry	11/2004
Ohio State University, Department of Chemistry	10/2004
University of Cincinnati, Department of Chemistry	10/2004
Tufts University, Department of Chemistry	4/2004
University of Kansas, Department of Chemistry	4/2004
Max Plank Institute for Bioinorganic Chemistry	3/2004
North Dakota State University, Department of Chemistry	12/2003
St. John's University, Department of Chemistry	10/2003
City College of New York, Department of Chemistry	10/2003
Stockholm University, Dept. of Biochemistry and Biophysics	4/2003
Barnard College, Department of Chemistry	3/2002
University of Nebraska, Department of Chemistry	9/2002
Scripps Research Institute, Department of Biochemistry and Molecular Biophysics	5/2002
Hunter College, Department of Chemistry	9/2001
Texas A&M University, Department of Chemistry	4/2001
Memorial Sloan-Kettering Cancer Center, Department of Biochemistry and Biophysics	10/2000
Columbia University, Dept. of Biochemistry and Biophysics	9/2000

EXTERNAL SERVICE & PROFESSIONAL ACTIVITIES

Councilor	American Chemical Society (ACS)	2013–2015, 2019–2022, 2025–2027
	Member, Joint Board – Council Committee on Science	2014-2019
Board Member	New York Local Section of the ACS	2007–present
	Chair (2017), *Secretary* (2011–2012), *Treasurer* (2022–2026)	
	Long Range Planning Committee Chair (2013–present)	
	Outstanding Service Award Jury (2020–2024)	
	William H. Nichols Medal Award Jury (2017–2021)	
	Brooklyn Subsection of the New York ACS	2010–present
	Chair (2010–2012)	
	Middle Atlantic Region of the ACS	2018–present
	Chair (2024)	
Summer Research Program Director	American Cancer Society Summer Intern Program	2022–present
	Gray Foundation Summer Research Program	2021–present
	Stacey & Michael Garil Summer Intern Program	2020–2021
	CM&E Group Summer Intern Program	2019
	Nichols Fellow Program	2015–2018
Meeting Organizer	Conference for Undergraduate Women in Physics	2024
	Marie Maynard Daly National Historic Chemical Landmark	2023
	2023 Middle Atlantic Regional Meeting of the ACS	2023
	2020 Middle Atlantic Regional Meeting of the ACS (terminated)	2020
	Teaching Students with Disabilities Symposium	2023
	Nanoscience Approaches to Cancer II Symposium	2022
	Nanoscience Approaches to Cancer Symposium	2021
	Academic Integrity in the Time of COVID Symposium Series	2021
	Teaching in the Time of COVID Symposium Series	2020
	Reaching Students with Disabilities Symposium	2018
	ACS Award for Distinguished Service in the Advancement of Inorganic Chemistry Symposium	2016
	William H. Nichols Distinguished Award Symposium	2017, 2020–2022
	New York ACS Sectionwide Conference	2016, 2020–2022
	Metalloprotein and Protein Design Conference	2005
	New York ACS Inorganic Topical Group Symposium	2004–2005
Webinar	ACS On Campus Tips for Applying to Graduate School in Chemistry	2021
Reviewer	Journals: *Journal of the American Chemical Society, Inorganic Chemistry, Biochemistry, Nature, Journal of Biological Inorganic Chemistry, Jounal of Inorganic Biochemistry* Proposals: *National Institutes of Health, National Science Foundation, American Heart Association, PSC-CUNY* Tenure/Promotion packages	

Outreach	US National Chemistry Olympiad *High School student competition*	2010–present
	National Chemistry Week at the New York Hall of Science *Hands-on chemistry demonstrations*	2015–present
	Social media for the New York ACS	2008–present
	Graduate School: The Ins and Outs of Getting In, panelist	2015–2018
	Brooklyn Frontiers in Science Public Lecture *Annual public lecture*	2010–2019
Webmaster	www.newyorkacs.online	2007–present
Editor	*The Indicator*	2021–present
Guest Editor	*Inorganic Chemistry* Forum on Biomolecular Design	2006
Training	STEM Pedagogy Institute – Computational Methods, *Participant*	2022
	American Council of Education Effective College Instruction, *Graduate*	2020–2021
	CUNY Online Teaching Essentials Workshop, *Participant*	2020
	Academic Leadership Team workshop, *Participant*	2019
	ACS Leadership Development System, *Graduate*	2014–2017

UNIVERSITY SERVICE

The City University of New York

Hispanic Serving Research Universities, *CUNY's representative*	2024–present
High Performance Computing Center Working Group, *Member*	2024–present
Council of Administrators for Research Success (CARS), *Member*	2023–present
CUNY R1 Working Group, *Member*	2023–present
CUNY R2 Working Group, *Member*	2023–present
PSC–CUNY Grant Review Panel, *Member*	2010–2012
CUNY Summer Undergraduate Research Program, *Host lab*	2010

The Graduate Center – the City University of New York

Academic Affairs Budget Committee, *ex officio*	2023–present
Graduate Council Research Committee, *ex officio*	2023–present
Responsible Conduct of Research Workshop, *Leader*	2024
Presidential Search Committee, *Member*	2019
Executive Committee of Executive Officers, *Chair*	2015–2020
Academic Review Committee (P&B), *Member*	2017–2020
Presidential Advisory Committee on Diversity and Inclusion, *Member*	2017–2020
ACS Bridge Program Partner Site, *Founding director*	2020
MS in Nanoscience, *Founding director*	2019
Graduate Center Strategic Plan Implementation Committee, *Member*	2017–2020
CUNY Bench Sciences Oversight Committee, *Member*	2017–2018
Search Committee, Director, Center for Teaching and Learning, *Member*	2015
Undergraduate Research Symposium, *PhD program representative*	2010

PhD Program in Chemistry

Executive Officer	2014–2020
Deputy Executive Officer	2011–2024, 2021
Diversity & Inclusion Task Force, *Convener*	2015
Admissions Committee, *Chair*	2011–2021
Awards Committee, *Chair*	2014–2020
Faculty Membership Committee, *Chair*	2016–2020

Brooklyn College – The City University of New York

Faculty Council, *Departmental representative*	2023
Faculty Council, Awards Committee, *Member*	2023
Pre-Health Advising Office, *Faculty overseer*	2022–2023
Community of Practice Leader for Distance Learning, *School representative*	2020–2021
Brooklyn College Committee on Admissions, *Member*	2011–2012
Brooklyn College Strategic Planning Working Group, *Departmental representative*	2010–2011
Roosevelt Science Complex Programming/Design Team *Departmental representative*	2010–2011
SMART to Finish:Advising Undergraduates for High-Impact Learning *Departmental representative*	2011
SCORE Research Retreat Program Committee, *Member*	2010
Masters Curriculum Task Force, *Member*	2009–2010
NIH SCORE Grant Advisory Committee, *Member*	2008–2009

Department of Chemistry and Biochemistry – Brooklyn College

Chair	2023–2023
Summer Chair	2021–2023
Undergraduate Deputy Chair	2021–2022
Appointments Committee (P&B)	2011–2023
Undergraduate Advisor	2011–2014
Endowed Chair Selection Committee, *member*	2024
Equipment Committee, *member*	2020–2023
Safety Committee, *member*	2011–2014
Web Committee, *Chair*	2011–2014
Friedman Lecture Committee, *member*	2011–2014
Academic Integrity Committee, *member*	2010–2014
High School Day Chemistry Magic Show Duo, *member*	2009–2012

Brooklyn College Cancer Center

Associate Director for Education	2020–2023
Faculty Mentoring Team, *member*	2023–present
Pilot Grant, *reviewer*	2023–present

Columbia University

KAST Lab Construction Project, *faculty liaison*	2005–2008

Baccalaureate Service, *marshall* 2005

Department of Chemistry – Columbia University

Admissions Committee, *member* 2001–2007
NSF Research Experience for Undergraduates, *host lab* 2001–2007
NSF Graduate STEM Fellows in K–12 Project, *host lab* 2004-2007

TEACHING

The Graduate Center – the City University of New York

CHEM 71000	Advanced Inorganic Chemistry	16 students	Fall 2023
CHEM 71000	Advanced Inorganic Chemistry	24 students	Fall 2022
CHEM 71000	Advanced Inorganic Chemistry	19 students	Fall 2021
CHEM 71000	Advanced Inorganic Chemistry	24 students	Fall 2020
CHEM 79500	First Level Laboratory Research	20 students	Spring 2020
BICM 90000	Dissertation Supervision	1 student	Spring 2020
CHEM 79500	First Level Laboratory Research	19 students	Fall 2019
BICM 90000	Dissertation Supervision	1 student	Fall 2019
CHEM 79500	First Level Laboratory Research	18 students	Spring 2019
BICM 90000	Dissertation Supervision	1 student	Spring 2019
CHEM 79500	First Level Laboratory Research	18 students	Fall 2018
CHEM 81000	Doctoral Dissertation Research	1 student	Fall 2018
BICM 90000	Dissertation Supervision	1 student	Fall 2018
CHEM 79500	First Level Laboratory Research	18 students	Spring 2018
CHEM 81000	Doctoral Dissertation Research	1 student	Spring 2018
CHEM 90000	Dissertation Supervision	2 students	Spring 2018
BICM 90000	Dissertation Supervision	1 student	Spring 2018
CHEM 79500	First Level Laboratory Research	19 students	Fall 2017
CHEM 81000	Doctoral Dissertation Research	1 student	Fall 2017
BICM 90000	Dissertation Supervision	1 student	Fall 2017
CHEM 79500	First Level Laboratory Research	18 students	Spring 2017
BICM 90000	Dissertation Supervision	1 student	Spring 2017
CHEM 79500	First Level Laboratory Research	19 students	Fall 2016
BICM 90000	Dissertation Supervision	1 student	Fall 2016
CHEM 79500	First Level Laboratory Research	20 students	Spring 2016
CHEM 61000	Project TEACH	20 students	Spring 2016
CHEM 81000	Doctoral Dissertation Research	2 students	Spring 2016
BICM 90000	Dissertation Supervision	1 student	Spring 2016
CHEM 79500	First Level Laboratory Research	21 students	Fall 2015
BICM 82000	Doctoral Dissertation Research	1 student	Fall 2015
CHEM 79500	First Level Laboratory Research	26 students	Spring 2015
CHEM 79500	First Level Laboratory Research	28 students	Fall 2014
BICM 82000	Doctoral Dissertation Research	1 student	Fall 2014
BICM 82000	Doctoral Dissertation Research	1 student	Fall 2013
CHEM 79001	Basic Laboratory Techniques	4 students	Spring 2012
CHEM 79001	Basic Laboratory Techniques	4 students	Fall 2009

CHEM 79001	Basic Laboratory Techniques	7 students	Spring 2009
CHEM 79001	Basic Laboratory Techniques	3 students	Fall 2008

Brooklyn College – The City University of New York

CHEM 3420	Instrumental Analysis	9 students	Fall 2023
CHEM 5010	Research	6 students	Fall 2023
CHEM 5110	Honors Research	10 students	Fall 2023
CHEM 3415W	Analytical Chemistry (writing intensive)	26 students	Spring 2023
CHEM 5010	Research	20 students	Spring 2023
CHEM 5220	Seminar	1 student	Spring 2023
CHEM 5010	Research	7 students	Fall 2022
CHEM 5120	Honors Research	6 students	Fall 2022
CHEM 5010	Research	23 students	Spring 2022
CHEM 5210	Seminar	2 students	Spring 2022
CHEM 3420	Instrumental Analysis	8 students	Fall 2021
CHEM 5010	Research	16 students	Fall 2021
CHEM 3420	Instrumental Analysis	17 students	Spring 2021
CHEM 5010	Research	16 students	Spring 2021
CHEM 5210	Seminar	3 students	Spring 2021
CHEM 3415W	Analytical Chemistry (writing intensive)	50 students	Fall 2020
CHEM 5210	Seminar	2 students	Fall 2020
CHEM 7110G	Masters Seminar	3 students	Fall 2020
CHEM 5210	Seminar	2 students	Spring 2020
CHEM 7110G	Masters Seminar	1 student	Spring 2020
CHEM 7420G	Lab Techniques	11students	Spring 2020
CHEM 5010	Research	4 students	Fall 2019
CHEM 7110G	Masters Seminar	4 students	Fall 2019
CHEM 5110	Honors Research	7 students	Spring 2019
CHEM 7110G	Masters Seminar	2 students	Spring 2019
CHEM 3420	Instrumental Analysis	6 students	Fall 2018
CHEM 7420G	Lab Techniques	1 student	Fall 2018
CHEM 7420G	Lab Techniques	1 students	Fall 2018
CHEM 5010	Research	3 students	Fall 2018
CHEM 5210	Seminar	2 students	Fall 2018
CHEM 4761	Inorganic Chemistry	6 students	Spring 2018
CHEM 7761G	Advanced Inorganic Chemistry	5 students	Spring 2018
CHEM 7110G	Masters Seminar	5 students	Spring 2018
CHEM 3420	Instrumental Analysis	6 students	Fall 2017
CHEM 7420G	Lab Techniques	3 students	Fall 2017
CHEM 5210	Seminar	8 students	Fall 2017
CHEM 5210	Seminar	4 students	Spring 2017
CHEM 3420	Instrumental Analysis	13 students	Fall 2016
CHEM 7420G	Lab Techniques	4 students	Fall 2016
CHEM 5210	Seminar	4 students	Fall 2016
CHEM 5210	Seminar	6 students	Spring 2016
CHEM 3420	Instrumental Analysis	12 students	Fall 2015

CHEM 7420G	Lab Techniques	5 students	Fall 2015
CHEM 5210	Seminar	12 students	Fall 2015
CHEM 5210	Seminar	7 students	Spring 2015
CHEM 3420	Instrumental Analysis	17 students	Fall 2014
CHEM 7420G	Lab Techniques	4 students	Fall 2014
CHEM 5210	Seminar	8 students	Fall 2014
New Faculty Teaching Release			Spring 2014
CHEM 3420	Instrumental Analysis	15 students	Fall 2013
CHEM 7420G	Lab Techniques	4 students	Fall 2013
CHEM 5010	Research	4 students	Fall 2013
CHEM 5010	Research	2 students	Summer 2013
CHEM 3415W	Analytical Chemistry (writing intensive)	44 students	Spring 2013
CHEM 3420	Instrumental Analysis	17 students	Fall 2012
CHEM 7420G	Lab Techniques	6 students	Fall 2012
CHEM 3415W	Analytical Chemistry (writing intensive)	43 students	Spring 2012
CHEM 3420	Instrumental Analysis	11 students	Fall 2011
CHEM 7420G	Lab Techniques	11 students	Fall 2011
CHEM 5010	Research	6 students	Spring 2011
CHEM 7910G	Thesis Research	1 students	Spring 2011
CHEM 7930G	Thesis Research	1 student	Spring 2011
CHEM 5010	Research	13 students	Fall 2010
CHEM 7810G	Introduction to Lab Research	7 students	Fall 2010
CHEM 7920G	Thesis Research	1 student	Fall 2010
CHEM 41W	Analytical Chemistry (writing intensive)	30 students	Spring 2010
CHEM 73.2	Research	8 students	Spring 2010
CHEM 79.5	Introduction to Lab Research	2 students	Spring 2010
CHEM 70.5	Seminar	6 students	Spring 2010
CHEM 42	Instrumental Analysis	9 students	Fall 2009
CHEM 73.2	Research	7 students	Fall 2009
CHEM 79.5	Introduction to Lab Research	9 students	Spring 2009
CHEM 42	Instrumental Analysis	7 students	Fall 2008

Department of Chemistry – Columbia University

C3071	Introduction to Inorganic Chemistry	26 students	Spring 2007
G8105	Bioinorganic Chemistry	10 students	Spring 2007
C3071	Introduction to Inorganic Chemistry	19 students	Spring 2006
G8107	Physical Methods in Inorganic Chemistry	17 students	Spring 2006
C3071	Introduction to Inorganic Chemistry	21 students	Spring 2005
G8105	Bioinorganic Chemistry	11 students	Spring 2005
C3071	Introduction to Inorganic Chemistry	14 students	Spring 2004
G8107	Physical Methods in Inorganic Chemistry	12 students	Fall 2003
G8108	Group Theory	13 students	Fall 2003
G8105	Bioinorganic Chemistry	12 students	Spring 2002
G8107	Physical Methods in Inorganic Chemistry	12 students	Fall 2002
G8108	Group Theory	12 students	Fall 2002
G8107	Physical Methods in Inorganic Chemistry	12 students	Fall 2001

G8108	Group Theory	12 students	Fall 2001
G8105	Bioinorganic Chemistry	12 students	Spring 2001

STUDENTS, POSTDOCS, & OTHER ADVISEES

Ph.D. Theses Advised

Inna Bakman-Sanchez | City University of New York Ph.D. in Biochemistry, 2020
Senior Program Manager, Memorial Sloan Kettering Cancer Center
Pointing the Zinc Finger on Protein Folding: Energetic Investigation into the Role of the Metal–Ion in the Metal–Induced Protein Folding of Zinc Finger Motifs

Amit R. Reddi | Columbia University Ph.D. in Chemistry, 2008
Associate Professor of Chemistry and Biochemistry, Georgia Institute of Technology
Using Designed Metallopeptides to Deconvolute the Energetics of Zinc and Heme Proteins

Sean D. Moran | Columbia University Ph.D. in Chemistry, 2008
Assistant Professor of Chemistry and Biochemistry, Southern Illinois University
Investigating the Effects of Protein Structural Context and Hydrophobic Burial on the Thermodynamic Selectivity and Reactivity of Tryptophan Indole and Mononuclear Metal Ion Cofactors

Koon-Ching Cheung | Columbia University Ph.D. in Chemistry, 2008
Therapeutics Analyst at Citadel
Using Density Functional Theory to Probe the Role of Axial Ligands in Heme–Protein Thermodynamics

Amy K. Petros | Columbia University Ph.D. in Chemistry, 2006
Principal Lecturer, University of North Texas
Modeling Thiolate-Rich Metalloproteins using Ferredoxin Maquettes: Analysis of Cobalt(II) and [4Fe–4S]$^{2+/+}$ Binding to IGA

Jinyou Zhang| Columbia University Ph.D. in Chemistry, 2005
Senior Scientists II, Boehringer Ingelheim Animal Health
Investigation of the Effects of Non-Natural Amino Acids and Hemes in De Novo Heme Protein Design

Charles J. Reddy | Columbia University Ph.D. in Chemistry, 2005
Senior Scientists II, Boehringer Ingelheim Animal Health
Heme–Binding Thermodynamics of Designed Proteins: Implications on the Nature of Cytochrome

Graduate Students Advised

Jose Villegas | Brooklyn College M.A. in Chemistry, 2011
Assistant Professor, University of Illinois at Chicago

Ka Lam Chan | Brooklyn College M.A. in Chemistry, 2011
AP and Regents Chemistry Teacher, New York City Department of Education

Maglorzata Szarkowska | Brooklyn College M.A. in Chemistry, 2013
Pharmacy technician, CVS

Jaclyn Catalano | Columbia University M. Phil. in Chemistry, 2007
Associate Professor, Montclair State University

Margaret Elvekrog | Columbia University M. Phil. in Chemistry, 2007
Senior Director, Corporate Strategy at Exact Sciences

Roxanne Daugherty-Sim | Texas A&M University (visiting). M.S. in Chemistry, 2002
Director, Quality at Syndax Pharmaceuticals

Undergraduate Students Advised

Jonathan Rosario | Brooklyn College B.A. in Chemistry, 2013
Victoria Goldenshtein, Ph.D | Brooklyn College B.A. in Chemistry, 2011
Michael Lennenville, M.D. | Brooklyn College B.A. in Chemistry, 2011
Michelle Leuenberger, Ph.D. | Brooklyn College B.A. in Chemistry, 2011
Stephanie Iusim, M.D. | Brooklyn College B.A. in Chemistry, 2011
Madina Nemo | Brooklyn College B.A. in Chemistry, 2010
Temi Adeyeye, Ph.D. | Brooklyn College B.A. in Chemistry, 2010
Mariya Gorkhover | Brooklyn College B.A. in Chemistry, 2009
Coray McBean, Ph.D. | Brooklyn College B.A. in Chemistry, 2010
Mariya Gorkhover | Brooklyn College B.A. in Chemistry, 2009
Katherine White, Ph.D. | St. Mary's College B.S. in Chemistry, 2007
Tabitha Guzman | San Jose State University B.A. in Chemistry, 2006
Greg Kimball, Ph.D. | Columbia University B.S. in Chemistry, 2006
Stephen Mui | Columbia University B.A. in Chemistry, 2006
Katherine Liberman, M.D. | Barnard College B.A. in Chemistry, 2006
Amanda Ramsdell, M.D. | Columbia University B.S. in Chemistry, 2005
Gina Skubik, Pharm. D. | St. Mary's College B.S. in Chemistry, 2005
Margaret Elvekrog, Ph.D. | Vitterbo University B.S. in Chemistry, 2004
Sarah Shaner, Ph.D. | Marietta College B.S. in Chemistry, 2004
Gina Skubik, Pharm. D. | St. Mary's College B.S. in Chemistry, 2005
Hyacinth Hai-Xu Lu, M.D. | Columbia University B.S. in Chemistry, 2003
Rachel Hoftyzer | University of Iowa B.S. in Chemistry, 2003
Heidi K. Privett, Ph.D. | Centre College B.S. in Chemistry, 2002

Postdoctoral Advised

Michelle Kennedy, Ph.D. | Columbia University 2000-2003
Project Manager, MRIGlobal

Visiting High School Teacher Advised

Alistair Chew | Columbia University 2004
Teacher, Anglo-Chineses School, Singapore

Visiting Professors Advised

Alison G. Hyslop, Ph.D. | Columbia University & Brooklyn College 2004, 2006, 2009
Associate Dean for Graduate Studies, St. John's University

Chandrika Kulatilleke, Ph.D. | Brooklyn College 2008–2009
Professor of Chemistry, Baruch College – CUNY

FUNDING

Summary

$1.8M in individual research support from domestic and international granting agencies (NSF, NIH, American Heart Association, European Union) from a total of $7.9M awarded.

Active

Thermodynamic Analysis of cytochrome c-to-b Conversions
PSC-CUNY Traditional A PI: Gibney
7/2023 – 6/2024 3,463 total costs

Diversity in Cancer Research at Brooklyn College Cancer Center, a Highly Diverse Institution
American Cancer Society PI: Contel (Gibney, Key Collaborator)
1/2023 – 12/2026 2,613,000 total costs

Submitted

Access to STEM Career Excellence: Cultivating Equity in Graduate School Preparedness at Minority-Serving Institutions at CUNY
Sloan Foundation PI: Brumberg (Gibney, Project Lead)
3/2025 – 3/2026 135,582 total costs

Completed

Thermodynamic Analysis of cytochrome c-to-b Conversions
PSC-CUNY Traditional A PI: Gibney
7/2022 – 12/2023 3,480 total costs

Thermodynamic Analysis of cytochrome c-to-b Conversions
PSC-CUNY Traditional A PI: Gibney
7/2019 – 6/2022 3,435 total costs

Pb(II) Binding Thermodynamics of Human Transcription Factor IIB
PSC-CUNY Traditional B PI: Gibney
7/2015 – 6/2016 5,992 total costs

Zn(II) Binding Thermodynamics of Human Transcription Factor IIB

PSC-CUNY Traditional B PI: Gibney
7/2014 – 6/2015 5,980 total costs

Peptide-based Diodes for Solar Cells
European Commission Framework Programe 7 (FP7-256672)
PI: Breitling (Gibney co-PI)
8/2011 – 7/2015 448,000 total to Gibney (3.85M total)

Thermodynamic Evaluation of the Coupled Binding of Zn(II) and DNA to a Zinc Finger Protein Tumor Suppressor
National Institutes of Health (SC3-GM089634)
PI: Gibney
1/2009 – 12/2014 435,195 total costs

Thermodynamic Analysis of Pb(II) and Zn(II) Binding to Cysteine-rich Peptides
PSC-CUNY Regular PI: Gibney
7/2010 – 6/2011 3,690 total costs

Thermodynamic Analysis of Zn(II) and DNA binding to Wilms' Tumor Suppressor
PSC-CUNY Out-of-cycle PI: Gibney
7/2009 – 6/2010 3,200 total costs

Thermodynamic Evaluation of the Thioether Linkages in c-type Cytochromes using cyt c-to-b Conversion Proteins
American Heart Association PI: Gibney
7/2007 - 6/2010 198,000 total costs

De novo Design of Molybdenum and Tungsten Proteins
Dreyfus Foundation PI: Gibney
7/2005 – 6/2010 75,000 total costs

Design of Cytochrome c Oxidase Maquettes
American Heart Association PI: Gibney
9/2004 - 8/2007 198,000 total costs

Modeling Natural Molybdenum/Tungsten Sites in Designed Proteins
ACS–PRF PI: Gibney
9/2004 – 8/2006 80,000 total costs

SEED Funding in Biological Nanostructures
National Science Foundation PI: Gibney
1/2003 – 12/2003 20,000 total costs

Cryoprobe Accessory for Bruker DRX600 Spectrometer

National Institutes of Health PI: Palmer
9/2002-8/2004 256,000 total costs

Allosteric Metalloprotein Design
National Science Foundation PI: Gibney
8/2002 – 7/2005 350,000 total costs

Second Coordination Sphere Control of Metal-Ion Specificity in Designed Metalloproteins
ACS–PRF PI: Gibney
6/2002 – 8/2004 35,000 total costs

PROFESSIONAL REFERENCES

Joshua Brumberg, *President*
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