

Biographical Sketch: Daniel M. Quinn, Professor of Chemistry

I. Professional Preparation:

Ph.D. (Bioorganic Chemistry) University of Kansas, 1978
B.S. (Chemistry) Quincy College, 1972

II. Appointments:

Director, Predoctoral Training Program in Biotechnology, University of Iowa; 1998 – present
Professor of Chemistry, University of Iowa; 1992 – present
Adjunct Professor, Meharry Medical College, Department of Pharmacology, 2001 – 2005
Chair, Department of Chemistry, University of Iowa; 1999-2002
Associate Professor of Chemistry, University of Iowa; 1987 – 1992
Assistant Professor of Chemistry, University of Iowa; 1982 – 1987

III. Awards:

2009	University Housing Academic Excellence Award
2009	Honors Program Teaching Award
2006-present	Honorary Editorial Board, Perspectives in Medicinal Chemistry
2006	CLAS Collegiate Teaching Award
2004-2006	T. L. L. Temple Foundation Discovery Award, Alzheimer's Association
2002	Honorary Member, Golden Key International Honor Society

IV. Selected Ten Highest Impact Publications (92 total) or Patents (2 total):

1. Tormos, J.R.; Wiley, K.L.; Schlom, P.S.; Wang, Y.; Fournier, D.; Masson, P.; Nachon, F.; Quinn, D.M. Accumulation of Tetrahedral Intermediates in Cholinesterase Catalysis: a Secondary Isotope Effect Study. *Journal of the American Chemical Society* **2010**, *132*, 17751-17759.
2. Tormos, J.R.; Wiley, K.L.; Seravalli, J.; Nachon, F.; Masson, P.; Nicolet, Y.; Quinn, D.M. The Reactant State for Substrate-Activated Turnover of Acetylthiocholine by Butyrylcholinesterase is a Tetrahedral Intermediate. *Journal of the American Chemical Society* **2005**, *127*, 14538-14539.
3. Liang, Y.; Medhekar, R.; Brockman, H.L.; Quinn, D.M.; Hui, D.Y. Importance of Arginines 63 and 423 in Modulating the Bile Salt-Dependent and Bile Salt-Independent Hydrolytic Activities of Rat Carboxyl Ester Lipase. *Journal of Biological Chemistry* **2000**, *275*, 24040-24046.
4. Malany, S.; Sawai, M.; Sikorski, R.S.; Seravalli, J.; Quinn, D.M.; Radić, Z.; Taylor, P.; Velan, B.; Kronman, C.; Shafferman, A. Transition State Structure and Rate Determination for the Acylation Stage of Acetylcholinesterase Catalyzed Hydrolysis of (Acetylthio)choline. *Journal of the American Chemical Society* **2000**, *122*, 2981-2987.
5. Quinn, D.M.; Feaster, S.R.; Nair, H.K.; Baker, N.A.; Radić, Z.; Taylor, P. Delineation and Decomposition of Energies Involved in Quaternary Ammonium Binding in the Active Site of Acetylcholinesterase. *Journal of the American Chemical Society* **2000**, *122*, 2975-2980.
6. Feaster, S.R.; Quinn, D.M.; Barnett, B.L. Molecular Modeling of the Structures of Human and Rat Pancreatic Cholesterol Esterases. *Protein Science* **1997**, *6*, 71-77.
7. Radić, Z.; Kirchhoff, P.; Quinn, D.M.; McCammon, J.A.; Taylor, P. Electrostatic Influence on the Kinetics of Ligand Binding to Acetylcholinesterase: Distinctions Between Active Center Ligands and Fasciculin. *Journal of Biological Chemistry* **1997**, *272*, 23265-23277.
8. Harel, M.; Quinn, D.M.; Nair, H.K.; Silman, I.; Sussman, J.L. The X-ray Structure of a Transition State Analog Complex Reveals the Molecular Origins of the Catalytic Power and Substrate Specificity of Acetylcholinesterase. *Journal of the American Chemical Society* **2006**, *118*, 2340-2346.

9. Feaster, S.R.; Lee, K.; Baker, N.; Hui, D.Y.; Quinn, D.M. Molecular Recognition by Cholesterol Esterase of Active Site Ligands: Structure-Reactivity Effects for Inhibition by Aryl Carbamates and Subsequent Carbamylenzyme Turnover. *Biochemistry* **1996**, *35*, 16723-16734.
10. Quinn, D.M. Acetylcholinesterase: Enzyme Structure, Reaction Dynamics, and Virtual Transition. *States Chemical Reviews* **1987**, *87*, 955-981.

V. Synergistic Activities:

1. Member in Interdisciplinary Research Centers: Professor Quinn is a member of the Center for Biocatalysis and Bioprocessing (CBB) and serves on the Executive Committee of the Center.
2. Principal Investigator on Interdisciplinary Grant: Professor Quinn is the Principle Investigator and Director of the NIH-funded Predoctoral Training Program in Biotechnology. Faculty and their predoctoral trainees who participate in the program are drawn from four colleges and six departments: Chemistry (CLAS); Biochemistry, Microbiology (College of Medicine); Civil & Environmental Engineering, Chemical & Biochemical Engineering (College of Engineering); Medicinal & Natural Products Chemistry (College of Pharmacy). The Center for Biocatalysis and Bioprocessing leverages the financial support provided by the NIH. Twelve predoctoral trainees are currently supported by the program. The Predoctoral Training Program in Biotechnology provides trainees with interdisciplinary coursework, seminars and symposia, as well as research and industrial internship opportunities.
3. Diversity: Professor Quinn is a Faculty Advisor of the University of Iowa Chapter of the National Organization of Black Chemists and Chemical Engineers (NOBCChE).
4. NIH Study Section: Professor Quinn is a permanent member of the Biomedical Research Training Study Section at the National Institutes of Health, and serves as an *ad hoc* member of the study section that reviews grant applications to the CounterACT Program at NIH.
5. American Chemical Society: Professor Quinn is a Visiting Associate of the ACS Committee on Professional Training (CPT). In this role he site visits departments of chemistry in colleges/universities that are petitioning the CPT for ACS certification of their BS in chemistry programs, or whose BS programs are undergoing periodic review.
6. Editorial Board for Scientific Journals: Professor Quinn is a member of the Editorial Board of *Perspectives in Medicinal Chemistry*.

VI. Engagement:

1. 2011 - now Scientific Advisory Committee, Session Chair, Isotopes 2013; Gdynia, Poland, June, 2013
2. 2008-2014 NIH Biomedical Research Training Study Section (permanent member)
3. 2010-now Scientific Advisory Committee, Eleventh International Cholinesterase Conference, Kazan, Russia; meeting scheduled for June, 2012
4. 2010-2011 Scientific Advisory Committee, Isotopes 2011; Greoux-les-Bain, France, June, 2011
5. 2010 Organizing Committee, Midwest Regional Meeting of the National Organization of Black Chemists and Chemical Engineers – NOBCChE
6. 2009 Organizing Committee, Midwest Regional Meeting of the American Chemical Society
7. Scientific Advisory Committee, Tenth International Cholinesterase Conference, Šibenik, Croatia, 2009
8. 2008 Chair, Isotopes in the Chemical and Biological Sciences Gordon Conference, Ventura, CA
9. 2006-2008 Councilor, Gordon Research Organization
10. 2007 International Advisory Board, 9th International Meeting on Cholinesterases, Suzhou, China, May, 2007
11. Journal review: *Biochemistry*, *Journal of Biological Chemistry*, *Journal of the American Chemical Society*, *Journal of Organic Chemistry*, *Journal of Medicinal Chemistry*

Total Number of Graduate Students Advised: 32

Total Number of Postdoctoral Scholars Advised: 15