

Curriculum Vitae
Gordon Marcus Loudon

Part I. General Information

1. Vital Statistics

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1. *Date of Birth:* October 10, 1942
2. *Place of birth:* Baton Rouge, Louisiana
3. Married (1964) to Judith Lynn Blanchard
4. *Children:* Leland Kyle (b. 1969) and Marcus Christopher (b. 1970)

2. Education

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1. Bachelor of Science in Chemistry (*Magna cum Laude*), Louisiana State University, Baton Rouge (1964)
2. Doctor of Philosophy, University of California, Berkeley (1968). Field of Specialization: Organic Chemistry. Major Professor: Donald S. Noyce
3. Postdoctoral Study, Department of Biochemistry, University of California, Berkeley (1968–1970). Field of Specialization: Biochemistry. Research Director: Daniel E. Koshland, Jr.

3. Employment History

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1. Teaching Assistant in Organic Chemistry, Louisiana State University, Baton Rouge, 1963–64 (half time)
2. Summer Employee in Research, Dow Chemical Company, Louisiana Division, Plaquemine, LA, June–August 1964
3. Teaching and Research Assistant, Department of Chemistry, University of California, Berkeley, 1964–68
4. Postdoctoral Research Fellow, Department of Biochemistry, University of California, Berkeley, 1968–70
5. Lecturer in Biochemistry, University of California, Berkeley, January–March 1970
6. Assistant Professor of Chemistry, Cornell University, Ithaca, NY, 1970–76
7. Visiting Associate Professor of Chemistry, University of Georgia, Athens, January–March 1977
8. Associate Professor of Chemistry, Cornell University, Ithaca, NY, 1976–77
9. Associate Professor of Medicinal Chemistry, Department of Medicinal Chemistry and Pharmacognosy, Purdue University, West Lafayette IN, 1977–1983
10. Professor of Medicinal Chemistry, Department of Medicinal Chemistry and Pharmacognosy, Purdue University, West Lafayette IN, 1983–present

11. Associate Dean for Research and Graduate Programs, School of Pharmacy and Pharmacal Sciences, Purdue University, West Lafayette IN, 1988–2002
12. Gustav Cwalina Distinguished Professor of Medicinal Chemistry [named for excellence in teaching and teaching scholarship], February 3, 1996–present
13. Senior Associate Dean for Research and Graduate Programs, College of Pharmacy, Nursing, and Health Sciences, Purdue University, West Lafayette IN, 2002–2007

3. Honors and Awards

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1. Dow Chemical Company Undergraduate Fellowship for the Study of Basic Chemistry, Louisiana State University, 1960–1964
2. *Chemical and Engineering News* Merit Award, May 1963
3. Outstanding Senior Award in Basic Chemistry, Baton Rouge Section of the American Chemical Society, 1964
4. Society of the Sigma Xi Outstanding Science Student Award at Louisiana State University, 1964
5. Omicron Delta Kappa Honorary, Louisiana State University, 1963
6. National Institutes of Health Predoctoral Fellowship, 1966–1868
7. National Institutes of Health Postdoctoral Fellowship, 1969–1970
8. Clark Teaching Prize, College of Arts and Sciences, Cornell University, 1976 (This prize recognizes the best teacher in the College of Arts and Sciences.)
9. Henry Heine Faculty Teaching Award, School of Pharmacy, Purdue University, 1980 and 1985
10. Class of 1922 Helping Students Learn Award, Purdue University, 1988
11. Phi Beta Kappa, honorary member, Purdue University, 1989
12. Rho Chi (National Pharmacy Honor Society), 1990
13. Gustav E. Cwalina Distinguished Professorship of Medicinal Chemistry, 1996
14. Purdue University Teaching Academy, September 22, 1997
15. Charles B. Murphy Award (the Purdue University-wide teaching award), 1999
16. Instituted in Purdue University's "Book of Great Teachers," Purdue Memorial Union, 1999.
17. Indiana "Professor of the Year" Award, presented by the Carnegie Foundation for the Advancement of Teaching and directed by CASE (Council for the Advancement and Support of Education), November 14, 2000.

4. Memberships

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1. Omicron Delta Kappa Honorary, Louisiana State University
2. American Chemical Society
 - a. Division of Organic Chemistry
 - b. Division of Medicinal Chemistry
 - c. Division of Biological Chemistry
 - d. Division of Chemical Education

3. American Society for Biochemistry and Molecular Biology (FASEB)
 4. American Associate for the Advancement of Science
 5. Phi Beta Kappa (Purdue Chapter)
 6. Purdue University Teaching Academy, September 22, 1997
 7. American Association of Colleges of Pharmacy
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Part II. Research

1. Research Publications

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1. G. M. Loudon, "Investigations of the Mechanisms of Carbon-Carbon Multiple Bond Protonation Reactions, and the Effects of *Ortho* Substituents." Ph. D. Dissertation, University of California, Berkeley, 1968
2. G. M. Loudon and D. S. Noyce, "General Acid Catalysis in the Dehydration of 1-Aryl-2-phenylethanols." *J. Am. Chem. Soc.*, **1969**, *91*, 1433–1437
3. D. S. Noyce, C. A. Lipinski, and G. M. Loudon, "Correlation of the Reactivity of Thiophene Derivatives." *J. Org. Chem.*, **1970**, *35*, 1718–1720
4. G. M. Loudon, D. Portsmouth, A. Lukton, and D. E. Koshland, Jr., "The Chemistry of the Modification of Tryptophan with 2-Hydroxy-5-nitrobenzyl Bromide." *J. Am. Chem. Soc.*, **1969**, 2792–2794
5. G. M. Loudon and D. E. Koshland, Jr., "The Chemistry of a Reporter Group: 2-Hydroxy-5-nitrobenzyl Bromide." *J. Biol. Chem.*, **1970**, *245*, 2247–2254
6. G. M. Loudon and D. E. Koshland, Jr., "Diagnostic Relationships in the Relaxation Spectrometry of Allosteric Enzymes." *Biochemistry*, **1972**, *11*, 229–240
7. G. M. Loudon, C. K. Smith, and S. E. Zimmerman, "Concurrent General Acid-Electrostatic Catalysis in Vinyl Ether Hydrolysis, and Aspartic Acid-52 of Lysozyme." *J. Am. Chem. Soc.*, **1974**, *96*, 465–479
8. G. M. Loudon and Carl Berke, "Hydrolysis of α -Methoxystyrenes. A Molecular-Orbital Perturbation Analysis of Substituent Effects in Hydration and Solvolysis Reactions." *J. Am. Chem. Soc.*, **1974**, *96*, 4508–4517
9. M. J. Miller and G. M. Loudon, "A Convenient, High-Yield Conversion of Aldehydes to Nitriles." *J. Org. Chem.*, **1975**, *40*, 126–127
10. M. J. Miller and G. M. Loudon, "Carboxyl-Terminal Amino Residue Analysis of Peptides: a New Method." *J. Am. Chem. Soc.*, **1975**, *97*, 5295–5297
11. G. M. Loudon and D. E. Ryono, "An Unusual Rate Law for Vinyl Ether Hydrolysis. Observation of H₃PO₄ Catalysis at High pH." *J. Org. Chem.*, **1975**, *40*, 3574–3577
12. D. E. Ryono and G. M. Loudon, "Electrostatic Facilitation of General Acid-Catalyzed α -Oxonium Ion Formation in a Lysozyme-Like Environment: Synthesis of the Models." *J. Am. Chem. Soc.*, **1976**, *98*, 1889–1899

13. G. M. Loudon and D. E. Ryono, "Electrostatic Facilitation of General Acid-Catalyzed α -Oxonium Ion Formation in a Lysozyme-Like Environment: Kinetic Investigations." *J. Am. Chem. Soc.*, **1976**, *98*, 1900–1907
14. Claudia Danforth, A. W. Nicholson, J. C. James, and G. M. Loudon, "Steric Acceleration in Lactonization Reactions: An Analysis of 'Stereopopulation Control'." *J. Am. Chem. Soc.*, **1976**, *98*, 4275–4281
15. Michael Novak and G. M. Loudon, "The Aminolysis of α -Acetoxystyrenes. The pK_a of Acetophenone in Aqueous Solution." *J. Am. Chem. Soc.*, **1976**, *98*, 3591–3597
16. G. M. Loudon, M. E. Parham, and M. J. Miller, "Approaches to Carboxyl-Terminal Sequencing and End-Group Determinations in Peptides: A Review." in "Bioorganic Chemistry," v. III, E. E. van Tamelen, ed. New York: Academic Press, 1977, pp. 71–93
17. A. E. Burkhardt, S. O. Russo, C. G. Rinehardt, and G. M. Loudon, "The Interaction of *N*-Acetylglucosamine and an Affinity-Label Analog with α -Lactalbumin and Lactose Synthetase." *Biochemistry*, **1975**, *14*, 5465–5469
18. M. J. Miller, F. E. DeBons, and G. M. Loudon, "The Chemistry of a Method for the Determination of Carboxyl-Terminal Residues in Peptides." *J. Org. Chem.*, **1977**, *42*, 2494–2498 (1977)
19. Michael Novak and G. M. Loudon, "The pK_a of Acetophenone in Aqueous Solution." *J. Org. Chem.*, **1977**, *42*, 1750–1760
20. Michael Novak and G. M. Loudon, "The Hydrolysis of α -Acetoxystyrene: Kinetics and Investigations of ^{18}O Exchange." *J. Org. Chem.*, **1977**, *42*, 2499–2504
21. M. E. Parham and G. Marc Loudon, "A New Method of Determination of the Carboxyl-Terminal Residue of Peptides." *Biochem. Biophys. Res. Comm.*, **1978**, *80*, 7–13
22. M. E. Parham and G. M. Loudon, "Carboxyl-Terminal Sequential Degradation of Peptides," *Biochem. Biophys. Res. Comm.*, **1978**, *80*, 1–6
23. G. M. Loudon, "Kinetics of Enzyme-Catalyzed Reactions." (Book Review) *Quart. Rev. Biology*, **1978**, *53*, 52–53
24. G. Marc Loudon and M. E. Parham, "New Reagents for Carboxyl-Terminal Peptide Sequencing," *Tetrahedron Letters*, **1978**, 437–440
25. C. C. Y. Lee and G. M. Loudon, "Quantitative Determination of Amino Groups on Derivatized Controlled-Pore Glass: a Comparison of Methods." *Analytical Biochem.*, **1979**, *94*, 60–64
26. A. S. Radhakrishna, M. E. Parham, R. M. Riggs, and G. M. Loudon, "New Method for Direct Conversion of Amides to Amines." *J. Org. Chem.*, **1979**, *44*, 1746–1747
27. A. S. Radhakrishna, G. M. Loudon, and M. J. Miller, "The Amination of Ester Enolates with *O*-2,4-Dinitrophenylhydroxylamine." *J. Org. Chem.*, **1979**, *43*, 4836–4841
28. G. M. Loudon and James N. Jacob, "The Hydrolysis of *N*-(1-Aminoalkyl) Amides." *J. Chem. Soc., Chem. Commun.*, **1980**, 377–378

29. G. M. Loudon and F. E. DeBons, "Protected Diaminomethane." *J. Org. Chem.*, **1980**, *45*, 1703–1704
30. F. E. DeBons and G. M. Loudon, "Tryptic Cleavage of a Peptide at Modified Aspartic Acid." *Biochem. Biophys. Res. Comm.*, **1980**, *92*, 606–609
31. G. M. Loudon, M. R. Almond, and J. N. Jacob, "The Mechanism of Hydrolysis of *N*-(1-Aminoalkyl) Amides." *J. Am. Chem. Soc.*, **1981**, *103*, 4508–4515
32. J. T. Capecchi, M. J. Miller, and G. M. Loudon, "A Method for the Analysis of α - and ω -Linkages in Peptides Containing Aspartic Acid and Glutamic Acid." *J. Org. Chem.*, **1983**, *48*, 2014–2021
33. J. T. Capecchi and G. M. Loudon, "A Method for Distinguishing α - and ω -Dicarboxylic Amino Acid Linkages in Peptides." *Proceedings of the Sixth American Peptide Symposium*, E. Gross and J. Meienhofer, eds. **1980**, Rockford IL, Pierce Chemical Company, pp. 157–160
33. G. M. Loudon, A. S. Radhakrishna, M. R. Almond, J. K. Blodgett, and R. H. Boutin, "Conversion of Aliphatic Amides into Amines with *I,I*-Bis(trifluoroacetoxy)iodobenzene. I. Scope of the Reaction." *J. Org. Chem.*, **1984**, *49*, 4272–4276
35. R. H. Boutin and G. M. Loudon, "Conversion of Aliphatic Amides into Amines with *I,I*-Bis(trifluoroacetoxy)iodobenzene. II. Kinetics and Mechanism." *J. Org. Chem.*, **1984**, *49*, 4277–4284
36. J. K. Blodgett, G. M. Loudon, and K. D. Collins, "Specific Cleavage of Peptides Containing an Aspartic(β -Hydroxamic Acid) Residue." *J. Am. Chem. Soc.*, **1985**, *107*, 4305–4313
37. J. T. Capecchi and G. M. Loudon, "Substrate Specificity of Pyroglutamylaminopeptidase," *J. Med. Chem.*, **1985**, *28*, 140–143
38. J. K. Blodgett and G. M. Loudon, "Modification and Cleavage at Asparagine and Glutamine Residues in Peptides." *Proceedings of the Ninth American Peptide Symposium*, **1986**, C. M. Deber, V. J. Hruby, and K. D. Kopple, eds., Pierce Chemical Co., Rockford, Illinois, pp. 371–374
39. Merrick R. Almond, Julie B. Stimmel, E. Alan Thompson, and G. Marc Loudon, "Hofmann Rearrangement under Mildly Acidic Conditions with [*I,I'*-Bis(trifluoroacetoxy)iodo]benzene: Cyclobutylamine Hydrochloride from Cyclobutanecarboxamide." *Org. Syn.*, **1988**, *66*, 132–141
40. J. B. Stimmel and G. M. Loudon, "Carboxyl-Terminal Peptide Degradation. Formation of a C-Terminal Derivative." *Proceedings of the Tenth American Peptide Symposium*, Garland Marshall, ed., **1988**, Escom, Leiden, pp. 242–244
41. J. K. Blodgett and G. M. Loudon, "Cleavage vs. Transpeptidation in the Autodecomposition of Peptides Containing 2,4-Diaminobutanoic Acid and 2,3-Diaminopropanoic Acid Residues." *J. Am. Chem. Soc.*, **1989**, *111*, 6813–6821
42. G. M. Loudon, Hee-Sung Choi, and P. C. Andrews, "Chemical Recognition of Terminally Amidated Peptides." *Proc. Eleventh American Peptide Symposium*, **1990**, Jean Rivier, and G. R. Marshall, eds., Escom, Leiden, pp. 433–434

43. Robert L. Geahlen, G. Marc Loudon, Lisa A. Paige, and David Lloyd, "A General Method for Preparation of Peptides Biotinylated at the Carboxy Terminus." *Analytical Biochemistry*, 1992, 202, 68–70
44. V. L. Boyd, MeriLisa Bozzini, P. J. Guga, R. J. DeFranco, P.-M. Yuan, G. M. Loudon, and Duy Nguyen, "Activation of the Carboxy Terminus of a Peptide for Carboxy-Terminal Sequencing." *J. Org. Chem.*, 1995, 60, 2581–2587 (1995)

2. Abstracts

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1. G. M. Loudon, T. E. Barman, A. Lukton, and D. E. Koshland, Jr., "Binding of Substrates to Lysozyme Containing a Reporter Group on the Active Site Tryptophan." *Abstracts of Papers*, 158th National Meeting of the American Chemical Society, 1969, New York, BIOL 255
2. G. M. Loudon and C. K. Smith, "Electrostatic Catalysis and Aspartic Acid-52 of Lysozyme." *Abstracts of Papers*, 166th National Meeting of the American Chemical Society, 1975, Chicago, BIOL 007
3. Claudia Danforth, A. W. Nicholson, R. Winans, and G. M. Loudon, "A Critical Evaluation of 'Stereopopulation Control'." *Abstracts of Papers*, 170th National Meeting of the American Chemical Society, 1975, Chicago, ORG 113
4. M. J. Miller and G. M. Loudon, "A Carboxyl-Terminal Peptide Degradation." *Abstracts of Papers*, 170th National Meeting of the American Chemical Society, 1975, Chicago, BIOL 031
5. Michael Novak and G. M. Loudon, "The Aminolysis of Enol Esters; the pK_a of Acetophenones in Aqueous Solution." Acyl Transfer Reaction Symposium, Chemical Institute of Canada Conference, London, Ontario, Canada, June 6, 1976, BI-6
6. Michael Novak and G. M. Loudon, "The Aminolysis of α -Acetoxystyrene, and the pK_a of Acetophenones in Aqueous Solution." *Abstracts of Papers*, 172nd National Meeting of the American Chemical Society, 1976, San Francisco, ORG 103
7. J. T. Capecchi and G. M. Loudon, "A Method for Distinguishing α - and ω -Dicarboxylic Amino Acid Linkages in Peptides." *Sixth American Peptide Symposium*, Washington, D.C., 1979
8. J. K. Blodgett and G. M. Loudon, "Development of a New, Specific Peptide Cleavage at Aspartic Acid Residues in Polypeptides." *19th Great Lakes Regional Meeting of the American Chemical Society*, West Lafayette IN, 1985
9. J. K. Blodgett and G. M. Loudon, "Development of a New, Specific Peptide Cleavage at Glutamine Residues in Polypeptides." *19th Great Lakes Regional Meeting of the American Chemical Society*, West Lafayette IN, 1985
10. J. B. Stimmel and G. M. Loudon, "Sequential Degradation of Peptides from the Carboxyl Terminus," *National Graduate Student Meeting in Medicinal Chemistry*, Purdue University, West Lafayette IN, 1985

11. J. K. Blodgett and G. M. Loudon, "Modification and Cleavage of Peptides at Asparagine and Glutamine Residues." *Ninth American Peptide Symposium*, 1985
12. G. M. Loudon, R. H. Boutin, and J. K. Blodgett, "Mechanistic Studies and Biological Applications of the Acidic Hofmann Rearrangement with (*I,I*-Dicarboxy)iodobenzene Derivatives." (Invited Lecture) *Symposium on Hypervalent Iodine Chemistry.* Central Regional Meeting of the American Chemical Society, Akron OH, 1985
13. J. B. Stimmel and G. M. Loudon, "Carboxyl-Terminal Peptide Degradation. Formation of a C-Terminal Derivative." *Tenth American Peptide Symposium*, 1987, St. Louis, MO.
14. Hee-Sung Choi and G. M. Loudon, "Chemical Recognition of Terminally Amidated Peptides." *22nd Annual Graduate Student Symposium in Medicinal Chemistry*, 1989, West Lafayette IN.
15. G. M. Loudon, H.-S. Choi, and P. C. Andrews, "Chemical Recognition of Terminally Amidated Peptides," *Eleventh American Peptide Symposium*, LaJolla CA, 1989
16. Betsy Leverett, Juncai Bai, B. B. Post, and G. M. Loudon, "Aziridine Inhibitors of HIV Protease." *Abstracts of Papers*, 1994, 208th National Meeting of the American Chemical Society, Washington, D.C.
17. V. L. Boyd, MeriLisa Bozzini, Jindong Zhao, R. J. DeFranco, P.-M. Yuan, G. M. Loudon, and Duy Nguyen, "Sequencing Proteins from the C-Terminus." *Methods in Protein Structure Analysis*, September 1994, Snowbird UT
18. D. N. Nguyen, G. W. Becker, R. M. Riggin, G. M. Loudon, V. L. Boyd, MeriLisa Bozzini, P.-M. Yuan, "Alkylation of Cysteine: Application in Automated C-Terminal Sequencing of Proteins." *Ninth Symposium of the Protein Society*, July 1995, Boston MA

3. Invited Research Lectures

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1. Department of Biochemistry, Cornell University, October 1971
2. Department of Chemistry, Rochester Institute of Technology, Rochester NY, October 9, 1975
3. IBM Corporate Research, San Jose CA, November 18, 1975
4. Department of Chemistry, University of California, Berkeley, November 19, 1975
5. Department of Chemistry, University of Utah, Salt Lake City UT, November 20, 1975
6. Department of Chemistry, Colorado State University, Fort Collins CO, November 21, 1975
7. Department of Chemistry, College of William and Mary, Williamsburg VA, March 19, 1976
8. Department of Chemistry, University of Georgia, Athens, March 1977

9. Department of Chemistry, Georgia Institute of Technology, Atlanta GA, January 28, 1977
10. Department of Chemistry, Emory University, Atlanta GA, February 25, 1977
11. Department of Chemistry, Louisiana State University, Baton Rouge, March 21, 1977
12. Department of Medicinal Chemistry and Pharmacognosy, Purdue University, West Lafayette IN, February 1, 1977
13. Department of Chemistry, Tulane University, New Orleans LA, March 14, 1977
14. Department of Chemistry, University of Mississippi, Oxford MS, May 3, 1977
15. Department of Biochemistry, University of Illinois, Champaign IL, February 3, 1978
16. Department of Chemistry, Purdue University, West Lafayette IN February 4, 1978
17. Department of Chemistry, University of Indiana, Bloomington IN, February 16, 1978
18. Department of Chemistry, DePauw University, Greencastle IN, November 2, 1978
19. Department of Medicinal Chemistry, University of Illinois Medical Center, Chicago IL, November 10, 1978
20. Department of Chemistry, Bowling Green State University, Bowling Green OH, March 31, 1979
21. Department of Chemistry, Indiana University-Purdue University, Indianapolis IN, October 26, 1979
22. Department of Chemistry, Division of Biochemistry, Purdue University, West Lafayette IN, March 19, 1980
23. Second Midwestern Regional Conference on Organic Synthesis (“Corncob Conference”), Bradford Woods Conference Center of the University of Indiana, May 21–24, 1980
24. Department of Medicinal Chemistry and Pharmacognosy, Purdue University, West Lafayette IN, September 4, 1980
25. Department of Chemistry, University of Ohio, Athens OH, September 18, 1980
26. Department of Chemistry, Rensselaer Polytechnic Institute, Troy NY, April 2, 1980
27. Department of Chemistry, Cornell College, Mount Vernon IA, March 20, 1983 (Joint with an organ recital performed the following day)
28. Department of Chemistry, Northern Illinois University, DeKalb IL, April 19, 1984
29. Department of Biochemistry, School of Hygiene and Public Health, Johns Hopkins University, November 26, 1984
30. Department of Biochemistry, Northern Illinois University, DeKalb IL, March 22, 1985
31. Syntex of Canada, Ltd., October 30, 1985
32. Department of Chemistry, University of Toronto, November 1, 1985

33. Department of Chemistry, Miami University of Ohio, Oxford OH, October 30, 1987
34. Department of Chemistry, Valparaiso University, Valparaiso IN, November 7, 1987
35. Department of Chemistry, Division of Biochemistry, Purdue University, February 4, 1987
36. Department of Chemistry, University of Iowa, Iowa City IA, March 30, 1987
37. Department of Chemistry, Cornell College, Mount Vernon IA, April 1, 1987
38. Genentech Corporation, South San Francisco CA, March 29, 1989
39. Wisconsin Undergraduate Research Symposium in Chemistry (Keynote Speaker), St. Norbert's College, DePere WI, April 29, 1989
40. Department of Chemistry, Wabash College, Crawfordsville IN, October 24, 1989

4. Research Support Generated by Peer-Reviewed Proposals

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1. DuPont Young Faculty Grant, 1970–1973, \$10,000
2. Petroleum Research Fund of the American Chemical Society, “Electrostatic Catalysis in Carbonium Ion Reactions,” 1971–1974, \$7,500
3. Research Corporation, Cottrell Grant Program, “Chemical Mechanisms in Lactose Synthetase,” \$10,000
4. National Institutes of Health, “New Reagents for Protein Sequencing and Modification,” GM 20315, 1973–1977, \$269,208 (Renumbered GM 25143 after move to Purdue)
5. National Science Foundation, “Chemical Mechanisms in Lactose Synthetase,” GB 28826, 1971–1973, \$60,000
6. National Science Foundation, “Chemical Mechanisms in Lactose Synthetase,” 1976–1977, PCM 76-84426 \$50,000
7. National Science Foundation, “Reagents for the Specific Cleavage of Polypeptide Chains,” CHE 77-22493, 1977–1979, \$125,500
8. David Ross Fellowship (to Raymond H. Boutin), 1981–1982, \$11,675
9. Purdue Cancer Center (from Indiana Elks and American Cancer Society), “Suicide Inhibition of Proteases Involved in Tumor Invasiveness,” \$5,685
10. National Institutes of Health, “Carboxyl-Terminal Peptide Sequencing,” GM 28850, 1981–1984, \$171,122
11. David Ross Fellowship (to James K. Blodgett), “Specific Cleavage of Peptides at Aspartic Acid,” \$10,150
12. Co-Principal Investigator in National Institutes of Health Shared Instrumentation Proposal for Solid-State NMR, 1985, Funded at \$100,000
13. National Institutes of Health, “Specific Cleavage of Peptides at Glutamine Residues,” 1984-1987, GM34213, \$145,651
14. Burroughs-Wellcome Company, “Peptides to Inhibit Tumor Invasion and Metastasis,” (with D. J. Morr e), 1987, \$5,000

15. National Institutes of Health, "Amino Acid Analyzer and a Peptide Synthesizer," 1986, S10 RR02794 (Co-PI, Mark Hermodson, PI), \$182,600. This grant purchased the ABI Model 430A Peptide Synthesizer that began the Purdue Peptide Synthesis Facility.
16. National Institutes of Health, "Chemical Identification of Peptide Hormones," 1987–1990, GM 37500, \$214,560
17. Purdue Cancer Center, "Chemical Identification of Peptide Hormones," 1990–1991, \$10,000
18. National Institutes of Health, "Irreversible Inhibitors of HIV Protease," 1992–1995, AI33769, \$427,636
19. Applied Biosystems, Inc., Foster City, CA, "Peptide Sequencing from the Carboxy Terminus," 1993–1994, \$69,150
20. PRF Fellowship (to Cuakkri Abburi), "Covalent Inhibition of the HIV Protease," 1994–1996, \$20,400
21. National Institutes of Health (National Center for Research Resources), "Research Facilities for Drug Discovery and Synthesis for the School of Pharmacy," 09/30/99–09/29/02, \$999,999. (Construction Grant)
22. National Institutes of Health (National Center for Research Resources), "Research Facilities Construction Grant for Medicinal Chemistry and Molecular Pharmacology in the School of Pharmacy," 09/30/00–09/29/03, \$1,975,425. (Construction Grant)
23. U. S. Army Breast Cancer Program, "A Summer Undergraduate Program in Breast Cancer Research," 05/01/2002–04/30/2005, \$141,000. (David Riese II, Co-PI) This is a three-year undergraduate research program that funds 8 positions. Students are mentored by faculty from Pharmacy or Veterinary Medicine.

5. Research Students

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1. *Undergraduate Research Students*

At Cornell University:

Cornelius K. Smith
 Cathy Sticka
 Stephen E. Zimmerman
 Marian F. Kadlubowski
 Christian G. Rinehart
 Laura Bauer
 John Hunt
 Jon Tollins
 Bob Schoenleber
 Peter Hirsch
 Allen W. Nicholson
 Claudia Danforth
 John C. James

At Purdue University:

Robert M. Riggs
Phillip N. Evans
Cecelia Tsao
Katherine Dittrich
Alan E. Thompson
Max Barnhart
Sue Bradley
Jennifer Joyce

2. *Graduate Students Who Completed Degrees*

Alan E. Burkhardt, Ph. D., 1975
Wanda Lizak Welles, Ph. D., 1976
Denis Evan Ryono, Ph. D., 1975
Marvin James Miller, Ph. D., 1976
Marc Ellous Parham, Ph. D., 1977
Michael Novak, Ph. D., 1977
Francis Eugene DeBons, Ph. D., 1979
John T. Capecchi, Ph. D., 1980
James Karl Blodgett, M. S., 1982; Ph. D., 1986
Raymond H. Boutin, Ph. D., 1984
Merrick R. Almond, Ph. D., 1985
Julie Beth Stimmel, Ph. D., 1987
Hee-Sung Choi, Ph. D., 1992
Anders Leroy Lund, Ph. D., 1995
Betsy Dian Leverett, Ph. D., 1995

3. *Postdoctoral Associates*

Dr. Clifford Y. Lee
Dr. Uri George Vanacek
Dr. Arakali S. Radhakrishna
Dr. James N. Jacob
Dr. Daniel Lee
Dr. Nancy M. Gray
Dr. David Lloyd (in Purdue Peptide Synthesis Facility)
Dr. Duy Nguyen
Dr. Juncai Bai (in Purdue Peptide Synthesis Facility)
Dr. Jayu Wu

6. Research-Related Service

National Service

1. Member, NIH Biochemistry Fellowship “B” Study Section, February 2, 1980
2. Promotions Consultant for Department of Chemistry, State University of New York at Stony Brook, December, 1983
3. Member, Small Business Innovative Research (SBIR) Study Section, December 11, 1984
4. Member, NIH Biochemistry Fellowship (BIB) Study Section, Spring 1980
5. Member, NIH Small Business Innovative Research (SBIR) Study Section, December 11, 1984
6. Publicity Chair, 19th Great Lakes Regional Meeting of the American Chemical Society, June 1985
7. Proposal Referee for National Science Foundation; *ad hoc* Reviewer for National Institutes of Health (various times)
8. Promotions Consultant, Department of Biochemistry, Louisiana State University, 1990
9. Member, National Review Panel for the Graduate Fellowships Program of the Division of Medicinal Chemistry, American Chemical Society, 1999–2001.
10. Member, National Review Panel for the Merck/AACP Undergraduate Research Scholar Program of the American Association of Colleges of Pharmacy, 1999–2001
11. Member, American Chemical Society Selection Committee for the Annual Alfred Bader Award in Bioorganic and Bioinorganic Chemistry, 1998–2000.
12. Journal Referee for *Journal of the American Chemical Society*, *Journal of Organic Chemistry*, *Journal of Biological Chemistry*, *Biochemistry*, *Carbohydrate Research*, *Analytical Biochemistry*, *Tetrahedron Letters*, *International Journal of Peptide and Protein Research*, *Journal of Physical Organic Chemistry*, *Bioorganic and Medicinal Chemistry Letters*, *Accounts of Chemical Research*
13. Member, Review Panel for the Medicinal Chemistry Division of the American Chemical Society for Medicinal Chemistry Graduate Fellowships, 1998–2000
14. Charter Member, Scientific and Technical Review Board, National Center for Research Resources, 2001–2003. (NCRR Study Section for Construction Grants)

University Service (not a comprehensive list)

Set up and supervised Purdue Peptide Synthesis Facility, 1986–present. This facility is a core facility of the Purdue Cancer Center and the Center for AIDS Research.

Counselor, Purdue Section of the American Chemical Society, 1987–1988

Chair, Department Head Search Committee, Department of Medicinal Chemistry and Pharmacognosy, 1987–1988

Seminar Chair, Department of Medicinal Chemistry and Pharmacognosy, 1982–1988; 1992–1994

Associate Dean for Graduate and Research Programs, School of Pharmacy and Pharmacal Sciences, 1988–present.

Purdue Research Institute Steering Committee, 1988–1989

Member, North Central Accreditation Steering Committee, 1989–1990

Member, Purdue Data Network Advisory Committee, 1990–present

Member, Purdue Graduate Council, 1989–1992; 1995–1998; 2003–2006

Peer Reviewer, Global Initiative Faculty Grants, 1992

Member, Library Serials Reduction Project, 1992, 1996

Assistant Director, Center for AIDS Research, 1993–present

Member, Purdue Cancer Center “Jump-Start” Grants for Translational Research Study Panel, 1994.

Co-Chair (with Marilyn Haring) of the University Teaching Evaluation Committee, 1995–1998. This committee was charged with the development of a university-wide teaching evaluation system which was adopted by the University Senate in April of 1998.

Co-Chair (with George van Scoyoc) of the Criterion-3 Subcommittee for the North Central Accreditation, 1998–9. This committee was charged with documenting that Purdue is achieving its instructional mission.

Member, Search Committee, Purdue Life Sciences and Biotechnology Institute, 1998–9.

Chair, Life Sciences Mall Planning Task Force to plan a \$300 Million Life Sciences Complex on the Purdue South Campus

Chair, Search Committee for Head of the Industrial and Physical Pharmacy Department at Purdue, 2008–2009.

Chair, Task Force to Develop a Faculty Assessment System, Department of Medicinal Chemistry and Molecular Pharmacology, Purdue University, 2008–2009.

Chair, Search Committee for Head of Industrial and Physical Pharmacy Department, 2008–2009

7. Consultant Activities

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1. Consultant for Genentech, South San Francisco, CA, 1989–1990
2. Consultant for Applied Biosystems Division, Perkin-Elmer Company, Foster City, CA, 1993–1995
3. Outside Reviewer, University of Cincinnati School of Pharmacy Graduate Programs, Report delivered December 2002.
4. Consultant for Kansas Technology Enterprise Corporation (KTEC), Review of Higuchi Bioscience Center, May 3–4, 2005.
5. Reviewer of University of Cincinnati Program in Pharmaceutical Chemistry, 2004

6. Reviewer of Associate Dean position, University of Minnesota College of Pharmacy, 2006
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Part III. Teaching

1. Teaching-Related Publications

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1. G. M. Loudon, "The Necessity of Using Monochromatic Radiation in Spectrometry." *J. Chem. Educ.*, **1964**, *41*, 391
2. A. J. Doheny and G. M. Loudon, "The Effect of Free-Radical Stability on the Rate of Bromination of Hydrocarbons: a Tested Demonstration." *J. Chem. Educ.*, **1980**, *57*, 507–508 (1980)
3. J. M. Cassady, D. E. Nichols, and G. M. Loudon, "Laboratory Experiments for MDCH 204–205," 11th Edition, **1978**. (An in-house laboratory manual for organic chemistry in which the emphasis is on the chemistry of drugs and drug-related molecules.)
4. J. M. Cassady, D. E. Nichols, and G. M. Loudon, "Laboratory Experiments for MDCH 204–205," 12th Edition, **1979**
5. J. M. Cassady, D. E. Nichols, and G. M. Loudon, "Laboratory Experiments for MDCH 204–205," 13th Edition, **1980**.
6. J. M. Cassady, D. E. Nichols, and G. M. Loudon, "Laboratory Experiments for MDCH 204–205," 14th Edition, **1981**
7. J. M. Cassady, D. E. Nichols, and G. M. Loudon, "Laboratory Experiments for MDCH 204–205," 15th Edition, **1982**
8. J. M. Cassady, D. E. Nichols, and G. M. Loudon, "Laboratory Experiments for MDCH 204–205," 16th Edition, **1983**
9. J. M. Cassady, D. E. Nichols, and G. M. Loudon, "Laboratory Experiments for MDCH 204–205," 17th Edition, **1984**
10. G. M. Loudon, "Organic Chemistry," 1st Edition, **1984**, Reading MA: Addison-Wesley Publishing Company, Reading MA. (A major, full-year college text in organic chemistry.)
11. Addison Ault and G. M. Loudon, "Solutions Manual to Accompany Organic Chemistry." **1984**, Reading MA: Addison-Wesley Publishing Company
12. J. M. Cassady, D. E. Nichols, G. M. Loudon, and M. S. Cushman, "Laboratory Experiments for MDCH 204–205," 18th Edition, **1985**
13. J. M. Cassady, D. E. Nichols, G. M. Loudon, and M. S. Cushman, "Laboratory Experiments for MDCH 204–205," 19th Edition, **1986**, Champaign IL: Stipes Publishing Company
14. G. M. Loudon, J. M. Cassady, D. E. Nichols, and M. S. Cushman, "Laboratory Experiments for MDCH 204–205," 20th Edition, **1987**, Champaign IL: Stipes Publishing Company
15. G. M. Loudon, "Organic Chemistry," 2nd Edition. Redwood City: Benjamin/Cummings Publishing Company, **1988**. (The second edition of a major, full-year college text in organic chemistry.)

16. G. M. Loudon and Joseph G. Stowell, "Study Guide and Solutions Manual to Accompany Organic Chemistry, Second Edition," 1988, Redwood City CA: Benjamin/Cummings Publishing Company. (This manual contains study hints, summaries, and complete solutions to all problems for the companion text.)
17. G. M. Loudon, J. M. Cassady, D. E. Nichols, and M. S. Cushman, "Laboratory Experiments for MDCH 204–205," 21st Edition, 1988, Champaign IL: Stipes Publishing Company
18. Joseph G. Stowell and G. Marc Loudon, "Microscale Organic Exercises for the Health Sciences," 1st Edition, 1991, Champaign IL: Stipes Publishing Company. (A laboratory manual for the microscale-oriented laboratory for pharmacy and other health-profession students.)
19. G. M. Loudon, "Mechanistic Interpretation of pH-Rate Profiles," *J. Chem. Educ.*, 1991, 68, 973–974
20. Joseph G. Stowell and G. Marc Loudon, "Microscale Organic Exercises for the Health Sciences," 2nd Edition, 1992, Champaign IL: Stipes Publishing Company
21. Joseph G. Stowell and G. Marc Loudon, "Microscale Organic Exercises for the Health Sciences," 3rd Edition, 1993, Champaign IL: Stipes Publishing Company
22. Joseph G. Stowell and G. Marc Loudon, "Microscale Organic Exercises for the Health Sciences," 4th Edition, 1994, Champaign IL: Stipes Publishing Company
23. G. M. Loudon, "Organic Chemistry," 3rd Edition, 1995, Redwood City CA: Benjamin/Cummings Publishing Co. (The third edition of a major, full-year college text in organic chemistry.)
24. G. M. Loudon and Joseph G. Stowell, "Study Guide & Solutions Manual to Accompany Organic Chemistry, 3rd Edition," vol. 1, 1995, Redwood City CA: Benjamin/Cummings Publishing Co. (A manual containing chapter outlines, study hints, and solutions to problems for the companion text.)
25. Joseph G. Stowell and G. Marc Loudon, "Microscale Organic Exercises for the Health Sciences," 5th Edition, 1995, Champaign IL: Stipes Publishing Company
26. David M. Allen and G. Marc Loudon, "Computer Animation Modules for Organic Chemistry." 1995, Redwood City CA: Benjamin-Cummings Publishing Company. (A CD-ROM containing lecture demonstrations to aid in the teaching of spatial and dynamic concepts in organic chemistry.)
27. G. M. Loudon and Joseph G. Stowell, "Study Guide & Solutions Manual to Accompany Organic Chemistry, 3rd Edition," vol. 2, 1996, Redwood City CA: Benjamin/Cummings Publishing Co. (The second volume of a manual containing chapter outlines, study hints, and solutions to problems for the companion text.)
28. G. M. Loudon and Joseph G. Stowell, "Instructor Guide to Accompany Organic Chemistry, 3rd Edition." Vol. 1, 1996, Redwood City, CA: Benjamin/Cummings Publishing Company. (This guide contains solutions to non-asterisked problems in the companion text.)

29. G. M. Loudon and Joseph G. Stowell, "Instructor Guide to Accompany Organic Chemistry, 3rd Edition." Vol. 2, 1996, Redwood City, CA: Benjamin/Cummings Publishing Company
30. Joseph G. Stowell and G. Marc Loudon, "Microscale Organic Exercises for the Health Sciences," 6th Edition, 1996, Champaign IL: Stipes Publishing Company
31. G. Marc Loudon, *That's Not a Cheese Cube in Your Hand, That's the Library of Congress*, 1996, in "Current Research News," section of *The Chemistry Place*, <http://www.chemplace.com>, Peregrine Publishing Company
32. G. Marc Loudon, *The Three Faces of Carbon*, 1996, in "Current Research News," section of *The Chemistry Place*, <http://www.chemplace.com>, Peregrine Publishing Company, Wakefield, MA
33. G. Marc Loudon, *Ironing Out the Carbon Balance*, 1996, in "Current Research News," section of *The Chemistry Place*, <http://www.chemplace.com>, Peregrine Publishing Company, Wakefield, MA
34. G. Marc Loudon, *Having It All: Combinatorial Synthesis*, 1996, in "Current Research News," section of *The Chemistry Place*, <http://www.chemplace.com>, Peregrine Publishing Company, Wakefield, MA
35. G. Marc Loudon, *Wherefore Art Thou, Roaming Oil?*, 1996, in "Current Research News," section of *The Chemistry Place*, <http://www.chemplace.com>, Peregrine Publishing Company
36. G. Marc Loudon, *PET Me and You Can Look into My Head*, 1996, in "Current Research News," section of *The Chemistry Place*, <http://www.chemplace.com>, Peregrine Publishing Company, Wakefield, MA
37. Joseph G. Stowell and G. Marc Loudon, "Microscale Organic Exercises for the Health Sciences," 7th Edition, 1997, Champaign IL: Stipes Publishing Company
38. G. Marc Loudon, *Observing Single Molecules*, 1997, in "Current Research News," section of *The Chemistry Place*, <http://www.chemplace.com>, Peregrine Publishing Company, Wakefield, MA
39. G. Marc Loudon, *Accounting for Missing Xenon*, 1997, in "Current Research News" section of *The Chemistry Place*, <http://www.chemplace.com>, Peregrine Publishing Co., Wakefield, MA
40. G. Marc Loudon, *Benzynes Incarcerated in a Molecular Container*, 1997, in "Current Research News" section of *The Chemistry Place*, <http://www.chemplace.com>, Peregrine Publishing Co., Wakefield, MA
41. G. Marc Loudon, *Group Discussion before Individual Examinations*, in "The Hidden Curriculum. Faculty-Made Tests in Science," 1997, S. Tobias and J. Raphael, eds., Plenum Publishing Company, New York, Part 2, pp. 85–86
42. G. Marc Loudon, *Biosensors*, 1997, in "Current Research News" section of *The Chemistry Place*, <http://www.chemplace.com>, Peregrine Publishing Co., Wakefield, MA
43. G. Marc Loudon, *Chemical Damage by Cigarette Smoke*, 1997, in "Current Research News" section of *The Chemistry Place*, <http://www.chemplace.com>, Peregrine Publishing Co., Wakefield, MA

44. G. Marc Loudon, *More Self-Assembling Molecules*, 1997, in “Current Research News” section of *The Chemistry Place*, <http://www.chemplace.com>, Peregrine Publishing Co., Wakefield, MA
45. G. Marc Loudon, *1997 Nobel Prizes in Chemistry: Pumping Ions*, 1997, in “Current Research News” section of *The Chemistry Place*, <http://www.chemplace.com>, Peregrine Publishing Co., Wakefield, MA
46. G. Marc Loudon, *Molecules That Read DNA*, 1998, in “Current Research News” section of *The Chemistry Place*, <http://www.chemplace.com>, Peregrine Publishing Co., Wakefield, MA
47. Joseph G. Stowell and G. Marc Loudon, “Microscale Organic Exercises for the Health Sciences,” 8th Edition, 1998, Champaign IL: Stipes Publishing Company
48. Joseph G. Stowell and G. Marc Loudon, “Microscale Organic Exercises for the Health Sciences,” 9th Edition, 1999, Champaign IL: Stipes Publishing Company
49. Joseph G. Stowell and G. Marc Loudon, “Microscale Organic Exercises for the Health Sciences,” 10th Edition, 2000, Champaign IL: Stipes Publishing Company
50. Joseph G. Stowell and G. Marc Loudon, “Microscale Organic Exercises for the Health Sciences,” 11th Edition, 2001, Champaign IL: Stipes Publishing Company
51. G. Marc Loudon, “Organic Chemistry,” 4th Edition, 2002, New York NY: Oxford University Press
52. G. Marc Loudon and Joseph G. Stowell, “Study Guide and Solutions Manual to accompany *Organic Chemistry, 4th Edition*,” 2002, New York NY: Oxford University Press.
53. G. Marc Loudon and David Allen, “Dynamic Organic Chemistry,” (A CD containing animations of organic chemistry concepts), 2003, New York NY: Oxford University Press.
54. G. Marc Loudon and Mark E. Sharp, *Online Class Review*, 2006, *Journal of College Science Teaching*, 35, 39–43.
55. Animesh Aditya, David E. Nichols, and G. Marc Loudon, “Borohydride Reduction of Estrone. Demonstration of Diastereoselectivity in the Undergraduate Organic Chemistry Laboratory.” *Journal of Chemical Education*, 2008, 85(11), 1585–1587
56. Marc Loudon, *Organic Chemistry*, 5th Edition, 2008, Greenwood Village CO: Roberts and Company Publishers.

2. Teaching-Related Presentations

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1. 8th Biennial Conference on Chemical Education, Symposium on the Future of the Organic Curriculum, Storrs CT, August 5–10, 1984: “Organic Chemistry and the Preprofessional Student”
2. Department of Chemistry, Division of Chemical Education, Purdue University, October 2, 1984: “Confessions of a Textbook Author”

3. Hoosier Associate of Science Teachers Convention, Indianapolis IN, February 14–15, 1986: “To C or not to C, That Is the Question; or, Does Organic Chemistry Belong in the High-School Curriculum?”
4. Pharmacy Conference for High-School Science Teachers, Purdue University, November 13, 1986: “What University Science Professors Expect from High-School Student Preparation”
5. Department of Chemistry, Division of Chemical Education, Purdue University, November 9, 1988: “Revelations of a Textbook Author Teaching Organic Chemistry”
6. Benjamin/Cummings Authors’ Board Conference, October 16, 1994: “Multimedia Demonstrations for Teaching Organic Chemistry”

Coauthors on presentations 7–13 are G. M. Bodner, Richard Bauer, and Kirsten Lowrey:

7. Great Lakes Regional Meeting of the American Chemical Society, June 1994: “Assessment of Students’ Learning in an Organic Chemistry Course in Which a Discussion Format Was Used to Deliver Course Material.”
8. Great Lakes Regional Meeting of the American Chemical Society, June 1994: “Curriculum Change in the Organic Chemistry Course: What Happens to Material Coverage When the Instructor Changes the Mode of Delivery?”
9. 13th Biennial Conference on Chemical Education, Bucknell University, August 1994: “The Organic Chemical Lecture: What Happens to Material Coverage When the Instructor Changes the Mode of Delivery?”
10. 13th Biennial Conference on Chemical Education, Bucknell University, August 1994: “The Development of Higher-Order Thinking Skills in Organic Chemistry: One Instructor’s Teaching and Evaluation Methods.”
11. 208th National Meeting of the American Chemical Society, Washington, D. C., August 1994: “Examining the Organic Chemistry Lecture Course.”
12. Western Australia Science Education Association Conference, Curtin University, Perth, Australia, November 1994: “Alternative Modes of Instruction in Organic Chemistry.”
13. 210th National Meeting of the American Chemical Society, Chicago IL, August 1995: “We Learn So Little and Forget So Much: How to Help Students Remember What They Learn When They Take Organic Chemistry.”
14. G. M. Loudon, Purdue Board of Trustees’ Planning and Strategy Subcommittee, November 16, 1995, “Group-Learning Strategies in Teaching Organic Chemistry.”
15. G. M. Loudon and J. Michael Jacob, Purdue Center for Instructional Services Workshop, “Together Each Accomplishes More Work in the Traditional Classroom,” *Teachers on Teaching* series, co-presenter with J. Michael Jacob, December 7, 1995
16. G. M. Loudon, Purdue School of Agriculture Excellence-21 Retreat, “A Group-Study Approach to Teaching Organic Chemistry,” University Inn, West Lafayette IN, February 19, 1996

17. G. M. Loudon, Purdue Department of Foods and Nutrition, "An Excellence-21 Approach to Transformation of an Organic Chemistry Course," March 11, 1996
18. G. M. Loudon, Workshop, Purdue Committee for the Education of Teaching Assistants, "A Group-Study Approach to Teaching Organic Chemistry," April 3, 1996.
19. G. M. Loudon, Purdue School of Pharmacy & Pharmacal Sciences Faculty, "An Excellence-21 Approach to Transformation of an Organic Chemistry Course," April 26, 1996
20. G. M. Loudon, Purdue University, *Focus on Teaching*, (A Lecture Series Dedicated to Teaching Excellence), "Using Group-Learning Techniques to Teach Organic Chemistry to Preprofessional Students," November 13, 1996
21. G. M. Loudon and G. M. Bodner, American Chemical Society, 214th National Meeting, Las Vegas Nevada, September 11, 1997, Chemical Education Division Symposium, *Using Our Understanding of How Students Learn to Change the Way We Teach Organic Chemistry*. "Alternative Modes of Instruction: What Happens When We Change the Way We Teach Organic Chemistry?" CHED 253.
22. G. M. Loudon and David M. Allen, "Towards the Multimedia-Enhanced Textbook." MIDC Symposium, Purdue University, March 2, 1999. (*Poster*)
23. G. M. Loudon, Department of Pharmacy Practice, Purdue University, April 7, 1999, *What Happens When We Change the Way We Teach Organic Chemistry?*
24. G. M. Loudon, Department of Chemistry, University of Notre Dame, Notre Dame, IN, April 15, 1999, *What Happens When We Change the Way We Teach Organic Chemistry?*
25. G. M. Loudon, Department of Chemistry, Purdue University, West Lafayette IN, September 15, 1999, *What Happens When We Change the Way We Teach Organic Chemistry?*
26. G. M. Loudon, Division of Instructional Services Workshop, Stewart Center, Purdue University, March 8, 2000, *Development of a Teaching Evaluation System: Process and Outcomes*
27. G. M. Loudon, Department of Horticulture and Landscape Architecture Teaching Retreat, Purdue University, University Inn, May 11, 2000, *Incorporation of Group Learning into a Large Science Lecture Course*.
28. G. M. Loudon, Division of Instructional Services Workshop, Stewart Center, Purdue University, October 26, 2000, *How Do We Get Students to Do the Assigned Reading?*
29. G. M. Loudon, GAANN Fellows Seminar, Department of Biological Sciences, Purdue University, April 24, 2001, *A New Approach to Teaching Large "Lecture" Classes*
30. G. M. Loudon, Heads Meeting, School of Science, Purdue University, April 26, 2001, *What Happens When We Change the Way We Teach Organic Chemistry?*

31. G. M. Loudon, Department of Chemistry, Louisiana State University, Baton Rouge, May 17, 2001, *What Happens When We Change the Way We Teach Organic Chemistry?*
32. G. M. Loudon, College of Basic Sciences, Louisiana State University, Baton Rouge, May 18, 2001, *Commencement Address*
33. G. M. Loudon, St. Louis College of Pharmacy, April 9, 2003, *What Happens When We Change the Way We Teach Organic Chemistry?*
34. G. M. Loudon, Wayne State University College of Pharmacy, April 21, 2004, *Changing the Way We Teach in the Basic Sciences*
35. G. M. Loudon, Purdue University Teaching Workshop, February 17, 2005, *Shrinking the Large Science Classroom*. (A presentation on use of reading-enhancement and group-study concepts in large science courses.)
56. G. M. Loudon, *Mozart and Medicinal Chemistry: The Interplay of the Arts and Sciences*. Phi Beta Kappa Initiation Banquet Address, Purdue University, March 29, 2007.

3. Courses Taught

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At The University of California, Berkeley:

“Physical Methods in Biochemistry,” a special-topics course. Lectures dealt with the theory of temperature-jump and other relaxation methods. Spring Semester 1970

At Cornell University:

“Enzyme Mechanisms” (CHEM 572, later renumbered to CHEM 672, 3 cr.). A graduate course dealing with model systems, enzyme mechanisms, and the physical and chemical methods used in studying these topics. Spring semester 1971–1974. Also taught an equivalent course as CHEM 834 at the University of Georgia while on visiting appointment (Winter Quarter 1977).

“Organic Chemistry Laboratory II” (CHEM 256, later renumbered to CHEM 256, 2 cr.) A large undergraduate laboratory for second-semester organic chemistry dealing with organic qualitative analysis and two original projects dealing with the determination of organic mechanisms. Spring Semester 1971

“Organic Chemistry for Preprofessional Students” (CHEM 353, later renumbered CHEM 253, 4 cr.) A one-semester, four-lectures-per-week course in organic chemistry. Winter 1971, Fall 1972, Spring 1975, Fall 1976, Summer 1977

“Chemical Aspects of Biochemistry” (CHEM 668, 4 cr.) A biochemistry course for students who have not had biochemistry with an emphasis on chemical aspects. Fall 1974, Fall 1975.

“Organic Chemistry Laboratory I” (CHEM 255, 2 cr.) The first semester of organic laboratory for all nonmajors, enrollment 650. One lecture (two sections) per week and one three-hour laboratory. Fall 1974.

At Purdue University:

- “Organic Medicinal Chemistry I” (MDCH 204 [now MCMP 204], 4 cr.) The first-semester organic chemistry course for pharmacy students. Responsibilities include 60–100% of lectures (varies by semester) and coordinating the laboratory. Fall semester 1978–1980, 1983, 1988–1994, 1996–present. The Fall 1993 class was a special section in which a special “Study-Group” method for learning organic chemistry was first used.
- “Organic Medicinal Chemistry II” (MDCH 205 [now MCMP 205], 4 cr.) The second-semester organic chemistry course for pharmacy students. Responsibilities include 60–100% of lectures (varies by semester) and coordinating the laboratory. Spring semester 1978–1988, 1995–6. In Spring of 1995 and thereafter, the “Study-Group Method” was extended to large sections.
- “Seminar in Medicinal Chemistry” (MDCH 696 [now MCMP 696]. Set up and administered the graduate-student seminar system used in the department. The system is still used. (Both semesters, 1981–1987; 1993–1994)
- “Preparation for Research Proposals,” a special course designed to provide graduate students with some of the tools necessary to write research proposals. I delivered the lecture in literature searching. Spring 1990.
- “Chemical Pharmacology” (MDCH 600, 2 cr.) This course was a current-topics course in various aspects of chemical pharmacology. My responsibility was a three-lecture sequence on peptides and peptidomimetics. Spring semester 1990, 1992.
- “Study Skills Development” (A lecture in PHPR 100) A special presentation designed to help students with study-skills development with emphasis on chemistry. (Fall semester 1990, 1991, 1992, 1993, 1998–2002)
- “Opportunities for Research Careers in the Pharmaceutical Sciences” (A lecture in PHPR 201 (now in PHPR 312) A special presentation designed to help undergraduate students understand the various research careers that are available in the pharmaceutical sciences, and how to prepare for them. (Fall semester 1992–present)
- “Pharmacy Orientation” (PHPR 100) A course designed to help students deal with the issues of college life. My role is to lead three group discussions: “How College and High School Differ,” “Study Habits,” and “Diversity.” (Fall semester 1995, 1996)
- “Organic Chemistry Review for Beginning Graduate Students” (MCMP 490) A problem-oriented course designed to help new graduate students who do not perform up to standard on an organic chemistry proficiency examination (Fall semester 1996)
- “Research Proposal Preparation” (MCMP 690), Guest lecturer on “Writing Issues in Research Proposal Preparation,” Spring 2005–Spring 2008

4. Teaching Awards and Evaluations

Winner, Clark Award for Outstanding Teaching in the College of Arts and Sciences at Cornell University, 1976. This award is based on student nominations and testimonials.

Winner, Henry Heine Award for Outstanding Teacher in the School of Pharmacy, both 1980 and 1985. This award is based on student votes.

Winner, Class of 1922 Helping Students Learn Award, Purdue University, 1988
Appointment as Cwalina Distinguished Professor of Medicinal Chemistry on the basis of teaching and teaching scholarship, February 1996.

Teaching evaluations prior to 1991 were conducted with the “Cafeteria” method of Purdue University. In one evaluation (MDCH 205, Spring 1986), typically two-thirds of students either agreed or strongly agreed that “this instructor is among the best teachers I have known” (median 4.2/5.0); all students agreed or strongly agreed that “this instructor displays a clear understanding of course topics”(median 4.9/5.0) and that “my instructor seems well-prepared for class” (median 4.9/5.0). More than two-thirds agreed or strongly agreed that “my instructor is actively helpful when students have problems” (median 4.2/5.0). This evaluation is typical of those received at other times.

Teaching evaluations from 1991–1998 were original evaluations designed to provide students with more personal input and to provide the instructor with a more detailed evaluation of various aspects of the course rather than to provide numerical ratings for the instructor.

Teaching evaluations from 1999–present adhered to the new MCMP Evaluation System. Overall instructor rating for Fall 2000 was 4.56/5.00.

Selected to be Founding Member of the Purdue University Teaching Academy, September 1997.

Winner of the Charles M. Murphy Award, the Purdue University-wide Undergraduate Teaching Award, April 16, 1999.

Selected for permanent Recognition in Purdue University’s “Book of Great Teachers,” Purdue Memorial Union, Spring 1999.

Nominated as Carnegie “Teacher of the Year” by Purdue University, 1998, 2000.
Indiana “Teacher of the Year” Award, presented by the Carnegie Foundation for the Advancement of Teaching and directed by CASE (Council for the Advancement and Support of Education), November 14, 2000

5. Teaching-Related Innovations and Service

National

1. Reviewer for *Journal of Chemical Education*, 1984–present.
2. Developed a unique, mechanistically-oriented text, “Organic Chemistry,” published by Benjamin/Cummings Publishing Company, now in its 3rd Edition, and widely adopted in the USA, 1984–present.
3. Served as member of the NSF Research Experiences for Undergraduates (REU) Study Panel, Washington D.C., November 1991.
4. Member and Co-Author, American Chemical Society panel to develop and write the Society’s Organic Chemistry Proficiency Examination, 1988–1990.
5. Member, Author Advisory Board, Benjamin/Cummings Publishing Company, to advise the company on directions in educational software development, 1993–present.
6. Co-Editor, with Kendall N. Houk, of *Organic Chemistry Monograph Series*, Oxford University Press, 1993–present. This is a unique series of texts in various areas of organic chemistry with emphasis on pedagogy designed for the intermediate-level student to bridge between the undergraduate first course and graduate courses.
7. Faculty member, *The Chemistry Place*, a project of Peregrine Publishing Company, to provide chemistry instructional and learning resources via the world-wide web to secondary school and college students studying introductory chemistry, 1996–1998. The first prototype of this project was mounted on the world-wide web on Feb. 17, 1997, at <http://www.chemplace.com>. As a faculty member the responsibility is to provide periodic updates on current chemistry research, presenting it in a way that is intelligible to the intended audience.
8. National Reviewer for American Association of Colleges of Pharmacy Undergraduate Research Awards, 1998–present.
9. Panel Member, BIO2010, a Panel of the National Academy of Sciences to make curricular recommendations for teaching chemistry to biology students in the next decade, Washington DC, February 16, 2001
10. Commencement Speaker, May 18, 2001, College of Science, Louisiana State University, Baton Rouge, LA.

Purdue

1. Served as Faculty Fellow for Wiley Hall, 1981–1985. In this program, faculty have dinner with students in a particular residence hall, attend special residence-hall functions, etc. The idea is for faculty to have more informal, out-of-class contact with students.
2. Served on committees that evaluated and revised both student teaching-evaluation instruments and the criteria for selection of the Heine [Best

- Teacher] Award for the School of Pharmacy, 1982–1983.
3. Studied reading habits of organic chemistry students by conducting one-on-one interviews with thirty students who were having difficulty following the first examination in the 1987 MDCH 205 class. As a result, developed and evaluated better techniques for teaching students how to read chemistry texts. This led to the “How to Study Chemistry” module taught in PHPR 100 (see “Courses Taught”) and to the Helping Students Learn Award in 1988.
 4. Spearheaded the effort to institute the microlaboratory approach to teaching organic chemistry in the School of Pharmacy by writing the proposal for the administration and organizing, along with Joseph G. Stowell, Director of Laboratories, the transition to the microlaboratory. This type of laboratory was instituted in the Fall of 1988 and has provided students with a laboratory environment of greater safety while reducing chemical-disposal problems associated with the laboratory by a factor of 1000. An original course text was developed in collaboration with Dr. Stowell.
 5. Developed an undergraduate research program in the School of Pharmacy that has generated over \$75,000 in industrial funding to date. It operates on a “modified co-op” model, in which a student does research one summer at Purdue, and then does research in a sponsoring company in a succeeding summer.
 6. Developed the Dean’s Summer Undergraduate Research Program, which has typically funded about 10 students each summer from gift funds and from an Eli Lilly gift to the School.
 7. Developed (with David Riese II) a Summer Undergraduate Breast Cancer Undergraduate Research Program. This was funded (eight students/year, three years) starting in 2002 by a grant from the U. S. Army Breast Cancer Program.
 8. Planned and served as School liaison with Purdue University Computing Center and with the Department of Computer Sciences at Purdue for the development and realization of the RHPH Instructional Computing Laboratory, which opened in Fall 1990.
 9. Worked with staff of Elliot Hall of Music to plan the Class of 1940 gift, the Class of 1940 Organ Project. Addressed a Class of 1940 gathering, visited Michigan State University to hear a similar organ, and helped plan the specification of the concert organ, 1989–1990. Serves intermittently as Purdue Commencement Organist.
 10. Developed and authored a brochure, “Graduate Study in the Pharmaceutical Sciences,” 1989. This brochure answers the commonly-asked questions about graduate study. Hundreds of copies have been distributed to pharmacy undergraduates and to prospective applicants for graduate school.
 11. Served as a member of the Purdue Convocations Advisory Committee, 1990–1992, and member of Friends of Convocations. Purdue Convocations are an important and essential part of the Purdue educational experience. Has hosted Convocations events in the home and has served as host for visiting artists.
 12. Served on the Editorial Board of the Purdue University Press, 1991–1993.

13. Has served two times (1990, 1995) as Chair of the *Class of 1922 Helping Students Learn Award* selection committee.
 14. Along with Professor Craig Marcus, spearheaded the realization of an instructional computing software development laboratory within the School of Pharmacy, 1988–present. This now operated with a full-time A/P staff. Worked with Mr. David Allen, the computer-graphics specialist in the School, to develop and publish professional-quality instructional computing software for use in teaching organic chemistry (listed as #26 under teaching-related publications). This activity has generated outside revenue that has been folded back into the instructional computing operation.
 15. Has worked with Pharmacy Development Officer to endow the Kienly Teaching Award for graduate students.
 16. Developed a presentation for pharmacy undergraduates on research opportunities in the pharmacal sciences and how to prepare for them, now presented annually in PHPR 312, 1992–present
 17. Accompanist for student performers in the Purdue Bands’ “Noon Recital Hour,” 1993–present. Performed a special recital of organ, organ/trumpet, and piano-duet music on the stage of Elliot Hall, September 1994.
 18. Served as faculty liaison for “Unique Purdue,” a project of the Office of the Vice-President for Academic Affairs, 1994–present. A unique aspect of this project was the preliminary development of an accompanying multimedia CD-ROM package.
 19. Developed an Excellence-21 Initiative for Purdue University on classroom teaching using a group-study approach, academic year 1995–1996. This was part of a larger project, begun in 1994 in collaboration with Prof. George M. Bodner, to introduce group-study techniques into organic chemistry instruction.
 20. Served as chair of the committee to examine the Written English Proficiency Requirement of the Graduate School, academic year 1995–1996.
 21. Served on Phi Beta Kappa Membership Selection Committee, 1996–present. This committee evaluates hundreds of transcripts annually of student candidates for Phi Beta Kappa.
 22. Served with Marilyn J. Haring, Dean of Education, as co-Chair of the Teaching Evaluation Committee, Spring Semester 1996–Spring Semester 1997, a committee appointed by the Executive Vice-President for Academic Affairs to develop a teaching-evaluation system for the University. A final report was filed on January 20, 1997.
 23. Faculty coordinator for Freshman Scholars Program (Linda Lipschutz, Director) in the School of Health Sciences, 1997–present. This program seeks to involve outstanding freshmen in prepharmacy and health sciences in the scholarly activities of faculty and staff.
 24. Developed the Pharm.D.-Ph.D. joint program, now an official offering of the School, 2007.
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