

CURRICULUM VITAE

RENÉE JEANNE GOLDBERG ARNOLD

EDUCATION

- 1979-1980 Certificate of Completion
Pharmacy Residency
University of California, San Francisco
University Hospital
San Diego, California (campus)
- 1975-1979 Doctor of Pharmacy (PharmD)
University of Southern California
School of Pharmacy
Los Angeles, California
- 1973-1975 Undergraduate
University of Maryland
College Park, Maryland

PROFESSIONAL AFFILIATIONS

- Member, Long Island University (LIU) Council of Overseers
- Member, LIU Council of Overseers Educational Policies Committee
- Co-founder, International Society for Pharmacoeconomics and Outcomes Research (ISPOR)
- Chair, Disease Management Working Group, ISPOR Translating Research to Practice Special Interest Group
- Former member, Board of Directors, ISPOR
- Former Chair, Education Committee, ISPOR
- Former Co-Chair, Abstract Review Committee, ISPOR
- Member, Society for Medical Decision Making
- Reviewer, *Value in Health*, official journal of ISPOR
- Member, Reuters Insight Community of Experts

PROFESSIONAL LICENSURE (RPh)

California
Nevada
New York License #033912-1

PROFESSIONAL EXPERIENCE

President and CEO

2006 - Present

Arnold Consultancy & Technology LLC
5 Penn Plaza – 19th floor
New York, NY 10001

Arnold Consultancy & Technology LLC (ACT) is a pharmaceutical outcomes research and software development company. ACT develops software and cutting edge technologies to aid the pharmaceutical and biotechnology industry in being more efficient during the drug development process, quickly identifying and quantifying drug adverse events, and determining the cost effectiveness of different therapeutic strategies. Our aim is to improve the public image of commercial concerns by providing these innovative technologies for pharmaceutical discovery, development and outcomes research that ultimately facilitates development of socially responsible healthcare options. We engage in a variety of projects designed to promote the scientific and patient-oriented properties of an agent to enhance its marketability. To that end, ACT develops research protocols, including concept, design, data analysis and report preparation of pharmacoeconomic and other outcomes-related subject matter. We also review product promotional needs to assist in developing a research program that will provide useful strategic information. In addition, ACT develops scientific articles and monographs for publication, as well as providing consultants for various programs.

Moreover, ACT develops the contents and plans for scientific programs, executes focus groups, panels, seminars, symposia and workshops and designs training programs specific to the needs of the sales and medical departments pertinent to our outcomes programs. Other specialty projects include the development of decision analysis programs for drug selection and cost-benefit appraisal. Furthermore, we specialize in the development of online disease management programs for all aspects of the health care marketplace.

Adjunct Associate Professor

2006 - Present

Master of Public Health Program
Department of Community and Preventive Medicine
Mount Sinai School of Medicine
One Gustave L. Levy Place
New York, New York
10029

Develop and teach lecture section in MD/MPH program on Introduction to Pharmacoeconomics. This course provides an introduction to the major concepts and principles of pharmacoeconomics, with particular emphasis on modeling, methodologies, and data sources. Students learn about the international use of pharmacoeconomics in drug regulation, drug approval and pricing. They are given examples of pharmacoeconomic models used to support these purposes in government, the pharmaceutical industry and health care settings.

Clinical Professor of Pharmaceutical and Social Sciences

2005 - Present

Arnold and Marie Schwartz College of Pharmacy of Long Island University
75 DeKalb Avenue
Brooklyn, NY

Developed and teach lecture sections on Introduction to Pharmacoeconomics to Doctor of Pharmacy students.

President and Co-Founder
Pharmacon International, Inc.
80 Broad Street, Suite 1701
New York, NY 10004

1987 - 2006

Pharmacon International is a pharmaceutical outcomes research and software development company. We engage in a variety of projects designed to promote the scientific and patient-oriented properties of an agent to enhance its marketability. Pharmacon also develops research protocols, including concept, design, data analysis and report preparation of Phases I to IV, including large-scale collaborative clinical trials. Pharmacokinetic and biopharmaceutic expertise is provided with regard to generic drugs and bioequivalence. We also review product promotional needs to assist in developing a research program that will provide useful strategic information. In addition, Pharmacon develops scientific articles and monographs for publication, as well as providing consultants for various programs. Moreover, Pharmacon develops the contents and plans for scientific programs, executes focus groups, panels, seminars, symposia and workshops and designs training programs specific to the needs of the sales and medical departments. Other specialty projects include the development of decision analysis programs for drug selection and cost-benefit appraisal. Furthermore, we specialize in the development of online and interactive voice response (IVR)-based disease management programs for all aspects of the health care marketplace.

Senior Vice President, Medical Director
William J. Bologna International, Inc.
149 Fifth Ave., 14th floor
New York, NY 10010

3/86 - 11/87

My responsibilities included interfacing with copy, art and marketing departments within the Agency to formulate and implement strategies and to design promotional and educational materials for our clients' prescription and OTC pharmaceutical products. I also performed the usual medical director function of approval for medical accuracy of copy, art and marketing campaigns. In addition, I procured consultants and speakers as necessary for the Agency and the pharmaceutical firm; recommended, designed and performed site visits for Phase III and IV clinical trials; wrote detailed proposals for various relevant special projects such as symposia and review articles; explored the feasibility of the pharmaceutical firm's entrance into a new marketplace; provided editorial direction for monographs, articles, newsletters and single-sponsor publications; and proposed new medically-based marketing programs.

Vice President, Clinical and Technical Affairs
Director, Clinical and Technical Affairs
William J. Bologna International, Inc.

11/85 - 3/86
10/84 - 10/85

Clinical Associate Professor of Pharmacy
Arnold & Marie Schwartz College of Pharmacy
and Health Sciences, Long Island University
75 DeKalb Avenue
Brooklyn, NY 11201

9/83 - present

The original objective in maintenance of adjunct status involved continuation of my research in the determination of plasma amino acid levels in very low birth weight neonates. I directed a research group in association with a pharmaceutical firm who provided monetary, technical and statistical support. In addition, Pharmacon International, Inc. is participating in graduate pharmacology, pharmaceutical marketing and continuing education programs.

Manager, Medical and Scientific Services 8/83 - 10/84
Strategic Medical Communications
225 Christiani Street
Cranford, NJ 07016

Assistant Professor of Clinical Pharmacy 9/80 - 9/83
Arnold & Marie Schwartz College of Pharmacy
and Health Sciences, Long Island University
Brooklyn, NY

I was involved in the instruction of baccalaureate students in two didactic courses, a clinical pharmacy rotation in antibiotic therapy in pediatric patients at The Brooklyn-Caledonian Hospital and a special projects course involving student research. I acted in an advisory capacity on regular medical rounds at the hospital and as a featured speaker in several pediatric grand rounds presentations.

Pharmacy Technician Instructor 10/78 - 6/79
Northwest College
West Covina, California

Chemist 6/78 - 9/78
Food and Drug Administration
Division of Biopharmaceutics and Pharmacokinetics
Rockville, Maryland 20854

I was involved in the evaluation of dissolution and bioequivalency data relating to the new drug applications submitted by pharmaceutical manufacturers.

EDITORIAL EXPERIENCE

Reviewer, *Medical Decision Making*
Reviewer, *American Journal of Managed Care*
Section Editor, *Heart Disease*
Reviewer, *Annals of Internal Medicine*
Reviewer, *Value in Health* [official journal of the International Society for Pharmacoeconomics and Outcomes Research (ISPOR)]

PUBLICATIONS/PRESENTATIONS

1. Arnold R. Introduction to Pharmacoeconomics...from theory to practice. Boca Raton: Taylor and Francis Group, LLC, 2009 (in press).
2. Arnold RJG, Kuan RK. Quality of life and costs in atopic dermatitis. In: Preedy VR, Watson, RR (eds). Handbook of Disease Burdens and Quality of Life Measures. Heidelberg: Springer; 2008.
3. Marcus P, Arnold RJG, Ekins S, et al. A Retrospective Randomized Study of Asthma Control in the US: Results of the CHARLOT Study; *Current Medical Research and Opinion* 2008;24:3443-3452.
4. Cheng JWM, Arnold RJG. Pharmacoeconomic Review of Medical Management of Persistent Asthma. *Allergy and Asthma Proceedings* 2008 (March-April);29(2).

5. Arnold RJG. Cost-Effectiveness Analysis: Should It Be Required for Drug Registration and Beyond? *Drug Discov Today* 2007; Vol 12/21-22: 960-965.
6. Arnold RJG, Donnelly A, Altieri L, Wong KS, Sung J. Assessment of outcomes and parental impact on quality of life endpoints in the management of atopic dermatitis (ATOPIQUE). *Managed Care Interface* 2007;20:18-23.
7. Arnold R. Use of interactive software in medical decision making. In: Ekins S, ed. Computer Applications in Pharmaceutical Research and Development. Hoboken: John Wiley & Sons, Inc.; 2006.
8. Arnold RJG, Kim R, Tang B. The cost-effectiveness of argatroban treatment in heparin-induced thrombocytopenia: the effect of early versus delayed treatment. *Cardiol Rev* 2006;14:7-13.
9. Arnold RJG, Stein-Albert M, Serebrisky D, Kaniecki DJ, Ting A, Perez C, St. John J, Martin G. Use of an automated chronic care management system in underserved pediatric asthmatic patients. Presented at the American Academy of Pediatrics (AAP) Council on Clinical Information Technology, AAP National Conference and Exhibition, October 8-11, 2005.
10. Arnold RJG. Implementing automated chronic disease management support systems in asthma: the promise and the pitfalls. Presented at the Critical Issues in eHealth Research Conference. National Institutes of Health, Bethesda, MD, June 9-10, 2005.
11. Arnold RJG, Gabrail N, Raut M, Kim R, Sung JCY, Zhou Y. Clinical implications of chemotherapy-induced diarrhea in patients with cancer. *Journal of Supportive Oncology* 2005 May-Jun;3(3):227-32.
12. Arnold R, Zhou Y, Wong KS, Sung J. Burden of illness and impact of atopic dermatitis on parents' quality of life among children with atopic dermatitis. Presented at 63rd Annual Meeting of the American Academy of Dermatology, February 18-22, 2005 (P704).
13. Arnold R, Kim R, Zhou Y, Tang B. Budgetary impact of heparin-induced thrombocytopenia with thrombosis and treatment with the direct thrombin inhibitor Argatroban. Presented at ASHP 39th Midyear Clinical Meeting, Orlando, FL, December 8, 2004 (P401E).
14. Arnold R, Kim R, Zhou Y, Tang B. Temporal effect of argatroban administration on cost of treatment of heparin-induced thrombocytopenia Presented at the 2004 Annual Meeting of the American College of Clinical Pharmacy, Dallas, Texas, October 25, 2004.
15. Raut M, Arnold R, Kim R, Sung J, Gabrail N, Zhou Y. Clinical and economic implications of chemotherapy-induced diarrhea among cancer patients: results from a multi-site study. Presented at The Geriatric Oncology Consortium's Advancing Cancer Care in the Elderly (ACCE 2004): Quality Care for Colorectal Cancer conference, Washington, DC, Sept 9-12, 2004.
16. Arnold RJG, Gabrail N, Raut M, Kim R, Zhou Y. Implications of Chemotherapy-induced Diarrhea on Dosing Intensity. *Journal of Clinical Oncology* 2004;22(14S):6128.
17. Arnold RJ, Kaniecki DJ, Rosen J. Web-enabled asthma application for personalized medical communication within a multi-group practice setting. Presented at the ISPOR 9th Annual International Meeting, May 16-19, 2004.
18. Arnold RJ, Kaniecki DJ, Rosen J. Web-enabled asthma application for personalized medical communication within a multi-group practice setting. *Value in Health* 2004; 7: 310 (abstract).
19. Arnold RJ, Gabrail N, Raut M, Kim R, Sung J, Gause D, Zhou Y. Impact of chemotherapy-induced diarrhea on management patterns and resource utilization among cancer patients: results from a multi-site study. *Value in Health* 2004; 7: 246 (abstract).
20. Fischer J, Arnold RJG, Kaniecki DJ, O'Neill C, Dirani RG. The Avandia Worldwide Awareness Registry (AWARe[®]) Use of the EB Health server Internet analysis tools: an internet-based program for real-time

- evaluation of clinical, humanistic and economic outcomes of patients. 63rd Scientific Sessions Abstract Book of the American Diabetes Association 2003, the June supplement to Diabetes.
21. Raut M, Arnold R, Kim R, Sung J, Law A, Siegel N. Chemotherapy—induced diarrhea treatment and resource utilization study: a study overview. *Proc Am Soc Clin Oncol* 2003;22 (abstr 2221).
 22. Goldberg Arnold RJ, Kaniecki DJ. Health economic considerations in cardiovascular drug utilization. In: Frishman WH, Sonnenblick EH, ed. *Cardiovascular Pharmacotherapeutics*. 2nd Edition. New York: McGraw Hill, Inc., 2003. 43.
 23. Fivenson D, Arnold RJG, Kaniecki DJ, Cohen JL, Frech F, Finlay A. The effect of atopic dermatitis on total burden of illness and quality of life on adults and children in a large managed care organization. *Jnl Mgd Care Pharm* 2002;8:333-342.
 24. Najib MM, Arnold RJG, Kaniecki DJ, Pettit KG, Roth D, Antell L, Xuan J. Medical resource use and costs of congestive heart failure following use of carvedilol. *Heart Disease* 2002 March/April;4:70-77.
 25. Bakst A, Meletiche DM, Arnold R, Pettit K, Harjono H, Najib M, Cobitz A. The Avandia Worldwide Awareness Registry (AWARE[®]): An Internet-based program for evaluation of clinical, humanistic and economic outcomes of patients with type 2 diabetes (presented at the International Society for Pharmacoeconomics and Outcomes Research Sixth Annual International Meeting 23 May, 2001, Philadelphia, Pennsylvania).
 26. Bree RL, Arnold RJG, Pettit KG, Kaniecki DJ, LaFrance ND, Lev Toaff A. Use of decision analytic methodology to support use of a new oral ultrasound contrast agent for patients with abdominal pain. *Acad Radiol* 2001;8:234-242.
 27. Goldberg Arnold RJ. Disease management and pharmacoeconomics as tools for mass prevention of hypertensive complications. *Heart Disease* 2000 May/June 2001;3:152-156.
 28. Zaman A, Goldberg Arnold RJ, Pettit KG, Kaniecki DJ, Benner K, Zacker C, DiCesare J, Helfand M. Cost of Treating an Episode of Variceal Bleeding in a VA Setting. *Am J Gastroenterol*. 2000;95:1323-1330.
 29. Arnold RJG. Disease management and pharmacoeconomics as tools for mass prevention of hypertensive complications (Symposium 14). Presented at the 9th International Congress on Cardiovascular Pharmacotherapy, 26-30 March, 2000, Salvador, Bahia, Brazil.
 30. Arnold RJG, Akhras KS, Chen C, Chen S, Pettit KG, Kaniecki DJK. Review of the Development, Validation and Application of Predictive Instruments in Interventional Cardiology. *Heart Disease* July/August, 1999;1(3):138-148.
 31. Arnold RJG, Kotsanos JG. Proceedings of the Advisory Panel Meeting and Conference on Pharmacoeconomic Issues: Panel 3: Methodological issues in conducting pharmacoeconomic evaluations—retrospective and claims database studies. *Value in Health* 1999;2(2):82-87.
 32. Finlay AY, Cohen J, Pettit K, Fivenson D. Quality of Life in Atopic Dermatitis. Presented at the American Academy of Dermatology 57th Annual Meeting, March 19-24, 1999, New Orleans, LA.
 33. Arnold RJG. Presentation of Advantages and problems with the use of retrospective and claims data in conducting outcomes research at The Practical Outcomes ResearcherTM Workshop, sponsored by Pfizer Inc., Chicago, IL, June 4, 1998.
 34. Fagan S, Frech F, Pettit KG, Bailey E, Kaniecki DJ, Arnold RJG, Fivenson D. Relationship between quality of life, disease severity and physician visits in managed care patients with atopic dermatitis. *Value in Health* 1998;1:45 (abstract).
 35. Fagan S, Frech F, Pettit KG, Bailey E, Kaniecki DJ, Arnold RJG, Fivenson D. Relationship Between Quality Of Life, Disease Severity And Physician Visits In Managed Care Patients With Atopic Dermatitis. Presented at

- the Third Annual International Meeting, International Society for Pharmacoeconomics and Outcomes Research, Philadelphia, PA, May 29, 1998.
36. Arnold RJG, Pettit KG, DiCesare J, Fastenau J, Kaniecki DJ. Prospective Economic Evaluation In A Phase IIIb Renal Transplant Clinical Trial. *Value in Health* 1998;1:36 (abstract).
 37. Arnold RJG, Pettit KG, DiCesare J, Fastenau J, Kaniecki DJ. Prospective Economic Evaluation In A Phase IIIb Renal Transplant Clinical Trial. Presented at the Third Annual International Meeting, International Society for Pharmacoeconomics and Outcomes Research, Philadelphia, PA, May 29, 1998.
 38. Goldberg Arnold R. Chairperson for the Symposium on The Patient at Risk: Balancing Costs with Outcomes Allied Professionals Program: Socio-Economic Aspects of Cardiology. The XIII World Congress of Cardiology. Rio de Janeiro, Brazil, April 26, 1998.
 39. Goldberg Arnold R. Telemedicine applied to daily practice in the patient at risk for cardiovascular disease. Presented at the XIII World Congress of Cardiology. Rio de Janeiro, Brazil, April 26, 1998.
 40. Chalfin DB, Pettit KG, Arnold RJG, Kaniecki DJ. Invasive methods for diagnosing ventilator-acquired pneumonia (VAP): A time-dependent decision analysis. Presented at The 7th World Congress of Intensive & Critical Care Medicine. Ottawa, Canada: July 1, 1997.
 41. Arnold RJG, Kaniecki DJ, Pettit KG, McNutt RA, Rouhani R, Wasnich RD, Davis JW. Computer-assisted choice of cost-effective regimens for osteoporosis management, SBIR Phase 1. Submitted to the Health Care Financing Administration in fulfillment of *HCFA Grant No. 97/P-08097/2*, September 1996.
 42. Quenzer RW, Pettit KG, Arnold RJG, Kaniecki DJ. Pharmacoeconomic analysis of selected antibiotics in lower respiratory tract infection. *Am J Man Care* 1997; 3(7):1027-36.
 43. Arnold RJG. Applications of large databases to evaluate cost-effective therapy. *Clinical Ther* 1996; 18(suppl A): 15.
 44. Goldberg Arnold RJ, Kaniecki DJ. Health economic considerations in cardiovascular drug utilization in Cardiovascular Pharmacotherapeutics, *McGraw Hill, Inc.*, New York: 1996:1409-1421.
 45. Goldberg Arnold RJ, Pettit KG, Kaniecki DJ. Implementing real-time decision models on the Internet. Presented at the 12th Annual Meeting of the International Society of Technology Assessment in Health Care. San Francisco, CA: June 24, 1996.
 46. Goldberg Arnold R, Pettit K, DiCesare J, Canafax D, Lewis R, Kaniecki D. Application of Medicare databases to a theoretical renal transplant Markov model. Presented at the Association for Pharmacoeconomic and Outcomes Research (APOR) First Annual International Meeting. Philadelphia, PA: May 13-14, 1996.
 47. Goldberg Arnold RJ, Kaniecki DJ, McNutt RA, Rouhani R, Pettit K, Lowe FC. Creation of a Markov model to predict the costs of various treatments of benign prostatic hyperplasia (BPH) from patient, physician, and health administrator perspectives. Presented at the American Urological Association 1996 Annual Meeting. Orlando, FL: May 4-9, 1996.
 48. Arnold, RJG. Medical decision-making for osteoporosis treatments via the Internet. Presented at 1st DIA-Sponsored Symposium on Curriculum Development in Osteoporosis. San Francisco, CA: March 11, 1996.
 49. Lewis RL, Canafax DM, Pettit KG, DiCesare J, Kaniecki DJ, Arnold RJ, Roberts MS. Use of Markov modeling for evaluating the cost-effectiveness of immunosuppressive therapies in renal transplant recipients. *Transplantation Proceedings* 1996; 28 (4): 2214-2217.
 50. Goldberg Arnold RJ, Kaniecki DJ, Sax MJ, et al. Cost containment strategies in the United States: role of cost-effectiveness research. *Drug Inf J.* 1996;30(3): 609-19.

51. Baker AM, Goldberg Arnold RJ, Kaniecki DJ. Considerations in measuring resource use in clinical trials. *Drug Inf J*. 1995;29(4):1421-8.
52. Goldberg Arnold RJ, Kaniecki D, Tak Piech C, Puder KL. An economic evaluation of HMG-CoA Reductase Inhibitors for Cholesterol Reduction in the Primary Prevention of Coronary Heart Disease. [Presented at the 11th International Conference on Pharmacoepidemiology. Montreal, Que: August 1995].
53. Quenzer R, Arnold RJG, Kaniecki DJ. Cost-Effectiveness Analysis of Antibiotics in Community-Acquired Lower Respiratory Tract Infection (LRTI). Abstracts of the 34th Interscience Conference on *Antimicrobial Agents and Chemotherapy 1994:244*. [Presented at the 34th Interscience Conference on Antimicrobial Agents and Chemotherapy (ICAAC). Orlando, FL: October 6, 1994.]
54. Goldberg Arnold R, Kaniecki D, Frishman W. Cost-Effectiveness of Antihypertensive Agents in Patients with Reduced Left Ventricular Function. *Pharmacotherapy* 1994;14(2):178-184.
55. Goldberg Arnold R, Kaniecki D, Frishman W. Cost-Effectiveness of Antihypertensive Agents in Patients with Reduced Left Ventricular Function. *Pharmacotherapy* 1994;14(2):178-184.
56. Goldberg Arnold R, Kaniecki D, Kudo D, Rossi J, Kowato K, Simmons BJ and the Surfactant Cost-Effectiveness Study Group. Cost-Effectiveness Analysis of Neonatal Surfactant Therapy. *Resp and Critical Care Med* 1994; 149(4): A729.
57. Goldberg Arnold R, Kaniecki D, Kudo D, Rossi J, Kowato K, Simmons BJ and the Surfactant Cost-Effectiveness Study Group. Cost-Effectiveness Analysis of Neonatal Surfactant Therapy. Presented at *The American Thoracic Society Meeting, International Conference*, Boston, MA May 24, 1994.
58. Kaniecki DJ, Arnold RJG. Selection of oral controlled-release drug products: a critical decision for the pharmacist. *Pharmacy Times*: March 1993.
59. Arnold RJG, Kaniecki DJ. Selection of oral controlled-release drug products: a critical decision for the physician. *Southern Med J* 1993; 86(2): 208-214.
60. Podrid PJ, Arnold RJG, Kaniecki DJ. Pharmacoeconomic considerations in antiarrhythmic therapy. *PharmacoEconomics* 1992; 2(6): 456-467.
61. Jubran A, Gross N, Ramsdell J, Lee P, Simonian R, Schuttenhelm K, Sax M, Kaniecki DJ, Arnold RJG, Sonnenberg FA. Comparative cost-effectiveness analysis of theophylline and ipratropium bromide in patients with chronic obstructive pulmonary disease: a three-center study. *Chest* 1993; 103: 678-684.
62. Jubran A, Gross N, Ramsdell J, Lee P, Simonian R, Schuttenhelm K, Sax M, Kaniecki DJ, Arnold RJG. Cost-effectiveness analysis of bronchodilators. *Chest* 1991; 100 (2; supplement): 55S.(Presented at American College of Chest Physician's Annual Meeting, November, 1991).
63. Podrid PJ, Kowey PR, Frishman WH, Arnold RJ, Kaniecki DJ. Cost-effectiveness analysis of antiarrhythmic agents. *AJC* 1991; 68: 1662-1667.
64. Frishman WH, Arnold RJG. "Bevantolol", *Drugs for the Heart and Circulation*, Dyson J (ed), W. B. Saunders Company, Philadelphia, 1990.
65. Goldberg R, Rementeria J, Dong M, Piltz G, Sridhar C, Storm M. Amino acid patterns of infants of very low birth weight, *Nutrition* 1989; 5: 101-105.
66. Middleton E, Arnold RJG. Bronchial hyperreactivity: mediators and mechanisms--introduction and concluding remarks, *J Allergy and Clin Immunol* 1988; 81: 111, 160-162.
67. Frishman W, Goldberg R. A Review of Bevantolol: Pharmacologic Properties and Therapeutic Efficacy in Hypertension and Angina, *Drugs* 1988; 1: 35: 1-21.

68. Goldberg R. A pharmaco-logical approach to marketing, *Pharmaceutical Executive* 1986; 6: 48-54.
69. Goldberg R, Dong M. The effects of blood transfusions on serum electrolyte levels in neonates, *Am J Intravenous Ther and Clin Nutr* 1983; 53: 5-13.
70. Publications 1,2 and 5 were reprinted in the *J Prac Nurs*.
71. Piltz G, Goldberg R, Perentesis G. Pharmacokinetics of selected anticonvulsant drugs, *Pharmacy Times* (Feb) 1983: 62-71.
72. Kirschenbaum H, Piltz G, Perentesis G, Goldberg R, et al. Stability of dobutamine in large volume parenterals, *Am J Hosp Pharm* 1982; 39: 1923-1925.
73. Goldberg R. Usage of antibiotics in the treatment of infectious diseases in dentistry, *Penn Dental Assoc J* 1982 (Sept-Oct): 1-4.
74. Cutie A, Goldberg R. Drug excretion into breast milk (Part II), *Pharmacy Times* (June) 1982: 84-94.
75. Goldberg R, Cutie A. Excretion of drugs into breast milk (Part I), *Pharmacy Times* (May) 1982: 60-69.

AWARDS and APPOINTMENTS

1973-77	US Gov't. Junior Fellowship program
1973-75	University of Maryland Honors program
1973-74	Awards for outstanding achievement in gov't. projects
1978	Position as grad. student (chemist) in gov't. summer employment program
1978	QSAD Essay Award
1979	Rexall Award for Outstanding Leadership Achievement
1981	PMA Visiting Professorship - Ortho Pharmaceuticals
1981	Arthur G. Zupko Endowed Research Chair Grant for establishment of a Research & Instructional Parenteral Laboratory at The Brooklyn-Caledonian Hospital -- approx. \$20,000
1981-1991	Joint Research with Kendall-McGaw Laboratories, Inc.; provision of plasma amino acid determinations, data analysis