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EDUCATION

1955 - 1959 A.B., Magna cum Laude, Biochemical Sciences, Harvard University, Cambridge, MA

1959 - 1963 M.D., Magna cum Laude, Harvard Medical School, Boston, MA

TRAINING

1963 - 1965 Intern and Resident in Medicine, Peter Bent Brigham Hospital, Boston, MA

1965 - 1968 Research Associate and Special Fellow (NIH), Laboratory of Biochemistry, National Cancer Institute, National Institutes of Health

1968 - 1971 Special Fellow (NIH), Department of Biochemistry, Stanford University

June 1970 Course in Animal Cell Culture, Cold Spring Harbor Laboratory, New York

1971 Fellow in Infectious Disease, Boston City Hospital, Boston, MA

1971 Fellow in Infectious Disease, Massachusetts General Hospital, Boston, MA

FACULTY APPOINTMENTS

1972 - 1978 Assistant Professor of Medicine (Infectious Disease), University of Chicago, Chicago, IL

1975 - 1978 Research Associate (Assistant Professor) in Microbiology, University of Chicago, Chicago, IL

1978 - 1980 Associate Professor of Medicine (Infectious Disease) and Research Associate (Associate Professor) in Microbiology, University of Chicago, Chicago, IL

1980 - 1985 Clinical Associate (Associate Professor) in Medicine (Infectious Disease), Research Associate (Associate Professor) in Microbiology and Surgery (Otolaryngology), University of Chicago, Chicago, IL

1985 - 1986 Associate Professor of Medicine (Infectious Disease), University of Chicago, Chicago, IL

1986 - Present	Professor of Medicine, Wayne State University School of Medicine, Detroit, MI
1986 - 2002	Vice Chief, Division of Infectious Diseases, Wayne State University School of Medicine,
1986 - 2002	Director of Research, Division of Infectious Diseases, Wayne State University School of Medicine, Detroit, MI
1988 - Present	Adjunct Graduate Faculty (Professor), Department of Biochemistry and Molecular Biology, Wayne State University School of Medicine, Detroit, MI
2002 - Present	Associate Dean for Faculty Affairs, Wayne State University School of Medicine, Detroit, MI

PROFESSIONAL SOCIETIES, COMMITTEES, AND PANELS

American Society for Microbiology

Chairman-Elect, Division A (Antimicrobial Chemotherapy), 1986 - 1987
Chairman, Division A (Antimicrobial Chemotherapy), 1987 - 1988
Division A Nominating Committee, 1995, 1996
Divisional Group I Representative (General Meeting Program Committee), 1990 - 1992
Alternate Councilor, Division A (Antimicrobial Chemotherapy), 1989 - 1990
Councilor, 1990 - 1992
Ad Hoc Committee on International Activities, 1991-1992
Committee on Divisions, 1991-1992
Committee on Divisional Restructuring, 1993

PROFESSIONAL SOCIETIES, COMMITTEES, AND PANELS (cont.)

General Meeting Task Force, 1993
Nominating Committee, 1993
International Committee, 1993-2005; Chair, 1996-2003; Chair, International Seminars Task Force, 2004-2005
Conferences Committee 1993-1996; Chair, 1993-1996
Chair, Ortho/McNeil Predoctoral Fellowship Selection Committee, 1993-1995
Meetings Board, 1994-1996
Council Policy Committee, ex officio, 1999-2003
International Professorship Selection Committee, 2001-2007
Professional Development Committee, 2004-2007

Fellow, American Academy of Microbiology
Committee on Awards, 1993-1996

Fellow, Infectious Diseases Society of America

Inter-American Society for Chemotherapy
- Co-Chairman, Section on Bacteria, 1983-86
- President-Elect, 1985-86
- President, 1986-88
- Board of Directors, 1988-Present; Chairman, 1988-1993
- Nominating Committee, 1994-2000

International Society of Chemotherapy
- Council, 1985-2002
- Executive Committee, 1987-1995
- Awards Committee, 1993-1995

Scientific Program Committee, First, Second, Third, and Fourth International Congresses on Biological Response Modifiers (1991, 1993, 1995, 1997)

Scientific Program Committee, 18th International Congress of Chemotherapy (1993);
19th International Congress of Chemotherapy (1995)

International Advisory Committee, 4th and 5th Western Pacific Congress on Chemotherapy and Infectious Diseases, 1994, 1996.

Commission on Goals, American Society of Health-System Pharmacists, 1993-1995

Advisory Panel on Impacts of Antibiotic-Resistant Bacteria, Office of Technology Assessment (U.S. Congress), 1994-1995

Advisory Committee to the U.S. Food and Drug Administration on the Request for Over-the-Counter Status for Acyclovir, 1995.

PROFESSIONAL SOCIETIES, COMMITTEES, AND PANELS (cont.)

Alliance for the Prudent Use of Antibiotics
- Scientific Advisory Board, 1995 - Present

International Organizing Committee, 10th Mediterranean Congress of Chemotherapy, 1996.

Veterans Administration Merit Review Subcommittee for Infectious Diseases, Ad Hoc 1997, Regular 1998- 2001

Michigan Antibiotic Resistance Reduction (MARR) Coalition, 1998-Present
- Executive Council, 1999-Present
- Governing Council, 1999-Present
- Chair, Healthcare Provider Education Task Force, 2000-Present

Muskegon Coalition for Appropriate Antimicrobial Therapy, 2000-Present

Pan American Health Organization Technical Advisory Group on Antibiotic Resistance in Latin America, 1999-Present

U.S. National Committee for the International Union of Microbiological Societies, 2001-2006; Chair, 2005-2006

LICENSURE

Licensure: California, Illinois, and Michigan

HONORS AND AWARDS

1959	Phi Beta Kappa
1959	AB Degree, Magna Cum Laude
1962	Alpha Omega Alpha
1963	Borden Undergraduate Research Award in Medicine
1963	MD Degree, Magna Cum Laude (for a thesis in a special field)
1973 - 1975	Alpha Omega Alpha Faculty Secretary-Treasurer, University of Chicago
1975 - 1986	Alpha Omega Alpha Faculty Councillor, University of Chicago
1981	Sigma Xi
1981 - 1986	Sigma Xi (Council of the University of Chicago Chapter)
1993	International Society of Chemotherapy, Medal of Service
1994-present	Who's Who in America, 49th, 50th, 51st eds.
1994	Division A Lecturer, American Society for Microbiology
1998, 1991	Wayne State University School of Medicine Teaching Award
1999	Award for Leadership and Teaching Excellence in Continuing Medical Education, Wayne State University School of Medicine

EDITORIAL POSITIONS

1981 - Present	Antimicrobial Agents and Chemotherapy, Editorial Board
1991 - 1992	Co-Editor, Proceedings of the First International Congress on Biological Response Modifiers, Canadian Journal of Infectious Diseases.
1992 - Present	European Journal of Clinical Microbiology and Infectious Diseases, Editorial Board
1997 - Present	Drug Resistance Updates, Editorial Board

COMMITTEES

1978 - 1986	Pharmacy and Therapeutics Committee, University of Chicago, Chicago, IL (Chairman 1983-86)
1979 - 1983	Committee on Sexually Transmitted Diseases, Chicago Board of Health (Chairman, Subcommittee on Laboratories)

1979 - 1986	Institutional Biosafety Committee, University of Chicago, Chicago, IL (Subcommittee on Recombinant DNA; Subcommittee on Chemical Carcinogens; Chairman, Subcommittee on Infectious Agents); Biological Safety Officer
1985 - 1986	Quality Control Committee, University of Chicago, Chicago, IL
1986 - 1998	Pharmacy and Therapeutics Committee, Harper Hospital, Detroit, MI; Vice Chairman, 1987-1988; Chairman, 1988 - 1998
1987 - 1990; 1993 - 2002	Promotion and Tenure Committee, Department of Medicine, Wayne State University School of Medicine; Chairman, 1994-2002
1987 - 1989	VA Research and Development Committee, VA Medical Center, Allen Park, MI
1987 - 1991; 1992 - Present	Research Committee, Department of Medicine, Wayne State University School of Medicine; Chairman, 1992 - 1999
1988 - 1991	Infection Control Committee, Harper Hospital, Detroit, MI
1989	University Advisory Panel for the College of Pharmacy and Applied Health Professions, Wayne State University
1989	Morbidity and Mortality Review Committee. Department of Medicine, Harper Hospital, Detroit, MI
1989 - 2000	Chairman, Division of Infectious Diseases Quality Assurance Committee, Harper Hospital, Detroit, MI
1990 - 1991; 1993	Laboratory Utilization Subcommittee, Harper Hospital, Detroit, MI
1990 - 1998	Department of Medicine Quality Assurance Committee, Harper Hospital, Detroit, MI
1991 - 1998	Chairman, Antibiotic Utilization Subcommittee, Harper Hospital, Detroit, MI
1991 - 1992	Internal Review Committee for the Department of Medicine, Wayne State University; Chair, Subcommittee on Divisions; Subcommittee on Research
1991, 1992	University Committee on Promotion and Tenure, Wayne State University
1993 -1997	Department of Medicine Merit and Compensation Committee
1993 -1994	Department of Medicine Committee on Research Support Guidelines
1994 - 2002	Department of Medicine Research Reserve Fund Advisory Committee

1995 -1996	Board of Physician Advisors for Patient-Focused Care, Harper Hospital, Detroit, MI
1996 -1998	Harper Hospital QECRM Care of the Elderly Subcommittee
1998 - Present	Detroit Medical Center Pharmacy and Therapeutics Committee; Vice Chair, 1998 - Present; Chair, Antimicrobial Agents Subcommittee, 1998 – Present
1998 - 2002	Harper Hospital Medication Use Committee; Chair, 1998-2002
1998	Chair, Department of Medicine Measures Implementation Team
1998	Department of Medicine Search Committee for Core Biostatistician
1998	Department of Medicine Implementation Team on Faculty Effort Threshold of Research Commitment
1998	Department of Medicine Program Areas of Emphasis Implementation Team
1999-2002	Department of Medicine Research Mentor Advisory Committee
1999-2002	Department of Medicine Committee for Protected Time for Research

Publications
Original Observations in Referred Journals

1. Lin ECC, SA Lerner, and SE Jorgensen: Method for isolating constitutive mutants for carbohydrate-catabolizing enzymes. Biochem Biophys Acta 60:422, 1962.

2. Lerner SA, TT Wu, and ECC Lin: Evolution of a catabolic pathway in bacteria. Science 146:1313, 1964.

3. Tanaka S, SA Lerner, and ECC Lin: Replacement of a phosphoenolpyruvate-dependent phosphotransferase by a nicotinamide adenine dinucleotide-linked dehydrogenase for the utilization of mannitol. J Bacteriol 93:642, 1967.

4. Finley R, ED Kieff, S Thomsen, J Fennessy, M Beem, SA Lerner, and JA Morello: Bronchial brushing in the diagnosis of pulmonary disease in patients at risk for opportunistic infection. Amer Rev Resp Dis 109:379, 1974.

5. Stiffler PW, SA Lerner, M Bohnhoff, and JA Morello: Plasmid DNA in clinical isolates of *Neisseria gonorrhoeae*. J Bacteriol 122:1293, 1975.

6. Morello JA, SA Lerner, and M Bohnhoff: Characteristics of atypical *Neisseria gonorrhoeae* from disseminated and localized infections. Infect Immunity 13:1510, 1976.

7. Pogwizd SM and SA Lerner: *In vitro* activity of gentamicin, amikacin, and netilmicin (SCH 20569) alone and in combination with carbenicillin against *Serratia marcescens*. Antimicrob Agents Chemother 10:878, 1976.

8. Lerner SA, R Seligsohn, and GJ Matz: Comparative clinical studies of ototoxicity and nephrotoxicity of amikacin and gentamicin. Amer J Med 62:919, 1977.

9. Meislin HW, SA Lerner, MH Graves, MD McGehee, FE Kocka, JA Morello, and P Rosen: Cutaneous abscesses: anaerobic and aerobic bacteriology and outpatient management. Ann Intern Med 87:145, 1977.

10. Robison LR, R Seligsohn, and SA Lerner: Simplified radioenzymatic assay for chloramphenicol. Antimicrob Agents Chemother 13:25, 1978.

11. Bhattacharya I, R Seligsohn, and SA Lerner: Effects of radiopharmaceuticals on radioenzymatic assays of aminoglycoside antibiotics: interference by gallium-67 and its elimination. Antimicrob Agents Chemother 14:448, 1978.

12. Sirisanthana T and SA Lerner: Effect of clavulanic acid on the *in vitro* synergism between carbenicillin and gentamicin against *Serratia marcescens*. Antimicrob Agents Chemother 15:630, 1979.

13. Rusthoven JJ, TA Davies, and SA Lerner: Clinical isolation and characterization of aminoglycoside-resistant small colony variants of *Enterobacter aerogenes*. Amer J Med

67:702-706, 1979.

14. Lerner SA and GJ Matz: Suggestions for monitoring patients during treatment with aminoglycoside antibiotics. Otolaryngol Head Neck Surg 87:222, 1979.

15. Perlin MH and SA Lerner: Amikacin resistance associated with a plasmid-borne aminoglycoside phosphotransferase in *Escherichia coli*. Antimicrob Agents Chemother 16:598, 1979.

16. Lerner SA, EL Friedman, EJ Dudek, G Kominski, M Bohnhoff, and JA Morello: Absence of acetohydroxyacid synthetase in a clinical isolate of *Neisseria gonorrhoeae* requiring isoleucine and valine. J Bacteriol 142:344, 1980.

17. Janda WM, M Bohnhoff, SA Lerner, and JA Morello: Epidemiology of pathogenic neisseria in homosexual men. J Homosexuality 5:289, 1980.

18 Janda WM, M Bohnhoff, JA Morello, and SA Lerner: Prevalence and site-pathogen studies of *Neisseria meningititis* and *gonorrhoeae* in homosexual men. J Amer Med Assoc 244:2060, 1980.

19. Perlin MH and SA Lerner: Localization of an amikacin 3'-phosphotransferase in *Escherichia coli*. J Bacteriol 147:320, 1981.

20. Lum AM, RJ Wassersug, MJ Potel, and SA Lerner: Schooling behavior of tadpoles: a potential indicator of ototoxicity. Pharmacol Biochem Behavior 17:363, 1982.

21. Perlin MH and SA Lerner: Decreased susceptibility to 4'-deoxy-6'-N-methylamikacin (BB-K 311) conferred by a mutant plasmid in *Escherichia coli*. Antimicrob Agents Chemother 22:78, 1982.

22. Lerner SA, R Seligsohn, I Bhattacharya, R Hinojosa, and GH Matz: Aminoglycoside Levels in the Inner Ear Perilymph of Man, Nephrotoxicity and Ototoxicity of Drugs, JP Fillastre (Editor), Institut National de la Sante et de La Recherche Medicale (INSERM), 1982, pp 387-405.

23. Dudek EJ, JD Stephenson, and SA Lerner: Susceptibility of *Neisseria meningitidis* and *Neisseria gonorrhoeae* isolates to N-formimidoyl thienamycin. Antimicrob Agents Chemother 22:926, 1982.

24. Lerner SA and SH Fox: Clinical microbiology and infectious disease in China: a personal view. Clin Microbiol Newsl 4:149, 1982.

25. Janda WM, JA Morello, SA Lerner, and M Bohnhoff: Characteristics of pathogenic *Neisseria* spp. isolated from homosexual men. J Clin Microbiol 17:85, 1983.

26. Cheung K-S, SA Wasserman, E Dudek, SA Lerner, and M Johnston: Chloroalanyl and propargylglycyl dipeptides. Suicide substrate containing antibacterials. J Med Chem 26:1733, 1983.

27. Lerner SA, EJ Dudek, WE Boisvert, and KO Berndt: Effect of highly potent antipseudomonal β-lactams alone and in combination with aminoglycosides against *Pseudomonas aeruginosa*. Rev Infect Dis 6:S678, 1984.

28. Lerner SA, ES Lyon, and VC Wald: The treatment of urinary tract infections with amoxicillin/clavulanate. Postgrad Med, Sept-Oct 1984, pp 225-228.

29. Hinojosa R, R Seligsohn, and SA Lerner: Ganglion cell counts in the cochleae of patients with normal audiograms. Acta Otolaryngol 99:8, 1985.

30. Garcia-Riestra C, MH Perlin, and SA Lerner: Lack of accumulation of exogenous adenylyl dihydrostreptomycin by whole cells or spheroplasts of *Escherichia coli*. Antimicrob Agents Chemother 27:114, 1985.

31. Lerner SA and JP Quinn: Emergence of resistance to β-lactam antibiotics in *Pseudomonas aeruginosa* during treatment with new 8-lactams. Chemioterapia 4:95, 1985.

32. DeHertogh DA and SA Lerner: Correlation of aminoglycoside resistance with the K_ms and V_{max}/K_m ratios of enzymatic modification of aminoglycosides by 2"-O-nucleotidyltransferase. Antimicrob Agents Chemother 27:670, 1985.

33. Mansur J, PW Abramowitz, SA Lerner, RB Smith, and RJ Townsend: Stability and cost analysis of clindamycin-gentamicin admixtures given every eight hours. Am J Hosp Pharm 42:332, 1985.

34. Perlin MH and SA Lerner: High-level amikacin resistance in *Escherichia coli* due to phosphorylation and impaired aminoglycoside uptake. Antimicrob Agents Chemother 29:216-224, 1986.

35. Mobashery S, SA Lerner, and M Johnston: Conscripting β-lactamase for use in drug delivery. Synthesis and biological activity of a cephalosporin C_{10}-ester of an antibiotic dipeptide. J Am Chem Soc 108:1985, 1986.

36. Sawyers CL, RD Moore, SA Lerner, and CR Smith: A model for predicting nephrotoxicity in patients treated with aminoglycosides. J Infect Dis 153:1062, 1986.

37. Boisvert W, KS Cheung, SA Lerner, and M Johnston: Mechanisms of action of chloroalanyl antibacterial peptides. Identification of the intracellular enzymes inactivated on treatment of *Escherichia coli* JSR-O with the dipeptide β-CL-LAla-β-CL-LAla. J Biol Chem 261:7871, 1986.

38. Bohnhoff M, JA Morello, and SA Lerner: Auxotypes, penicillin susceptibility, and serogroups of *Neisseria gonorrhoeae* from disseminated and uncomplicated infections. J Infect Dis 154:225, 1986.

39. Quinn JP, EJ Dudek, CA DiVincenzo, DA Lucks, and SA Lerner: Emergence of resistance to imipenem during therapy of *Pseudomonas aeruginosa* infections. J Infect Dis 154:289-294, 1986.

40. Lerner SA, BA Schmitt, R Seligsohn, and GJ Matz: Comparative study of ototoxicity and nephrotoxicity in patients randomly assigned to treatment with amikacin or gentamicin. Am J Med 80(6B):98, 1986.

41. Cheung K-S, W Boisvert, SA Lerner, and M Johnston: Chloroalanyl antibiotic peptides. Antagonism of the antimicrobial effects by L-alanine and L-alanyl peptides in gram-negative bacteria. J Med Chem 29:2060, 1986.

42. Hinojosa R, and SA Lerner: Cochlear neural degeneration without hair cell loss in two patients with aminoglycoside ototoxicity. J Infect Dis 156:449,1987.

43. Lerner SA, CA Lavieri, and EM Quimosing: Selection of ciprofloxacin-resistant mutants in vitro from clinical isolates of *Pseudomonas aeruginosa*. Rev Infect Dis 10 (Suppl 1): 533, 1988.

44. Quinn JP, CA DiVincenzo, DA Lucks, RL Luskin, KL Shatzer, and SA Lerner: Serious infections due to penicillin-resistant strains of viridans streptococci with altered penicillin-binding proteins. J Infect Dis 157:764, 1988.

45. Mobashery S, SA Lerner, and M Johnston: Monitoring β-lactamase activity in vivo by ^{13}C nuclear magnetic resonance spectroscopy. Antimicrob Agents Chemother 32:1196,1988.

46. Gaynes R, E Groisman, E Nelson, M Casadaban, and SA Lerner: Isolation, characterization, and cloning of a plasmid-borne gene encoding a phosphotransferase that confers high-level amikacin resistance in enteric bacilli. Antimicrob Agents Chemother 32:1379-1384,1988.

47. Levine DP, P McNeil, and SA Lerner: Randomized, double-blind comparative study of intravenous ciprofloxacin versus ceftazidime in the treatment of serious infections. Rev Infect Dis 12 (Suppl 15): S1173 - 1174, 1989.

48. Levine DP, P McNeil, and SA Lerner: Randomized, double-blind comparative study of intravenous ciprofloxacin versus ceftazidime in the treatment of serious infections. Amer J Med 87 (Suppl 5A): S160 - 163, 1989.

49. Kaatz GW, SM Seo, NJ Dorman, and SA Lerner: Emergence of teicoplanin resistance during therapy of *Staphylococcus aureus* endocarditis. J Infect Dis 162:103-108, 1990.

50. Rybak MJ, SA Lerner, DP Levine, LM Albrecht, PL McNeil, GA Thompson, MT Kenny, and L Yuh: Teicoplanin pharmacokinetics in intravenous drug abusers being treated for bacterial endocarditis. Antimicrob Agents Chemother 35:696-700, 1991.

51. Oren, I, EK Manavathu, and SA Lerner: Isolation and characterization of a species-specific DNA probe for *Candida albicans*. Nucl Acids Res 19:7113-7116, 1991.

52. Moore RD, SA Lerner, and DP Levine: Nephrotoxicity and ototoxicity of aztreonam versus aminoglycoside therapy in seriously ill nonneutropenic patients. J Infect Dis 165:683-688, 1992.

53. Zafaralla G, EK Manavathu, SA Lerner, and S Mobashery: Elucidation of the role of arginine-244 in the turnover processes of class A β-lactamases. Biochemistry 31:3847-3852, 1992.

54. Imtiaz U, E Billings, JR Knox, EK Manavathu, SA Lerner, and S Mobashery: Inactivation of class β-lactamases by clavulanic acid: The role of arginine-244 in a proposed non-concerted sequence of events. J Amer Chem Soc 115:4435-4442, 1993.

55. Imtiaz U, EK Manavathu, SA Lerner, and S Mobashery: Critical hydrogen bonding by serine-235 for cephalosporinase activity of TEM-1 β-lactamase. Antimicrob Agents Chemother 37:2438-2442, 1993.

56. Fink MP, DR Snydman, MS Niederman, KV Laeper, Jr, RH Johnson, SO Heard, RG Wunderink, JW Caldwell, JJ Schentag, GA Siami, RL Zameck, DC Haverstock, HH Reinhart, RM Echols, and the Severe Pneumonia Study Group (inc. SA Lerner): Treatment of Severe pneumonia in hospitalized patients: Results of a multicenter, randomized, double-blind trial comparing intravenous ciprofloxacin with imipenem-cilastatin. Antimicrob Agents Chemother 38:547-557,1994.

57. Siregar JJ, SA Lerner, and S. Mobashery: Purification and characterization of aminoglycoside 3'-phosphotransferase type IIa and kinetic comparison with a new mutant enzyme. Antimicrob Agents Chemother 38:641-647,1994.

58. Imtiaz U, EK Manavathu, S Mobashery, and SA Lerner: Reversal of clavulanate resistance conferred by a Ser-244 mutant of TEM-1 β-lactamase as a result of a second mutation (Arg to Ser at position 164) that enhances activity against ceftazidime. Antimicrob Agents Chemother 38:1134-1139, 1994.

59. Bulychev A, I Massova, SA Lerner, and S Mobashery: Penem BRL 42715: An effective inactivator for β-lactamases. J Am Chem Soc 117:4797-4801, 1995.

60. Alangaden GJ, EK Manavathu, SB Vakulenko, NM Zvonok, and SA Lerner: Characterization of fluoroquinolone-resistant mutant strains of *Mycobacterium tuberculosis* selected in the laboratory and isolated from patients. Antimicrob Agents Chemother 39:1700-1703,1995.

61. Vakulenko SB, M T∴th, P Taibi, S Mobashery, and SA Lerner: Effects of Asp-179 mutations in TEM_{pUC19} β-lactamase on susceptibility to β-lactams. Antimicrob Agents Chemother 39:1878-1880, 1995.

62. Manavathu EK, SB Vakulenko, N Obedeanu, and SA Lerner: Isolation and characterization of a species-specific DNA probe for the detection of *Candida krusei*. Current Microbiol, 33:147-151, 1996.

63. Manavathu EK, GJ Alangaden, and SA Lerner: A comparative study of the broth micro- and macro-dilution techniques for the determination of the in vitro susceptibility of *Aspergillus fumigatus*. Can J Microbiol 42:960-964, 1996.

64. Taibi-Tronche P, I Massova, SB Vakulenko, SA Lerner, and S Mobashery: Evidence for structural elasticity of class A β-lactamases in the course of catalytic turnover of the novel cephalosporin cefepime. J Am Chem Soc 118:7441-7448, 1996.

65. Chow JW, MJ Zervos, SA Lerner, LA Thal, SM Donabedian, DD Jaworski, S Tsai, KJ Shaw, and DB Clewell: A novel gentamicin resistance gene in *Enterococcus*.

Antimicrob Agents Chemother 41:511-514, 1997.

66. Alangaden G, B Kreiswirth, E Manavathu, and SA Lerner: Mechanism of kanamycin and amikacin resistance in *Mycobacterium tuberculosis*. Antimicrob Agents Chemother 42: 1295-1297, 1998.

67. Vakulenko SB, B Geryk, LP Kotra, S Mobashery, and SA Lerner: Selection and characterization of β-lactam/β-lactamase inactivator-resistant mutants following PCR mutagenesis of the TEM-1 β-lactamase gene. Antimicrob Agents Chemother 42: 1542-1548, 1998.

68. Rybak MJ, BJ Abate, SL Kang, MJ Ruffing, SA Lerner, and GL Drusano: Prospective evaluation of the effect of an aminoglycoside dosing regimen on rates of observed nephrotoxicity and ototoxicity. Antimicrob Agents Chemother 43:1549-1555, 1999.

69. Vakulenko SB, P Taibi-Tronche, M Toth, I Massova, SA Lerner, and S Mobashery: Effects on substrate profile by mutational substitutions at positions 164 and 179 of the class A TEM_{pUC19} β-lactamase from *Escherichia coli*. J Biol Chem 274:23052-23060, 1999.

70. Torres C, MH Perlin, F Baquero, DL Lerner, and SA Lerner: High-level resistance in *Pseudomonas aeruginosa* associated with a 3'- phosphotransferase with high affinity for amikacin. Int J Antimicrob Agents 15:257-263, 2000.

71. Hinojosa R, EG Nelson, SA Lerner, MI Redleaf, and DR Schramm: Aminoglycoside ototoxicity: A human temporal bone study. Laryngoscope, 111:1797-1805, 2001.

72. Grapsas I, SA Lerner, and S Mobashery: Conjoint molecules of cephalosporins and aminoglycosides. Arch Pharm Med Chem 334:295-301, 2001.

72. Chow JW, V Kak, I You, SJ Kao, J Petrin, DB Clewell, SA Lerner, GH Miller, and KJ Shaw: Aminoglycoside resistance genes *aph (2")-Ib* and *aac(6')-Im* detected together in strains of both *Escherichia coli* and *Enterococcus faecium*. Antimicrob Agents Chemother 45:2691-2694, 2001.

73. Vakulenko SB, D Golemi, B Geryk, M Suvorov, JR Knox, S Mobashery, and SA Lerner: Mutational replacement of Leu-293 in the class C *Enterobacter cloacae* p99 β-lactamase confers increased MIC of cefepime. Antimicrob Agents Chemother 46:1966-1970, 2002.

74. Lee, HK, SB Vakulenko, DB Clewell, SA Lerner, and JW Chow: Mutations in the *aph(2")-Ic* gene are responsible for increased levels of aminoglycoside resistance. Antimicrob Agents Chemother 46:3253-3256, 2002.

75. Vakulenko, SB, SM Donabedian, AM Voskresenskiy, MJ Zervos, SA Lerner, and JW Chow: Multiplex PCR for detection of aminoglycoside resistance genes in enterococci. Antimicrob Agents Chemother 47:1423-1426, 2003.

76. Juzych, NS, M Banerjee, L Essenmacher, and SA Lerner: Improvements in antimicrobial prescribing for treatment of upper respiratory tract infections through provider education. J Gen Intern Med 20:901-905, 2005.

Review Articles

1. Lerner SA: Gonorrhea: epidemic of a treatable disease. Comprehensive Therapy 1:48, 1975.

2. Causey WA, SA Lerner, and E Kieff: Infectious disease introduction. Comprehensive Therapy 2:7, 1976.

3. Matz G and S Lerner: Amikacin. Perceiver 8:10, 1977.

4. Lerner SA and GJ Matz: Suggestions for monitoring patients during treatment with aminoglycoside antibiotics. Perceiver 10:4, 1979.

5. Lerner SA and GJ Matz: Aminoglycoside ototoxicity. Amer J Otolaryngol 1:169, 1980.

6. Mumford LM and SA Lerner: Bacterial resistance to aminoglycosides. Clin Microb Newsl 2:1, 1980.

7. Matz GJ, SA Lerner, and EF Lanzl: Aminoglycoside antibiotics in the treatment of otologic infections. Otolaryngol Head Neck Surg 89:705, 1981.

8. Lerner SA and T Fekete: Single-dose therapy for cystitis. J Amer Med Assoc 247:1865, 1982.

Review Articles (cont.)

9. Lerner SA: Optimal duration of treatment of urinary tract infections. Eur Urol 13 (Suppl 1):26, 1987.

10. Quinn JP, AE Studemeister, CA DiVincenzo, and SA Lerner: Resistance to imipenem in *Pseudomonas aeruginosa*: clinical experience and biochemical mechanisms. Rev Infect Dis 10:892,1988.

11. Nordstrom L and SA Lerner: Single daily dose therapy with aminoglycosides. J Hosp Infect 18(Suppl A):117, 1991.

12. Felmar EA, Garrison MW, and SA Lerner: Do aminoglycosides still have a role? Patient Care 28:63-74, 1994.

13. Lundstrom TS and SA Lerner: Vancomycin-resistant enterococci--an overview. APIC News, pp. 10-11, July/Aug., 1994.

14. Lerner SA: Ask the Experts: Diagnosis and treatment of urinary tract infections. Alliance for the Prudent Use of Antibiotics Newsletter 15:7-8, 1997.

15. Alangaden GJ and SA Lerner: Overview of antimicrobial resistance. Infect Dis Clin Updates 4:1-4, 1997.

16. Alangaden GJ and SA Lerner: Clinical use of fluoroquinolones for the treatment of mycobacterial diseases. Clin Infect Dis 25:1213-1221, 1997.

17. Brown PD and SA Lerner: Community-acquired pneumonia. Lancet 352: 1295-1302, 1998.

Books and Chapters

1. Mowry HJ, JW Roeder, GJ Matz, and SA Lerner: Auditory and Vestibular Assessment of Patients Receiving Aminoglycosides, *Aminoglycoside Ototoxicity*, SA Lerner, GJ Matz, and JE Hawkins Jr (Editors), Boston: Little Brown and Company, 1981, pp 249-254.

2. Roeder JW, HJ Mowry, GJ Matz, and SA Lerner: Serial Vestibular Testing of Normal Subjects, *Aminoglycoside Ototoxicity*, SA Lerner, GJ Matz, and JE Hawkins Jr (Editors), Boston: Little Brown and Company, 1981, pp 309-319.

3. Matz GJ and SA Lerner: Prospective Studies of Aminoglycoside Ototoxicity in Adults, *Aminoglycoside Ototoxicity*, SA Lerner, GJ Matz, and JE Hawkins Jr (Editors), Boston: Little Brown and Company, 1981. pp 327-336.

4. Lerner SA, R Seligsohn, I Bhattacharya, R Hinojosa, and GJ Matz: Pharmacokinetics of Gentamicin in the Inner Ear Perilymph of Man, *Aminoglycoside Ototoxicity*, SA Lerner, GJ Matz, and JE Hawkins Jr (Editors), Boston: Little Brown and Company, 1981, pp 357-369.

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45. Lerner SA: Convenor of Symposium on Controversies in Clinical Trials of Antimicrobial Agents, 4th Annual Conference, Inter-American Society for Chemotherapy, 1988.

46. Lerner SA: Problems of antibiotic resistance and perspectives on the use of various

groups of antibiotics, National Research Institute of Antibiotics, Moscow, USSR, 1988.

47. Lerner SA: Development of antibacterial resistance to "backup antibiotics", imipenem and amikacin, Department of Medicine, Chicago Medical School, 1988.

48. Lerner SA: Microbiological rationale for once daily dosing with aminoglycosides, New Perspectives of Dosing in Antibiotic Therapy with Aminoglycosides, Caracas, Venezuela, 1988.

49. Lerner SA, SM Navashin, and RC Moellering, Jr.: Convenors of the 1st Soviet-American Symposium on Antibiotics and Chemotherapy, Moscow, USSR, 1988.

50. Lerner SA: Aminoglycoside-modifying enzymes and aminoglycoside resistance, 1st Soviet-American Symposium on Antibiotics and Chemotherapy, Moscow, USSR, 1988.

51. Lerner SA: Emergence of resistance to antibiotics, Department of Biochemistry, Wayne State University School of Medicine, 1988.

52. Lerner SA: Selection of new resistance to ampicillin-clavulanic acid, 5th Annual Conference of the Inter-American Society for Chemotherapy, Buenos Aires, Argentina, 1988.

53. Lerner SA: New resistance to aminoglycoside antibiotics, 5th Annual Conference of the Inter-American Society for Chemotherapy, Buenos Aires, Argentina, 1988.

54. Lerner SA: Mechanisms of resistance to antibiotics, Department of Medicine, Veterans Administration Medical Center, University of North Dakota School of Medicine, 1988.

55. Lerner SA: Emergence of bacterial resistance to antibiotics, Department of Infectious Diseases, University Hospital of Lund, Lund, Sweden, 1989.

56. Lerner SA: Clinical studies on the treatment of serious gram-positive coccal infections with teicoplanin, Department of Infectious Diseases, General Hospital (University of Lund), Malm , Sweden, 1989.

57. Lerner SA: Emergence of bacterial resistance to antibiotics, Department of Clinical Microbiology, Karolinska Institute, Stockholm, Sweden, 1989.

58. Lerner SA: Mechanisms of emergence of resistance to antibiotics, Division of Infectious Disease, Duke University School of Medicine, 1989.

59. Lerner SA: Development of resistance to antibiotics: A model of bacterial evolution, Department of Biology, University of Louisville, 1989.

60. Lerner SA: Emergence of bacterial resistance to antibiotics, Department of New Drug Development, Abbott Laboratories, 1989.

61. Lerner SA: Overview of lomefloxacin, 16th International Congress of Chemotherapy, Jerusalem, Israel, 1989.

62. Lerner SA: The role of APH(3') enzymes in resistance to amikacin, 2nd Hellenic - British - Scandinavian Meeting on Chemotherapy, Thessaloniki, Greece, 1989.

63. Lerner SA: Emergence of resistance to antibiotics, Division of Infectious Disease, Syracuse University School of Medicine, 1989.

64. Lerner SA: Emergence of resistance to new antibiotics, Division of Infectious Disease, University of Minnesota VA Medical Center, 1989.

65. Lerner SA: Recent development of bacterial resistance to amikacin, 9th International Symposium on Future Trends in Chemotherapy, Geneva, Switzerland, 1990.

66. Lerner SA: Ciprofloxacin in the treatment of serious infections, 3rd International Congress of Internal Medicine, Buenos Aires, Argentina, 1990.

67. Lerner SA: Management and treatment of the septic patient, 3rd International Congress of Internal Medicine, Buenos Aires, Argentina, 1990.

68. Lerner SA: Resistance to amikacin (AK) by enzymatic phosphorylation, 7th Mediterranean Congress of Chemotherapy, Barcelona, Spain, 1990.

69. Lerner SA: Development of resistance to ampicillin plus clavulanic acid as the result of mutation in the structural gene of the TEM-1 ∃-lactamase, Annual Conference of the Hungarian Society of Chemotherapy, Hajduszoboszlo, Hungary, 1990.

70. Lerner SA: Participant, NIH Workshop on Antibiotic Resistance, Annapolis, MD, 1990.

71. Lerner SA: Aminoglycosides in the 1990s, Chicago Infectious Disease Society, 1990.

72. Lerner SA: Dose adjustment of antibiotics: What is needed to minimize toxicity?

25th Annual Midyear Clinical Meeting, American Society of Hospital Pharmacists, 1990.

73. Lerner SA: Resistance to ampicillin plus clavulanic acid in *E. coli* as the result of mutational alteration of the TEM-1 β-lactamase to resistance to inactivation by clavulanic acid, 2nd Western Pacific Congress of Chemotherapy and Infectious Diseases, Jomtien, Thailand, 1990.

74. Lerner SA: Failures based on emergence of antimicrobial resistance, 17th International Congress of Chemotherapy, Berlin, Germany, 1991.

75. Lerner SA: Guidelines for the evaluation of therapy of acute uncomplicated urinary tract infections in women, 5th European Congress of Clinical Microbiology and Infectious Disease, Oslo, Norway, 1991.

76. Lerner SA: Tolerance of high-dose teicoplanin: Experience at Detroit Receiving Hospital, Second Teicoplanin Investigators Workshop on Endocarditis, Tucson, AZ, 1992.

77. Lerner SA: Is the addition of an aminoglycoside to a β-lactam necessary in serious infections? 8th Mediterranean Congress of Chemotherapy, Athens, Greece, 1992.

78. Lerner SA: Conventional or single-dose treatment of urinary tract infections, VIIth Brazilian Congress of Infectious Diseases, Sao Paulo, Brazil, 1992.

79. Lerner SA: Review of current therapy for urinary tract infections, U.S. Investigators Meeting on Cefepime, San Diego, CA, 1993.

80. Lerner SA: New mechanisms of bacterial resistance to antibiotics, Seminar on Current Trends in Infectious Disease, St. Louis College of Pharmacy, St. Louis, MO, 1993.

81. Lerner SA: Structure-function relationships of β-lactamase, American Society for Microbiology General Meeting, Las Vegas, NV, 1994.

82. Lerner SA: Clinical use of quinolones in mycobacterial diseases, 5th International Symposium on New Quinolones, Singapore, 1994.

83. Lerner SA: β-Lactamases in β-lactam resistance, 4th Western Pacific Congress of Chemotherapy and Infectious Diseases, Manila, 1994.

84. Lerner SA: Mycobacterial resistance to antimicrobial agents, 4th Western Pacific Congress of Chemothrapy and Infectious Diseases, Manila, 1994.

85. Lerner SA: Bacterial antibiotic resistance: Tarnishing the silver bullet, Pacific Northwest Meeting, Association of Official Analytical Chemists, Olympia, WA, 1995.

86. Lerner SA: The physician's responsibility in preventing medication misadventures, American Society of Health-System Pharmacists Annual Meeting, Las Vegas, NV, 1995.

87. Lerner SA: Rational approach to antibiotic therapy, 3rd Russian National Congress "Man and Medicine," Moscow, 1996.

88. Lerner SA: Clinical aspects of antibiotic resistance, 3rd Russian National Congress "Man and Medicine," Moscow, 1996.

89. Lerner SA: Antibiotics and antibiotic resistance: Implications for society, Pacific Northwest Meeting, Association of Official Analytical Chemists, Bellingham, WA, 1996.

90. Lerner SA: Invited Participant, Ciba Symposium on Antibiotic Resistance, London, 1996.

91. Lerner SA: Classification and structure of β-lactamases, 10th Mediterranean Congress of Chemotherapy, Antalya, Turkey, 1996.

92. Lerner SA: Control of antibiotic usage in a hospital setting, 21st National Congress of Infectology and Clinical Microbiology/3rd National Congress of Antimicrobials and Chemotherapy, Guadalajara, Mexico, 1996.

93. Lerner SA: Structure-function relationships of β-lactamases, 5th Western Pacific Congress of Chemotherapy and Infectious Diseases, Singapore, 1996.

94. Lerner SA: Structure-function relationships in β-lactamases, 20th International Congress of Chemotherapy, Sydney, Australia, 1997.

95. Lerner SA: Clinical significance of antibiotic resistance, Republic of Tatarstan Seminar on Antimicrobial Chemotherapy, Kazan, Russia, 1997.

96. Lerner SA: Means of reducing costs of antibacterial therapy, Republic of Tatarstan Seminar on Antimicrobial Chemotherapy, Kazan, Russia, 1997.

97. Lerner SA: Antibiotic resistance issues, Ferris State University School of Pharmacy, Big Rapids, MI, 1997.

98. Lerner SA: Clinical impact of antibiotic resistance, Conference on Maternal-Perinatal Health, Michigan State Medical Society, Dearborn, MI, 1998.

99. Lerner SA: Clinical impact of antibiotic resistance, Nurse Practitioners Association for Continuing Education National Meeting, Chicago, 1998.

100. Lerner SA: Recent developments in antibiotic resistance, Division of Infectious Diseases, Henry Ford Medical Center, 1998.

101. Lerner SA: Appropriate and cost-effective use of out-patient antibiotics, Michigan State Medical Society, Dearborn, MI 1998.

102. Lerner SA: Antibiotic resistance in sexually transmitted diseases, 6th Western Pacific Congress of Chemotherapy and Infectious Diseases, Kuala Lumpur, Malaysia, 1998.

103. Lerner SA: Antibiotic resistance in clinical medicine, International Diarrheal Disease Research Institute, Dhaka, Bangladesh, 1998.

104. Lerner SA: Strategies to control antibiotic usage, Pan American Health Organization Symposium on Addressing Problems of Antibiotic Resistance in Latin America, Asuncion, Paraguay, 1999.

105. Lerner SA: Antibiotic-resistant organisms and their impact on treatment strategies, length of stay, and discharge planning issues, Continuing Medical Education of Blue Cross-Blue Shield of Michigan, Flint and Southfield, MI, 1999.

106. Lerner SA: Clinical impact of antibiotic resistance, 16th Annual Infectious Disease Symposium, St. John Northeast Community Hospital, Detroit, 1999.

107. Lerner SA: Rational use of antibiotics, Update on Infectious Disease, Michigan State Medical Society, Dearborn, 1999.

108. Lerner SA: Regulation of antibiotic usage in the hospital, 6th Peruvian Congress of Infectious and Tropical Diseases, Lima, 1999.

109. Lerner SA: β-Lactamases and their role in β-lactam resistance, 6th Peruvian Congress of Infectious and Tropical Diseases, Lima, 1999.

110. Lerner SA: Evolution of β-lactamase-mediated resistance to β-lactam antibiotics, 7th International Symposium on Molecular Aspects of Chemotherapy, Gdansk, Poland, 1999.

111. Lerner SA: Evolution of β-lactamase-mediated resistance to β-lactam antibiotics, Serum and Vaccine Research Laboratory, Polish Academy of Medical Sciences, Warsaw, 1999.

112. Lerner SA: Resistance in gram-negative bacteria, Antimicrobial Resistance in the 1990s, Wayne State University School of Medicine Continuing Medical Education, Novi, MI, 1999.

113. Lerner SA: Mechanisms of antibiotic resistance and implications for treatment, School of Medicine of Ho Chi Minh City, Ho Chi Minh City (Saigon), Vietnam, 1999.

114. Lerner SA: Clinical impact of antibiotic resistance, Michigan Pharmacists Association, Dearborn, 2000.

115. Lerner SA: Antibiotic resistance in primary care, Reproductive Health Care 2000, Seattle, 2000.

116. Lerner SA: Strategies to address antibiotic resistance in the hospital, Pan American Health Organization Task Force on Addressing Problems of Antibiotic Resistance in Latin America, Miami, 2000.

117. Lerner SA: Development and implementation of policies for control of antibiotic usage, Joint Symposium of the Interregional Association of Clinical Microbiology and Antimicrobial Chemotherapy and the American Society for Microbiology, Antibiotics and Drug Resistance at the Dawn of the New Millennium, Moscow, 2000.

118. Lerner SA: The threat of antibiotic resistance, Michigan Public Health and Preventive Medicine Physicians, Dearborn, 2000.

119. Lerner SA: Quinolone antibiotics and their role in clinical practice, Update on Infectious Disease, Michigan State Medical Society, Dearborn, 2000.

120. Lerner SA: Addressing the challenges of antibiotic resistance in the hospital setting, University of Malaysia School of Medicine, Kuala Lumpur, 2000.

121. Lerner SA: Antimicrobial strategies for the control of resistant gram-negatives in hospitals, 7th Western Pacific Congress of Chemotherapy and Infections Diseases, Hong Kong, 2000.

122. Lerner SA: Chair of a Symposium on "Antibiotic Resistance: Improvement of

Appropriate Use of Antibiotics in the Americas," 10th Pan-American Congress of Infectious Disease, Guadalajara, Mexico, 2001; Lerner SA: The role of international health organizations in the control of antibiotic resistance, presented in this symposium.

123. Saubolle M, S Sharp, and SA Lerner: Workshop on antibiotic susceptibility testing and its significance, Annual Conference of the Interregional Association for Clinical Microbiology and Antimicrobial Chemotherapy, Moscow, Russia, 2001.

124. Lerner SA: Problems and impact of antibiotic resistance in hospital and daily clinical practice, Annual Congress of the Indonesian Society of Microbiology, Yogyakarta, Indonesia, 2001.

125. Lerner SA: Detection and significance of extended-spectrum β-lactamases, 35th Brazilian Congress on Clinical Pathology, Salvador da Bahia, Brazil, 2001.

126. Lerner SA: Organized and chaired a symposium on "Antibiotic Resistances: Global Threat and Local Responses," Annual Meeting of the American Public Health Association, Atlanta, GA, 2001; Lerner SA: A state initiative on antibiotic resistance: The MARR coalition.

127. Lerner SA: Structure-function relationships of β-lactamases. Latin American Congress of Microbiology, Havana, Cuba, 2002.

128. Saubolle, M, S Sharp, and SA Lerner: Workshop on antibiotic susceptibility testing and its clinical significance, Tomsk, Omsk, and Novosibirsk, Russia, 2002.

129. Lerner SA: Resistance Ranger: Teaching schoolchildren about antimicrobial resistance, 2nd International Conference on Improving Use of Medicines (sponsored by the WHO), Chiang Mai, Thailand, 2004.

130. Lerner SA: Impact of antibiotic resistance on the approach to URIs and other infections, Michigan Academy of Family Physicians, Mackinac Island, Michigan, 2004.

131. Lerner SA: Interventions in the community to reduce inappropriate treatment with antibiotics, 34th National Congress of the Mexican Society of Microbiology, Cancun, Mexico, 2004.

132. Lerner SA: The use of drug formularies and clinical treatment guidelines, Symposium on Lessons Learned in the Partnership between the Pan American

Health Organization (PAHO) and the U. S. Agency for International Development (USAID), Pan American Health Organization, Washington, DC, 2004.

133. Lerner SA: The importance and legacy of Leonid S. Stratchounski and the Institute of Antimicrobial Chemotherapy, Dedication of the Institute of Antimicrobial Chemotherapy of the Smolensk State Medical Academy, Smolensk, Russia, 2005.

134. Lerner SA: Antibiotic resistance as a key to establish antibiotic policies, VIII International IACMAC Congress, Moscow, Russia, 2006.

135. Lerner SA: Management strategy of infectious complications in patients with diabetes, VIII International IACMAC Congress, Moscow, Russia, 2006.

136. Lerner SA: The MARR coalition: Promoting appropriate antibiotic use through education, Symposium in memory of Leonid S. Stratchounski, Smolensk State Medical Academy, Smolensk, Russia, 2006.

GRANT SUPPORT

1986 Miles Pharmaceuticals, "Controlled, Randomized, Double-Blind Comparison of Intravenous Ciprofloxacin With Intravenous Ceftazidime in the Treatment of Selected infections," Co-Investigator, $125,880

1987 Merrell Dow Research Institute, "A Randomized, Blinded Comparative Study of Teicoplanin Versus Vancomycin the Treatment of Non-Vascular Access Associated

	Bacteremia/Endocarditis Caused by Gram-Positive Bacteria," Co-Investigator, $118,512
4/87 - 3/90	NIH (NIGMS), "Delivery Systems for Enzyme Inactivators," University of Chicago Consortium Agreement, 10% Time, $121,650
09/87 - 1992	Pfizer Pharmaceuticals, "A Prospective, Stratified, Randomized, Double-Blinded Comparison of the Safety and Efficacy of Cefoperazone Plus Piperacillin Versus Cefoperazone Plus Amikacin in Therapy of Infected Solid Tumor Patients Receiving Cisplatin," Co-Investigator, $274,600
11/87 - 1992	Merrell Dow Research Institute, "An Open Study of Teicoplanin in the Intravenous Drug Abuse Associated Bacteremia/Endocarditis Caused by Gram-Positive Bacteria," Principal Investigator, $76,241
2/88 - 1992	E.R. Squibb and Sons, Inc., "A Multicenter Randomized Clinical Trial Comparing Aztreonam with an Aminoglycoside in Patients at High Risk for Developing Nephrotoxicity," Principal Investigator, $445,527
1/1/89-1993	Bristol Myers, "A Comparative Study of Cefepime and Ceftazidime in the Treatment of Patients with Lower Respiratory Tract Infections and Serious Bacterial Infections," Co-Principal Investigator, $445,527
3/1/89-1994	Merrell Dow, "An Open Study of Teicoplanin in the Treatment of Intravenous Drug Abuse Associated Endocarditis Caused by Gram-Positive Bacteria," Co-Investigator, $37,166

6/1/89-1994	Merrell Dow, "A Multi-center Randomized Blinded comparative Study of Teicoplanin Dosing Regimens and Vancomycin in the Treatment of Endocarditis and Bacteremia of Non-Cardiac Origin Caused by Gram- Positive Bacteria," Principal Investigator, $118,512
10/1/89-1992	Eli Lilly, "Daptomycin versus Conventional Therapy in Endocarditis and Bacteremia," Co-Investigator, $55,427
10/1/90-Completion	Beecham Laboratories, "Characterization of a Mutant TEM β-Lactamase That Confers Resistance to the Combination of Ampicillin Plus Clavulanic Acid," Principal Investigator, $35,000

1/1/91-12/31/92	Zambon Laboratories, "Fosfomycin Tromethamine Versus Ciprofloxacin in Uncomplicated Urinary Tract Infections," Principal Investigator, $41,584
8/1/92-7/30/95	NIH, 1 RO1 AI 33170, "Mechanisms of Processes of the TEM-1 β-Lactamase," Total Direct Costs = $353,210, Co-Principal Investigator, 15% effort
12/15/91-12/15/92	Sandoz, "Evaluation of the Effect of Two Sandoz Compounds on Efflux-Mediated Mechanisms of Resistance to Antibiotics," Principal Investigator, $5,000
3/1/92-6/5/92	Abbott, "A Multicenter, Double-Blind, Randomized, Comparative Study of the Efficacy and Safety of Temafloxacin Intravenous/Oral Sequential Therapy Versus Cefuroxime with or without Erythromycin Intravenous/Oral Sequential Therapy in the Treatment of Hospitalized Patients with Community Acquired Pneumonia," Principal Investigator, $32,936
9/1/92-8/30/93	Roerig/Pfizer, "Mechanistic Studies of the TEM β-Lactamase with Substrates and Sulbactam," Principal Investigator, $44,611
12/1/92-11/20/94	Smith-Kline Beecham, "Mechanistic Studies of the TEM β-Lactamase with Substrates and Clavulanic Acid," Principal Investigator, $103,652

12/1/92-11/30/93	Roerig/Pfizer, "Isolation and Characterization of a Species-Specific DNA Probe for *Candida krusei* and its Use in the Detection of *C. Krusei* by Polymerase Chain Reaction," Principal Investigator, $49,558
1/93-1/94	WSU Interdisciplinary Research Seed Fund, "Mycobacterial Targets for Design of Novel Chemotherapeutic Agents," Principal Investigator, $10,000
9/1/93-1/31/94	American Cyanamid, "A Double-Blind, Randomized, Comparative, Multicent, Safety, Tolerance and Efficacy Study of Parenteral Biapenem (CL 186,815) versus Imipenem/Cilastatin in the Treatment of Hospitalized Patients with Acute Nosocomial Pneumonia, Principal Investigator, $3,571
10/1/93-1/31/94	Rhone-Poulenc Rorer, JRV-203 Dose Ranging, Double-Blind, Randomized Multicenter Study of Synercid (RP 57669/RP 54476) vs. Ceftriaxone in the Treatment of Acute Bacterial Pneumonia, Principal Investigator, $17,000
10/1/93-9/30/95	Rhone-Poulenc Rorer, Study of the Treatment of Infections Due to Vancomycin-Resistant *Enterococcus faceium* (V.R.E.F.) with Synercid, Principal Investigator, $3,390
10/1/94-9/30/95	Bristol-Myers Squibb, Selection and Characterization of Mutant Derivatives of the TEM-1 β-Lactamase that Confers Resistance to Ceftazidime or Cefepime, Principal Investigator, $17,700
10/94 - 1/95	Lederle Laboratories, A Randomized, Double-Blind, Comparative, Multicenter, Safety, Tolerance and Efficacy Study of Parenteral 4.5g Piperacillin/Tazobactam (ZOSYN), Principal Investigator, $4,000
5/1/96-4/30/98	Rhone-Poulenc Rorer, Study, Phase III Population Pharmacokinetic Study for the Determination of Plasma Levels of Synercid in Treated Patients, Principal Investigator, $13,500

2/97-3/98	Merck & Co, Inc., A Prospective Multicenter Double-Blind, Randomized Comparative Study to Evaluate the Safety, Tolerability and Efficacy of L-749,345 versus Ceftriaxone Sodium plus Metronidazole in the Treatment of Serious Complicated Intra-Abdominal Infections of Mild to Moderate Severity in Adults, Principal Investigator, $42,246
7/1/97-3/98	Pharmacia and Upjohn, U-100766 in the Treatment of Gram-Positive Bacteremia: An Open Label Phase II Study of Intravenous Therapy with Optional Oral Continuation, Principal Investigator, $42,500
10/1/96-9/30/99	Department of Veterans Affairs Merit Review, A Novel Gentamicin Resistance Gene in Enterococci, $188,600; Co-Investigator; P.I.: Joseph W. Chow
7/96-6/00	NIH, AI 33170, Class A β-Lactamases, $535,087; Co-Principal Investigator; P.I.: Shahriar Mobashery
1/1/00-6/30/01	Bristol-Myers Squibb, The Effect of Formulary Conversion from Ceftazidime to Cefepime on the In Vitro Sensitivities of *Pseudomonas aeruginosa*, *Enterobacter cloacae*, and *Klebsiella pneumoniae* to Selected Antibiotics, $10,000; Co-Principal Investigator; P.I.: Diane Cappelletty
7/01-4/02	Blue Cross/Blue Shield of Michigan Foundation, Evaluation of Change in Antimicrobial Prescribing Patterns Following a Healthcare Provider Educational Intervention, $10,000; Principal Investigator
10/1/00-9/30/03	Department of Veterans Affairs Merit Review, Aminoglycoside Resistance in Enterococci, $427,500; Co-Investigator; P.I.: Joseph W. Chow
7/1/04-6/30/09	Department of Veterans Affairs Merit Review, Aminoglycoside Resistance in Enterococci, $785,600, Co-Investigator; P.I.: Joseph W. Chow [Declined, since Dr. Chow left Wayne State University and the VA]