

CURRICULUM VITAE

ZEV LEIFER

71 Roanoke Street
Staten Island, NY 10314
Telephone: (718) 982-0048

Born: May 24, 19417
New York (U.S. citizen)
Divorced (6 children)

WORK EXPERIENCE

2002-Present

Professor of Microbiology

Touro College (LAS Flatbush)

Taught: Microbiology (Bio 228), Human Biology (Bi0 111), General Biology (Bio 101)
Lecture and Lab

1982-Present

Genetic Toxicology/ Distance Education/Molecular Modeling

Development and utilization of microbial assay systems for the detection of environmental carcinogens and teratogens /Distance Education in the classroom and internationally, virtual laboratory.

Teaching and Administration

Associate Professor (1982-1985)

Professor (1985-Present)

Microbiology and Pathology

Coordinator, Second Year Program (1982-1985)

Assistant Dean, Division of Basic Sciences (1985-1986)

Dean of Basic Sciences (1986-1999)

Chairman, Department of Microbiological Sciences (1992-Present)

Division of Basic Sciences

New York College of Podiatric Medicine

New York, New York 10035

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1976-1982

Mutagenicity Testing (Ames Assay; PoIA Assay)

Development and utilization of microbial assay systems for the detection of mutagens and carcinogens.

Evaluation of microbial assays for the detection of DNA-damaging chemicals in the environment (for EPA)

Teaching

Research Assistant Professor (1976-1981)
Research Associate Professor (1981-1982)
Adjunct Research Associate Professor (1982-1987)
Adjunct Professor (1987-1990)
Medical Microbiology, Microbial Physiology
Course Coordinator, Medical Microbiology Laboratory

Department of Microbiology
New York Medical College
Valhalla, New York

1974-1976

Bacterial Genetics and Physiology (Post-Doctoral II)

Studied the mechanism of action of antimicrobial agents which inhibit the biosynthesis of phospholipids in *E. coli*. Isolation and characterization of mutants resistant to such agents. Active transport studies.
Mentor: Dr. Burton E. Tropp

Teaching

Instructor, General Chemistry
Department of Chemistry
Queens College of the City University of New York
Flushing, New York

1972-1974

Biochemistry/ Bacterial Genetics and Physiology (Post Doctoral I)

Genetic and biochemical characterization of lysine decarboxylase.
Regulatory mechanisms controlling cadaverine formation in the absence of putrescine. Protein purification. Thin layer chromatography. Fluorometry.
Mentor: Dr. Werner K. Maas

Department of Microbiology
New York University of Medicine, New York, New York

Above includes training in phage techniques and biochemistry of transcription (Jan-June, 1974)
Mentor Dr. P.R. Srinivasan

Department of Biochemistry

Columbia University College of Physicians and Surgeons,
New York, New York

Teaching

Instructor, Medical Microbiology Laboratory

New York University of Medicine, New York, New York (1972)

1965-1966

Animal Cell Virology

The replication of Reovirus RNA in mouse fibroblast cells in tissue culture.

The Sloan-Kettering Institute for Cancer Research,
New York, New York

EDUCATION

Ph.D. (1972)

Thesis Title: Isolation and Characterization of Mutants of Escherichia coli. Conditionally Deficient in the Biosynthesis of Putrescine and Cadaverine.

Thesis Advisor: Dr. Werner K. Maas

Department of Microbiology

New York University School of Medicine, New York, New York

M.A. (1965)

Studied the biochemical mechanism of phagocytosis and pinocytosis in guinea pig polymorphonuclear leucocytes and amoebae.

Advisor: Dr. Manfred L. Karnovsky

Division of Medical Sciences, Department of Biochemistry
Harvard University, Boston, Massachusetts

B.A. (1963)

Field of Study: Chemistry/Biology

Honors: Baccalaureate degree, magna cum laude

Honorable Mention, Woodrow Wilson Fellowship

Yeshiva University, New York, New York

GRANTS

March of Dimes Foundation, 1983-1985

Development and Utilization of a Microbial Assay System for the detection of Environmental Teratogens that Act on Genetic Regulatory Mechanisms.

SOCIETIES

American Society of Microbiology
American Association for the Advancement of Science

LANGUAGES

French, German

COMPUTER EXPERIENCE

Dbase, (Programming and systems development), Windows, Microsoft Word,
Excel, PowerPoint
Hyperchem, MOO building and programming

PUBLICATIONS

1. Hirschfield, I.N., H.J. Rosenfeld, Z. Leifer and W.K. Maas (1969) Growth inhibition of a mutant of *Escherichia coli* by arginine and its reversal by polyamines. *Bact. Proc.*, pp. 144.
2. Hirschfield, I.N., H.J. Rosenfeld, Z. Leifer, and W.K. Maas (1970) Isolation and characterization of a mutant of *Escherichia coli* blocked in the synthesis of putrescine. *J. Bacteriol.* 101:725-730.
3. Maas, W.K., Z. Leifer and J. Poindexter (1970) Studies with mutants blocked in the synthesis of polyamines. *Ann. N.Y. Acad. Sci.* 171: 957-967.
4. Poindexter, J.S. and Z. Leifer (1971) Proposed role of putrescine (1, 4-diaminobutane) in amino acid metabolism. *Bact. Proc.*, p. 132.
5. Leifer, Z. and W.K. Maas (1972) enzymatic synthesis of cadaverine by putrescine auxotroph of *Escherichia coli*. Abstracts of the Annual Meeting of the American Society for Microbiology, p. 180.
6. Leifer, Z. (1972) Isolation and Characterization of Mutants of *Escherichia coli* conditionally deficient in the biosynthesis of putrescine and cadaverine. Ph.D Thesis, New York University Graduate School of Arts and Sciences, Division of Medical Sciences, Department of Microbiology.
7. Leifer, Z. and W.K. Maas (1973) Studies on the regulation of lysine decarboxylase by polyamines. *Fed. Proc.* 32:659.
8. Leifer, Z. and W.K. Maas (1974) Biochemical and physiological characterization of lysine decarboxylase II and its relation to lysine decarboxylase I and to polyamines. Abstracts of the Annual Meeting of the American Society for Microbiology, p. 191
9. Leifer, Z. (1974). Book review: "Function of Naturally Occurring Polyamines", by Uriel Bachrach. Academic Press, New York, (1973) Published in *American Society for Microbiology (ASM) News* 40:222-224
10. Leifer, Z., C.-T. Tang, R. Engel and B.E. Tropp (1976) Studies on the transport of an inhibitor of phospholipids biosynthesis in *Escherichia coli*. Abstracts of the Annual Meeting of the American Society for Microbiology, p. 166

11. Leifer, Z., R. Engel and B.E. Tropp (1976). Transport of 3, 4- dihydroxybutyl-1-phosphonate, an analogue of snglycerol 3-phosphate. *J. Bacteriol.* 130:968-971
12. Leifer, Z. and H.S. Rosenkranz (1979) Modifications and improvements of the E. coli DNA repair assay. *Environmental Mutagenesis* 1:123.
13. Rosenkranz, H.S. and Z. Leifer (1980) Determining the DNA modifying activity of the chemicals using DNA polymerase deficient *Escherichia coli*, in *Chemical Mutagens: Principles and Methods for their Detection*, Vol. 6, (F.J. de Serrer and A. Hollaender, eds). Plenum Press, New York, pp. 109-147.
14. Hyman, J., Z. Leifer, and H.S. Rosenkranz (1980) The E. coli Pol A assay: A quantitative procedure for the diffusible and non- diffusible chemicals. *Mutation Res.* 74:107-111
15. Rosenkranz, H.S., T. Kada, Z. Leifer, M. Mandel, R.S. Stafford and E. Zeiger (1980) An evaluation of bacterial DNA repair tests for predicting genotoxicity and carcinogenicity in *Current Status of Bioassays in Genetic Toxicology Gene-Tox*). Abstracts of a conference sponsored by the United States Environmental Protection Agency, Washington, D.C., December 3-5, pp. 38.
16. Leifer, Z. T. Kada, M. Mandel, E. Zeiger, R. Stafford and H.S. Rosenkranz (1981) an evaluation of tests using DNA repair-deficient bacteria for predicting genotoxicity and carcinogenicity: A report of the U.S. E.P.A.'s Gene-Tox Program. *Mutation Res.* 87:211-297.
17. Rosenkranz, H.S., J. Hyman, and Z. Leifer (1981) DNA polymerase deficient assay, in *progress in the Mutation Research*, Vol. 1, *Evaluation of Short- Term Tests for Carcinogens: Report of the International Collaborative Program* (F.J> de Serres and J. Ashby, eds.) Elsevier/North Holland, New York, pp. 210-218.
18. Leifer, Z., J. Hyman, and H.S. Rosenkranz (1981) Determination of genotoxic activity using DNA polymerase deficient and proficient E. coli, in *Short-Term Tests for Chemical Carcinogens* (H.F. Stich and R.H.C. San, eds.) Springer-Verlang, New York, pp. 127-139.
19. McCoy, E.C., Z. Leifer, H.S. Rosenkranz, and R. Mermelstein (1981) Characterization of nitroreductase-deficient *Salmonella* tester strains useful in the detection of nitroarenes in environmental mixtures. *Environmental Mutagenesis* 3: 353.
20. Wertheimer, S.J. and Z. Leifer (1983) Putrescine and spermidine sensitivity of lysine decarboxylases in *Escherichia coli*: Evidence for constitutive enzyme and its mode of regulation. *Biochem. Biophys. Res. Commun.* 114:882-888.
21. Leifer, Z. (1986) Enviromental chemicals can alter *lac* operon regulatory properties. Abstracts of the Annual Meeting of the American Society for Microbiology, p. 160.

22. DeLauro, T.M., S.H. Kornhauser, Z. Leifer and G.A. Luster (1992) the Independent Studies Program in the Basic Sciences: A Curricular Innovation. J. Amer. Pod. Med. Assn. 82:311-319.
23. Leifer, Z. (1997) A Hands-On Microbiology Lab in Virtual Reality. Abstracts of the Annual Meeting of the American Society of Microbiology, p. 589.
24. Leifer, Z. (1997) Communicating Pediatric and Podopediatric Information Using Internet Web Page. Abstracts of the Annual Meeting of the American Public Health Association, p. 185.
25. Leifer, Z. (1997) Order out of Chaos: Organizing Your Internet Searches. Online text for lecture in "BioScience Resources on the Internet" course.
Location: <http://www.uni-mainz.de/~frosc000/leifer.html>.
26. Leifer, Z. (1997) Order Out Of Chaos: Organizing Your Internet Searches. Published in online journal HMS Beagle.
Issue 13, July 25, 1997
Location: <http://biomednet.com/hmsbeagle/1997/13/webres/insitu.htm>
27. Leifer, Z. (1997) A Microbiology Office- Laboratory in Cyberspace. Presented and published online at the Virtual Conference of University Biology Education.
Location: http://www.liv.ac.uk/ctibiol/vCUBE97/html/zev_leifer.htm.
28. Lau, C.H., Leifer, Z. Kossida, S. and Schaffner, Jr., I.R. (1997) BioScience Resources on the Internet (BRI): A Model Solution for Remaining Current on Internet Resources and Technology. Presented and published online at the Virtual Conference on University Biology Education.
Location: http://www.liv.ac.uk/ctibiol/vCUBE97/html/chin_hoon_lau.htm
29. Leifer, Z. (1998) Pediatric resources on the Internet. Journal of the American Podiatric Medical Association 88(5): 232-235.
30. Leifer, Z. (1998) Teaching the Internet as a Tool in Microbiology Study and Research. Abstracts of the Annual Meeting of the American Society for Microbiology. P. 540.
31. Leifer, Z. (1998) Research Collaboration via MOO. Published in online journal HMS Beagle, Issue 24. January 30, 1998.
Location: <http://www.biomednet.com/hmsbeagle/1998/24/webres/insitu.htm>.
32. Leifer, Z. (1998) Internet Training Should Be Part of Microbiology Education. Presented online and published at the 1998 Virtual Conference on Computers in university Biology Education. Location: <http://cube.bioc.liv.ac.uk.8080/upload/Leifer2.htm>
33. Leifer, Z. (1999) Finding and Communicating Internet Microbiology Information. Abstracts of the Annual Meeting of the American Society for Microbiology. P.667

34. Leifer, Z. (2000) Lead an Environmental Carcinogen, Can Affect Genetic Regulation. Abstracts of the Annual Meeting of the American Association for the Advancement of Science. P A-75
35. Leifer, Z. (2000) Nickel, an Environmental Carcinogen, Can Affect Genetic Regulation. Abstracts of the Annual Meeting of the American Society for Microbiology, p. 361
36. Leifer, Z. (2001) The Effect of Lead on Genetic regulation on a Microplate Assay. Abstracts of the Annual Meeting of the American Society for Microbiology, p. 604
37. Leifer, Z. (2002) Bioterrorism: An Internet Project and a Website. Abstracts of the Annual Meeting of the American Society for Microbiology, p. 499
38. Leifer, Z. (2003) Bioterrorism Website: A Global and a Local Resource. Abstracts of the American Society for Microbiology meeting- Future Directions for the Biodefense Research: Development of Countermeasures, p. 76
39. Kondu, P., Skrzypek, M, Leifer, Z. and Gore-Langton, R. (2003) A Paradigm for Online Medical Education. Abstracts of the Annual Meeting of the International Association of Medical Science Educators. IT-4.
40. Lau, C.H., Atherton, D., Kondu, P., Gore-Langton, R., and Leifer,Z. (2004). Internet Collaboration, in “The Internet for Molecular Biologists: A Practical Approach”, edited by Claire Sansom and Robert Horton. Oxford University Press. Pp. 103-104.
41. Leifer, Z. (2010) Bioterrorism Education in the Medical School Curriculum: A proposal. Abstracts of the American Society for Microbiology meeting- Biodefense and Emerging Diseases, p. 73