



Curriculum Vitae

Prepared January 31, 2018

PHILIP G. LEWIS, M.D., M.P.H.

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|---------------------|---|
| Jun 2009 –Present | Principal-Carthage Investment Group

Carthage is a family office seeking to sustainably develop value; principally invested in Fortune 500 and select start-up firms. |
| Jun 2009 –Present | President/CEO, Saints Theodore & Frances Preventive Medicine |
| Dec 1993 - May 2009 | Vice President, Director Global Environmental, Health, Safety and Sustainable Development, Rohm and Haas Company/Dow Advanced Materials, Philadelphia, PA

Responsibilities included oversight of safety, health, environmental affairs, product integrity, product stewardship and sustainability concerns of plants, laboratories and products worldwide. Rohm and Haas Company was a \$10 billion multi-national producer of specialty polymers and biologically active compounds with over 140 manufacturing and laboratory locations in the U.S. and 25 countries around the world. Rohm and Haas Company was acquired by The Dow Chemical Company on April 1, 2009. |
| Jul 1989 - Nov 1993 | Director of Safety, Health and Environmental Affairs and Corporate Medical Director
Rohm and Haas Company |
| May 1987 - Jun 1989 | Corporate Medical Director
Rohm and Haas Company |
| Jul 1983 - Apr 1987 | Associate Corporate Medical Director
Rohm and Haas Company |
| Jul 1980 – Jun 1983 | Fellowship |

Philip G. Lewis, MD, MPH

Clinical Fellow in Environmental, Occupational Medicine,
and Dermatology
Johns Hopkins Medical Institutions, Baltimore, MD

Jul 1978- Jun 1980 Chief, (CPT-P) Preventive Medicine Activity and
Epidemiologist Darnall Army Hospital, MEDDAC & III Corps
Fort Hood, TX

In 1978-80, Fort Hood was the largest army installation in the free world. Responsibilities of the preventive medicine activity included development, implementation and management of programs in medicine, nursing, epidemiology, industrial hygiene, environmental sciences and safety to protect the health of over 200,000 active duty soldiers, retirees and their dependents.

Jul 1976 – Jun 1978

Post-Graduate Training

Residency

Resident in General Preventive Medicine,
completed June 1978,
Walter Reed Army Institute of Research,
Washington, DC

Internship

Intern (Flexible),
completed June 1977,
Walter Reed Army Medical Center,
Washington, DC

Sep 1972 – May 1976

Graduate Education

Doctor of Medicine, completed May 1976,
Johns Hopkins University School of Medicine,
Baltimore, Maryland

Master of Public Health (Epidemiology), completed May
1976,(dual degree program)
Johns Hopkins University Bloomberg School of Public
Health
Baltimore, Maryland

Academic Affiliations

Adjunct Faculty (Asst. Prof.) and Leader, Environmental Health and Risk Assessment Module
Occupational Medicine Residency,
University of Pennsylvania, Perelman School of Medicine
1997-Present

Adjunct Faculty,
in the Division of Occupational Medicine,
The Johns Hopkins University Bloomberg School of Hygiene and Public Health
1983 - 2008

Committees and Boards

Member, Congregational Development Committee, Episcopal Diocese of New Jersey, June 2015-Present

Chair, Resident Advisory Committee, Occupational Medicine Residency, University of Pennsylvania, May 2014-Present

Chair, Evangelism Commission, Trinity Episcopal Cathedral, The Episcopal Diocese of New Jersey, Trenton, NJ 1999-Present

Board, 501nano, Inc., Nov 2013-April 2016

Member, Minor Chapter (Vestry) and Major Chapter, Trinity Episcopal Cathedral, The Episcopal Diocese of New Jersey, Trenton, NJ 1999-January 2010

Member, Board of Trustees, Widener University, Chester, PA, 1994 - 2009

Chairman, Responsible Care Leadership Group of the International Council of Chemical Associations, 2006 - 2009

Member, Advisory Committee for the Risk and Decision Center, Department of Operations and Information Management, the Wharton School, University of Pennsylvania, 1996 - 2008

Member, Committee on Health, Product and Science Policy, The American Chemical Council, 2003 - 2006

Chairman, Search Committee, Trinity Cathedral, November 2005 - December 2006

Chairman, Profile Committee, Trinity Cathedral, May 2005 – January 2006

Member, Occupational Health Graduate Nursing Program Advisory Committee, University of Pennsylvania, 1991 - 2004

Member, Medical Advisory Board, George School, Newtown, PA, 1987 - 2004

Senior Warden, Minor Chapter (Vestry) Trinity Episcopal Cathedral, 1994-1997, 2001-2004

Chairman, Advisory Committee for the Risk and Decision Center, Department of Operations and Information Management, the Wharton School, University of Pennsylvania, 1999 – 2002

Presidential appointee (Clinton), Board of Directors, Mickey Leland Urban Air Toxics Research Center, Houston, Texas. 1997-2002

Member, National Environmental Justice Advisory Council, US Environmental Protection Agency 1998-2001

Member, Commonwealth of Pennsylvania Department of Environmental Protection, Environmental Justice Work Group, 1999 - 2000

Mentor, Education for Ministry (EFM), Trinity Episcopal Cathedral, 1998-1999

Member, Work Group on Environmental Stewardship, 21st Century Commission, Commonwealth of Pennsylvania 1997-1998

Member, School Committee, George School, Newtown, PA 1997 - 1999

Member, Diocesan Council, Episcopal Diocese of New Jersey, 1996-99

Member, Advisory Board, Division Environmental Medicine and Toxicology, Jefferson University, College of Medicine, 1995-1999

Member, Resident Advisory Committee, Division of Occupational Medicine, Johns Hopkins University, 1993 - 1995

Member, Resident Advisory Committee, Department of Preventive Medicine Uniformed Services, University of the Health Sciences 1990 - 1995

Faculty, Committee for the Environment Medicine Course, ACOEM, 1993-1994

Member, Board of Directors, American Cancer Society, Philadelphia Division 1992-93

Member, American College of Occupational and Environmental Medicine, Environmental Committee, 1992-93

Member, American Cancer Society, Philadelphia Division, Committee on Corporate Relations, 1990-93

Member, Health and Safety Committee and Sponsor Health Program Task Group, Chemical Manufacturers' Association 1990-1992

Member, Vestry, Church of the Incarnation, Episcopal, Morrisville, PA
1989-91

President, Rohm and Haas Company Chem Club, 1989-90

Member, Medical Advisory Board for, The Collegiate Health Care Corporation
1988-90

Treasurer, Philadelphia Occupational Medical Association, 1985-90

Member, Advisory Council, the College Consortium on Drugs and Alcohol 1984-90

Chairman, Dermatology Committee, American College of Occupational Medicine
1984-90

Member, Committee on Post-Graduate Course for the 1987 - AOHC, AOMA
1986-87

Industrial Monitor, Industry/University Cooperative Center for Research in
Hazardous and Toxic Substances, New Jersey Institute of Technology, 1985-86

Education

Undergraduate Education

Bachelor of Science in Chemistry (Summa Cum Laude), completed May
1972, Widener University, Chester, Pennsylvania

Graduate Education

Doctor of Medicine, completed May 1976, Johns Hopkins University School
of Medicine, Baltimore, MD

Master of Public Health, completed May 1976, Johns Hopkins University
School of Hygiene and Public Health, Baltimore, MD

Certification

General Preventive Medicine, Certified December 1980
American Board of Preventive Medicine

Accomplishments and Awards

Alpha Chi Scholastic Honor Society
American Chemical Society Award for Outstanding Achievement in Chemistry
American Legion Silver Medal for Scholarship
Army Achievement Medal
Army Surgeon General's Physician Recognition Award
Army Commendation Medal
Delta Omega (Public Health Honor Society)
Distinguished Military Graduate - Army ROTC - 1972
George M. Sternberg Medal for
 Excellence in Preventive Medicine and Epidemiology
James C. O'Brien Award
John Lance Geoghegan Award
Who's Who in American Colleges and Universities

Memberships

Fellow, American College of Preventive Medicine
Fellow, American College of Occupational and Environmental Medicine
Associate, American Academy of Dermatology
Member, American Medical Association
Member, American Public Health Association
Member, National Medical Association

Medical Licensure

Maryland, USA
Pennsylvania, USA

Hobbies

Metaphysics
Weight Lifting

Research Interests

Integrated Preventive Medicine Programs, Risk Assessment, Risk Management, Sustainability

Publications

1. Torrington, K.G., Lewis, P.G., Tellis, C.J., Swedarskey, R.H.: "Systemic Sarcoidosis presenting with a Testicular Nodule," Southern Medical Journal, Vol. p. 1001-1031, 1979.
2. Lemon, S.M., Lednar, W.M., Bancroft, W.H., Cannon, H.G., Benenson, M., Park, J.H., Churchill, F.E., Tezak, R.W., Erdtmann, F.J., Kirchdoerfer, R.G.,

- Lewis, P.G., Janes, Miller, R.N.: "Etiology of Viral Hepatitis in American Soldiers," American Journal of Epidemiology, Vol. 116, No. 3, p. 438-450, 1982.
3. Hymes, S.R., Farmer, E.R., Lewis, P.G., et al: "Cutaneous Graft-Versus-Host Reaction: Prognostic features seen by light microscopy," JAAD, Vol. 12, No. 3, p. 468-474, 1985.
 4. Emmett, E.A., Lewis, P.G., Tanaka, F., et al: "Industrial Exposure to Organophosphorus Compounds: Studies on a Group of Workers with a Decrease in Esterase Staining Monocytes and a Comparison Group," JOM, Vol. 27, No. 12, p. 905-914, 1985.
 5. Cameron, L.L., Taylor, H.R., Lewis, P.G., Emmett, E.A.: "Methods of Measuring Cumulative Solar UVB Exposure in Epidemiologic Studies," Photochem. Photobiol., Vol. 43 (Suppl.) p. 225-230, 1986.
 6. Lewis, P.G.: "Contact Allergy to the Preservative Kathon," Contact Dermatitis, Vol. 14, 198-200, 1986.
 7. Lewis, P.G. and Emmett, E.A.: "Irritant Dermatitis from Tri-Butyl Tin Oxide and Contact Allergy From Chlorocresol," Contact Dermatitis 1987:17:129-132.
 8. Cameron, L.L., Vitasa, B.C., Lewis, P.G., Taylor, R., Emmett, E.A.: "Visual Assessment of Facial Elastosis Using Photographs as a Measure of Cumulative Ultraviolet Exposure," Photodermatology 1988:277-282.
 9. Lewis, P.G., Hood, A. F. et al: "Post Inflammatory Elastolysis and Cutis Laxa: A Case Report," Journal of the American Academy of Dermatology, 1990:22:40-48.
 10. Lewis, P.G. and Moss, J.M.: "Isothiazolinone Preservatives: A Toxicological Evaluation," Cosmetic Dermatology, 1991:2:123-133.
 11. Jayjock, M.A. and Lewis, P.G.: "Low-Applied-Dose Extrapolation of Induction and Elicitation of Contact Allergy in the Evaluation and Management of Sensitization Risk from Kathon[®] CG Isothiazolinone in Products," American Journal of Contact Dermatitis, 1992:3:86-91.
 12. Lewis, P.G. and Jayjock, M.A.: "Risk Assessment Modeling: Allergic Contact Dermatitis Application," American Journal of Contact Dermatology, 1994:5:143-149.
 13. Rosenthal, I. and Lewis, P.G.: "The Real Cost of Risk Analysis," Process Safety Progress, 1994:13:92-94.
 14. Jayjock, M.A., Hazelton, G.A., Lewis, P.G., Wooder, M.F.: "Formulations Effect on Dermal Bioavailability of Isothiazdone Biocide," Fd. Chem. Toxic., 1996:34:277-282.

15. Myers, R.E., Vernon, S.W., Carpenter, A.S., Balsher, A.M., Lewis, P.G.: "Participation in a Worksite Colorectal Cancer Screening Program Among Employees at Increased Risk," Cancer Detection and Prevention, 1997:21:380-389.
16. Weiler, E.D., Cherry, J, Lewis, P.G.: "Case Study: Management System Verification Using Responsible Care® at Rohm and Haas: Lessons Learned," Environmental Quality Management, 1997:6:13-19.
17. Weiler, E.D., Lewis, P.G., Belonger, D.J.: "Building an Integrated Environmental, Health, and Safety Management System," Environmental Quality Management, 1997:6:59-65.
18. Lewis, P.G.: "Occupational and Environmental Medicine: Moving the factory fence or hedging our bets?" Occupational Medicine, 2000:50:217-220.
19. Jayjock, M.A., Lewis, P.G., Lynch, J. R.: "Quantitative Level of Protection Offered to Workers by ACGIH Threshold Limit Values (TLV®) Occupational Exposure Limits" American Industrial Hygiene Journal, , 2001: 62: 4-11.
20. Weiler, E.D., Jayjock, M.A., Lewis, P.G. : "Responsible Care® Programs for Hazardous Chemicals" Environmental Quality Management, Spring 2001: 41-52.
21. Lewis, P.G. : "A Cure for Preventive Medicine" American Journal of Preventive Medicine, 2002:22(4):324-325
22. Jayjock, M.A., Lewis, P.G. : "Implications of Hormesis for Industrial Hygiene" Biological Effects of Low Level Exposures (BELLE) Newsletter, 2002:10(3):2-7
23. Weiler, E.D., Johnson, L.D., Lewis, P.G. : "Environmental, Health, and Safety Considerations During Acquisitions" Environmental Quality Management, Summer 2003: 1-7.
24. Oktem, U., Lewis, P.G., Donovan, D., Hagan, J.R., Pace, T., "EMS and Sustainable Development: A Model and Comparative Studies of Integration" Greener Management International, Summer 2004: 46: 11-28.
25. Lewis, P.G. : Book Review of Hazardous Chemicals: Control and Regulation in the European Market by Herbert F. Bender, Philipp Eisenbarth. 397 pp. 2007. Wiley-VCH Verlag GmbH & Co. KGaA, Weinheim. ISBN: 978-527-31541-3., Journal of Occupational and Environmental Medicine, Vol 51, No 1., Jan 2009: 112-113.

Seminars and Lectures

1. Johns Hopkins University School of Hygiene and Public Health, "Dermatophysiology, " for the General Physiology course, October 31, 1983 .

2. Rutgers University School of Medicine, "Allergic vs. Irritant Contact Dermatitis," for the Department of Occupational Medicine, December 13, 1983.
3. Johns Hopkins University School of Medicine, "Statistics for the Dermatologist," for the Department of Dermatology, December 21, 1983.
4. Prairie View A&M University, "Dermatophysiology and the Occupational Environment," for the Department of Biology, April 14, 1984.
5. MeHarry Medical College, "Occupational Skin Disease - The Changing Field," for the Department of Community and Occupational Medicine, June 27, 1984.
6. American Osteopathic College of Preventive Medicine, "The Corporate Role in Rehabilitation," at the November 11, 19 Atlanta Convention of the American Osteopathic Association.
7. Poster session at the 44th Meeting of the American Academy of Dermatology, "The Development of Methyl and Methylchloroisothiazolinone," December 7-12, 1985.
8. Rutgers University School of Medicine; "Policy Development for Control of Reproductive Hazards in the Workplace," for the Department of Occupational Medicine, January 28, 1986.
9. Merck Company: "Practical Aspects of Embryo-Fetotoxin Protection in the Workplace," for the Corporate Medical Department, April 1, 1986.
10. Yale University School of Public Health: "Opportunities in Industry for Biologic Professionals," for the Department of Environmental Sciences, April 15, 1986.
11. Johns Hopkins University School of Hygiene and Public Health: "Occupational Medicine (Clinical)," a course for the Division of Occupational Medicine, Jan 21-Mar 18, 1987; Jan 20-Mar 16, 1988; Jan 18-Mar 22, 1989; Mar 20, 1990; Feb 13, 1991.
12. American Occupational Health Conference 1987: "Basic Course in Occupational Dermatology," Philadelphia, PA.
13. National Cancer Advisory Board, NCI: "Preventive Activities and Screening in Cancer Management," at the Public Participation Hearings, April 19, 1988.
14. National Society of Black Engineers, MIT Chapter: "Explaining Scientific Problems to a Non-Scientific Public," November 27, 1990.
15. Johns Hopkins University School of Hygiene and Public Health: "The Future of Occupational Medicine," for the Division of Occupational Medicine, March 1992, April 1993.

16. Medical Society of Eastern Pennsylvania, "OSHA and the Private Practitioner" June 1992.
17. American Industrial Hygiene Association Regional Meeting, "What Management Wants from the SH&E Professional" December 1997
18. Plenary Session Closing Remarks: "Capitalism, Green Chemistry and the Promise of the Future", Presidential Green Chemistry Award, Green Chemistry Conference, Washington, DC., August 1998
19. Middle Atlantic Regional Conference on Occupational Medicine: "Environmental Health and Risk Communication", Philadelphia, PA, September 1999
20. Mickey Leland National Urban Air Toxics Research Center, Keynote Address at the Symposium "Environmental Air Toxics: Role in Asthma Occurrence" M.D. Anderson Cancer Center, May 2001.
21. American Industrial Hygiene Conference, Roundtable "The U. S. Chemical Safety and Hazard Investigation Board: Making a Difference in Workplace Safety and Health" New Orleans, LA, June 2001
22. Asia Pacific Regional Responsible Care Conference "Business, Community and Sustainable Development" Seoul, Korea, November 2003
23. Yale University Department of Occupational and Environmental Medicine "Sustainable Development and the Physician", New Haven, CT, April 2004
24. Russian Chemists Union, Russian Chemical Workers' Union, Chemical Industry Federation of Finland and Chemical Workers' Union of Finland, the International Conference Social Responsibility of Chemical Industry. Chemical Industry and International Program Responsible Care, "Global Responsible Care Programme" Moscow, May 14-15, 2007