

Ferid Murad, M.D., Ph.D.

9/05

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Date of Birth: September 14, 1936
Place of Birth: Whiting, Indiana
Citizenship: United States
Marital Status: Married, 1958, Carol A. Leopold
Children: Christine, Marianne, Carrie, Julie, Joseph

Education:

1954 - 1958	B.A., DePauw University, Greencastle, Indiana Major - Premedical Science
1958 - 1965	M.D., Western Reserve University, School of Medicine Cleveland, Ohio
1958 - 1965	Ph.D., Department of Pharmacology, Western Reserve University, School of Medicine, Cleveland, Ohio

Honorary Degrees:

Honoris Causa, Tirana University, Albania, October, 1999
Doctor of Science, Honoris Causa, Case Western Reserve University, Cleveland, Ohio, May, 2000
Doctor of Science, Honoris Causa, Thomas Jefferson University, Philadelphia, PA, June, 2000
Doctor of Science, Honoris Causa, State University of Ceara, Fortaleza, Brazil, November, 2000
Doctor of Science, Honoris Causa, Luviv State Medical University, Luviv, Ukraine, November, 2001
Doctor of Science, Honoris Causa, Chinese University of Hong Kong, Hong Kong, December, 2002
Doctor of Science, Honoris Causa, DePauw University, Greencastle, Indiana, May 2004
Doctor of Science, Honoris Causa, Charles University, Prague, Czech Republic, June, 2005

Positions Held:

1958 - 1965	Research Fellow, Department of Pharmacology, Western Reserve University, School of Medicine, Cleveland, Ohio; worked with Drs. T.W. Rall and E.W. Sutherland.
1965 - 1966	Intern in Internal Medicine, Massachusetts General Hospital, Boston, Massachusetts, Dr. A. Leaf, Chairman of Internal Medicine.
1966 - 1967	Resident in Internal Medicine, Massachusetts General Hospital, Boston, Massachusetts, Dr. A. Leaf, Chairman of Internal Medicine.
1967 - 1969	Clinical Associate and Senior Assistant Surgeon, Public Health Service, National Heart and Lung Institute, Molecular Disease Branch, Section on Metabolism, Bethesda, Maryland; worked with Dr. M. Vaughan.

1969 - 1970	Senior Staff Fellow, National Heart and Lung Institute, Molecular Disease Branch, Section on Metabolism, Bethesda, Maryland; worked with Dr. M. Vaughan.
1970 - 1975	Associate Professor, Departments of Internal Medicine and Pharmacology, University of Virginia, School of Medicine, Charlottesville, Virginia.
1975 - 1981	Professor, Departments of Internal Medicine and Pharmacology, University of Virginia, School of Medicine, Charlottesville, Virginia
1971 - 1981	Director, Clinical Research Center, University of Virginia, School of Medicine, Charlottesville, Virginia.
1973 - 1981	Director, Division of Clinical Pharmacology, Department of Internal Medicine, University of Virginia, School of Medicine, Charlottesville, Virginia
1981 - 1989	Professor, Departments of Internal Medicine and Pharmacology, Stanford University, Stanford, California
1981 - 1986	Chief of Medicine, Palo Alto Veterans Administration Medical Center, Palo Alto, California
1984 - 1986	Associate Chairman, Department of Medicine, Stanford University, Stanford, California
1986 - 1988	Acting Chairman, Department of Medicine, Stanford University, Stanford California
1986 - 1988	Acting Division Chief, Division of Respiratory Medicine, Department of Medicine, Stanford University, Stanford, California
1988 - 1990	Divisional Vice President, Pharmaceutical Discovery, Abbott Laboratories, Abbott Park, Illinois
1988 - 1996	Professor (Adjunct), Department of Pharmacology, Northwestern University Medical School, Chicago, Illinois
1990 - 1992	Vice President, Pharmaceutical Research & Development, and Corporate Officer, Abbott Laboratories, Abbott Park, Illinois
1992 - 1996	Consultant
1993 - 1995	CEO/President, Molecular Geriatrics Corporation, Lake Bluff, Illinois
1996 - 1997	Professor (Adjunct) Department of Cell and Molecular Biology, Northwestern University, School of Medicine, Chicago, Illinois
1997 - 1999	Professor and Director, Division of Clinical Pharmacology, Departments of Medicine and Integrative Biology and Pharmacology, University of Texas-Houston, Medical School, Houston, Texas
1997 - 2005	Professor and Chairman, Department of Integrative Biology and Pharmacology, University of Texas-Houston, Medical School, Houston, Texas

1997 - present	Professor - University of Texas-Houston, Graduate School of Biomedical Sciences, Houston, Texas
1998 - present	Professor - Department of Medicine, University of Texas – Houston School of Medicine, Houston, Texas.
1998 - present	John S. Dunn Distinguished Chair in Physiology and Medicine
1998 – present	Regental Professor, University of Texas - Houston
1999 - present	Director, Institute of Molecular Medicine, University of Texas – Houston School of Medicine, Houston, Texas.
1999 – present	Professor (Adjunct) Dept. Medical Biochemistry, Ohio State University, Columbus, Ohio

Medical Licensure:

Ohio
Massachusetts
Virginia
California
Texas

Societies:

Phi Beta Kappa (1959)
Alpha Omega Alpha (1963)
American Federation for Clinical Research (1969)
American Society for Pharmacology and Experimental Therapeutics (1970)
Albemarle Medical Society (1970)
American Association for the Advancement of Science (1970)
Endocrine Society (1971)
Southern Society for Clinical Investigation (1973)
American College of Clinical Pharmacology (1974)
American Society of Biological Chemists (1974)
American Society for Clinical Investigation (1975)
New York Academy of Sciences (1975)
Fellow, American College of Physicians (1976)
Association for Clinical Research Center Program Directors (1977 - 1981)
National Institutes of Health Alumni Association (1977)
Association of American Physicians (1981)
Association of Veterans Administration Chiefs of Medicine (1981)
Western Association of Physicians (1982)
American Heart Association - Council on Basic Science (1984)
Member, National Academy of Sciences (1997)
Member – American Physiological Society (1998)
Member, Institute of Medicine of the National Academy of Sciences (1998)
Member, American Academy of Arts and Sciences (2000)
Fellow, Cardiovascular Section of the American Physiological Society
Foreign Member – Macedonian Academy of Sciences and Arts (2000)
Foreign Member – Albanian Academy of Sciences (2000)
Honorary Member, Kosovo Academy of Arts and Sciences (2000)
Honorary Member, World Innovation Foundation (2005)

Honors and Awards:

Alfred S. Maschke Award for Clinical Excellence (Western Reserve University, 1965)
Mosby Book Award (Western Reserve University, 1965)
Diplomate of the National Board of Medical Examiners (1966)
Research Career Development Award (NIAMD, 1972 - 1977)
Diplomat of the American Board of Internal Medicine (1974)
American Heart Association - Ciba Award Recipient (1988)
Albert and Mary Lasker Award for Basic Research, (1996)
Nobel Prize in Physiology or Medicine (1998)
Award from Chairman Yassar Arafat, 1998
Resolution from the City of Houston, Texas (1998)
Resolution from the State of Texas (1998)
Resolution from the United States House of Representatives (1998)
Old Gold Award, DePauw University (1999)
Life of Quality Award for Sheltering Arms (1999)
Honor of the Nation Award from the President of Albania (1999)
Sagamore Wabash Award, The Highest honor from the Governor of Indiana (1999)
The Albanian American National Council Award (1999)
Distinguished Alumnus Award, Case Western Reserve University School of Medicine (1999)
Golden Plate Award from the American Academy of Achievement (1999)
Honorary Citizen, Gostivar, Macedonia (1999)
Resolution from Lake County, Indiana (1999)
Honorary Director, Epithelial Cell Biology Res. Ctr Chinese Univ. of Hong Kong (2000 to present)
Macedonian Medal of St. Apostle Paul (2000)
Consulting Editor, News in Physiological Sciences (2000)
Baxter Award for Distinguished Research in the Biomedical Sciences Association of American Medical Colleges (AAMC) (2000)
Pictured on a postage stamp from Albania
Science and Technology Consultant, Shenzhen, China (2000)
Honorary Professor, Soochow University, Suzhou, China (2002)
Honorary Professor, Shanghai Second Medical University (2002)
Honorary Professor, Shanghai University of Traditional Medicine (2003)
Scientific Steering Committee China Nat. Center for Biotechnology (2002-05)
Scientific Steering Committee National Institute of Biological Science, Beijing (2002-05)
Honorary Board Member – World High Tech Society (2002-present)
Honorary Member, Islamic Academy of Sciences (2003)
Honorary Member, World Innovation Foundation (2004)
Fellow, European Academy of Sciences (2004)
Honorary Member, The National Society of High School Scholars (2004)
Member, International Advisory Board for Shanghai Xuhui District (2004)
Santiago Grisolia Award – Valencia, Spain (2005)
Editorial Board, Cell Biology International (2005-)
American Society Clinical Pharmacology Research Prize (2005)
Jury Member Premios Rey Jaime I Prize of Spain (2005)
Whiting High School Wall of Fame (2005)

Committees/Memberships/Named Lectureships:

Research Advisory Committee, Virginia Heart Association (1971 - 1975)
Editorial Board Member, Journal of Cyclic Nucleotide Research (1974 - 1988)
Various NIH site visits and special study sections (1971 - 1988)
Co-editor, Journal of Cyclic Nucleotide Research (1978 - 1982)
Member of Task Force in the NIH Evaluation of Research Needs in Endocrinology and Metabolic Diseases (1978 - 1979)
Ad hoc reviewer and site visitor for American Cancer Society (1979)

Ad hoc member NIH Molecular Cytology Study Section (1979)
Ad hoc member NIH Pathology Study Section (1979)
Editorial Board Member, Journal of Biological Chemistry (1979 - 1984)
Vice Chairman - Cyclic Nucleotide Gordon Conference (June, 1980)
Ad hoc member NIH Endocrinology Training Grant Study Section (1980)
Ad hoc member NIH Pharmacology Study Section (1980)
Editorial Board Member, Analytical Biochemistry (1980 - 1983)
Pfizer Lecturer - St. Louis University (1980)
Pfizer Lecturer - Clinical Research Inst. of Montreal (1981), Stanford (1981), Rutgers (1981)
Chairman - Cyclic Nucleotide Gordon Conference (June, 1981)
Ad hoc member American Cancer Society Study Section (1982)
Ad hoc grant reviewer, Veterans Administration (1982)
Ad hoc grant reviewer, National Science Foundation (1982)
Pfizer Lecturer - University of Virginia (1983)
Ad hoc member, American Cancer Society Study Section (1984)
Co-editor - The Pharmacological Basis of Therapeutics, seventh edition (1985)
Member NIH - Pharmacology Study Section (1984 - 1987)
Associate Editor - Journal of Applied Cardiology (1986 - 1992)
Council Member - Western Association of Physicians (1986 - 1989)
Journal of Clinical Investigation - Editorial Committee (1986 - 1987)
Pfizer Lecturer - Washington University (1986)
Member - California University - Wide Task Force on AIDS (1987 - 1988)
Associate Editor - Journal of Clinical Investigation (1987 - 1988)
Co-editor - Advances in Pharmacology (1990 - present)
Editorial Advisory Board - The Journal of R&D Management (1990-1992)
National Inst. of Health, NIDDK Board of Scientific Counselors (1990-94) (Chairman, 1993-1994)
Member - American Federation Clinical Research Foundation - Board of Directors (1991-1993)
Annual Bashour Lecture - Southwestern University, Dallas (1992)
Editorial Board - Endothelium (1992-present)
Co-chairman First International Conf. Biochemistry and Molecular Biolgy of Nitric Oxide, UCLA, (July, 1994)
Chairman Nitric Oxide and Cyclic GMP Signaling Workshop, 9th International Conf. on Second Messengers and Phosphoproteins, Nashville, (October, 1995)
Co-chairman Second International Conf. Biochemistry and Molecular Biology of Nitric Oxide, UCLA, (July, 1996)
Board of Directors, Tripos, Inc., (Biopharmaceutical Co.), (1996 - present)
Co-chairman International Conference on Nitric Oxide, Brazil, March, 1999
Scientific Advisor – Texas Biotechnology, Inc (1998 – present)
Annual Potter Lecture, Thomas Jefferson University (1998)
Annual Kauffman Lecture, University of Colorado (1998)
Editorial Board – General Pharmacology: The Vascular System (1998 – present)
Board Member – Cardiovascular Center, University of Virginia (1999 – present)
Board Member, Albanian International Scholarship Foundation (1998 – present)
Board of Directors – Neuronautics, Inc. (Biopharmaceutical Co.) (1999 – present)
Annual Crispell Lecture, University of Virginia (1999)
Annual William R. Martin Lecture, University of Kentucky (1999)
Commencement Addresses, Kincaid High Sch., St. John's High Sch., Whiting High School (1999)
Annual Graduate Research Forum Lecture, University of Toronto (1999)
Annual Kukovitz Lecture, University of Graz (1999)
Annual Reh fuss Lecture, Thomas Jefferson University (1999)
Scientific Advisory Board, Medinox (1999 to present)
President's Lecture, Chico State University (1999)
Founders Lecture, Assoc. Acad. Surgeons, Philadelphia (1999)
Annual Nathan Greenfield Lecture, Case Western Reserve University (1999)

Annual Priscilla White Lecture – Joslin Clinic and Dept. Medicine Harvard University Boston (2000)
Annual Sir Henry Dale Lecture – Johns Hopkins University (2000)
Evans Research Seminar, Boston University (2000)
Scientific Advisory Board Member, Arginox (2000 to present)
Hugh Davson Distinguished Lectureship, FASEB meeting (2000)
Benjamin Zweifach Memorial Lectureship, University of California, San Diego (2000)
Melvin Calvin Lecture, Michigan Technological University (2000)
Commencement Address, Case Western Reserve University, School of Medicine (2000)
Commencement Address, Thomas Jefferson University (2000)
Member, Scientific Advisory Board, Vasopharm (2000)
Member, Macedonian American Committee (2000)
Member of Executive Board of Assoc. of Sciences, Albanian Doctors in Macedonia (2000)
Member, Science and Technology Advisory Committee, DePauw University (2000)
Board Member Asian Pacific Holding Company of Hong Kong (2000 to present)
Honorary Board Member, National Albanian American Council (2001)
Roy E. Moon Distinguished Lectureship, Angelo State University (2001)
Board of Directors, Immuno-Rx, Inc. (2001-present)
Member, Scientific Advisory Board, Preventis, Inc. (2001-present)
Board of Directors, Kosova Foundation for Medical Development (2001-present)
Earl W. Sutherland Lectureship, Vanderbilt University (2001)
Sigma Xi Lecture, University of Northern Iowa (2001)
Member, Board of Patrons, Oxford International Biomedical Centre (2001)
Board of Directors, High Life, Inc. (2001-present)
Ehters lecture, Mayo Clinic (2001)
Honorary Board of Directors, National Albanian American Council (2001)
Member, Scientific Advisory Board, Biocapital II (2002-present)
Michaelides Lecture – International Meeting, Clinical Cardiology, Greece (2002)
Honorary Member, Hellenic Cardiological Society (2002)
International Research Advisory Bd of U. Health Network, Toronto, Canada (2002 – present)
Scientific Advisory Board, Nano Materia, Inc. (2002-present)
Klaus Hoffmann Lecture, University of Pittsburgh (2002)
Scientific Advisory Board, Juventis (2002-present)
Board of Directors, Sophia Laboratories (2002-2004)
Scientific Advisory Board, Oxon Medica (2002-present)
Board of Trustees, Case Western Reserve University (2002-present)
Scientific Advisory Board, Equity4Health Venture Fund (2003-present)
Member, American Federation for Medical Research (2003-present)
Scientific Advisory Board, Lumen Therapeutics, LLC (2003-present)
Member – International Raoul Wallenberg Foundation and the Angelo Roncalli International Committee (2003 – present)
Scientific Advisory Board, PLx, Inc. (2003 – present)
Board of Directors, NIOXX (2003 - present)
Annual Michael Brady Lecture, University of Iowa, October, 2003
American Hall of Fame Committee member (2003 – present)
Lecturer International Peace Foundation
Member Albanian Scholarship Foundation Assembly
Member Board of Directors Foundation for Medical Development (2004-present)
Scientific Advisory Board, PTV Sciences, L.P. (2004-present)
Member Advisory Board of International Peace Foundation (2004 – present)
Board of Directors, Chun-Li Biotech. (2004-present)
Editorial Board of Cell Biology International (2005-present)
R.P. Zimmerman Lecture, Memorial Medical Center, Johnstown, PA (2005)
Editorial Board, “Open Access”, Advanced Studies on the Foundation of Knowledge (2005-present)

Medical Center and University Committees: (1970 - 1981, University of Virginia)

Clinical Research Center Advisory Committee (1971 - 1981)
Clinical Research Committee (1971 - 1976)
Drug and Pharmacy Committee (1971 - 1981)
Diabetes-Endocrinology Research Center Advisory Committee (1974 - 1981)
Medical Center Hour Committee (1975 - 1979)
Search Committee member for Department of Pathology Chairman (1976)
Search Committee member for Director of Cardiology (1975 - 1977)
Long Range Planning Committee for the Med. Ctr: co-chair of Research Section (1976-1981)
Member of University Committee for distribution of the Pratt bequest (1976 - 1981)
Search Committee member for Director of Clinical Pathology laboratories (1976 - 1977)
Member Planning Committee for a Combined Research Building (1976)
Faculty Promotions and Tenure Committee for the School of Medicine (1976 - 1981)
Member Medical School Instrumentation Center Committee (1977 - 1981)
Director – Postdoc. research training program in Diabetes and hormone action (1978 - 1981)
Member - Medical Scientist Training Program (M.D., Ph.D.) Committee (1978 - 1981)
Member - Faculty Forum for Scientific Research (1979 - 1981)
Member - Computer Technology Services Advisory Committee (1979 - 1981)
Member - Appointments Committee of the Center for Advanced Studies (1979 - 1981)
Chairman - Student Promotion Appeals Committee (1980)
Chairman - Hartford Fellowship Selection Committee (1981)

Medical Center and University Committees: (1981 to 1988, Stanford University)

Chairman - Research and Development Committee, Palo Alto Veterans Administration Medical Center (1981 - 1982)
Member - Deans Committee, Veterans Administration Medical Center (1981 - 1987)
Member - Budget and Space Committee, Veterans Administration Medical Center (1981 - 1986)
Member - Medical Scientists Training Program Committee (1982 - 1986)
Member - Search Committee for Chief of Rehabilitation Medicine (1982 - 1983)
Chairman - Search Committee for Chief of Pulmonary Division (1982 - 1985)
Member - Housestaff Selection Committee, Department of Medicine (1982 - 1985)
Member - Research & Development Committee, Veterans Admin. Med.Center (1981-1986)
Member - Hospital Space Committee, Veterans Administration Medical Center (1982 - 1983)
Chairman - Kovitz Visiting Scientist Committee (1982 - 1988)
Faculty Advisor for Freshman & Sophomore undergraduate students (1982 - 1984)
Member - Senate of the Academic Council, Stanford University (1983 - 1985)
Member - Institute of Biological & Clinical Investigation Committee, Stanford Univ. (1983 - 1987)
Member - Hewlett Award Committee (1983 - 1988)
Member - Various Department & Medical School promotion committees
Chairman - Department of Medicine Committee on Clinical Excellence (1983 - 1985)
Member - various Department of Medicine Search Committees
Member - Search Committee for Director of Rehabilitation Medicine (1984 - 1985)
Member - Steering Committee for the Kaiser Family Foundation Study on the Future of the Academic Medical Center (1985 - 1987)
Member - Stanford Hughes Institute Advisory and Selection Committee (1984 - 1988)
Member - Dean's Advisory Committee on Faculty Awards (1985 - 1988)
Professional Standards Board, Veterans Administration Medical Center (1986 - 1987)
Member - Dean's Faculty Budget Review Committee (1986 - 1988)
Member - Dean's Executive Committee (1986 - 1987)
Member - Faculty Practice Program Committee (1986 - 1987)
Member - Hospital Directors Council (1986 - 1987)
Member - Medical Service Steering Committee (1986 - 1987)
Member - Medical Staff Board (1986 - 1988)

Member - Search Committee for Chairman of the Department of Genetics (1987 - 1988)

Abbott Laboratories: (1988 to 1992)

Vice-President, Pharmaceutical Division, 1988-1990

Corporate Officer and V.P. Pharmaceutical R&D, 1990 - 1992

V.P. of Pharmaceutical Discovery programs (1988 to 1992); approximately 430 staff and \$67 million budget

Directed pharmaceutical research and development programs (1990 to 1992) including Discovery, Clinical Development, Regulatory, Drug Safety and Product Development; approximately 1500 staff and \$300 million budget

Brought forward more than 25 new chemical entities from Discovery as clinical candidates for clinical development and/or out-licensing. Numerous IND's, NDA's, and SNDA's filed.

Anticipate many NDA's to be filed during the next 5-7 year period as a result of this effort.

Developed programs for NIH extramural funding and/or research collaborations with funding of approximately \$3 million per year

Developed a post-doctoral training program with 20-30 trainees in Discovery

Continued to direct my own research project in nitric oxide-cyclic GMP with 15-20 staff and about \$750,000 per year of extramural NIH grant support

Molecular Geriatrics Corporation: (1993 to 1995)

CEO and President, 1993 - 1995

A co-founder of the biopharmaceutical company focused on the therapeutics and diagnostics of Alzheimer's Disease and other neurodegenerative diseases. Raised approximately \$15 million in private investments and grant support. Designed laboratory and office facilities and recruited about 50 scientists and staff. Developed various university and NIH collaborations and corporate partnership and world-wide licensing agreement with Upjohn Company for the development and commercialization of an Alzheimer's Disease therapeutic agent.

Medical Center and University Committees: (1997-present, University of Texas)

Member - Dean's Academic Council (1997 – present)

Member - Dean's Strategic Advisory Group (1997)

Member - Dean's Committee of Basic Science Chairs (1997 – present)

Member – Graduate Faculty, Graduate School of Biomedical Sciences (1997 – present)

Member – Search Committee, Director of Division of Pulmonary Medicine (1997 –1998)

Member - Search Committee, Chief of Clinical Cardiology (1998-2000)

Member – Intellectual Property Committee (1997 – 2001)

Chairman – Search Committee for Director of Institute of Molecular Medicine (1998 –1999)

Member - M.D./Ph.D. Board (1998-present).

Member – Advisory Board for Clinical Research Curriculum (2000 - present)

Member – External Advisory Board, U. of TX MD Anderson Cancer Ctr, Melanoma SPORE, (2000-present)

Member – Search Committee for Director for University Clinical Research Center (2001-2002)

Member – IMM Project Building Committee – (2002 – present)

Member – Liaison Committee on Medical Education Subcommittee on Graduate Education (2002- present)

Member – Search Committee for Executive Vice President for Research (2002 – present)

Member – Architectural Advisory Committee for the Institute of Molecular Medicine (2002 – present)

Member – Ground Rules Committee and Steering Committee for Biotech Park – (2002 – present)

Member – Search Committee Center for Membrane Biology (2002 – present)

Member – Various Search Committees for the Institute of Molecular Medicine (1998-present)

Patents and Licenses:

1. Ferid Murad and John Lewicki. Two-site immunoassays using monoclonal antibodies of different classes or subclasses and test kits for performing same. U.S. Patent Number 4,474,892; October 2, 1984; Foreign patent pending.
2. Ferid Murad, Dale Leitman and Cesar Molina. A sensitive assay for atrial natriuretic factor and related peptides using cultured cells and a kit for same, 1985.
3. Ferid Murad, James F. Kerwin, Jr., and Lee Gorsky. Guanidino compounds as regulators of nitric oxide synthase. U.S. Patent Number 5,380,945; January 10, 1995.
4. Iraidia Sharina, Joshua Krumenacker, Emil Martin and Ferid Murad. Genomic organization of the mouse and human soluble guanylyl cyclase genes. (Provisional patent, Sept., 2000).
5. Ka Bian, Norman Weisbrodt and Ferid Murad. Trichinella-derived specific down regulation of inducible nitric oxide synthase. (Atty DKT: UTSH250USP1, Oct., 2000).
6. Emil Martin and Ferid Murad. Treatment or prevention of cGMP-dependent pathophysiology with a mutant variant of soluble guanydy cyclase (Provisional Patent, February, 2003)
7. Murad F, Nedospasov A., Natalya B, Pimonoin T, Martin E. Methods of detecting nitrotyrosine and aminotyrosine residues of peptides and proteins.

P U B L I C A T I O N S

Papers, Chapters and Books:

1. Murad, F., Chi, Y.M., Rall, T.W., Sutherland, E.W.: The effect of catecholamines and choline esters on the formation of adenosine 3', 5'-phosphate by preparations from cardiac muscle and liver. **J. Biol. Chem.** 237:1233-38, 1962.
2. Murad, F.: A study of agents which influence the formation and action of adenosine 3', 5'-monophosphate. Dissertation, Western Reserve University, Graduate School, 1965.
3. Murad, F.: Immuno-hemolytic anemia during therapy with methyl dopa. **J. Amer. Med. Assoc.** 203:149-50, 1968.
4. Murad, F., Vaughan, M.: Effect of glucagon on rat heart adenylyl cyclase. **Biochem. Pharmacol.** 18: 1053-59, 1969.
5. Murad, F., Strauch, B.S., Vaughan, M.: The effect of gonadotropins on testicular adenylyl cyclase. **Biochim. Biophys. Acta.** 177: 591-98, 1969.
6. Vaughan, M., Murad, F.: Adenylyl cyclase activity in particles from fat cells. **Biochemistry** 8: 3092-99, 1969.
7. Murad, F., Rall, T.W., Vaughan, M.: Conditions for the formation, partial purification and assay of an inhibitor of adenosine 3', 5'-monophosphate. **Biochim. Biophys. Acta.** 192: 430-45, 1969.
8. Murad, F., Brewer, H.B., Vaughan, M.: Effect of thyrocalcitonin on adenosine 3', 5'-monophosphate formation by rat kidney and bone. **Proc. Nat. Acad. Sci.** 65: 446-53, 1970.

9. Murad, F., Manganiello, V., Vaughan, M.: Effects of guanosine 3', 5'-monophosphate on glycerol production and accumulation of adenosine 3', 5'-monophosphate during incubation of fat cells. **J. Biol. Chem.** 245: 3352-60, 1970.
10. Stossel, T., Murad, F., Mason, R., Vaughan, M.: Regulation of glycogen metabolism in polymorphonuclear leukocytes. **J. Biol. Chem.** 245: 6228-34, 1970.
11. Murad, F., Manganiello, V., Vaughan, M.: A simple sensitive protein binding assay for guanosine 3', 5'-monophosphate. **Proc. Nat. Acad. Sci.** 68: 736-39, 1971.
12. Manganiello, V., Murad, F., Vaughan, M.: Effects of lipolytic and antilipolytic agents on cyclic 3', 5'-adenosine monophosphate in fat cells. **J. Biol. Chem.** 246: 2195-02, 1971.
13. Murad, F., Gilman, A.G.: Adenosine 3', 5'-monophosphate and guanosine 3', 5'-monophosphate: A simultaneous protein binding assay. **Biochim. Biophys. Acta.** 252: 397-400, 1971.
14. Murad, F., Pak, C.: Urinary excretion of adenosine 3', 5'-monophosphate and guanosine 3', 5'-monophosphate. **New Eng. J. Med.** 286: 1382-87, 1972.
15. Mendoza, S., Murad, F., Handler, J., Orloff, J.: Refractoriness of toad bladder to stimulation of sodium transport. **Amer. J. Physiol.** 223: 104-09, 1972.
16. Murad, F.: Cyclic AMP: A mediator of hormone response and its clinical application. **Virginia Monthly** 99: 1197-1201, 1972.
17. Murad, F., Weitzman, R.: Effects of parathyroid hormone and calcitonin on cyclic AMP metabolism. **Proceedings of the Fourth International Congress of Endocrinology** 273: 468-73, 1972.
18. Murad, F.: Clinical applications of cyclic nucleotide levels. In: Pharmacology and the Future of Man, **Proceedings of the Fifth International Congress of Pharmacology** 5: 233-44, 1972, S. Karger, Basel.
19. Murad, F.: Beta-blockade of epinephrine induced cyclic AMP accumulation in heart, liver, fat and trachea. **Biochim. Biophys. Acta.** 304: 181-87, 1973.
20. Thomas, E.W., Murad, F., Looney, W.B., Morris, H.P.: Adenosine 3', 5'-monophosphate and guanosine 3', 5'-monophosphate: Concentrations in Morris hepatomas of different growth rates. **Biochim. Biophys. Acta.** 297: 564-67, 1973.
21. Middler, S., Pak, C.Y., Murad, F., Bartter, F.: Thiazide diuretics and calcium metabolism. **Metabolism** 22: 139-46, 1973.
22. Murad, F., Weitzman, R.: Hormonal regulation of cyclic AMP. **Seminars in Drug Treatment** 3: 189-202, 1973.
23. Murad, F.: Principles of drug interactions. **Consultant**, Vol. 14, No. 9, pp. 56-59, September, 1974.
24. Murad, F.: Clinical studies and applications of cyclic nucleotides. Advances in Cyclic Nucleotide Research, Vol. 3, pp. 335-383, 1973, G.A. Robison and P. Greengard, Eds., Raven Press, New York.

25. Murad, F.: Techniques for the formation, partial purification and assay of a cyclic AMP inhibitor. Methods in Enzymology: Hormone Action Part C Cyclic Nucleotides, Vol. 38, pp. 273-283, 1974, J. Hardman and B. O'Malley, Eds., Academic Press, New York.
26. Gilman, A.G., Murad, F.: Assay of cyclic nucleotides by receptor protein binding displacement. Methods in Enzymology: Hormone Action Part C Cyclic Nucleotides, Vol. 38, pp. 49-61, 1974, J. Hardman and B. O'Malley, Eds., Academic Press, New York.
27. Kimura, H., Thomas, E., Murad, F.: Effects of decapitation, ether and pentobarbital on guanosine 3', 5'-phosphate and adenosine 3', 5'-phosphate levels in rat tissues. **Biochim. Biophys. Acta.** 343: 519-28, 1974.
28. Kimura, H., Murad, F.: Nonenzymatic formation of cyclic GMP from GTP. **J. Biol. Chem.** 249: 329-31, 1974.
29. Murad, F., Kimura, H.: Cyclic nucleotide levels in incubations of guinea pig trachea. **Biochim. Biophys. Acta.** 343: 275-86, 1974.
30. Kimura, H., Murad, F.: Evidence for two different forms of guanylate cyclase in rat heart. **J. Biol. Chem.** 249: 6910-19, 1974.
31. Murad, F.: Mechanism of action of some bronchodilators: Cyclic nucleotide metabolism in tracheal preparations. **Amer. Review of Resp. Dis.** 110: 111-18, 1974.
32. Gilman, A.G., Murad, F.: Hormones and hormone antagonists. In, The Pharmacological Basis of Therapeutics, 5th Edition, pp. 1369-1371, 1975, Ed., L.S. Goodman and A. Gilman, the Macmillan Co., New York.
33. Gilman, A.G., Murad, F.: Adenohypophyseal hormones and related substances. In, The Pharmacological Basis of Therapeutics, 5th Edition, pp. 1372-1397, 1975, Ed., L.S. Goodman and A. Gilman, The Macmillan Co., New York.
34. Gilman, A.G., Murad, F.: Thyroid and antithyroid drugs. In, The Pharmacological Basis of Therapeutics, 5th Edition, pp. 1398-1422, 1975, Ed., L.S. Goodman and A. Gilman, The Macmillan Co., New York.
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368. Murad, F. How does the blood vessel constrict or dilate? International Conference on Heart, Hypertension, and Diabetes. Hyderabad, India, November, 2003.
369. Murad F. Nitric oxide in cellular signaling and drug development, International Peace Foundation lecture series, (4 lectures). Bangkok, Chiang Mai, Khen Kaen and Song Kla, Thailand, January 2004.
370. Murad F. Application of nitric oxide research to drug development. 8th International Conference on Business and Economic Development. Monterrey, Mexico, January, 2004.
371. Murad F. Discovery of nitric oxide and its applications for drug development. Presented at the Houston Society for Engineering in Medicine and Biology, Houston, Feb., 2004.
372. Murad, F. Guest speaker, 26th National Arab American Medical Association meeting, Houston, October, 2004.

373. Murad, F. Keynote speaker, Bioastronautics meeting, Galveston, TX, Jan. 2005.
374. Murad, F. Plenary Speaker, Nitric oxide discovery and role in cell signaling and drug development. Western Assoc. Physicians meeting, Carmel, Feb., 2005.
375. Murad, F. Keynote speaker, Society of University Surgeons meeting, Nashville, TN, Feb. 2005.
376. Seminara AR. Murad F. MEK-ERK Kinase 1 (MEKK1) transcriptional regulation by nitric oxide (NO) in murine macrophages. XXXV International Congress of Physiological Sciences, San Diego, CA, April 3, 2005.
377. Murad, F. Keynote speaker, Application of nitric oxide and cyclic GMP research to drug development. First Internat. Conf. on Biological and Medical Physics, United Arab Emirates, March, 2005.
378. Murad, F. Speaker DeLange Conference, Rice University, Frontiers of Medicine, March, 2005.
379. Murad, F., Keynote Speaker, European Metabolic Group meeting, Prague, May, 2005.
380. Murad, F., Speaker, Three Master Course Lectures, Valencia, Spain, May, 2005.
381. Murad, F., Speaker, Cyclic GMP meeting, Potsdam, Germany, June, 2005.
382. Murad, F., Lecture, Campus de Excellence meeting, Canary Islands, June, 2005.
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