

CURRICULUM VITAE

10/2013

PERSONAL INFORMATION

Donna Marie Murasko
U.S. Citizen
Drexel University
College of Arts and Sciences
4020 MacAlister Hall
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Philadelphia, PA 19104
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EDUCATION

1975	M.S. Hershey Medical Center, The Pennsylvania State University Hershey, Pennsylvania Degree: Ph.D.; Major: Microbiology
1972	Douglass College of Rutgers - The State University New Brunswick, New Jersey Degree: B.A.; Major: Bacteriology

POSTDOCTORAL TRAINING

1976 - 1977	Postdoctoral Associate with Dr. R.T. Prehn The Jackson Laboratory, Bar Harbor, ME
1975 - 1976	Postdoctoral Fellow with Dr. R.T. Prehn The Institute for Cancer Research, Philadelphia, PA

ACADEMIC ADMINISTRATION

2003 – Present	Dean, College of Arts and Sciences, Drexel University, Philadelphia, PA
2002 - 2003	Interim Dean, College of Arts and Sciences, Drexel University, Philadelphia, PA
2002	Vice Provost, Drexel University, Philadelphia, PA
1996 - 2002	Chair, Department of Microbiology and Immunology
1992-94, 1995-96	Acting Chair, Department of Microbiology and Immunology
1985 - 1992	Deputy Chair, Department of Microbiology and Immunology

ACADEMIC APPOINTMENTS

2002 – Present	Professor of Biology, Drexel University, Philadelphia, PA
2002 – Present	Professor of Microbiology and Immunology, College of Medicine, Drexel University, Philadelphia, PA
2002 – Present	Professor of Medicine, College of Medicine, Drexel University, Philadelphia, PA
1998 - 2002	Professor of Microbiology and Immunology, MCP Hahnemann University, Philadelphia, PA
1998 - 2002	Professor of Medicine, MCP Hahnemann University, Philadelphia, PA
1994 - 1998	Professor of Microbiology and Immunology, Allegheny University School of Medicine, Philadelphia, PA

1994 - 1998	Professor of Medicine, Allegheny University School of Medicine, Philadelphia, PA
1987 - 1994	Professor of Microbiology and Immunology, The Medical College of Pennsylvania, Philadelphia, PA
1987 - 1994	Professor of Medicine, The Medical College of Pennsylvania, Philadelphia, PA
1981 - 1986	Associate Professor of Microbiology and Immunology, The Medical College of Pennsylvania, Philadelphia, PA
1983 - 1986	Associate Professor of Medicine, The Medical College of Pennsylvania, Philadelphia, PA
1980	Guest Lecturer, Biology Department, Rutgers University, Camden, NJ
1977 - 1980	Assistant Professor of Microbiology, The Medical College of Pennsylvania, Philadelphia, PA

HONORS AND AWARDS

Scientific

2009	Fellow, American Association for the Advancement of Science
1981 - 1982	Mary DeWitt Pettit Fellowship of the Special Trust Fund of the Alumnae/i Association of The Medical College of Pennsylvania
1978 - 1981	American Cancer Society Junior Faculty Research Award
1975 - 1977	NCI Individual Postdoctoral Fellowship

Other

2012	Association for Women in Science: Elizabeth W. Bingham Mentoring Award
2001	Member, Alpha Omega Alpha Honor Medical Society
2000	Research Award, Drexel University
2000 - 2001	ELAM Fellow
1988	Douglass Society (of Douglass College)
1986	Lindback Award for Distinguished Teaching
1971	Phi Beta Kappa (Junior year)

MEMBERSHIPS AND OFFICE IN PROFESSIONAL SOCIETIES

1989 - Present	Gerontology Society of America
1989 - 1995	American Association of University Professors
1985 – 2007	American Association for Cancer Research Membership Committee (1993-1994) State Legislative Committee of Pennsylvania (1993-1996) Teller's Committee (1995-1997; Chair 1997)
1984 - Present	American Association for the Advancement of Science
1980 - Present	American Association of Immunologists Public Affairs Committee (1997-2000) Finance Committee (2009-2012)
1975 - Present	American Society for Microbiology
1984 - 1990	International Society for Interferon Research
1981 - 1983	New York Academy of Sciences

COMMITTEE SERVICE

University

2012-Present	Responsibility-Centered Management (RCM) Steering Committee
2012-2013	Co-Chair, Strategic Plan Initiative # 6 (Expand Drexel's Academic Reputation)
2012	Middle States Steering Committee
2012	Search Committee, Executive Dean of Graduate School, College of Medicine
2012-Present	Executive Council, Drexel Plasma Institute (DPI)
2012-Present	Executive Council, Drexel Autism
2011-Present	Academy of Natural Science Integration Committee
2011-Present	Program Alignment & Review (PAR) Steering Committee
2011-2012	Strategic Plan Initiative # 3 (Enhance Drexel's Global Impact)
2010-2011	Chair, Dean College of Engineering Search Committee
2009-2011	Middle States Steering Committee
2009-2010	Co-Chair, Subcommittee of the Middle States Committee--The Educational Experience
2008-2009	Chair, Provost's Task Force on Enhancing the Undergraduate Curriculum
2007-2008	Search Committee, Director of ELAM (Executive Leadership in Academic Medicine)
2007-2008	Search Committee, Director of Research for Women's Health
2007-Present	Integrated Science Building Planning Committee
2006-2007	University Strategic Planning Committee
2006-2007	University Master Planning Committee
2005-2007	Diversity Task Force
	Chair, Retention and Development Subcommittee
2005	Review Committee for Dean, College of Engineering
2005-2006	Chair, Law School Faculty Search Committee
2004-2006	Law School Task Force
2003-2004	Review Committee for Dean, College of Medicine
2001	Co-Chair, Curriculum Review Task Force
2001 - 2002	President, University Faculty
2000 - 2001	President Elect, University Faculty
1998	Conflict of Interest Committee
1996 - 1998	Steering Committee on Lifelong Learning
1995	Nominating Committee for University Faculty Officers
1995	University Advisory Council on Committee
1995 - 1997	University Council
1995 - 1997	Tenure Committee
1992 - 1998	Executive Committee, Institute for Gerontology
1992 - Present	Executive Committee, Institute for Women's Health
	Associate Director of Research (1997-2002)

College

2001 - 2005	Appointments and Promotions Committee
2000 - 2002	Faculty Compensation and Incentive Plan Committee
1999 - 2000	Search Committee, Surgery Chair
1999 - 2002	Year 1 and 2 Curriculum Committee, Chair (2000-2002)
1998 - 2002	Advisory Board, Center for Mind/Body Studies
1996 - 2001	Educational Coordinating Committee
1997 - 1998	Chair, Task Force on Curriculum Evaluation

1996	Co-Chair, Task Force on Medical Student Advising/Mentoring
1996	Task Force on Graduate Education
1996	Task Force on Medical School Admissions
1996	Task Force on Clinical Research Center
1995 - 1998	Director, Center for Immunobiology
1994 - 1998	Advisory Council on Committees
1994	Consolidation Advisory Task Force
1993 - 1994	Strategic Planning Committees: Research Task Force; Educational Task Force
1993 - 1994	Pediatrics Chairman Search Committee, Chair
1992 - 1994	Graduate Council
1992 - 1995	Women in Medicine Committee, Chair (1992-93)
1992 - 1997	Board of Trustees, Medical College of Pennsylvania and Hahnemann University, Elected Faculty Representative
1992 - 1993	Academic Affairs Subcommittee of MCP Board on By-Laws
1992 - 1995	Search Committee for Director of Women's Health Programs, Chair
1989 - 1992	Interim Research Director of the Cancer Center
1989 - 1999	Cancer Center Coordinating Committee
1989 - 1991	Geriatrics Task Force
1990 - 1995	Appointment and Promotions Committee, Chair (1992-1995)
1990 - 1992	Committee on Women's Affairs, Chair (1990-1992)
1990 - 1991	Search Committee for Associate Dean for Graduate and Continuing Medical Education
1988 - 1992	Students' Promotion Committee, Chair (1989-1991)
1986 - 1990	Curriculum Committee
1985 - 1986	Pathology Chairman Search Committee
1984 - 1988	Appointment and Promotions Committee, Chair (1987-1988)
1984 - 1986	Executive Faculty, Secretary (1985-1986)
1981 - 1984	Research Grant Review Subcommittee, Co-Chair (1982-1983)
1981 - 1983	Research Committee
1980 - 1984	Advisory Council on Committees, Chair (1983-1984)
1980 - 1984	Graduate Council
1980 - 1982	Advisory Committee on Bioethics
1979 - 1985	Graduate Education Committee
1979 - 1983	Animal Facility Committee, Chair (1981-1983)

Departmental

1986 - 1990	Coordinator of Medical Microbiology and Immunology Course
1981 - 1983	Chairperson of Immunology Search Committee
1979 - 1985	Coordinator of Graduate Studies

Institutional

1995	AHERF Leadership Institute
1991 - 1998	Member, Board of Trustees, Allegheny Health, Education and Research Foundation

Other

1998 - 1999	Secretary, Committee for the University (Faculty Committee during Bankruptcy)
1996 - Present	Member, Scientific Review Board, Institute for Advanced Studies in Immunology and Aging

1985 - 1995	Member, Medical Advisory Board, Lupus Foundation of Philadelphia
1982 - 1983	Member, Board of Directors, Federated Medical Resources

COMMUNITY SERVICE

2009 -	Member, Steering Committee, Philadelphia Math & Science Coalition
2008 -	Member, Philadelphia Math & Science Coalition
1995 - 1998	Central High School Science Fair Judge
1995 - Present	Visiting Lecturer, Health Issues, William Penn Charter School
1993	Commencement Speaker, St. Mary's Ostrabrama School, S. River, NJ
1983 - 1984	Volunteer, Special Olympics
1977 - 1987	Alumnae President of Class of '72 Douglass College

RESEARCH ACTIVITIES

Research Grants as Principal Investigator

NIH R21 AG041510	Immunity of aged mice after lifelong repeated live or killed influenza vaccines
Total Direct Costs:	\$424,875
Years of Award:	September, 2011 – July, 2013

NIH 1R43 A1085783-01 A1	Novel Protein Adjuvant for Flu Vaccine
Total Direct Costs:	\$138,865
Years of Award:	July, 2010 – June, 2012

NIH R01 AG14913	Persistent Virus Infection in Aged Mice
Total Direct Costs:	\$2,463,147
Years of Award:	April, 1998 - March, 2010

NIH R01 AG18641	T Cell Response of Elderly to Influenza Immunization
Total Direct Costs:	\$1,171,739
Years of Award:	September, 2000 - June, 2004

NIH R01 AG13542	Enhancement of Non-Specific Immunity of Aged Mice
Total Direct Costs:	\$495,278
Years of Award:	December, 1996 - November, 1999

NIH R01 AG07719	Use of Immune Parameters as Biomarkers of Aging
Total Direct Costs:	\$1,263,186
Years of Award:	April, 1988 - March, 1999

Allegheny Singer Research	CTP-37 Vaccine Trials
Total Direct Costs:	\$268,001
Years of Award:	March, 1994 - June, 1996

American Cancer Society	Institutional Research Grant
Total Direct Costs:	\$72,000
Years of Award:	July, 1992 - June, 1995

NIH-NIA AG08659	Effect of Age on Retrovirus Disease and Immunosuppression
Total Direct Costs:	\$688,307

Years of Award:	December, 1989 - November, 1994
NIH-NCI CA43386	Characterization of Interferon: Immunoregulation (Actually a continuation of AI16840, change of Institute)
Total Direct costs:	\$245,742
Years of Award:	May, 1986 - April, 1989
NIH-NIAID AI16840	Interferon Characterization by Monoclonal Antibodies
Total Direct Costs:	\$122,161
Years of Award:	May, 1984 - April, 1986
Total Direct Costs:	\$253,974
Years of Award:	May, 1980 - April, 1984
W.W. Smith Charitable	Evaluation of Relevant Antitumor Responses in vivo: A Trust Multifaceted Approach.
Total Direct costs:	\$60,648
Years of Award:	October, 1987 - September, 1988
NIH-NIA AG05853-01	Lymphokines in Decreased T cell Responses of the Elderly
Total Direct Costs:	\$14,912
Years of Award:	October, 1985 - October, 1986
NIH-NCI CA23353	Stimulatory Effect of Immunization on Tumorigenesis
Total Direct Costs:	\$124,161
Years of Award:	April, 1978 - March, 1981

Research Grants as Co-Investigator

NIH-NIA: AG03934	Cell Mediated Immune Response to Influenza in the Elderly Principal Investigator: E. Abrutyn, M.D.
Total Direct Costs:	\$307,520 (Subproject to D. Murasko)
Years of Award:	May, 1993 - April, 1997
NIH-NIA AG03934	Studies on Urinary Tract Infection in a Geriatric Population.
Total Direct Costs:	\$173,360 (Subproject to D. Murasko)
Years of Award:	September, 1987 - August, 1992
Total Direct Costs:	\$168,125 (Subproject to D. Murasko)
Years of Award:	November, 1982 - August, 1987
NIH MH40380	CRC/PE: Mental Illness in Residential Care Settings Principal Investigator: Ira Katz, M.D.
Total Direct Costs:	\$93,963 (sub-project to D. Murasko)
Years of Award:	August, 1988 - July, 1993

Review Activities

2009-2010	Member, Animal and Human Biology Panel of NRC Decadal Survey on Biology & Physical Sciences in Space
2006 - 2010	External reviewer of the aging program of the Vaccine & Gene Therapy Institute at the Portland Primate Center.
2005; 2007	Member, Task Force on Aging and Inflammation, NIA
2005	Member, Task Force on Immunology and Space Flight, NASA

2005	Member, External Review Committee, Biomedical Sciences Graduate Programs—Ohio State University College of Medicine
2003 - 2006	Member, National Space Biomedical Research Institute (NSBRI)
2003 - Present	Ad Hoc Reviewer for NIH Committees: RO1, PO1, T32, K Awards (2-3/year)
2002	Member, AFAR National Scientific Advisory Council
2002 - 2004	Member, Editorial Board - <i>Clinical and Diagnostic Laboratory Immunology</i>
2000 - 2004	Member, NIA Review Panel B, National Institutes of Health
1999 - 2001	Member, Editorial Board - <i>Clinical and Diagnostic Laboratory Immunology</i>
1994 - 1997	Member, NIH Geriatrics and Rehabilitation Medicine Special Review Panel
1994	Member, NIA and NIAID Joint Task Force on Immunology and Aging
1994	Reviewer of NIA Intramural Program in Immunology
1992 - 1995	Member, Editorial Board - <i>Journal of Gerontology: Biological Sciences</i>
1992 - 1994	National Institutes of Health Reviewers Reserve
1992	Member, Working Group on Breast Cancer Screening in Women 65+
1991	Member, Advisory Committee on Immunology Research, National Institute on Aging
1990 - 1992	Ad hoc Member, Small Business Innovative Research Grant Review, National Institutes of Health
1989 - 1998	Member, Editorial Board - <i>Clinical Immunology and Immunopathology</i>
1988 - 1992	Gerontology and Geriatrics Review Committee, National Inst. on Aging, Chairperson, 1990-1992
1987 - 1988	Member, Special Review Committee (AIDS), National Institute on Drug Abuse
1986	Member, Clinical Investigator Award Special Study Section, National Cancer Institute
1984 - 1988	Consultant, Retinitis Pigmentosa Foundation
1983 - 1986	Member, Development Therapeutics Contract Review Committee, National Cancer Institute
1985 - Present	Site Visit Committee Member: National Cancer Institute; National Institute Neurological and Communicative Disorders and Stroke; National Institute on Aging (Chair of nine site visit teams, 1992-2001)

Ad hoc reviewer for:

Science
 Journal of Immunology
 Journal of Interferon Research
 Annals of Internal Medicine
 Cancer Research
 March of Dimes Fellowships
 European Journal of Cancer and Clinical Oncology
 Proceedings of the National Academy of Science USA
 Journal of Biologic Response Modifiers
 Multiple Sclerosis Society of Australia
 Infection and Immunity
 Virology

Journal of Clinical Microbiology
Experimental Gerontology
Biological Psychiatry

TEACHING EXPERIENCE

Undergraduate Courses

2009 Honors Seminar: Influenza
2007 Great Works Symposium Instructor
2003 - Present University 101 (2-3 sections each Fall and Winter)
2003 - Present Guest Lecturer: Microbiology, Immunology

Graduate Courses

1996 - 2002 Advanced Immunology
1996 - 2002 Introduction to Immunology
1995 Immunology of Women's Health Course, Course Director
1995 Cell and Molecular Immunology, Course Co-Director
1993 - 2002 Cell and Molecular Biology, Lecturer
1977 - 1994 Bioinstrumentation, Course Coordinator 1986, 1988, 1990

Medical School Courses

2002 - Present Medical Microbiology Course, 4-6 hours of lecture/year
1977 - 2002 Medical Microbiology and Immunology, Course Coordinator 1986-1990;
1999-2000 (Currently teach 4 hours)
1985 - 1995 Immunology, Course Coordinator, 1985, 1987

Graduate Students Directed

Bill Kournikakis, Ph.D. awarded 1982

"An Ultrastructural, Immunological and Physiological Study of the Mechanism of Antibody
Dependent Cellular Cytotoxicity."

Postdoctoral Fellow with Dr. Lorne Babiuk, Univ of Saskatchewan at Saskatoon, 1982-1985.

National Defense Scientist, Medicine Hat, Ontario, 1985-1990.

National Defense Senior Scientist, Medicine Hat, Ontario, 1990-Present.

Christie T. Davis, Ph.D. awarded 1984

"Purification and Characterization of Rat Fibroblast Interferon with An Emphasis on Identifying
Diversity."

Postdoctoral Fellow with Dr. Peter Vogt, University of Southern California School of Medicine,
1984-1985.

Postdoctoral Fellow with Dr. Luis Villarreal, University of California, Irvine, 1985 - 1991.

Recipient of NIH Individual Postdoctoral Fellowship, 1984-1987.

Computer Network Systems Manager and Drafting Supervisor, Smith Fause and Associates, Inc.,
El Segundo, CA, 1991- 2000.

President and CEO, Helix Analytical, 2000-Present.

Kerin Lee Fresa, Ph.D. awarded 1984

"Changes in Cellular Responsiveness Associated with Interferon-Mediated Modulation of Tumor
Growth."

Postdoctoral Fellow with Dr. Savtrir Tevethia, Hershey Medical Center of Penn State University.

Recipient of American Cancer Society Postdoctoral Fellowship, 1985-1987.

Assistant Professor, Department of Pathology, Hahnemann University College of Medicine, Philadelphia, PA, 1987-1994.

Associate Professor, Department of Microbiology, Philadelphia College of Osteopathic Medicine, Philadelphia, PA, 1994-1999.

Professor, Department of Microbiology, Philadelphia College of Osteopathic Medicine, Philadelphia, PA, 1999-Present.

Michael Kulka, Ph.D. awarded 1986

"Interaction of Mouse Interferon-B with Mouse L929 Cells: Receptor Binding, Antiviral Induction, Internalization and Degradation."

Postdoctoral Fellow with Dr. Laure Aurelian, Johns Hopkins University, 1986-1991.

Research Associate, SOM Department of Pharmacology and Experimental Therapeutics, University of Maryland of Baltimore, 1991-1995.

Research Assistant Professor, University of Maryland of Baltimore, 1995-Present.

Barbara Nelson, Ph.D. awarded 1987.

"Ability of Mitogen Stimulated Peripheral Blood Mononuclear Cells of Elderly Individuals to Produce and Respond to Cytokines."

Postdoctoral Fellow with Dr. Carol Nacy, Walter Reed Army Institute of Research, 1988-1993.

Science Specialist, Montgomery County Public Schools, 1995-1997.

Scientist, EntreMed, 1997-Present.

Eric A. Mann, M.D., Ph.D. awarded 1988

"The Effect of Interferons on Murine Lymphocyte Recirculation."

Resident, Otolaryngology, University of Connecticut Medical Center, 1988-1993.

Staff Physician, Otolaryngology, Walter Reed Medical Center, 1993-1999

Staff Scientist, NIH, Otolaryngology Research Center, 1999-Present

Deborah Matour, Ph.D. awarded 1988

"The Role of T Cell Phenotypes and Changes in Intracellular Calcium in Decreased lymphoproliferation of the Elderly."

Postdoctoral Fellow with Dr. Zedenka, Smith, Kline and French Laboratories, 1988-1992.

Consultant, Regulatory Affairs, Smith, Kline and French Laboratories, 1993-Present

Svetomir Markovic, Ph.D. awarded 1990

"Role of Immune Responses in Interferon - A/B Modulation of the Spontaneously Metastasizing B16F10L Murine Melanoma."

Medical Student, The Medical College of Pennsylvania, 1990-1993.

Resident, Internal Medicine, Mayo Clinic, Rochester, MN, 1993-1997.

Fellow, Hematology Oncology, Mayo Clinic, Rochester, MN, 1997-1999.

Assistant Professor, Hematology Oncology, Mayo Clinic, Rochester, MN, 1999-2005

Associate Professor, Medicine and Oncology, Director of Melanoma Program, Mayo Clinic, Rochester, MN 2005-Present.

Dawn A. Kirschmann, Ph.D. awarded 1992

"Inhibition of Macrophage-Induced, Antigen-Specific T Lymphocyte Proliferation by Poly I:C."

Postdoctoral Fellow with Dr. Benjamin Schwartz, Monsanto Corporate Research, Saint Louis, MO, 1992-1995.

Assistant Research Professor, Pediatric Research Institute, St. Louis University, St. Louis, MO, 1995-1996.

Assistant Research Scientist, Department of Anatomy and Cell Biology, University of Iowa, Iowa City, IO, 1996-2005.

Research Associate Professor, Cancer Biology and Epigenomics Program, Children's Memorial, Chicago, IL, 2005-Present.

I. Michael Goonewardene, Ph.D. awarded 1992

"Immune Parameters as Potential Biomarkers of Aging in the Long-Lived Brown Norway Rat."

Medical Student, Temple University School of Medicine, 1991-1995.

Resident, Medicine, University of North Carolina, 1995-1998.

Private Practice, 1998-Present.

Lisa Breuninger-Tenney, Ph.D. awarded 1993

"Effects of Endogenous Glucocorticosteroids on Lipopolysaccharide-Stimulated Interleukin-6 Production by Peripheral Blood Monocytes."

Postdoctoral Fellow, Fox Chase Cancer Center, Philadelphia, PA, 1993-1995.

Deneen Stewart, Ph.D. awarded 1995

"The Effect of Age on Endogenous and Exogenous Retrovirus Expression."

Postdoctoral Fellow, National Institutes of Allergy and Infectious Disease, Washington, DC, 1995-1996.

Postdoctoral Fellow, Food and Drug Administration, Bethesda, MD, 1996-1998.

Regulatory Affairs, SmithKline, Philadelphia, PA, 1998-Present.

Lois McCarthy, Ph.D. awarded 1995

"The Relationship of Mitogen-Induced Lymphoproliferation to Psychometric Status in the Elderly."

Postdoctoral Fellow, Department of Microbiology and Immunology, Temple University School of Medicine, Philadelphia, PA, 1996-Present.

Joseph Kutza, Ph.D. awarded 1995

"The Effect of Aging on Human Natural Killer and Lymphokine Activated Killer Cell Activity"

Postdoctoral Fellow, US Food and Drug Administration, Bethesda, MD, 1995 - 1998.

Staff Fellow, US Food and Drug Administration, Center for Biologics Evaluation and Research, Office of Therapeutics Research and Review, Division of Cytokine Biology, Bethesda, MD, 1998 – 2006.

Associate Director, CMC Regulatory Affairs, Immunology/Infectious Diseases, MedImmune, Inc. 2006-Present.

Xiao He, Ph.D. awarded 1996

"Response of Murine Splenocytes to Staphylococcal Enterotoxin b *in vitro*: Effects of Aging and Cytokines"

Postdoctoral Fellow, Department of Pathology, Washington University School of Medicine, St. Louis, MO, 1996-2000.

Research Associate, Fox Chase Cancer Center, Philadelphia, PA, 2000-2006.

Assistant Professor, Pathology, University of Utah, Salt Lake City, UT 2006-Present.

Erica Bernstein, Ph.D. awarded 1998

"The Role of Cell-Mediated Immunity After Influenza Vaccination of Healthy Elderly Individuals"

Medical Student, MCP Hahnemann University, 1998-1999.

Postdoctoral Fellowship, Spain, 1999-2000

Resident, Internal Medicine, Boston University, 2000-2005.

Assistant Professor, Medicine and Geriatrics, Boston University, 2005-Present.

Artur Plett, Ph.D. awarded 1999

"Age-Related Decrease in Murine Natural Killer Cell Activity After Interferon- α/β Stimulation"

Postdoctoral Fellow, Indiana University, 1999-Present.

Hematology/Oncology, Department of Medicine, Indiana University, Indianapolis, IN

Mohamed ElRefaei, Ph.D. awarded 2001

"The Effect of Aging on the Immune Response Against a Murine Leukemia Retrovirus"

Postdoctoral Fellow, University of California at Berkley, 2001-Present

John Po, Ph.D. awarded 2001

"Age-Associated Changes in Influenza A Virus-Specific CD8+ Lymphocyte Response in C57BL/6 Mice"

Medical Student, MCP Hahnemann University, 2001-2003

Resident, Boston Medical Center, 2003-Present

Yolanda Williams-Bey, Ph.D. awarded 2010

"The Effects of Regulatory T cells on an Age-Altered Specific CD8 T Cell Response Following Influenza Infection"

Postdoctoral Fellow, National Institute of Health, Bethesda, Maryland

Shoko Nogusa, Ph.D. awarded 2010

"Effects of Extrinsic and Intrinsic Factors on Age-associated Decline in Natural Killer Cell Activity during Primary Influenza Infection"

Postdoctoral Fellow, Fox Chase Cancer Center, Philadelphia, PA

BIBLIOGRAPHY

Papers Published

1. Lausch, R.N., D.M. Murasko, T. Albrecht and F. Rapp, 1974. Detection of specific surface antigens on cells transformed by cytomegalovirus with the techniques of mixed hemagglutination and 125I-labeled anti-globulin. *J. Immunol.* **112**:1680-1684.
2. Murasko, D.M. and R.M. Lausch, 1974. Cellular immune response to virus specific antigen in hamster bearing isografts of cytomegalovirus-transformed cells. *Int. J. Cancer* **14**:452-460.
3. Murasko, D.M. and R.N. Lausch, 1975. Spleen cell cytotoxicity for cytomegalovirus transformed cells. II. Inhibition by cytomegalovirus antiserum. *Int. J. Cancer* **16**:24-32.
4. Rapp, F.L. Geder, D. Murasko, R. Lausch, R. Ladda, E.S. Huang and M.M. Webber, 1975. Long term persistence of cytomegalovirus genome in cultured human cells of prostatic origin. *J. Virology* **16**:932-990.
5. Murasko, D.M. and R.N. Lausch, 1976. Immunostimulation of cytomegalovirus transformed cells and its inhibition by blocking sera. *J. Natl. Cancer Inst.* **56**:1083-1085.
6. Murasko, D.M., 1978. Apparent lack of H-2 restriction of allograft rejection. *J. Immunol.* **121**:958-961.

7. Murasko, D.M. and R.T. Prehn, 1978. Stimulatory effect of immunization on tumor induction by Moloney sarcoma virus. *J. Natl. Cancer Inst.* **61**:1323-1327.
8. Blank, K.J. and D. M. Murasko, 1980. Induction of interferon in AKR mice by various murine leukemia viruses. *Nature* **283**:494-495.
9. Murasko, D.M. and K.J. Blank, 1980. Induction of interferon-mediated transplacental effect in AKR mice. *Virology* **106**:248-495.
10. Blank, K. J. and D.M. Murasko, 1981. Effect of anti-interferon serum on Friend virus infection and FV-1 mediated resistance. *J. Interferon Res.* **1**:437-442.
11. Murasko, D.M. and M. Rusckowski, 1983. Production, screening and characterization of a monoclonal antibody to murine interferon-B. *J. Gen. Virol.* **64**:727-732.
12. Korngold, R., K.J. Blank and D.M. Murasko, 1983. Effect of endogenous interferon production on the level of thoracic duct lymphocyte output: induction with either poly I:C or vaccinia virus. *J. Immunol.* **130**:2236-2240.
13. Murasko, D.M., K. Fresa and R. Mark, 1983. Enhancement or inhibition of tumor growth by interferon: dependence on treatment protocol. *Int. J. Cancer* **32**:751-757.
14. Davis, C.T., E.P. Blankenhorn and D.M. Murasko, 1984. Genetic Variation in the ability of several strains of rats to produce interferon in response to polyriboinosinic - polyribocytidilic acid. *Infect. Immun.* **43**:580-583.
15. Murasko, D.M. and E.P. Blankenhorn, 1984. Genetic control of neutralizing antibody response to mouse interferon in rats. *J. Interferon Res.* **4**:435-440.
16. Davis, C.T., M. Rusckowski, D.A. Goldstein and D.M. Murasko, 1984. Production and partial purification of rat fibroblast interferon induced in a newly established cell line. *J. Interferon Res.* **4**:365-374.
17. Blank, K.L., L.N. McKernan and D.M. Murasko, 1985. Poly I:C or IFN a/b treatments inhibit macrophage induced T cell proliferation. *J. Interferon Res.* **5**:215-221.
18. Fresa, K.L., R. Korngold and D.M. Murasko, 1985. Induction of natural killer cell activity of thoracic duct lymphocytes by poly I:C or interferon. *Cell Immunol.* **91**:336-343.
19. Pace, J.L., S.W. Russell, P.A. LeBlanc and D.M. Murasko, 1985. Comparative effects of various classes of mouse interferon on macrophage activation for tumor cell killing. *J. Immunol.* **134**:977-981.
20. Davis, C.T., M. Rusckowski and D.M. Murasko, 1985. Biological similarities of rat fibroblast interferon to human and mouse alpha interferons. *J. Gen Virol.* **66**:1961-1968.
21. Fresa, K.L. and D.M. Murasko, 1986. Role of natural killer cells in the mechanism of the antitumor effect of interferon Moloney sarcoma virus transformed cells. *Cancer Res.* **46**:81-88.

22. Wrzos, H., D. M. Murasko and F. Rapp, 1986. Effect of antibody to interferon on genital herpesvirus infection in mice. *Microb. Path.* **1**:71-78.
23. Lotzova, E., C.A. Savary, M. Lowlachi and D.M. Murasko, 1986. Cytotoxic and morphological profile of endogenous and pyrimidinone-activated murine NK cells. *J. Immunol.* **136**:732-740.
24. Murasko, D.M., B.J. Nelson, R. Silver, D. Matour and D. Kaye, 1986. Immunological response to an elderly population: Mean age 85. *Am. J. Med.* **81**:612-618.
25. Kournikakis, B., J. Bozzola and D.M. Murasko, 1986. The ultrastructure of antibody dependent cellular cytotoxicity in HSV-1 infected and uninfected Chang liver cells. *Cytobios* **47**:73-84.
26. Kournikakis, B., J. Bozzola and D.M. Murasko, 1986. Ultrastructural study of biochemically modulated antibody dependent cellular cytotoxicity in HSV-1 infected and uninfected Chang liver cells. *Microbios* **48**:81-91.
27. Klczek, K., D.M. Murasko and K. Blank, 1987. Interferon-gamma, interferon - α/β and tumor necrosis factor differentially affect MHC class I expression in murine leukemia virus-induced tumor lines. *J. Immunol.* **139**:2641-2648.
28. Murasko, D.M., P. Weiner and D. Kaye, 1987. Decline in mitogen induced proliferation in the increasing age. *Clin. Exp. Immunol.* **70**:440-448.
29. Suzumura, A., E. Lavi, S. Bhat, D.M. Murasko, S.R. Weiss and J.H. Silberberg, 1988. Induction of glial cell MHC antigen expression in neurotropic coronavirus infection. *J. Immunol.* **140**:2068-2072.
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24. Murasko, D.M. and M.B. Mullen, 1986. Role of cells and Nk cells in inhibition of tumor growth by interferon. *Proc. Am. Assoc. Can. Res.* **27**:318.
25. Mann, E.N. and D.M. Murasko, 1986. Effect of interferons on murine lymphocyte recirculation. *UCLA Meeting on Interferon. Steamboat Springs, Co.*
26. Weiner, P., D.M. Murasko and D. Kaye, 1986. Decline in immune response with increasing age. *Proc. ICAAC.* **26**:129.
27. Nelson, B.J., D. Kaye and D.M. Murasko, 1987. Role of IL-2 in mitogen induced proliferation of peripheral blood mononuclear cells of elderly subjects. *Fed Proc.* **46**:788.
28. Matour, D., D.M. Murasko and D. Kaye, 1987. T cell phenotypes in response to mitogens on the aged. *Proc. ICAAC.* **27**:251.
29. Hubbel, H., H. Vargas, G. Gibson, K. Tsujimoto, E. Pequignat, R. Bigler, D. Murasko, W. Carter and D. Strayer, 1987. Non-T cell mediated immune augmentation and tumor growth inhibition by rIL-2 and ampligen. *Second Conf. Immunity to Cancer, Williamsburg, VA.*
30. Murasko, D.M., K. Fresa, and S. Markovic, 1989. Role of immune response in antitumor activity IFN. *Symposium: Changing Complexion of DNA Viruses, Hershey, PA.*
31. Markovic, S.M. and D.M. Murasko, 1990. Immunotherapy with IFN of the spontaneously metastasizing B16F10L murine malignant melanoma. *Proc. Am. Assoc. Cancer Res.* **31**:282.
32. Tsao, J.C., T.F. Gordon, C. Lerman, D. Murasko, and C. Maranto, 1990. The effects of progressive muscle relaxation and directed biological imagery on immune response (S-IgA). *Soc. Behav. Med.* **11**:22.

33. Murasko, D.M., I.M. Goonewardene, and D. Matour, 1990. Lymphoproliferation, lymphokines and heterogeneity with age. *J. Cell Biochem.* **14B**:48.
34. Murasko, D.M., 1990. Immune reactivity, morbidity and mortality of elderly humans. Sixth International Symposium on Infections in the Immunocompromised Host, Peebles, Scotland.
35. Markovic, S.N. and D.M. Murasko, 1990. Treatment with interferon prior to surgery of the spontaneously metastasizing B16-F10L murine melanoma: Role of NK cells. Third International Congress of the Metastase Research Society, Bethesda, MD.
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37. Kirschmann, D.A. and D.M. Murasko, 1991. Inhibition of macrophage-induced, antigen-specific T-cell proliferation by poly I:C. *FASEB J.* **5**:A1375.
38. Markovic, S.N. and D.M. Murasko, 1991. $\text{Lyt}2^+$ cells mediate general anesthesia induced inhibition of interferon stimulation of natural killer cell activity. *FASEB J.* **5**:A630.
39. Goonewardene, M.I. and D.M. Murasko, 1991. The effects of dietary restriction and aging on T-cell subsets in male and female Brown Norway rats. *FASEB J.* **5**:A1690.
40. Kirschmann, D.A. and D.M. Murasko, 1991. Splenic and inguinal lymph node (ILN) T cells respond differently to distinct antigenic stimuli in aged mice. *Gerontologist* **31**:171.
41. Kutza, J. and D.M. Murasko, 1991. Innate and inducible NK activity of elderly humans. *Gerontologist* **31**:179.
42. Goonewardene, I.M., E.M. Fontanilla and D.M. Murasko, 1991. Calcium ionophore (CaI) A23187-induced lymphocyte proliferation in aging rats and the effects of dietary restriction (DR). *Gerontologist* **31**:170.
43. McCarthy, L.E., I. Katz, R. Intrieri and D.M. Murasko, 1991. Association of mitogen induced lymphoproliferation (MIL) with psychometric parameters. *Gerontologist* **31**:179.
44. Ryan, Q.C., I.M. Goonewardene and D.M. Murasko, 1991. Characterization of SV40 large T transfected human T lymphocytes. *Gerontologist* **31**:170.
45. Kirschmann, D.A. and D.M. Murasko, 1992. Possible modulation of a costimulatory molecule on peritoneal macrophages by Poly I:C. *FASEB J.* **6**:A
46. Ryan, Q.C. and D.M. Murasko, 1992. Phenotypic selection of extensive population doubling by SV40 large T in subsets of human T lymphocytes. *Gerontologist* **32**:214.
47. Murasko, D.M., D. Stewart and K. Blank, 1993. Endogenous retrovirus expression. *J. Cell Biochem.* **17B**:63.

48. Murasko, D.M., M. Dorfman and D. Kaye, 1993. Cell mediated immune response to influenza vaccination in three groups of elderly subjects. *Proc. ICAAC*. **33**:348.
49. Kutza, J. and D.M. Murasko, 1993. In vitro induction of NK activity of young and elderly humans. *J. Immunol.* **150**(8):300A.
50. Ryan, Q. and D. Murasko, 1993. Heterogeneity of transcriptional changes of IL-2 gene expression in elderly humans. *Gerontologist* **33**:237.
51. Murasko, D.M. and Q.C. Ryan, 1994. Functional activity of long-term normal and SV40 transfected T lymphocyte cultures. *In Vitro Cell. & Develop. Biol.* **30A**(3):46.
52. Kutza, J. and D.M. Murasko, 1994. Effects of aging on *in vitro* LAK cell induction and cytokine stimulated NK activity of humans. (Exper. Biol. '94). *FASEB J.* **8**(5):A987.
53. Loiacono, L.A., J. Kutza, I. Gratz and D.M. Murasko, 1994. Basal and stimulated human natural killer (NK) cell activity prior to and after surgery under general anesthesia. Association for Academic Surgery 28th Annual Meeting.
54. Liu, T., X. He, D.M. Murasko and K.U. Kahng, 1995. Decreased splenocyte proliferation and cytokine production after bile duct ligation in the rat. *Surgical Forum*.
55. He, X. and D.M. Murasko, 1995. Effect of aging on mitogenic responses and cytokine profiles of old and young DBA/2 splenocytes. *Experimental Biology*.
56. He, X. and D.M. Murasko, 1995. Cytokine production by splenocytes of IFN- γ receptor knock-out mice. 9th International Congress of Immunology.
57. Gardner, E.M., E.D. Bernstein, M. Dorfman, E. Abrutyn, and D.M. Murasko, 1996. Relationship between nutritional status and immune function in healthy elderly individuals. First International Conference on Immunology and Aging, Bethesda, MD. Abstract S-90.
58. Bernstein, E.D., E.M. Gardner, M. Dorfman, E. Abrutyn, P. Gross, and D.M. Murasko, 1996. Cytokine production in the immune response to influenza vaccination in a healthy elderly population. First International Conference on Immunology and Aging, Bethesda, MD. Abstract S-106.
59. Plett, P.A., J. Kutza, D.C. LaTemple, L. Tang, and D.M. Murasko, 1996. Effect of IFN-a/b stimulation on natural killer cell activity in young vs. old mice. First International Conference on Immunology and Aging, Bethesda, MD. Abstract S-23.
60. Gardner, E.M. and D.M. Murasko, 1996. The effects of caloric restriction on immune function in Fischer 344 x Brown Norway (F1) rats. Conference on Aging and Functional Nutrition, Abstract 39.
61. Liu, T., J.A. Wargo, M. Leong, D.M. Murasko, and K.U. Kahng, 1997. Nitric Oxide (NO) production by splenocytes is increased after bile duct ligation (BDL) in the rat. Society for Surgery of the Alimentary Tract Annual Meeting.

62. Hoffman, M., J. Posner, and D.M. Murasko, 1998. Cell mediated immune response to influenza vaccination in three groups of elderly subjects. Annual Meeting of the American Geriatrics Society/American Federation for Aging Research.
63. Murasko, D.M., O. Likhyan, L. Cabral, E. Khan, L. Talangbayan, and M. Trinh, 2000. Wanted: Women Physicians to do Clinical Research. AAMC Annual Meeting, Washington, DC.
64. Elrefaei, M., K.J. Blank, and D.M. Murasko, 2000. Prolonged E55+ Retrovirus expression in aged mice is associated with decreased anti-virus immune response. FASEB J. **14**:A1038 (Abstract 93.15)
65. Gardner, E.M., B.A. Cocca, S.F. Shreiner, and D.M. Murasko, 2000. Relationship between proliferative responses and phenotypic profiles of peripheral blood T lymphocytes from healthy elderly after influenza vaccination. FASEB J. **14**: A950 (Abstract 42.17).
66. Gardner, E.M., E.D. Bernstein, K.A. Popoff, M. Dorfman, P.A. Gross, E. Abrutyn, and D.M. Murasko, 2000. Immune response to influenza vaccine in healthy elderly: Lack of association with plasma β -carotene, retinal, α -tocopherol, or zinc. FASEB J. **14**: A1236 (Abstract 195.10).
67. Po, J.L., P.D. Katsikis, E.M. Gardner, and D.M. Murasko, 2000. Reduced numbers of virus-specific CD8⁺ T lymphocytes in aged mice with influenza infection. FASEB J. **14**: A1039 (Abstract 93.11).
68. Po, J.L., E.M. Gardner, P.D. Katsikis, and D.M. Murasko, 2000. Pulmonary immune response after influenza infection: age-related decline in the number of virus-specific CD8⁺ T lymphocytes in individual C57BL/6 mice. Infection and Immunity Forum, Philadelphia, PA.
69. Langkamp-Henken, B., B.S. Bender, E.M. Gardner, K.A. Herrlinger-Garcia, M.J. Kelley, J. McEwen, D.M. Murasko, J. Schaller, J.M. Simpson, J.K., Stechmiller, D. Thomas, and S.M. Wood, 2001. Nutritional formula enhanced immune function and reduced upper respiratory tract infection (URTI) symptoms in a randomized, double-blind, controlled trial in older adults. Experimental Biology March 31-April 4, 2001, Orlando, FL.
70. Po, J.L., F. Anaraki, E.M. Gardner, P.D. Katsikis, D.M. Murasko, 2001. Decreased virus-specific CD8⁺ T lymphocytes in the secondary response of aged mice. FASEB J.
71. Langkamp-Henken, B., S.M. Wood, K.A. Herrlinger-Garcia, J.K. Stechmiller, D.J. Thomas, B.S. Bender, J.P. Schaller, E.M. Gardner, D.M. Murasko. Nutritional formula improved immune profiles in a nursing home population. FASEB J. 2004; 18(4):A9.

INVITED SEMINARS AND PRESENTATIONS

1977	Women in Science Conference, University of Maine of Orono
1978	Women in Science Conference, University of Maine of Orono
1979	Douglass College, Dept. of Biology, New Brunswick, NJ. "Effect of Interferon on Murine Leukemias."
1980	The Jackson Laboratory, Bar Harbor, Maine. "Effect of Interferon on Endogenous Leukemia Viruses."
1980	Women in Science Conference University of Maine of Orono

- 1980 Cook College, Dept. of Plan Pathology, New Brunswick, NJ. "Interferons: Production, Purification and Use."
- 1980 American Cancer Society's Science Writers' Seminar Daytona Beach, Florida. "Transplacental Interferon - Mediated Effect in AKR Mice."
- 1981 Thomas Jefferson University, School of Medicine, Department of Microbiology. "Effect of Interferon on Murin Leukemia."
- 1981 Chairperson: Immunology VI: Interferons American Assoc. for Cancer Research Annual Meeting, Washington, DC.
- 1982 Hershey Medical Center, Department of Microbiology, "Effects of Interferon on Retrovirus Induced Tumors."
- 1982 University of Pennsylvania, School of Medicine, Department of Pathology, "Interferon, Leukemia and Immunity."
- 1982 Rutgers University at Camden, Department of Biology. "Interferon and Murine Leukemias."
- 1982 Co-chairman, Third Philadelphia Immunology Conference for 200 area Immunologists.
- 1983 Warminster Hospital. "Antiviral Agents."
- 1983 Smith, Kline and French Laboratories. "Effect of Interferon on Murine Tumors."
- 1983 Co-chairman of session at Fourth Philadelphia Immunology Meeting. "Antiviral and Tumor Immunity."
- 1984 Clinical Ligand Assay Society. "Use of Monoclonal Antibodies and Identification of Leukocyte Subpopulations for Research and Clinical Diagnostic Techniques."
- 1984 Quakertown Hospital. "Update in Immunology."
- 1984 American Society for Biological Sciences, St. Joseph's University, Philadelphia. "Interferon: Fact and Fiction."
- 1984 Co-Chairman of Session at Fifth Philadelphia Immunology Meeting. "Lymphokines and Soluble Mediators of Immune Responses."
- 1984 Based Institute for Immunology, Switzerland. "Effect of a/b Interferons on Lymphocyte Recirculation."
- 1984 University of Maastutch, Netherlands. "Effect of Interferons on Lymphocyte Recirculation."
- 1985 Department of Microbiology, Hahnemann Medical College. "Modulation of Tumor Growth by IFN-a/b."
- 1985 Medicine Grand Rounds, West Park Hospital, Philadelphia. "Update in Immunology."
- 1985 Allergy and Immunology Division, Department of Medicine University of Pennsylvania. "HLA and Disease."
- 1985 Department of Comparative and Experimental Pathology, University of Florida. "Modulation of Tumor Growth by IFN-a/b."
- 1986 Medicine Grand Rounds, The Medical College of Pennsylvania. "Immunology and Endocrinology: An Overview."
- 1986 Smith, Kline and French Research Laboratories. "Changes in Lymphocyte Proliferation in Elderly Humans."
- 1987 Department of Microbiology and Immunology, Temple University School of Medicine. "Modulation of Tumor Growth by IFN."
- 1988 Keynote Speaker, Science and Mathematics Institute for Women, Douglass College.
- 1988 The Jackson Laboratory, Bar Harbor, Maine. "Modulation of Immune Response

- by IFN."
- 1988 Department of Biology, Trenton State College. "Changes in Immune Response with Age."
- 1989 Department of Pathology, Hahnemann School of Medicine. "Changes in Immune Response with Age."
- 1989 Philadelphia Geriatric Center. "Changes in Immune Response with Age."
- 1989 Invited Symposium Speaker at 19th Annual American Aging Association Meeting. "Immune Response of Elderly Populations."
- 1989 Invited Symposium Speaker at 42nd Annual Gerontological Society of American Meeting. "The Brown Norway Rat: Immune Response in Aging Similar to Humans."
- 1989 Continuing Education Seminar, The Medical College of Pennsylvania. "Basic Immunology 1989: Update for Pharmacists."
- 1989 Invited Speaker at Correlations of Aging and Space Effects on Biosystems Workshop. "Heterogeneity of Immune Response in Elderly Humans and Rodents."
- 1990 Invited Symposium Speaker at 6th International Symposium on Infections in the Immunocompromised Host. "Immune Reactivity, Morbidity and Mortality of Elderly Humans."
- 1990 Gerontology Research Center, National Institute of Aging, Baltimore, MD. "Heterogeneity of Changes in Immune Response with Increasing Age."
- 1990 Johnson and Johnson Headquarters, New Brunswick, New Jersey. "Immunological Markers of Aging."
- 1990 Sigma Xi, Lecture, Georgia Institute of Technology. "Role of NK and T Cells in Antitumor Activity of Interferon."
- 1990 Panel Participant, Science and Mathematics Institute for Women, Douglass College.
- 1991 Medical Oncology Grand Rounds, Pittsburgh Cancer Institute. "Neoadjuvant Interferon Therapy of Murine (B16) Metastatic Melanoma: Role of NK and T-Cells."
- 1991 Invited Speaker, Research Perspectives in Psychoneuroimmunology III, Columbus, Ohio. "Changes in Immune Response with Increased Age: Heterogeneity of Proliferation and Lymphokine Production."
- 1991 Department of Microbiology and Immunology, Hahnemann School of Medicine. "Interferon-Induced Inhibition of Spontaneous Metastases of B16F10L Melanoma: Mechanisms of Success and Failure."
- 1991 Speaker in Symposium "Pharmacy's New Frontier: The Biopharmaceuticals." Lehigh Valley Hospital Center. "Overview of Immunology for Pharmacists."
- 1992 Third Geriatric Board Review Program, Lancaster, PA. "Changes in the Immune Response with Age."
- 1992 Smith, Kline Beckman. "Immune Response of the Elderly to Influenza Infection."
- 1992 Invited Speaker, Aging - Model and Risk Factor for Neurobehavioral Dysfunction in AIDS Conference, National Institute of Mental Health. "Immune Response in Aged Animals: Normal and Retrovirus-Induced."
- 1992 Chairman, "Immunogerontology Minisymposium," 22nd Annual American Aging Association Meeting.
- 1992 Invited Speaker, 22nd Annual American Aging Association Meeting, "Heterogeneity of Immune Response in the Elderly."

- 1992 Department of Medicine, Albany School of Medicine. "Heterogeneity of Immune Response with Age."
- 1993 Chairman, "Biology of Retroviral Disease Session", 84th Annual American Association of Cancer Research Meeting.
- 1993 Huffington Center on Aging, Baylor College of Medicine, "Functional Activity of Primary and Long Term Lymphocyte Cultures of Aged Humans."
- 1993 Small Group Discussion Speaker, American Association of Medical Colleges, "Rewards for Teaching: The Value of Tenure for Medical Educators."
- 1993 Medical College of Pennsylvania Dean's Lecture Series, "Changes in Immune Response with Age: What, When, How and So What?"
- 1994 Invited Speaker, NIA and WHO Conference on Vaccine Development for Immunization of the Elderly. "Clinically Relevant Outcome Measures of Influenza Vaccine Studies."
- 1994 Invited Speaker, International Life Science Institute Conference on Dietary Restriction: Implications for Design and Interpretation of Toxicity and Carcinogenicity Studies. "Effect of Caloric Restriction on Endogenous and Exogenous Retrovirus Expression in Mice."
- 1994 Department of Medical Microbiology and Immunology, Ohio State University. "Changes in Immune Response with Age: What, When, How and So What?"
- 1994 Faculty, The Medical College of Pennsylvania Symposium. "Women's Health in Medical Education."
- 1994 Invited Speaker, West Virginia University, Women in Academic Medicine and Law: Professional Development Conference. "Comprehensive Women's Health - A Plan for the Future."
- 1994 Invited Speaker, Tissue Cell Culture Meetings. "Senescence of Human Lymphocytes In Vivo and In Vitro."
- 1994 National Meeting: Graduate Women in Science. Conference: Topics in Women's Health. Moderator of Panel: "Comprehensive Women's Health - A Plan for the Future."
- 1994 Invited Symposium Speaker, Gerontology Society of America Meeting. "Changes in Immune Response with Increasing Age: Status in 1994."
- 1994 Panel Discussant, Caloric Restriction Satellite Meeting, Gerontology Society of America.
- 1994 Immunology and Innate Immunity Minisymposium, 15th Philadelphia Regional Immunology Conference
- 1995 Department of Microbiology & Immunology, Northeast Ohio College of Medicine. "Effect of Age on Innate and Specific Immune Responses."
- 1995 Department of Physiology and Cell Biology, Bowman Gray College of Medicine. "Changes in Immune Response with Age: From Mice to Man."
- 1995 Grand Rounds, Philadelphia Veterans Administration Medical Center. "Changes in Immune Response with Age: From Test Tube to Flu."
- 1995 Co-Chair, Sixteenth Annual Philadelphia Immunology Conference.
- 1996 Visiting Professor, University of Texas Health Science Center, San Antonio, TX. Medicine: "Cell-Mediated Immune Response to Influenza in Healthy Elderly." Gerontology: "The Effect of Caloric Restriction on Immune Response and Retrovirus Infections."
- 1996 Department of Biology, St. Joseph's University, Philadelphia. "Age-Associated Changes in Effectiveness of Influenza Immunization."
- 1996 Co-Chair, Session on Immunology/Growth/Differentiation Beyond Hunt Valley: Research on Women's Health for the 21st Century?

- 1996 Plenary Session: "Heterogeneity of Changes in Immune Response with Increasing Age," International Conference on Aging and Immune Response, Washington, DC.
- 1996 Plenary Session: "Effect of Caloric Restriction on Impairment of Immune Response with Increasing Age," 26th Annual Meeting of American Aging Association.
- 1996 Distinguished Professor: "Heterogeneity of Immune Response of the Elderly: Implications for Influenza Immunization."60.
- 1996 Heterogeneity of immune response in elderly subjects: Influence of diet, genetics, and psychometric status. Conference on Aging and Functional Nutrition, San Francisco, CA
- 1997 Seminar, "Effects of Spaceflight on the Age-Associated Changes in Immune Response," Age and Space Flight: Expanding the Science Base, NASA and NIA, Bethesda, MD.
- 1997 Medical College of South Carolina and The Basic Science Education Forum, "The Impact of Downsizing on Medical Education and the Basic Sciences," Strategies for Teaching Medical Sciences in the 21st Century.
- 1997 Discussant, Mind/Body Program Symposium Series, Arthur Stone, Ph.D., "New Frontiers in Mind/Body Research," Allegheny University of the Health Sciences, Philadelphia
- 1997 Seminar, "Immune Response to Influenza Vaccination in the Elderly: Heterogeneity, Nutrition, Psychosocial Factors," Ross Products Division, Abbott Laboratories, Columbus, Ohio
- 1997 Seminar, "Influence of Age-Associated Decline in Immune Response on Tumor Immunity and Viral Infections," Ohio State University, Columbus, OH
- 1998 "Identification and Characterization of Immune Parameters as Biomarkers of Aging," Biomarkers of Aging and Longevity Workshop, Italy
- 2000 Seminar, "Effect of Age on Immune Response to Viral Infection: A Story of Mice and Men," Department of Microbiology, University of Pennsylvania, Philadelphia, PA
- 2000 "Aging and Cellular Immunity: An Overview," Vaccines 2000 Meeting, Washington, DC
- 2001 "Immune Response to Influenza Vaccination in Elderly: Antibodies, T Cells, and Cytokines," IMAGINE: Immunology and Aging in Europe Meeting, Cordoba, Spain
- 2002 Visiting Professor, University of Illinois
- 2004 "Age Associated Changes in Adaptive Immunity", Symposium on Inflammatory Cytokines and Aging.
- 2004 "Immune Response of the Elderly to Primary Virus Infections" and chaired a session on "Enhancement of Immune Responses in the Elderly", Trudeau Institute in Saranac Lake, NY
- 2004 "CD8 TCell Response to Influenza", Gerontological Society of America, Washington, DC
- 2006 "Response of Aged Mice to Virus Infection: Too Little, Too Late", Symposium on Aging of the Immune System: Causes and Remedies, Portland, Oregon,
- 2006 "The Challenge of Vaccinating the Elderly", 2006 Keystone Symposium on Advances in Influenza Research: From Birds to Bench to Bedside, Steamboat Springs, Colorado.
- 2006 "Type I Interferon and Immunity in Old Age", Aging Research In Immunology: the Impact of Genomics, 2006 Symposium, Paris, France

- 2007 “Biological Considerations Related to the Potential of Plasma: A Microbiologist’s Perspective”, 2007, NATO: Advanced Study Institute on Plasma Assisted Decontamination of Biological & Chemical Agents, Turkey
- 2008 *Advancing Women’s Leadership Forum*, American Council on Education, Office of Women in Higher Education, 71st National Leadership Forum”, 2008, Washington, DC
- 2008 “Intrinsic and Extrinsic Control of CD8T Cell Response to Primary Influenza Virus Infection”, 2008, US-Japan Cooperative Medical Sciences Program, Immunosenescence Workshop, San Francisco, California
- 2008 “Biological Considerations of Application of Plasma to Medical Systems”, 2008 Gordon Research Conference on Plasma Processing Science (GRC-PPS): Plasma in Biology and Medicine, South Hadley, Massachusetts
- 2008 ASP-IDSA Workshops on “Immunization and Older Adults”, 2008, Washington, DC
- 2009 “Immune Response to Influenza in the Aged: A Story of Mice and Men”, 96th Annual Meeting of The American Association of Immunologists, 2009, Seattle, WA
- 2010 “You Want to Do What? (Yes, Women Can Do Anything They Want)” Keynote Address, American Chemical Society Women’s Luncheon