CURRICULUM VITAE

PERSONAL INFORMATION:

NAME: Gayle E. Woloschak

ADDRESS: Department of Radiation Oncology
Department of Radiology
Department of Cell and Molecular Biology
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Feinberg School of Medicine
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www.feinberg.northwestern.edu/igp/facindex/WoloschakG/htm.

SECURITY CLEARANCE: TOP SECRET

DATE OF BIRTH: 4 June 1955
PLACE OF BIRTH: Sharon, Pennsylvania

SEX: Female
MARITAL STATUS: Single, no children

PROFESSIONAL INFORMATION:

TITLE: Professor (tenured); Associate Director Radiation Oncology Residency Program; Cancer Nano Materials Program Co-Leader, Robert H. Lurie Comprehensive Cancer Center, Northwestern University

APPOINTMENTS: Associate Director for Microbeam Science, Bio-CAT
Individual Investigator/Visiting Senior Scientist XOR-CAT
Advanced Photon Source, Argonne National Laboratory
Argonne, IL 60439

Member, Center for Genetic Medicine and Cancer Center;
Member, Graduate Faculty

Member, International Institute for Nanotechnology
Northwestern University Medical Center
Chicago, IL 60611

Associate Director, Zygon Center for Religion and Science
Adjunct Professor of Science and Religion
Lutheran School of Theology at Chicago
Chicago, IL

Visiting Senior Scientist
Bundeswehr Institute of Radiobiology
Munich, Germany

Lecturer
Rosalind Franklin Medical School
North Chicago, IL

Visiting Professor
Alexandria University, School of Medicine
Alexandria, Egypt

Chinese Academy of Sciences Visiting Professor
Ningbo Institute of Materials Technology and Engineering
Ningbo, China

EDUCATION:

1973-1976	B.S., summa cum laude; Biological Sciences; Youngstown State University, Youngstown, OH.
1976-1980	Ph.D., Medical Sciences (Microbiology); Medical College of Ohio, Toledo, OH.
1980-1983	Postdoctoral Research Fellow; Department of Immunology and Department of Cell Biology; Mayo Clinic, Rochester, MN.

POSITIONS HELD:

1983-1987	Associate Consultant, Assistant Professor, Department of Molecular Biology and Biochemistry and Department of Immunology, Mayo Clinic, Rochester, MN.
1987-1991	Assistant Scientist, Argonne National Laboratory, Argonne, IL.

1991-1994	Scientist, Biological and Medical Division, Argonne National Laboratory, Argonne, IL.
1994-2001	Group Leader and Molecular Biologist, Bioscience Division, Molecular Radiobiology Group, Argonne National Laboratory, Argonne, IL
Feb. 2001-June 2002	Senior Molecular Biologist, Bioscience Division, Argonne National Laboratory, Argonne, IL; Senior Fellow, Nanosciences Consortium, Argonne National Laboratory-University of Chicago
July 2002-present	Professor, Department of Radiation Oncology, Department of Cell and Molecular Biology, Department of Radiology, Northwestern University, Feinberg School of Medicine, Chicago, IL
January 2011-present	Co-chair, Department of Radiation Oncology Research Program

CURRENT RESEARCH INTERESTS:

Primary interests center around (1) studies of the acute and late radiation toxicities, (2) studies of gene regulation following stress responses such as radiation exposure, and (3) development of nanostructures and nanotechnology for intracellular manipulation

RESEARCH SUPPORT:

Funding Source	Title	Effort	Period
Fraternal Order of Eagles	Effects of the tumor promoter TPA on gene induction in mouse embryo AKR-2B cells	Principal Investigator	09/01/83-08/31/84
ACS IM-348 (American Cancer Society)	Immunoglobulin gene expression in myeloma and in normal lymphoid tissues	Principal Investigator	07/01/83-06/30/85
Warner Endowment for Lymphomatoid Granulomatosis Research	Gene expression in lymphomatoid granulomatosis	Principal Investigator	04/01/85-03/30/87
Training Grant CA09127-12	Tumor immunology and immunoregulation	Co-investigator	07/01/86-06/30/87
Fraternal Order of Eagles	Molecular characterization of B-lymphocyte abnormalities in ataxia telangiectasia model	Principal Investigator	07/01/86-06/30/87
Fraternal Order of	Oncogene expression in fresh human thyroid	Co-investigator	07/01/86-

Eagles	tumors		06/30/87
NIH	Biochemical characterization of T_H cell activation	Co-investigator	07/01/86-06/30/91
DOE Contract W-31-109-ENG-38	Genetic effects of high LET radiation	Principal Investigator	06/01/87-present
DOE grant	Inactivation of cancer suppressor genes in radiation-induced tumors	Principal Investigator	02/01/90-present
NIH (NIEHS)	Changes in gene expression accompanying exposure to EMF	Principal Investigator	09/30/94-09/29/97
NIH (NCI)	UV-Induced NF-kB Regulon	Principal Investigator	12/01/96-11/30/99
NIH (NCI)	2 Minority Supplements for UV-Induced NF-kB Regulon	Principal Investigator	12/01/96-11/30/99
NIH (NINDS) Program Project	Pathogenesis of Motor Neuron Disease (Project 3: The pathogenesis of motor neuron disease in the wasted mouse)	Principal Investigator (Project 3)	5/01/98-4/30/03
Lab Director Research Directed grant	Subcellular Localization of Proteins	Principal Investigator	07/01/99-09/30/00
Univ. Chicago-ANL Collaborative Seed Project	TcR Polymorphism in Autoimmune Disease: Analysis by Microchip Array Technology (PI: A. Mirzabekov, J. Bluestone)	Co-Investigator	10/01/98-09/30/00
Lab Director Research Directed grant (ANL)	Comprehensive Functional Characterization of Genomes Subtask 3. DNA- and Metal-binding Proteins	Principal Investigator of Subtask 3	01/01/01-06/28/02
NIH (NCI)	**PCNA Promoter Deletion in Radiosensitive Mice**	**Principal Investigator**	**12/01/99-11/30/04**
NIH (NCI)	Minority supplement for PCNA Promoter Deletion in Radiosensitive Mice	Principal Investigator	06/01/01-11/30/03
DOE/LDRD	Nano-Biocomposite structures; Consortium for Nanoscience Research theme project	Co-Principal Investigator	10/01/01-06/28/02
NIH (NCI)	Application of TiO2-DNA nanocomposites to Cancer Cells	Principal Investigator	03/01/04-02/28/07
NIH (NCI)	Minority supplement: Application of TiO2-DNA nanocomposites to Cancer Cells	Principal Investigator	03/01/04-02/28/07

NIH Breast Spore Project	**U**se of TiO_2 –oligonucleotide nanocomposites for site-specific cleavage of ErbB2 gene replicas in breast cancer cells and inactivation of ErbB2 mRNA	Principal Investigator	10/03/03-09/30/04
NIH (NIBIB)	**Applications of TiO2 nanocomposites**	**Principal Investigator**	**04/01/05-03-31/15**
DOE	Dog/Mouse Tissues from ANL Long-term Radiation Studies	Principal Investigator	09/01/04-
NIH Prostate Spore Project	TiO2 nanocomposites for Prostate Cancer	Principal Investigator on Project	05/01/05-
DOE	Adaptive Response Mechanisms after Chronic Whole-Body Exposure to Low LET Radiation	Principal Investigator	07/01/05-
DOE	Workshop October 2005: Radiation Risk from Chronic Low Dose-Rate Radiation Exposures	Principal Investigator	10/01/05-
NIH CCNE	**Project 5: TiO2 Nanoparticles as Therapy For Prostate Cancer**	**Project Leader (C. Mirkin, CCNE PI)**	**11/01/05-10/30/10**
NIH CCNE supplement	**Minority supplement for Project 5**	**Project Leader (C. Mirkin PI)**	**11/01/08-10/30/10**
DOE	Studies of the effects of radioprotectors on Microsatellite repeats	PI	10/01/06-09/30/09
NSF	**Midwest Crossroads AGEP**	**Investigator**	**06/01/05-present**
Rosenberg Foundation	Imaging Applications in the Rabbit	Coinvestigator (PI: Omary)	04/01/08-03/31/09
DOE	**An Integrated Program Project: Studies of Adaptive Responses**	**PI of Program Project/Project Leader Project 1**	**07/15/09-07/14/14**

NIH-R25	**Training grant: Cancer Nanotechnology in Imaging and Radiotherapy**	**PI**	**10/01/09-09/3014**
NIH-S10	**HEI grant: Bionanoprobe for Detection oflements in Cells**	**PI**	**07/01/10**

AWARDS:

1973-1976	Full academic scholarship awarded by Youngstown Education Foundation and Youngstown State University.
1976	Elected to Gould Society for academic achievement.
1976	Elected to Phi Kappa Phi Honorary national fraternity.
1976	Elected to Omicron Lambda Honorary biological fraternity.
1976-1980	Graduate Student Predoctoral Fellowship awarded by Medical College of Ohio.
1980-1983	NIH cancer training grant.
1986-1987	Teacher of the Year Award, Mayo Graduate School
2005-2006	Teacher of the Year Award, Association of Residents in Radiation Oncology, Northwestern University
2008	American Cancer Society Researcher's Recognition Award
2009	Niles Distinguished Lecturer, St. Lawrence University, NY
2010	Rosalind Franklin University Outstanding College of Health Professions Educator Award
2010	Teacher of the Year Award, Association of Residents in Radiation Oncology, Northwestern University

PROFESSIONAL ORGANIZATIONS:

American Society for Microbiologyn//
American Association for the Advancement of Science
American Institute of Biological Sciences
American Association of Immunologists
Sigma Xi (Vice-President, ANL Chapter, 1997)
Radiation Research Society
Society for Mucosal Immunology
American Society for Cell Biology
American Association for Cancer Research
American Society for Photobiology
The Bioelectromagnetics Society
European Society of Radiation Biology
Radiology Society of North America
European Bioelectromagnetics Association

American Society for Therapeutic Radiology and Oncology
American Society for Nanotechnology

EXTRAMURAL ACTIVITIES:

Committees:

Graduate Committees: 1 M.D./Ph.D. student, 10 Ph.D. students, 4 total theses from the lab, 7 post-doctoral trainees
Member, Science and Engineering Research Semester Program Committee, DOE, 1988-
Member, Autumn Immunology Conference Council, 1989-1994
Member, coordinated research program on low dose/low dose-rate radiation, International Atomic
Energy Agency
Member, Abstract Review Committee, Radiation Research Society, 1994-2000 annual meetings
Member, Program Committee, 49th Annual Radiation Research Society Meeting, 1996
Member, Fund-raising Committee, Radiation Research Society, 1994-1997
Member, Awards Committee, Radiation Research Society, 1996-1999
Member, Low Dose Planning Subcommittee, Department of Energy's Biological and Environmental Research Advisory Committee
Organizer, Joint Radiation Research Program between Tohoku University (Sendai, Japan) and Argonne National Laboratory, 1996 - Present
Member, Advisory Committee, Program Project for Columbia University Center for Radiobiology, 1998-present
Invited Participant, American Institute of Biological Sciences and U.S. Army Research and Material Command Breast Cancer Research Program Knowledge Harvest, 1999
Consultant, National Council of Radiation Protection Committee 89-3, Health Effects of Low-Frequency Electric and Magnetic Fields, 1999-2003
Member, Program Committee, Bioelectromagnetics Society, 2000-2002
Member, Nominations Committee, Radiation Research Society, 2000-2001
Member, Microarry Core Facility Oversight Committee, University of Chicago, 2000-
Member, Finance Committee, Radiation Research Society, 2001-2005
Member, SCOBA Social and Moral Issues Commission, 2002-present
Member, National Academy of Sciences Committee to Assess Potential Health Effects from Exposures to PAVE PAWS Low-Level Phased Array Radiofrequency Energy, 2002-2006
Member, National Council on Radiation Protection and Measurements, 2003-2015; member PAC-1 Committee
Chairman, NASA’s Radiation Discipline Working Group, 2003-2009
Member, Nuclear Medicine Technology School Advisory Committee, Northwestern Memorial Hospital, 2003-present
Member, Scientific Advisory Committee, Center for Nanoscale Materials, Argonne National Laboratory, 2005-2007; Vice-Chair 2007-2009
Member, Government Relations Federal Resources Subcommittee, American Society for Therapeutic Radiology and Oncology (ASTRO), 2005-present
Member, ABR Committee for writing questions for the Radiation Oncology Boards, Radiobiology component, 2005-present

Member, ASTRO Committee for writing questions for the Radiobiology Practice Exam, 2005-present
Member, National Academy of Sciences Committee on Shielding from Space Radiation, 2006-2008; report published "There and Back: Managing Space Radiation Risk in the Exploration Era", published March 2008
Member, Board of Directors, Center for Advanced Studies in Religion and Science, 2007-present
Chair, Scientific Advisory Committee, X-ray Microscopy and Imaging Group, Advanced Photon Source, Argonne National Laboratory, 2008-present
Member, Experimental Facilities Advisory Committee, National Synchrotron Light Source-II Brookhaven National Laboratory, 2008-present
Member, Joint Publication Board, Zygon
Member, National Research Council committee, National Academy of Sciences "Decadal Survey in Life and Physical Sciences Space Research", 2009-2011
Member, RSNA Research and Education Foundation Grant Program Committee, 2009-2012
Member, Scientific Advisory Committee, Advanced Photon Source Upgrades, Argonne National Laboratory, 2010-
Member, Advisory Board, EU-STORE project, 2009-present; member, subcommittee for evaluation of South Urals Biophysics Institute, Siberia, Russia
Member, National Academy of Sciences Committee on Cancer Risk and Nuclear Power Plants, 2011-present
Co-Chair, Imaging in Cancer Nanotechnology Working Group, NCI

Review Panels:

Ad hoc reviewer, National Science Foundation, 1987-present
Ad hoc reviewer, VA Grants Committee, 1987-1992
Ad hoc reviewer, Cellular Immunology, Immunogenetics, Mayo Clinic Proceedings, Diabetes
Reviewer, Fraternal Order of Eagle Grants, 1987
Chairman, Special Study Section, National Eye Institute, NIH, 1988
Ad hoc reviewer, DOE Grants, 1988- present
Reviewer, DOE program project, site visit, March, 1989
Ad hoc Reviewer, Radiation Research, Cancer Research, Molecular Carcinogenesis, International Journal of Radiation Oncology, Biology, Physics, Bioelectromagnetics, Biophysical Journal, Cancer Letters, Molecular Cancer Research, Mutation Research, Biophysical Journal, Gene, Journal of Bio-Optics, Advances in Space Research, Journal of Biological Inorganic Chemistry, Sensors, Environmental Mutagenesis, British Journal of Radiology, Journal of Nanomedicine
Reviewer, Illinois Cancer Council grants, 1990-1992
Ad hoc Reviewer, Special Study Section, NIH, 1992
Ad hoc Reviewer, Radiation Biology Study Section, NIH, 1993-1994
DOE review of Hollander/Genome Postdoctoral fellowships, 1994, 1995
Reviewer, NCI Program Project Site Visit, M.D. Anderson, Houston, TX, October 24-26, 1995
Member, Radiation Study Section, NIH, 1994-1998; Chairman, June, 1997
Reviewer, Research Projects of the University of Leuven, Belgium

Member, Editorial Board, International Journal of Radiation Research, 1997-present
Reviewer, NCI Program Project Site Visit, Washington University, St. Louis, MO, April 17-19, 1997
Member, Special NASA Review Committee, July 13-16, 1997
Reviewer, U.S. Army Breast Cancer Grants, Molecular Genetics 2 panel, 1998-present, Special reviewer for Concept Awards, 2003
Reviewer, NASA-NSCORT Program, Fort Collins, CO, September 12-14, 1999
Chairman, NIH Radiation Study section special review, December 16, 1999
Reviewer, American Cancer Society--Illinois grants, 1991-1997, 2000-present
Mentor, NIH/Univ. Kentucky Outreach Center for Science & Health Career Opportunities, 2000
Reviewer, Radiation Effects Panel, National Sciences Basic Research Initiative, 2000-
Reviewer, NIH Radiation study section special review, December 12, 2000
Vice-Chairman, American Cancer Society-Illinois Research Committee, 2000-2004
Member, U. S. Army Prostate Cancer Study Section, 2001-2003
Member, Department of Energy study section for Low Dose Radiation proposals, 2001-2003
Reviewer, NIH Radiation Program projects review, Harvard University, 3-5 October 2001
Reviewer, NASA In-flight proposals, 24-25 October 2001
Reviewer, NIH Radiation Program projects review, Georgetown University, 7-9 January 2002
Member, Radiological Society of North America Research and Education Research Study Section, 2002-present
Reviewer, NASA Space Life proposals, 14-16 April 2002
Ad hoc member, NIH Radiation study section, 17-19 June 2002
Ad hoc member, NCI Program Project Review Subcommittee D, 25 April 2002; 29-30 July 2003
Ad hoc member, NIH Radiation study section, 28-02 March 2001; 28-30 October 2002; 8-10 March 2003; 20-21 October 2003
NIH Program Project Review, Harvard University, 06-07 January 2004
Chairman, NASA Review for Radiation Biology, 2003-2010
Member, Editorial Board, foreign editor, Journal of Radiation Research (Japan), 2004-2010
Chairman, NIH Special Study Section, 09 January 2004
Reviewer, Templeton Foundation proposals for Science and Religion, 2005
Member, NIH RTB Study Section, 2005-2008; ad hoc member, 2008-2010
Editor, Journal of Structural Biology, special issue on X-ray Flourescence for Metal Detection in Cells, 2005
Reviewer, Projects on Nanoscale Science and Cancer, National Institutes of Health, July, 2005
Chairman, Department of Defense Breast Cancer Proposals, Molecular Genetics 2 and 3 Study section, August, 2005-2010
Member, NIH Special Study Section, January, 2006
Member, NIH Molecular Oncology Program Projects review panel, January, 2006, Bethesda, MD; Radiation and Oncology Program Project grants review panel, Bethesda, MD, June, 2007; July 2009

Member, NIH Molecular Therapeutics Program Projects, February, 2006, Bethesda, MD, Subcommittees C and E
Member, DOD Breast Cancer Concept Award Review panel, 2004-present
Reviewer, Foundation against Cancer proposals, Belgium 2004-present
Reviewer, Nanotechnology Proposals, NIEHS, May, 2007
Reviewer, Program Project reviews, NCI, May, 2007; Feb., 2008; June, 2008
Member, Editorial Board, Open Applied Physics Journal, 2007-present
Member, Editorial Board, Nanotechnology, Science and Applications, 2007-present
Member, Editorial Board, Open Applied Physical Chemistry Journal, 2007-present
Member, Editorial Board, Nanoscape, 2009-present
Member, DOD Ovarian Cancer Concept Award panel, 2007-present; chair, 2008
Member, Susan G. Komen for the Cure Awards panel, 2008-present
Senior Fellow, Ryan Awards in Nanoscience and Technology, 2007-present
Committee member, Life Sciences and Macromolecular Crystallography group, Advanced Photon Source, Argonne National Laboratory, 2008
Member, National Council on Radiation Protection and Measurements Scientific Committee 1-16, "Uncertainties in the Estimation of Radiation Risks and Probability of Disease Causation", 2008-present
Member, Editorial Board, Nanomedicine, 2009-present
Reviewer, Advanced Light Source Beamline requests, Lawrence Berkeley National Laboratory, 2008-present
Reviewer, National Synchrotron Light Source requests, Brookhaven National Laboratory, 2009-present
Member Editing Committee, NIH Stimulus package grant applications, July, 2009
Member, John Templeton Foundation Board of Judges, 2010-2013
Chair, DOD Genetics and Constructs panel, 2009-present
Chair, RSNA Radiation Oncology Research Study Section, 2009-2012
Member, Editorial Board, World Journal of Radiology, 2009-present
Chair, NIH Study Section on Science at the International Space Station, January 2010
Member, DOD Prostate panel grant review, 2010
Member, Joint Editorial Board, *Zygon*, 2010-present
Chair, NIH Study Section of Nanotechnology R25 applications, April 2010
Member, Editorial Board, Bulletin of the Alexandria Faculty of Medicine, 2010-
Member, Special Review Study Section, NIH May 2010
Member, Clinical and Therapeutics Study Section, CDMRP grants, 2010
Member, editorial board, Journal of Nanoscience Letters, 2010-present
Reviewer, AAAS Research Competitive Service, King Abdulaziz City for Science and Technology, July 2010
Member, NASA panel for NSCOR and VSCOR reviews, Sept. 2010
Member, review panel, NCI-G Education Subcommittee, Oct 2010
Reviewer, International Union against Cancer fellowships, 2010-
Associate Editor, Radiation Research, 2011-2014.
Ad hoc reviewer, NCI-F panel, Manpower and Training Grants, NIH, 2011
Reviewer, Komen Post-doctoral Fellowships, Breast Cancer, 2010-2011
Reviewer, BCMRP grants, Innovation Awards, 2011; Chair, special review on Radiation Risks

Reviewer, NCI-F Study Section for Training Grants and Training Programs, June, 2011, Alexandria, VA
Chair, NASA Space Radiation Study Section, June, 2011
Member, Prostate Cancer Review panel, CDMRP, July 2011

Invited Presentations:

Chairman, Workshop on Lymphocyte Differentiation, Autumn Immunology Conference, St. Louis, MO, November 5, 1989
Participant, NCI-sponsored workshop on "Proteins induced by DNA damage from exposure to ionizing radiations", 1991
Chairman, Workshop on Cytokines, Autumn Immunology Conference, Chicago, IL, 1991
Participant, Symposium on "Temporal Changes in Gene Expression Following Ionizing Radiation," Radiation Research Society meeting, March 1992, Salt Lake City, UT
Co-Chairman, Session on Oncogenes/Suppressor Genes, Radiation Research Society meeting, March 1992, Salt Lake City, UT
Invited Speaker and workshop Chairman, International Conference on Low Dose Irradiation and Biological Defense Mechanisms, 12-16 July 1992, Kyoto, Japan
Invited Speaker, Gordon Research Conference on DNA Repair, Oxnard, CA, Feb. 1-6, 1993
Symposium Organizer, American Society for Photobiology Meeting, June 1994
Invited Speaker, Radiation Research Society meetings, Dallas, TX, March 21-25, 1993
Invited Speaker and Session Co-chairman, Conference on Molecular Mechanisms in Radiation Mutagenesis and Carcinogenesis, Doorwerth, The Netherlands, April 19-22, 1993
Invited Speaker, Radiation Workshop at Round Top: Radiation-induced Apoptosis, Round Top, TX, May 5-8, 1994
Invited Speaker, Conference "Gene Induction and Adaptive Responses in Irradiated Cells: Mechanisms and Clinical Implications," Montreal, Quebec, June 3-4, 1994
Invited Speaker, ASTRO Meeting, October 1994
Invited Participant, Microbeam Workshop, Battelle Pacific Northwest Laboratories, October, 1994
Invited Participant, International Atomic Energy Agency research coordination meeting, "Exploration of Molecular Mechanism(s) of the Stimulatory Effect of Low-dose and Low-dose-rate Radiation," Vienna, November, 1994
Invited Participant, Radiation Biology International Symposium on "Gene Regulation and Cellular Response to Radiation," Kyoto Univ., Kyoto, Japan, November, 1994
Lecturer, International Atomic Energy Agency course, "IAEA Interregional Post Graduate Education Course on Radiation Protection," 1994, 1995
Invited Participant, DOE Workshop on transgenic mice/targeted mutagenesis, Washington, DC, October, 1994
Invited Participant, 43rd Annual Radiation Research Society meeting, San Jose, CA, April, 1995

Invited Participant, 10th International Congress of Radiation Research, Wurzberg, Germany, August, 1995; Travel Award recipient from Radiation Research Society
Workshop Chair, 49th Annual Radiation Research Society Meeting, 1996
Invited Speaker, Symposium in Minsk, Belarus in commemoration of the 10th anniversary of the Chornobyl nuclear accident, "Biological Effects of Radiation Injury", March, 1996
Invited participant, 6th International Transcribed Sequences Workshop, Edinburgh, Scotland
Symposium Chair, Radiation Research Society Meeting, 1997
Invited Speaker, International Workshop on Radiation Damage to DNA, London, UK, 1997
Invited Speaker, World Congress for Electricity and Magnetism in Biology and Medicine, Bologna, Italy, June 8-13, 1997
Invited Participant, The Royal Society Workshop on Health Effects of EMF Exposure, January 1998
Invited Speaker, National Council on Radiation Protection, Washington, DC, February 1998
Invited Speaker, Biologic Electromagnetics Society Meeting, St. Petersburg Beach, FL, June 1988
Invited Participant, Molecular Radiation Oncology Meeting, Wolfsberg, Switzerland, June 1998
Invited Participant, NCI Workshop "Molecular Biology of Genetic Biomarkers for Human Exposure to Ionizing Radiation", August 1998
Member, Organisational Committee and Symposium Chair, International Congress for Radiation Research, 1999; Dublin, Ireland
Invited Participant, NIH/DOE Workshop "Cellular Responses to Low Doses of Ionizing Radiation", NIH, April 27-30, 1999
Invited Participant, Public Lecture Series on Science and Religion, Aurora University, 1997-1999
Invited Speaker, Templeton Foundation Science and Religion Course Program Summer Workshop, 18-21 June 1999
Invited Speaker, Art Institute of Cincinnati Program on Science and the Humanities, Cincinnati, Ohio, October 25-26, 1999
Invited Speaker, Armed Forces Radiobiology Research Institute Conference on Low-Level Radiation Injury and Medical Countermeasures, Bethesda, MD, November 8-10, 1999
Invited Speaker, Travel Award Recipient, First International Conference on Translational Research and Pre-Clinical Strategies in Radio-Oncology, March 5-9, 2000, Lugano, Switzerland
Invited Speaker, Templeton Foundation Advanced Science and Religion Summer Workshop, June 23-27, 2000
Invited Speaker, American Cancer Society-Illinois Division meeting, Springfield, IL, October 25, 2000
Invited Speaker, Templeton Foundation/ASA Lecturer, Hastings College, Hastings, NE, November 14-16, 2000
Invited Speaker, Templeton Foundation Lecturer, Ouachita University, Arkadelphia, AR, November 27-29, 2000

Invited seminar speaker, Department of Nutrition, University of Illinois at Chicago, November 21, 2000

Invited speaker, Workshop on X-rays and NanoScience, Argonne National Laboratory, 14 December 2000

Invited speaker, Templeton Foundation Lecture series, St. John's University, St. Cloud, MN, 30 April 2001

Organizer and Speaker, ANL Workshop "Biological Applications of the X-ray Microprobe", 14-15 May 2001

Symposium Chair, Genetic Effects Session, BEMS meeting, 9-14 June 2001, St. Paul, MN

Invited Speaker, International Symposium on Radiation and Homeostasis, Kyoto, Japan, July 13-16, 2001

Invited Speaker, Interagency Workshop on Molecular and Cellular Biology of Moderate Dose Radiation and Potential Mechanisms of Radiation Protection, NIH, 17-18 December 2001

Keynote Speaker, City of Chicago Charitable organization program, America Cancer Society, 07 March 2002

Invited lecturer, Aurora University program on Science and Religion, 04 April/09 May 2002

Invited speaker, Zygon Center for Religion and Science Symposium, Toward a Theology of Disease: An Interfaith Religion and Science Dialogue on HIV/AIDS, 25-28 October 2002

Invited speaker, Head and Neck Cancer meeting, 12 October 2002, Tysons Corners, VA

Organizer, ANL/Northwestern University "Biological Applications of X-ray Microbeams", 28-29 April 2003

Invited speaker, Zygon Center for Science and Religion Advanced Seminar Course, Univ. Chicago, April, 2003

Invited speaker, Aurora University program on Evolution and Religion, 03 April 2003

Invited speaker, 12th Advanced Photon Source User's Meeting, Argonne National Laboratory, 29 April –01 May 2003

Invited participant, NCI Workshop on Radiobiology Education, 12-13 May 2003

Invited speaker, 3rd International Workshop on Micro and Nano Technology Applications in Biomedicine, BIOMINT 2003, World Academy of Biomedical Technologies, Chicago, IL, 26-27 September 2003

Symposium Chair, Joint Meeting of the Fourteenth Annual Argonne Symposium for Undergraduates in Science, Engineering and Mathematics ad the Central States Universities, Inc., 24-25 October 2003, Argonne National Laboratory

Invited Speaker, Argonne National Laboratory Science with Microbeams review, 21 January 2004

Invited speaker, International Association for Dental Research, March, 2004.

Invited speaker, Maximizing Applications of Nanobiotechnology for Pharmaceutical, Biotech and Biomedical Science, San Francisco, 15-16 April 2004

Invited speaker, University of Arkansas Cancer Center, 10 May 2004

Invited speaker, Low-dose Radiation Exposures Conference, Sendai, Japan, August 2004; Speaker at Spring-8 Synchrotron, Kobe, Japan; Speaker at Radiation Effects Research Institute, Hiroshima, Japan

Invited participant, Strategic Planning Workshop for the Advanced Photon Source, Lake Geneva, WI, 2-3 September 2004
Invited speaker, Workshop on Biological Uses of Hard X-rays, Lawrence Berkeley National Laboratory, October, 2004
Organizer, Workshop on X-ray Fluorescence Microscopy, Argonne National Laboratory, March 2005
Invited speaker, Future Materials Conference, Melbourne, Australia, 15 May 2005; also presented seminars at Monash University, Melbourne, Australia; Australian National Synchrotron, Melbourne, Australia
Organizer, Workshop on Metals and Metalloids in Cell Biology, Argonne National Laboratory Advanced Photon Source meeting, 05 May 2005
Invited speaker, Center for Nanoscale Materials Users meeting, Argonne National Laboratory, 02 May 2005
Invited speaker, DOE review of Advanced Photon Source programs, Argonne National Laboratory, 23-24 May 2005
Lecturer, Radiation Biology for the Nuclear Cardiologist, Oak Brook, IL June 2005, October 2005 (course of 20 hours)
Workshop organizer and speaker, “Low Dose Radiation Studies in Whole Animals”. Radiation Research Society Annual meeting, October 2005, Denver, CO
Lecturer, Radiation Biology for the Radiologist: Rush University, Chicago, IL; St. Francis Hospital, Evanston, IL; Loyola University Medical School, Maywood, IL, Northwestern University, Chicago, IL; Illinois Masonic Hospital, Chicago, IL 2005-6
Member, Organizing Committee, workshop on Rare Isotope Accelerator, Chicago, IL, August, 2005
Invited speaker, International Materials Research Congress, Cancun, MX, August 2005
Speaker, BIO-CAT meeting, Argonne National Laboratory, October 2005
Invited speaker, International Nanotechnology Institute, Northwestern University, 06 November 2005
Invited participant, Nanotechnology Kick-off meeting, CCNE, NIH, Bethesda, MD, 07 November 2005
Invited speaker, Nanotechnology Conference, Northwestern University, 17 November 2005
Invited participant, Low Level Radiation Effects Summit, Carlsbad, NM, January 2006
Invited speaker and symposium chair, International Translational Radiation Research meeting, Lugano, Switzerland, March 2006
Lecturer, Radiobiology for Radiation Oncology residents, Loyola University Medical School, Maywood, IL, January.-April 2006
Invited speaker, University of Toledo Science-Religion Symposium, Department of Philosophy, April 2006
Invited speaker, International Institute of Nanotechnology meeting, Saarsbrucken, Germany, April 2006
Invited speaker, ERL Biology Workshop. Cornell University, June, 2006.
Invited speaker, NIH-NCI Workshop on Radiation Carcinogenesis; workshop chair, speaker, discussion leader; Sept. 2006
Invited speaker, Low Dose Radiation Conference, Sapporo, Japan, Sept. 2006
Invited speaker and Symposium co-chair, Nanotechnology Symposium, ASTRO/RRS annual meetings, Philadelphia, PA, November 2006

Invited speaker, Georgetown University, Lombardi Cancer Center, Lectures for graduate student program, residency, and general Cancer Center research program, Dec. 2006
Invited speaker and Session Chair, Nuclear Medical Defense Conference, 27 Feb-01 March 2007, Munich, sponsored by Institut fur Radiobiologie der Bundeswehr
Invited participant, Nuclear Task Force of the European Bone Marrow Transplantation Group, University of Ulm, 01-03 March, 2007
Invited speaker, University of California at Davis, Cancer Center research program, May, 2007
Invited speaker, Advanced Photon Source Users' Meeting, Argonne National Laboratory, May 2007
Invited speaker, Center for Nanoscale Materials Users' Meeting, Argonne National Laboratory, May 2007
Invited speaker, Cancer Nanotechnology Conference, Paris, June 2007
Invited speaker, International Congress of Radiation Research, San Francisco, CA, July 2007
Member, Organization Committee, International Institute for Nanotechnology meeting, Northwestern University, October, 2007
Invited speaker, NCI Nanotechnology Alliance Investigators Meeting, Durham, NC, Oct 2007
Invited speaker, ASTRO annual meeting, November, 2007
Organizer and speaker, Biological Applications of Microprobes Workshop, Northwestern University, November 2007; jointly sponsored by Northwestern University Comprehensive Cancer Center, IIT, and Argonne National Laboratory
Course instructor and invited speaker, EU International Center for Advanced Studies in Health Sciences and Services, "European Approach to the Medical Management of Mass Radiation Exposure", Munich, Germany, 28-30 November 2007
Invited speaker, Medical College of Wisconsin Biochemistry seminar series, January, 2008
Invited speaker, Workshop on Synchrotron X-ray Imaging, Huangshan, China, March 2008
Invited speaker, Workshop on X-ray Fluorescence Microscopy, Brookhaven National Laboratory, Brookhaven, NY, April 2008
Session chair, National Council on Radiation Protection and Measurements meeting, April 2008; co-editor, special issue of Health Physics on the NCRP meeting
Invited speaker, University of Illinois-Chicago seminar program, October, 2008
Invited speaker, Armed Forces Radiobiology Research Institute, Bethesda, MD, December 2008
Invited speaker and session co-chair, Radiation Research Society annual meeting, Boston, Sept., 2008
Invited speaker, Evanston Northwestern Hospital and Research Center, August, 2008
Invited speaker, Nanocharacterization Laboratory, Frederick, MD, August, 2008
Program organizer, session co-chair, invited speaker, and poster judge, NCI Nanotechnology Alliance Investigators Meeting, Chicago, IL, September 2008
Invited participant, German Council of Science and Humanities site visit to Instititute for Radiobiology of the Bundeswehr in Munich, October 2008
Invited participant, Low Dose Radiation meeting, Japan, November 2008

Invited participant, NCRP Low Dose meeting, Washington, DC, December 2008
Invited speaker, “Exploring New Avenues in Cancer Treatment” conference, Alexandria, Egypt, Jan. 2009
Invited speaker, Nuclear Medical Defence Conference, Munich, Germany, February 2009
Session Chair and invited participant, European Radiobiological Archives meeting, Hamburg, Germany, April 2009
Invited speaker, Illinois Institute of Technology Colloquium, February 2009
Invited speaker, University of Wisconsin Department of Materials Sciences colloquium, 12 March 2009
Invited speaker, German Cancer Aid Symposium “Novel Tools for Risk Assessment and Early Detection of Premalignant Lesions and Cancer”, Bonn, Germany, May 2009
Co-Chair and co-organizer, Advanced Photon Source Workshop, Argonne National Laboratory, “Imaging Structural Hierarchy in Biological Systems”, May 2009
Invited speaker, Medical College of Georgia, Augusta, GA, May 2009
Invited speaker, Annual Health Physics Society meeting, Minneapolis, MN, July 2009
Conference Secretariat, organizer and invited speaker, Frontiers of Nanotechnology and Medicine meeting, Alexandria, Egypt, June 11-12, 2009
Invited speaker and session chair, Recent Advances in Proton Radiation Therapy Research Conference, Naperville, IL, June 2009
Invited Speaker, Heavy Ions Conference, Cologne, Germany, July 2009
Session chair, Radiation Research Society meeting, Savannah, Georgia, October 2009
Invited speaker, Nanotechnology panel discussion, ASTRO annual meeting, Chicago, IL October 2009
Invited speaker, LowRad Conference, Rio De Janero, Brazil, October 2009
Chair, Session on Therapeutics; Invited speaker, session on Nanotherapeutics, CCNE annual meeting, San Diego, CA, October 2009
Invited speaker, University of Texas Southwestern, Dallas, TX, December 2009
Invited Speaker and Session Chair, Gordon Conference on Radiation Oncology, Galveston, TX, January 2010
Invited speaker, Nanotechnology Conference, Society for Nuclear Medicine, Albuquerque, NM, Feb 2010
Vice-Chair, Radiation Oncology Gordon Research Conference, 2010-2012; Chair, 2012-2014
Invited speaker, DOE Low Dose Radiation meeting, Washington, DC, April 2010
Invited speaker, Keynote Speaker, Augustana College Center for Ethics, April 2010
Co-Chair, X-ray Microprobe Workshop (satellite meeting to X-ray Microscopy Conference), Chicago, August 2010
Invited speaker and panel discussion member, X-ray Microscopy Conference, August 2010, Chicago, IL
Invited speaker, Beagle Dog Congress, Pactific Northwest National Laboratory, Richland, WA, July 2010
Conference Co-Secretariat and Invited Speaker, Alexandria University Second Annual Nanomedicine Conference, Alexandria, Egypt, August, 2010
Invited participant, Scholar-in-Training Program, Radiation Research Society, annual meeting, Maui, Hawaii, September 2010

Invited participant, Nano ane Emerging Technologies for HIV Workshop, Bethesda, MD, October 2010
Webinar, LS-CAT beamline, “Bionanoprobe”, Argonne National Laboratory, January, 2011
Invited speaker, Univ. Illinois Chicago, Department of Materials Sciences Seminar, Feb., 2011
Co-chair, Imaging Workshop, APS Annual meeting, May 2011
Invited keynote speaker, Brookhaven National Laboratory/NSLS program, May 2011
Invited speaker, AACR annual meeting, April 2011
Invited speaker, International Symposium for Radiation Research and Medical Physics, Shanghai, China, June 2011
Invited speaker, Shanghai Synchrotron, Shanghai, China, June 2011
Invited speaker, Ningbo Research Institute, Ningbo, China, June 2011
Invited speaker, Chinese Academy of Sciences meeting, Beijing, China, June 2011
Invited speaker, BioConnect Nanotechnology and Clean Sciences Conference, Boston, MA, June 2011
Workshop panel chair, CCNE annual meeting, Boston, MA, Sept. 2011

INTRAMURAL ACTIVITIES:

Balfour/Kendall Awards Committee, Mayo Clinic, 1986
Trained 36 students, 4 graduate students, 7 visiting faculty in Argonne
Education Research Semester Program
Organizer, Department of Immunology Seminar Program, Mayo Clinic, 1986-1987
Chairman, Argonne National Laboratory Recombinant DNA Committee, 1989-present
Member, Carcinogen Users Committee, Biological and Medical Research Division, Argonne National Laboratory, 1989-2000
Member, Seminar Committee, Biological and Medical Research Division, Argonne National Laboratory, 1989-1990, 1991-1993, 1994-1996, 1999-2000
Member, Safety Committee, Biological and Medical Research Division, Argonne National Laboratory, l989-1993
Member, Search Committee, Division of Education Programs Division Director, 1992-1993
Member, Promotions Committee, Center for Mechanistic Biology and Biotechnology, 1995 1998, 2001-2002
Member, ANL Animal Care and Use Committee, 1995-2000; Chairman, 2000-2002
Chair, Ad Hoc Biosafety Committee for Biowarfare Agents, Center for Mechanistic Biology and Biotechnology/Biosciences Division, 1995-2000
Member, Search Committee, Biosciences Division Director, 1999-2000
Member, Special Safety Committee, Biosciences Division, 2001
Presenter on behalf of the construction of the Nano-CAT beamline at the Advanced Photon Source to Program Evaluation Board, February, 2001
Keynote speaker, Women in Science program, Argonne National Laboratory, April, 2001
Reviewer, Research proposals for SRI-CAT, Argonne National Laboratory, 2000-2002

Presenter for Lab-Directed Research Development program, ANL, 14 May 2002
Member, Search Committee, Department of Radiology, Northwestern University, 2003
Member, Radiation Safety Committee, Northwestern University, 2005-present; Chair, 2007-present
Lecturer for Molecular Cellular Biology courses, Graduate School, Northwestern University, 2005-present
Member, Appointment, Promotion and Tenure Committee, Northwestern University, 2006-present
Member, Feinberg School of Medicine Research Advisory Committee, 2010-2013
Symposium Chair, H Foundation Basic Science Symposium, "Bioengineering and Cancer", 23 April 2010, Northwestern University
Member, Steering Committee, Center for Molecular Innovation And Drug Discovery, Northwestern University Cancer Center
Chair, Search Committee, Department of Radiation Oncology, NU School of Medicine
Member, Committee for Animal Resources, NU School of Medicine

RESEARCH EXPERIENCE:

June, 2002—present. Professor, Department of Radiology/Section of Radiation Oncology, Northwestern University, Chicago, IL. Research studies involve: : (1) studies of gene regulation *in vitro* and *in vivo* (mouse systems) following radiation exposure; (2) molecular basis of motor neuron disease/radiation sensitivity in "wasted" mice and other models of motor neuron disease, (3) analysis of molecular mechanisms of oncogenesis in radiation-induced tumors, and (4) analysis of subcellular structures, metal complexes, and nano-complexes.

December 1991 – June, 2002. Senior Molecular Biologist/Molecular Biologist, Argonne National Laboratory. Research involved four major aspects: (1) studies of gene regulation *in vitro* following radiation exposure; (2) molecular basis of motor neuron disease/radiation sensitivity in "wasted" mice, (3) analysis of molecular mechanisms of oncogenesis in radiation-induced tumors, (4) analysis of subcellular structures, metal complexes, and nano-complexes using the Advanced Photon Source.

June 1987 - December 1991. Assistant Molecular Biologist, Argonne National Laboratory. Research involved studies of gene regulation in fibroblasts and lymphocytes treated with radiation. This has focused on (1) studies of genes induced following exposure to radiation, (2) investigations of abnormalities of "wasted" mice (including abnormal DNA repair following irradiation, neurologic dysfunction and immune deficiency at secretory sites), and (3) studies of mechanisms of oncogenesis in radiation-induced tumors.

July 1984 - June 1987. Associate Consultant, Assistant Professor, Department of Immunology with joint appointment in Department of Biochemistry and Molecular Biology, Mayo Clinic. This research involved two major areas: (1) examination of immunoglobulin heavy and light chain gene expression in mouse lymphoid tissues, primarily in secretory sites, and potential roles in immunodeficiency and (2) studies of phorbol ester induced genes in transformed cell lines and normal lymphocytes.

July 1983 - July 1984. Associate Consultant, Department of Cell Biology, Mayo Clinic, in the laboratory of Dr. Michael Getz. Work involved identification of specific genes induced by the tumor promoter TPA in mouse embryo cells and lymphoid cells, including the kinetics of gene induction, the mechanism of RNA accumulation, the production of a cDNA library from the cells and the identification of the genes by characterization of the protein products of the induced sequences.

July 1980 - June 1983. Postdoctoral research fellow in the laboratories of Dr. Thomas Tomasi, Dr. Charles Liarakos and Dr. Michael Getz at the Mayo Clinic. This work involved a collaborative research project with members of the Departments of Cell Biology and Immunology.

June 1976 - June 1980. Graduate student, Department of Microbiology, Medical College of Ohio. Research has involved the autoimmune disease of New Zealand Black (NZB) mice.

May 1975 - June 1976. Undergraduate research assistant, Department of Biological Sciences, Youngstown State University. Research included the effects of metal ions on the growth of *Hydra pseudoligactus* measuring organic phosphate levels, dissolved CO_2, pH, etc., in area rivers and lakes, and calculating the energy efficiency differences between caterpillars and moths. Experience in computer programming and program trouble-shooting was also acquired. A senior thesis was completed concerning the effects of crowding in the floating behavior of two species of *Hydra*.

TEACHING EXPERIENCE:

July 1997-present: Course director and instructor, Radiation Biology for Radiation Oncology residents, years 1-4, Northwestern University Medical Center program. Lecturer/Course Director (beginning in 2003), "The Epic of Creation" course offered annually sponsored by the Zygon Center for Religion and Science and the Lutheran School of Theology at Chicago. Lecturer, Molecular Biology course for graduate students, Northwestern University Integrated Graduate Program offered annually. Course director, program for undergraduate Nuclear Medicine, Radiation Oncology, and ultrasound technicians in Pathology and Radiation Biology each offered annually. Lecturer for radiobiology programs (beginning in 2005) for radiology residents at St. Francis Hospital, Rush University, Loyola University Medical Center; lecturer for radiobiology programs for radiation oncology residents at Loyola University Medical School offered annually. Lecturer in radiobiology for cardiology physicians twice/year, 20 hours total lecture. Lecturer, Radiobiology for Physicists, Rosalind Franklin University, North Chicago, IL. Course director and lecturer, program in Nanotechnology and program in Radiobiology, Alexandria University, Alexandria, Egypt.

June 1981 - June 1987: Lectures were presented semi-annually to graduate students in two Cell Biology courses offered by the Department of Biochemistry and Molecular Biology. These lectures centered around immunoglobulin gene organization and expression as well as cellular differentiation. In addition,
basic immunology lectures were given to the medical classes. A methods course offered to the graduate students involved techniques in molecular biology. Two yearly tutorials (for 10 weeks)

offered for graduate students were taught on topics ranging from secretory immunity, molecular aspects of B cell differentiation, and oncogene expression. In 1987, Teacher of the Year Award from Mayo Fellows' Association was presented for courses and lectures given to graduate students, residents, and fellows.

June 1977 - June 1980: Laboratory lectures dealing with Immunology, Infectious Diseases, and Microbiology were delivered to second year medical students. This involved designing and preparing laboratory experiments, lectures and practicals. In addition, several lectures on basic immunology were presented to first-year medical students.

January 1975 - May 1975: Undergraduate teaching assistant, Department of Biological Sciences, Youngstown State University. Primary responsibilities included preparing and teaching general biology, ecology, and biochemistry laboratories.

INVENTION REPORTS:

#ANL-IN-88-12: "B Cell Suicide Construct"
Inventors: G. E. Woloschak, E. Critzer

#ANL-IN-92-016: "Protein Inhibitor of AIDS Virus Expression"
Inventors: G. E. Woloschak, C. R. Libertin

#ANL-IN-93-084: "Inhibition of HIV Expression"
Inventors: G. E. Woloschak, C. R. Libertin

#ANL-IN-95-105: "A Method to Induce the Expression of Cellular Kinases and Nuclear Structure Molecules"
Inventors: D. Grdina and G. E. Woloschak

#ANL-IN-95-160: "Detection of All Expressed Genes"
Inventors: G. E. Woloschak, T. Paunesku and A. Milosavljevic

#ANL-IN-95-161: "ssDNA Consensus Element"
Inventors: G. E. Woloschak and T. Paunesku

#ANL-IN-96-088: "Quantitative Differential Display PCR"
Inventors: G. E. Woloschak and T. Paunesku

#ANL-IN-96-123: "Identification of a Stress-Response Element"
Inventors: G. E. Woloschak and T. Paunesku

#ANL-IN-96-145: "Identification of Protein That Can be Used to Regulate Cell Death"
Inventors: G. E. Woloschak and T. Paunesku

#ANL-IN-97-036: "Gene Therapy in Degenerative Neuron Diseases"
Inventors: G. E. Woloschak and T. Paunesku
(Provisional patent submitted, July 2001)

#ANL-IN-97-037: "Biomarkers that Indicate Exposure to Electromangetic Fields (EMFs)"
Inventors: G. E. Woloschak and T. Paunesku

#ANL-IN-97-038: "Consensus Elements that Indicate Exposure to Electromagnetic Fields (EMFs)"
Inventors: G. E. Woloschak and T. Paunesku

#ANL-IN-97-039: "Methods for Identifying Genomic Regulatory Elements"
Inventors: G. E. Woloschak and T. Paunesku

#ANL-IN-97-040: "A Biomarker for Radiosensitivity"
Inventors: G. E. Woloschak, T. Paunesku, and Carol Giometti

#ANL-IN-97-120: "Screening Method for Identifying Consensus Elements"
Inventors: G. E. Woloschak and T. Paunesku

#ANL-IN-99-008: "Gene Therapy for Treatment of Cancer"
Inventors: G.E. Woloschak and T. Paunesku
(Provisional patent application: 15 Sept 1999)

#ANL-IN-99-043: "Method and Compositions for Identification of Stress Cis-Elements"
Inventors: G.E. Woloschak, T. Paunesku, and Hoydoo You

#ANL-IN-99-045: "Bioresponse Reporter Construct"
Inventors: G.E. Woloschak and T. Paunesku

#ANL-IN-99-046: "A computer Method to Identify Regulatory Elements"
Inventors: G.E. Woloschak, R. Overbeek, and T. Paunesku

#ANL-IN-99-044: "Biodosimeter for Measuring Exposure to Radiation"
Inventors: G.E. Woloschak and T. Paunesku

ANL-IN-00-034: “A Photoelectrochemical cell for the electronic detection of DNA hybridization”
Inventors: T. Rajh, T. Paunesku, G. E. Woloschak, M. Thurnauer

ANL-IN-00-035: “A Photoelectrochemical cell for the detection of proteins which interact with DNA”
Inventors: T. Rajh, T. Paunesku, G. E. Woloschak, M. Thurnauer

ANL-IN-00-036: “Use of metal oxide semiconductor nanoparticles linked to biologically active molecules for *in vivo* molecular manipulations”
Inventors: T. Rajh, T. Paunesku, G. E. Woloschak, M. Thurnauer

ANL-IN-00-037: “Use of metal oxide semiconductor nanoparticles linked to biologically active molecules for *in vitro* applications”
Inventors: T. Rajh, T. Paunesku, G. E. Woloschak, M. Thurnauer

(Inventions ANL-IN-00-034/035/036/037 were filed for patent June 29, 2000, awarded as United States Patent 6,677,606 on 13 January 2004, "Dopa and dopamine modification of metal oxide semiconductors, method for attaching biological molecules to semiconductors")

ANL-IN-01-021: "Method for determining genetic susceptibility to motor neuron/wasting disease"

Inventors: G. E. Woloschak, T. Paunesku
(Invention ANL-IN-01-021 filed for patent September, 2002.)

NU: "Use of beta particles to induce cleavage of TiO2-DNA nanocomposites"
Inventors: T. Paunesku, G. E. Woloschak

NU 26153: An approach to magnetic resonance imaging based on magnetic nanocrystals.
Inventors: AiGuo Wu, Tatjana Paunesku, Gayle E. Woloschak

NU 26154: Preparation of magnetic nanocrystal materials and the formation process of magnetic nanocomposite materials.
Inventors: AiGuo Wu, Tatjana Paunesku, Gayle E. Woloschak

NU: Preparation of core-corona-shell nanocrystal materials and the formation process of nanocomposite materials
Inventors: AiGuo Wu, Tatjana Paunesku, Gayle E. Woloschak

NU: Preparation of core-shell nanocrystal materials based on metal components and the formation process of nanocomposite materials including metal elements
Inventors: AiGuo Wu, Tatjana Paunesku, Gayle E. Woloschak

NU 27046: An approach to computed tomography and magnetic resonance imaging obtained simultaneously based on nanomaterials
Inventors: Gayle E. Woloschak, Tatjana Paunesku, AiGuo Wu
(Provisional Patent application: 28 March 2008; applied for full patent March 2009)

NU 27045: An approach to computed tomography based on nanomaterials with photoactive properties
Inventors: AiGuo Wu, Tatjana Paunesku, Gayle E. Woloschak

WEBSITES:

janus.northwestern.edu/wololab: This website maintains datasets from radiation exposure studies including 53,000 mice and 7,000 dogs from studies done from 1965-1992. This website was established by and is maintained by the Woloschak laboratory.

PUBLICATIONS:

1. **Woloschak, G. E**. B-cell responses in autoimmune mice: Antibody production and polyclonal activation. Ph.D. dissertation, Medical College of Ohio, 1980.

2. **Woloschak, G. E**. and Tomasi, T. B. Immunology and molecular biology of the secretory IgA system of the gut. CRC Critical Reviews in Immunology 4:1-18, 1983.

3. **Woloschak, G. E.** and Senitzer, D. Splenocytes from NZB mice exhibit spontaneously high rates of fusion compared to control strains. Cellular Immunology 79:164-172, 1983.

4. **Woloschak, G. E**. and Senitzer, D. The effect of mitogenic stimulation of murine splenocytes on PEG-induced cell fusion. Hybridoma 2:341-349, 1983.

5. **Woloschak, G. E**. and Senitzer, D. Induction of anti-erythrocyte antibodies by in vivo administration of LPS. Clinical Immunology and Immunopathology 31:44-55, 1984.

6. Libertin, C. R., **Woloschak, G. E.**, Wilson, W. R., and Smith, T. F. Analysis of pneumocystis carinii-infected vs normal lung homogenates by fluorescence activated cell sorter. Journal of Clinical Microbiology 20:877-880, 1984.

7. **Woloschak, G. E.** Immunoglobulin heavy chain isotype-specific expression in murine Peyer's patches and spleens. (Short report), in Advances in Gene Technology: Molecular Biology of the Immune System (ed. Streilein, Ahmad, Black, Blomberg, Voellmy), pp. 345-346, 1985.

8. Singh, S. K., Donovan, K. A., **Woloschak, G. E.**, and David, C. S. DNA methylation and expression of Ia antigens in murine T cell lines. (Short report), in Advances in Gene Technology: Molecular Biology of the Immune System (ed. Streilein, Ahmad, Black, Blomberg, Voellmy). 1985, pp. 307-308.

9. **Woloschak, G. E.** Comparisons of heavy chain isotype expression in Peyer's patch and splenic B-cells. Molecular Immunology 23(6):581-591, 1986.

10. **Woloschak, G. E.**, Tomasi, T. B., and Liarakos, C. D. Identification of the major immunoglobulin heavy chain Poly A+ RNA in murine lymphoid tissue. Molecular Immunology 23(6):645-653, 1986.

11. **Woloschak, G. E.**, Dewald, G., Bahn, R. S., Kyle, R. A., Greipp, P. R., and Ash, R. C. Amplification of RNA and DNA specific for erb B in unbalanced 1;7 chromosomal translocation in myelodysplastic syndrome. Journal of Cellular Biochemistry, 32(1):23-34, 1986. (Also printed in UCLA Symposia Proceedings: Cellular and Molecular Biology of Tumors and Potential Clinical Applications, 1986, pp. 47-58.)

12. **Woloschak, G. E.** Association of oncogene activity and hematologic malignancy. Current Hematology and Oncology, 5:281-329, 1987, Chapter 6. Ed. by Virgil Fairbanks.

13. Bahn, R. R., Gorman, C. A., **Woloschak, G. E.**, David, C. S., Johnson, P. M., and Johnson, C. M. Human retroocular fibroblasts in vitro: a model for the study of Grave's ophthalmopathy. Journal of Clinical Endorcinology and Metabolism 65:665!670, 1987.

14. **Woloschak, G. E.**, Rodriguez, M., and Krco, C. J. Defective immunoglobulin gene expression in immune-deficient mice. Advances in Experimental Medicine and Biology, 216:23-30, 1987.

15. **Woloschak, G. E.** and Krco, C. J. Regulation of K/l immunoglobulin light chain expression in murine lymphocytes. Molecular Immunology 24:751-757, 1987.

16. **Woloschak, G. E.**, Rodriguez, M., and Krco, C. J. Characterization of immunologic and neuropathologic abnormalities in "wasted" mice. Journal of Immunology 138:2493-2499, 1987.

17. **Woloschak, G. E.** Immunoglobulin gene expression in xid mide: Defective expression of secreted and membrane α-heavy chain RNA. Molecular Immunology 24:995-1004, 1987.

18. Schmidt, M. A., **Woloschak, G. E.**, Michels, V. V., Lust, J. A., and Gordon, H. Human gastrin RFLP recognized by digestion with Bam HI or Eco RI. (RFLP report). Nucleic Acids Research, 15:7652-7653, 1987.

19. **Woloschak, G. E.** Functional aspects of cellular and transforming oncogenes and their relationship to heart disease. (Invited review) International Journal of Cardiology, 18:293-303, 1988.

20. **Woloschak, G. E.**, Hooper, W. C., Doerge, M. J., Phyliky, R. L., Witzig, T. E., Banks, P. M., Dewald, G. W., and Li, C.-Y. Oncogene expression in T-cell lymphoproliferative disorders. Leukemia Research, 12:327-338, 1988.

21. Fink, K. L., Wieben, E. D., **Woloschak, G. E.**, and Spelsberg, T. C. Rapid regulation of c-myc proto-oncogene by steroids in the avian oviduct. Proceedings of the National Academy of Sciences USA, 85:1796-1800, 1988.

22. **Woloschak, G. E.**, Krco, C. J., and Rodriguez, M. Influences of the microenvironment on B-cell responses of wasted mice: Comparison of Peyer's patches and mesenteric lymph nodes. Regional Immunology 1:163-171, 1988.

23. **Woloschak, G. E.** and Jones, C. A. Modulation of gene expression by fission-spectrum neutrons. ANL Biomolecules Symposium, 1988.

24. **Woloschak, G. E.**, Krco, C. J., and Rodriguez, M. Anti-m treatment suppresses immunoglobulin light chain gene expression and Peyer's patch development. Molecular Immunology, 26:351-358, 1989.

25. Lust, J. A., Banks, P. M., Hooper, W. C., Paya, C. V., Kueck, B. D., Hanson, G. A., Ritch, P. A., and **Woloschak, G. E.** T-cell non-Hodgkin's lymphoma in human immunodeficiency virus (HIV-1) infected individuals. American Journal of Hematology, 31:181-187, 1989

26. Gavinski, S. and **Woloschak, G. E.** Expression of viral and virus-like elements in DNA repair-deficient/immunodeficient wasted mice. Journal of Immunology 142:1861-1866, 1989.

27. Hooper, W. C., Abraham, R. T., Ashendel, C. L., and **Woloschak, G. E.** Differential responsiveness to phorbol esters correlates with differential expression of protein kinase C in KG-1 and KG-1a human myeloid leukemia cells. Biochimica et Biophysica Acta, 1013:47-54, 1989.

28. **Woloschak, G. E.** and Libertin, C. R. T-cell subset distributions in spleen, thymus and MLN from wasted mice (Short report). Advances in Mucosal Immunology, (ed. MacDonald, Challacombe, Bland, Stokes, Heatley, Mowat), 1990, pp. 180-181.

29. Rodriguez, M., Kenny, J. J., Thiemann, R. L., and **Woloschak, G. E.** Theiler's virus demyelination in mice immunosuppressed with anti-IgM and in mice expressing the xid gene. Microbial Pathogenesis, 8:23-35, 1990.

30. **Woloschak, Gayle E.**, Liu, Chin-Mei, Jones, Pocahontas Shearin, and Jones, Carol A. Modulation of gene expression in Syrian hamster embryo cells following ionizing radiation. Cancer Research 50:339-344, 1990.

31. Atluru, Durgaprasadarao, Polam, Subhashini, Atluru, Subbayamma, and **Woloschak, Gayle E.** Regulation of mitogen stimulated T-cell proliferation, Interleukin-2 production and Interleukin-2 receptor expression by protein kinase C inhibitor, H-7. Cellular Immunology, 129:310-320, 1990.

32. **Woloschak, Gayle E.**, Liu, Chin-Mei, and Shearin-Jones, Pocahontas. Regulation of protein kinase C by ionizing radiation. Cancer Research, 50:3963-3967, 1990.

33. Munson, George P., and **Woloschak, Gayle E.** Differential effect of ionizing radiation on transcription in repair-deficient and repair-proficient mice. Cancer Research, 50:5045-5048, 1990.

34. **Woloschak, Gayle E.**, and Chang-Liu, Chin-Mei. Differential modulation of specific gene expression following high- and low-LET radiations. Radiation Research, 124:183-187, 1990.

35. Padilla, Maurice, Libertin, Claudia R., Krco, Christopher J., and **Woloschak, Gayle E.** Radiation sensitivity of T-cells from wasted mice. Cellular Immunology, 130:186-194, 1990.

36. Atluru, Subbayamma, **Woloschak, Gayle E.**, McVey, David S., and Atluru, Durgaprasadarao. Cyclosporin A and FK-506: In vitro effects on proliferation of human T-cells. Biochemical Archives, 6:397-407, 1990.

37. Peak, Jennifer G., **Woloschak, Gayle E.**, and Peak, Meyrick J. Enhanced expression of protein kinase C gene caused by solar radiation. Photochemistry and Photobiology, 53:395-397, 1991.

38. **Woloschak, Gayle E.**, Shearin-Jones, Pocahontas, and Chang-Liu, Chin-Mei. Effects of ionizing radiation on expression of genes encoding cytoskeletal elements: Kinetics and dose effects. Molecular Carcinogenesis, 3:374-378, 1990.

39. **Woloschak, Gayle E.** and Chang-Liu, Chin-Mei. Expression of cytoskeletal elements in proliferating cells following radiation exposure. International Journal of Radiation Biology, 59:1173-1183, 1991.

40. Panozzo, John, Bertoncini, David, Miller, Debbie, Libertin, Claudia R., and **Woloschak, Gayle E.** Modulation of expression of virus-like elements following exposure of mice to high- and low-LET radiations. Carcinogenesis, 12:801-804, 1991.

41. Libertin, Claudia R., Padilla, M. and **Woloschak, Gayle E.** IL5 deficiency in IgA-deficient wasted mice. (Short Report) Frontiers of Mucosal Immunology, 1:645-646, 1991.

42. **Woloschak, Gayle E.**, Buczek, N., Marin-Ramos, L. and Libertin, C. R. Secretory component and IgA expression in immunodeficient wasted mice. (Short Report) Frontiers of Mucosal Immunology, 1:643-644, 1991.

43. **Woloschak, Gayle E.**, Churchill, Mark and Libertin, Claudia R. Immunological disorders characterizing the "wasted" mouse: A Review. Life Sciences Advances-Immunology, 10:95-104, 1991.

44 . Anderson, Aaron, and **Woloschak, Gayle E.** Cellular oncogene expression following exposure of mice to g-rays. Radiation Research, 130:340-344, 1992.

45. **Woloschak, Gayle E.** and Chang-Liu, C.-M. Effects of low-dose radiation on gene expression in Syrian hamster embryo cells: Comparison of JANUS neutrons and gamma rays, In: Proceedings of the International Conference on Low Dose Irradiation and Biological Defense Mechanisms, (Eds. Sugahara, T., Sagan, L. A. and T. Aoyama) pp. 239-242, 1992.

46. **Woloschak, Gayle E.** Workshop Summary: Mechanisms of Biological Defense Systems and Their Implications to Human, In: Proceedings of the International Conference on Low Dose Irradiation and Biological Defense Mechanisms, (Eds. Sugahara, T., Sagan, L. A. and T. Aoyama) pp. 487-490, 1992.

47. Atluru, D., Gudapaty, S. and **Woloschak, G.E.** Inhibition of human mononuclear cell proliferation, Interleukin-2 synthesis, messenger RNA for IL-2 and Leukotriene B_4 synthesis by a lipoxygenase inhibitor. Journal of Leukocyte Biology, 54:269-274, 1993.

48. Paunesku, T., Gemmell, M. A., Crkvenjakov, R. and **Woloschak, G. E.** A presumed B6 strain-specific p53 polymorphism is confined to a B6 cell line and is likely to represent a facilitating mutation. (Short Report) Mammalian Genome, 5:106-107, 1994.

49. Churchill, M. E., Gemmell, M. A. and **Woloschak, G. E.** Detection of retinoblastoma gene deletions in spontaneous and radiation-induced mouse lung adenocarcinomas by polymerase chain reaction. Radiation Research, 137:310-316, 1994.

50. **Woloschak, G. E.**, Chang-Liu, C-M., Panozzo, J., and Libertin, C. R. Low doses of neutrons induce changes in gene expression. Radiation Research, 138:S56-S59, 1994.

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206. Wu, A., Paunesku, T., Macheri, N., Thurn, K. T., Brown, E. M., Li, D., and **Woloschak, G. E.** Preparation, Properties, Characterization, and Applications of (Super)paramagnetic Nanoparticles. ACS meeting, Boston, 2008.

207. Mascheri, N., Zhang, Z., Paunesku, T., **Woloschak, G.,** and Li, D. Application of Positive Contrast SSFP Imaging to USPIO-labeled Macrophage Cells: Theory and In vitro Experiment. ISMRM meeting, Toronto, 2008.

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223. **Woloschak, G. E.,** Alcantara, M. J., Paunesku, D., Haley, B., and Paunesku, T. Long-term Animal Studies: past and New Results Related to Low Dose and Low-Dose Rate Exposures. Health Physics Society annual meeting, 2009.

224. **Woloschak, G.,** Alcantara, M., Mittal, A., Paunesku, D., Haley, B., Grdina, D., and Paunesku, T. Tissue and database archives on dog and mouse, gamma-ray and neutron, acute and protracted whole body irradiation experiments. LowRad meeting, Rio de Janeiro, Brazil, p. 19, 2009.

225. Paunesku, T., Wang, Q., Wanzer, M. B., and **Woloschak, G.** Effect of low dose radiation on nuclear and mitochondrial genomes. LowRad meeting, Rio de Janeiro, Brazil, p. 50, 2009.

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231. Boyle, J., Wu, A., Arora, H., Paunesku, T., and Woloschak, G. E. The radiosensitizing effects of Titanium-dioxide nanoparticles in vitro. ASTRO annual meeting, 2009, #2866, 75(3): S570, Chicago, IL

232. Mittal, A., Haley, B., Haley, M., T. Paunesku, D. Paunesku, G. E. Woloschak. The effects of radiation on development of prostate cancer and prostatic hyperplasia in canine model. DOE Low Dose Radiation meeting, Washington, DC, 2010, p. 141.

233. Woloschak, G. E., Haley, B., Wang, Q., Raha, S., Wanzer, M. B., Mittal, A., Liu, P., Linney, L., Vogt, S., Paunesku, T. Archive building and interrogation of archived samples: new techniques and old materials. DOE Low Dose Radiation meeting, Washington, DC, 2010, p. 143.

234. Raha, S., Wang, Q., Haley, M., Paunesku, T. and Woloschak, G. Gene copy number studies in archived and fresh mouse tissue samples. DOE Low Dose Radiation meeting, Washington, DC, 2010, p. 145.

235. Wanzer, M. B., Liu, P., Finney, L., Vogt, S., Mittal, A., Haley, B., Paunesku, T., and Woloschak, G. E. Investigation of the dog and mouse tissue archives using complementary imaging techniques. DOE Low Dose Radiation meeting, Washington, DC, 2010, p. 147.

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237. Arora, H., Wu, A., Paunesku, T., and **Woloschak, G. E.** Conjugation of Fe3O4@TiO2 core-shell nanoparticles to doxorubicin improves localization and cytotoxicity in drug-resistant ovarian carcinoma. The 10th International Conference on X-ray Microscopy, Chicago, IL, August 2010, p. 278.

238. Donnelly, E. D., Haley, B., Kwasny, M., Paunesku, T., and Woloschak, G. E. Evaluation of gastrointestinal toxicity development in mice irradiated with increasing levels of low-dose single fraction gamma radiation. ASTRO annual meeting, October 2010, San Francisco, CA.

239. **Woloschak, G.,** Wang, Q., Raha, S., Wanzer, B., and Paunesku, T. Mitochondrial gene copy number variations in tissues from irradiated mice. Radiation Research Society abstracts, 2010, Maui, HI, PS2.08, p. 80

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241. Shirazi, H., Haley, B., Kwasny, Paunesku, T., and **Woloschak, G.** Tumorigenesis and normal tissue toxicity following single exposure gamma irradiation in mice. Radiation Research Society abstracts, 2010, Maui, HI, PS5.70, p. 152.

242. Yuan, Y. Paunesku, T., Arora, H., Ward, J. Raha, S., Vogt, S., and **Woloschak, G. E.** Uptake mechanisms for tumor targeted TiO2 nanoconjugates for radiosensitization. Radition Research Society abstracts, 2010, Maui, HI, PS7.19, pp. 171-172 (Award fo Ye Yuan for best student poster).

243. Doty, C. B., Wu, A., Paunesku, T., and **Woloschak, G.** Modulation of E6 expression in HeLa cells by irradiation and nanoconjugates. Radiation Research Society abstracts, 2010, Maui, HI, PS7.71, pp. 185-6.

244. Arora, H., Wui, A., Raha, S., Boyle, J., Paunesku, T., **Woloschak, G.** Doxorubicin conjugation to Fe3O4@TiO2 core-shell nanoparticles show improved localization and cytotoxicity in drug-resistnt ovariation carcinoma. Radiation Research Society abstracts, 2010, Maui, HI, PS7.68, p. 185.

245. Paunesku, T., Wanzer M. B., and **Woloschak, G. E.** Long term effects of radiation treatments on micro RNAs in mice. Submitted, 2011.

246. Paunesku, T., Wang, Q., Raha, S., Kwasny, M. and **Woloschak, G. E.** Mitochondrial genomes are altered in response to different dose rate radiation treatments. Submitted, 2011.

247. Liu, W., Haley, B., Kwasny, M. J., Paunesku, T., and Woloschak, G. E. Comparing disease expression across species: an examination of radiation and species specific disease expression in Mus musculus and Peromyscus leucopus. DOE Low Dose meeting, 2011.

248. Paunesku, T., Wanzer, M. B., and Woloschak, G. E. Long term effects of radiation treatments on micro RNAs in mice. International Symposium for Radiation Research and Medical Physics, Shanghai, China, 2011, p. 30

249. Paunesku, T., Wang, Q., Raha, S., Kwasny, M., and Woloschak, G. E. Mitochondrial genomes are altered in response to different dose rate radiation treatments. International Symposium for Radiation Research and Medical Physics, Shanghai, China, 2011, p. 22.

Church-Related Activities
Gayle E. Woloschak

M. A., Applied Orthodox Theology, University of Balamand, Orthodox Patriarchate of Antioch, affiliated with the Antiochian House of Studies, 2008

D. Min. STUDENT, Pittsburgh Theological Seminary and Antiochian House of Studies, 2009-present

National:
2007-present—Member, Board of Directors, Center for Advanced Study in Religion and Science
2004-present—Member, Board of Directors, International Orthodox Christian Charities
2004-present—Member, Board of Directors, Orthodox Christian Mission Center; Secretary 2010-present
2004-present—Member, Orthodox Theological Society of America
2004-present—Member, Greek Orthodox Archdiocese Commission for Science and Technology; Chair, Organizing Committee for Conference on Stem Cell Research
2002-present—Member, Standing Conference of Orthodox Bishops of the Americas Social and Contemporary Moral Issues Commission
1994-present—Member, Metropolitan Council of the Ukrainian Orthodox Church of the USA; 1997-present, English Secretary
1999-2003—representative to SYNDESMOS, international Orthodox youth organization
1980-2003—Member, Executive Board of the Ukrainian Orthodox League of the USA; positions held included Chair of Youth Commission, Chair of Education Commission, Chair of Christian Caregiving and Missions Commission, President, Treasurer, and others

Local:
1998-present—Member, Greek Orthodox Diocese of Chicago Committee on AIDS
1987-present—Church school teacher for teens, Sts. Peter and Paul Ukrainian Orthodox Church, Palos Park, IL
2005-present—Member, Orthodox Society of Theologians, Chicago-Milwaukee area
Other parish positions held now or previously: Advisor to the Junior UOL chapter, member of parish council, member of choir

Activities:
Associate Director (Director 2007-2009), Zygon Center for Religion and Science, Lutheran School of Theology at Chicago; Director, Epic of Creation Program, Zygon Center; Course Director, Advanced Seminar in Religion and Science and Future of Creation course
Member, Greek Orthodox Diocesan Committee on Science and Technology
Mission trips: Ukraine in 1988 and 1994; Kenya with the Orthodox Christian Mission Center in 1990
Ad hoc Reviewer, Templeton Foundation grant proposals, 2003-present
Member, LOGOS Orthodox Discussion group, Holy Cross Greek Orthodox seminary, Brookline, MA

Member, John Templeton Foundation Board of Judges, 2010-2013
Member, Editorial Board, Zygon: A Journal of Religion and Science, 2009-present

Society memberships:
Orthodox Theological Society of America
American Academy of Religion
Orthodox Society of Theologians-Chicago
Center for Nature, Theology, and Science
International Society for Science and Religion
(Greek Orthodox) Archdiocesan Advisory Committee on Science and Technology

Related professional tasks:
1. Associate Director, Zygon Center for Religion and Science (Director of the Center 2007-2009); Director of the Epic of Creation program and Adjunct Professor of Science and Religion, Lutheran School of Theology at Chicago, University of Chicago Campus, Chicago, IL. Lecturer/Course Director (beginning in 2003), "The Epic of Creation" course offered annually by Center for Religion and Science sponsored by Zygon Center for Religion and Science and the Lutheran School of Theology. Co-director, "Future of Creation" also offered annually by the Lutheran School of Theology

2. Invited speaker for Templeton Science and Religion Foundation programs on HIV and religion, Evolution and religion, Bioethics of Transplantation, and others.

3. Member of Interfaith Dialogue on HIV and its Impact on Society, Lutheran School of Theology, Chicago, IL.

4. Member of the Chicago Group for discussion on issues of Science and Religion.

5. Member, Logos Group for Orthodox Discussion on Contemporary Issues, Boston, MA

Publications (books):
Woloschak, G. E. Challenge Questions on Orthodoxy for Students, Light and Life Publishing Company (Minneapolis, MN), 1994; 2nd printing 2000.

Woloschak, G. E. Beauty and Unity in Creation, Light and Life Publishing Co. (Minneapolis, MN), 1996.

Woloschak, G. E. and Paunesku, T. More Challenge Questions on Orthodoxy for Students, Light and Life Publishing Co. (Minneapolis, MN), 2002.

Publications (articles):

Woloschak, G. E. The origin of multicellular life: from sexually reproducing cells to a body plan. In: The Epic Creation: Scientific and Religious Perspectives on Our Origins, (T. Gilbert, K. Peters, Eds.) Lutheran School of Theology course curriculum, 2000-present, course CD

Woloschak, G. E. HIV: How science shaped the ethics, Zygon, 38: 163-167, 2003.

Woloschak, G. E. Transplantation: Biomedical and ethical concerns raised by the cloning and stem cell debate. Zygon (2003) 38: 699-704.

Woloschak, G. The New Biology and Its Impact in Biomedical Strategies Against HIV/AIDS. Zygon (June 2004) 39(2): 477-486

Woloschak, G. E. Letter to the Editor, Touchstone (2005)

Woloschak, Gayle E. Bioethics of Stem Cells. The Handmaiden (2005), Spring, pp. 28-33

Woloschak, Gayle. E. Nanotechnology: Small Times Are Upon Us. Journal of Lutheran Ethics (Feb. 2006) vol. 6, pp. 1-2

Woloschak, Gayle E. Technology: How Far is Too Far? Again magazine (2007) vol., 29, no. 3, pp. 7-9.

Woloschak, G. E. Religion-Science Interfaith Dialogue: Perspectives. In : Religious Pluralism in the 21st Century American Public Life, Ed by E. Prodromou, 2007, University of Notre Dame Press, in press.

Woloschak, G. E. Chance and Necessity in Peacocke's Scientific Work. Zygon, (March, 2008) 43 (1): 73-81.

Woloschak, G. E. "Stewardship of the Earth: Hurt Not the Earth", Ukrainian Orthodox Word (2008) 58: 10.

Woloschak, G. E. What is on the Horizon? What is Science Likely to be Doing in the Upcoming Years? IN: Theological Foundations in an Age of Biological Intervention, edited by David C. Ratke, Lutheran University Press, 2007, pp. 25-40.

Woloschak, G. E. War, War Technology, and Economia, in preparation, 2009

Woloschak, G. E. The Compatibility of the Principles of Evolution with Eastern Orthodoxy. St. Vladimir's Theological Quarterly, in press, 2011.

Woloschak, G. E. Contemporary Bioethical Issues for Orthodox Christians, Praxis Winter, 2010, 9(2): 13-15.

Woloschak, Gayle E. Technology: Life and Death, Orthodoxy in Korea, 110th

Anniversary of Orthodox Witness in Korea, 2010, pp. 67-81 (in Korean, pp. 55-66).

Articles for the *Ukrainian Orthodox Word*, *Calendar of the Ukrainian Orthodox Church*, and other publications

Invited Presentations (since 2002):

July, 2002: Invited speaker, Sobor of the Ukrainian Orthodox Church of Canada for clergy, clergy wives, and youth, "The Church in the World Today", "Issues of Science and Religion", Winnipeg, Manitoba
September, 2002: Invited speaker for one-day workshop on issues of science and religion, Edmonton, Alberta
April, 2003: Invited speaker for one-day workshop on issues of science and religion in the world today, Hamilton, Ontario
July, 2003: Invited speaker, World Parliament of Religions, Barcelona, Spain, "HIV: Perspectives from Science and Religion" as a part of a workshop sponsored by the Zygon Center for Religion and Science, Lutheran School of Theology at Chicago
August, 2003: Invited speaker, CYMK youth conference, Lake Winnipeg, Manitoba, "The Church in the World Today"
December, 2003: Orthodox Campus Fellowship, "Science and Religion", Antiochian Village, Ligonier, PA
February, 2004: Lutheran School of Theology at Chicago, Advanced Seminar presentation, "The Epic of Creation: Where are we going?"
December, 2004: Orthodox Campus Fellowship, "How to Organize a Bible Study", Antiochian Village, Ligonier, PA
February, 2005: Lutheran School of Theology at Chicago, Advanced Seminar presentation, "Nanotechnology as a Mimic of Nature"
April, 2005: Orthodox Christian Mission Center Health Care Committee meeting, "Mission Trip to Ukraine", Reston, VA
April, 2005: Orthodox Campus Fellowship, University of Virginia, "Science and Religion"; Parish workshop, "Bioethical Issues and Faith", Charlottesville, VA
June, 2005: Invited speaker, "Orthodoxy and the Science-Religion Dialogue", Orthodox Theological Society annual meeting, St. Vladimir's Seminary, Crestwood, NY
July, 2005: Workshop leader, "Bioethics and Orthodoxy", Ukrainian Orthodox League of USA annual convention, Northampton, PA
September, 2005: Invited speaker, St. Elizabeth Hospital ethics program, "Genetic Counseling", Youngstown, OH
September, 2005: Lutheran Sunday Scientists Symposium, "Science and Religion: The Interface", Los Alamos, NM
October, 2005: Invited speaker, Clergy Conference, Ukrainian Orthodox Church of USA, "Orthodoxy and the Stem Cell Debate"
January, 2006: Invited speaker, Park Ridge Community Church, "Evolution, Intelligent Design or Creationism?", Park Ridge, IL
March, 2006: Holy Apostles Greek Orthodox Church, "Orthodox Missions and the Orthodox Christian Mission Center", Westchester, IL
March, 2006: Lutheran School of Theology at Chicago, Advanced Seminar course,

speaker “What influences science?”
April, 2006: “Faith and Science: Evolution, Embryos, and Environment”, University of Toledo Department of Philosophy colloquium, Toledo, OH
June, 2006: Patriarch Athenagorus Orthodox Institute, Berkeley, CA, invited speaker to symposium, “Bioethics and Orthodoxy”
August, 2006: Ukrainian Orthodox Church of Canada Symposium on “Religion in our Culture”, Regina, Saskatchewan, invited speaker, “Faith and Science in Interface”
October, 2006: Marist College Symposium on Science and Religion, invited speaker, Poukeepsie, NY, “Science and Religion in Communion”
February, 2007: Invited speaker, Arthur Peacocke Symposium, Zygon Center for Religion and Science, Lutheran School of Theology at Chicago
February, 2007: Invited speaker, Montreal Orthodox Women’s Lenten program, “Orthodoxy meets the Biological Revolution”, Montreal, Canada
June, 2007: Invited speaker, Orthodox Theological Society of America annual meeting, St. Vladimir’s Seminary, Crestwood, NY, “Bioethical Issues Facing the Church.”
August, 2007: Invited speaker, Evangelical Lutheran Church of America’s Association of Teaching Theologians annual meeting, Hickory, NC, “What is on the Horizon? What is Science Likely to be Doing in the Upcoming Years?”
October, 2007: Invited speaker, St. Nicholas Ranch, Fresno, CA. Orthodox Conference on Ecology and the Environment.
March, 2008: Invited speaker, Ukrainian Orthodox Church of Canada, Winnipeg, MB, week-end retreat on Bioethical Issues Confronting Orthodox Christians
April, 2008: Invited speaker, Greek Orthodox Cathedral of the Annunciation, Baltimore, MD, “Bioethical Issues”
January, 2009: Invited speaker, Annual Gathering of Lutheran Ethicists, Chicago, IL, “Current Questions in Genetics and Ethics”
July, 2009: Keynote address, Ukrainian Orthodox League annual convention, Youngstown, OH
September, 2009: Invited speaker, St. Michael’s Orthodox Church, Burbank, IL, “Technology in the World Today”
October, 2009: Invited speaker, Conference on Evolution and Christianity, ELCA Alliance for Faith, Science and Technology, Lutheran Conference, Minneapolis, MN
December, 2009: Invited speaker, Science and Religion program, World Parliament of Religions, Melbourne, Australia
December, 2009: Invited speaker, Canadian Council of Churches, Conference on Ethics and Technology, Ottawa, Canada
February, 2010: Invited speaker, Ukrainian Orthodox Church of Canada, Symposium on Technology and Religion, Winnipeg, Manitoba
May, 2010: Invited speaker, Metropolitan of the Orthodox Church of Korea, Bioethical Conference, Death and End of Life Concerns
June, 2010: Invited speaker, OTSA, Holy Cross Orthodox Seminary, Boston, MA; Questions at the Interface of Faith and Science
October 2010: Invited speaker and workshop speaker, University of South Carolina First Symposium on Science and Society
December 2010: Keynote speaker, Orthodox Campus Fellowship Conference, Antiochian Village winter break program, Ligonier, PA
March 2011: Invited speaker, Ukrainian Orthodox League workshop, Villa Maria, PA
March 2011: Invited keynote speaker, Conference on Bioethics, University of Texas-PanAm, McAllen, TX

July 2011: Invited speaker, St. Vladimir's Seminary summer conference, Syosset, NY
April 2012: Invited plenary speaker, ESSSAT meeting, Estonia