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CURRICULUM VITAE/BIBLIOGRAPHY

Jerold G. Woodward, PhD

Office address and telephone

Department of Microbiology, Immunology, and Molecular Genetics, MN 426
University of Kentucky Medical Center
Lexington, Kentucky 40536-0084
(859) 323-5538

EDUCATION:

1975 Bachelor of Science in Biological Sciences from the University of California, Irvine.

1979 Doctor of Philosophy in Experimental Pathology/Immunology from the University of Utah.

POSTDOCTORAL TRAINING:

1980-83 Postdoctoral Fellow in Immunogenetics, Department of Microbiology, University of Southern California School of Medicine, Los Angeles, California.

ACADEMIC APPOINTMENTS:

1982-83 Director, Hybridoma Core Laboratory
University of Southern California
School of Medicine
Los Angeles, California

1982-83 Research Assistant Professor
Departments of Microbiology and Neurology
University of Southern California
School of Medicine
Los Angeles, California

1983-89 Assistant Professor:
Department of Microbiology and Immunology
University of Kentucky School of Medicine

1989-1997 Associate Professor,
Department of Microbiology and Immunology
University of Kentucky School of Medicine

1993-1996 Director, Microbiology and Immunology Graduate Program

1997- Professor, Department of Microbiology and Immunology
University of Kentucky School of Medicine

2017 Associate director, Flow Cytometry and Immune Monitoring Facility

2019 Study Director: GLP Vaccine Studies

MEMBERSHIP, SCIENTIFIC, HONORARY AND PROFESSIONAL SOCIETIES:

American Association for the Advancement of Science
American Association of Immunologists
Member Markey Cancer Center

SPECIAL AWARDS AND HONORS:

1979-80 NIH Postdoctoral Training Grant, Univ. of Southern Calif.
1980-83 National Arthritis Foundation Postdoctoral Fellowship
1983-86 National Arthritis Foundation Investigator Award
2004 Visiting professor, Shandong University, Jinan China.

MAJOR COMMITTEES:

University of Kentucky:
1987-88 Chairman: Molecular Immunologist Search Committee
1987 Member: Bacterial geneticist Search Committee
1987 Member: Molecular Neurologist Search Committee
1987 Member: Molecular Oncogene Search Committee
1990-99 Member: Microbiology Graduate Committee: MEPP.
1991-94 Medical Center Faculty Council
1985-93 Medical Center Animal Care Committee
1991-92 University Major Equipment Grant Review Panel
1993-96 Director, Microbiology and Immunology Graduate Program committee
1996 University Major Equipment Grant Review Panel
1997 Sturgell Award Selection Committee
1997 Member, Bacterial Pathogenesis Search Committee
1997 Member, Search committee for the Chair of Ophthalmology
1997 Chair, UK Life Sciences Day organizing committee
1998-99 Chairman of the Microbiology and Immunology virologist search committee
1999-02 Member of the Institutional Animal Care and Use Committee
1999-03 Member of the Integrated Biomedical Sciences Graduate Program committee

1989- Cancer Center Transgenic Mouse Facility advisory panel.
2003-07 Medical Center Promotions and Tenure committee.
2004-07 Medical Center Faculty Council
2005-08 Member, MIMG Immunology faculty search committee
2012- Member, MIMG Pathogenesis faculty search committee
2014- Member MIMG Graduate Program (MEPPS) committee.
2015 Member MIMG Microbiologist search committee.
2020 Member of the COVID-19 Unified Research Experts (CURE) Alliance team

External:
2003- Member of the Executive Council, Autumn Immunology Conference.
2008 Chair, Autumn Immunology Conference, Chicago.
2009-2016 Autumn Immunology Conference Executive Council: corporate advisor

EDITORIAL ACTIVITY:

Manuscript review Journal of Immunology, PLOS One, Proceedings of the National Academy of Sciences, USA, Journal of Leukocyte Biology, Journal of Neuroimmunology, CRC Critical Reviews, Biotechniques, Infection and Immunity, Blood, Invest. Ophthalmol. and Vis. Sci., Vaccine

Associate Editor Journal of Immunology, 1996- 2000

GRANT REVIEW PANELS:

Ad Hoc:
1986 University of Kentucky Agricultural Experiment Station
1987 NIH Small Business Innovative Research Grant
1987 U.S. Department of Agriculture Research Grants:
1989 U.S. Department of Agriculture Research Grants:
1990: National Science Foundation, April 1990.
1991 U.S. Department of Agriculture Research Grants:
1991 North Carolina Biotechnology Center
1991 NIH/NIDDK Special Study Section for Renal Center Grants
1995 NIH/NINDS Special Review Committee, P50 review
1996 NIH, Immunological Sciences special study section
1996 NIDCC Special Emphasis Review Panel, Clinical Trials cooperative groups
1997 Reviewer, Department of Veterans Affairs Appeals Committee
1999 NIH special study section: Environmental/infection/gene interaction in autoimmunity, RFA.
1999 British Columbia Health Research foundation, April, 1999.
2002 NIH special emphasis panel: National Eye Institute, ZEY1 VSN (01)
2003 NIH special emphasis panel: NIAID “Large Scale Antibody and T cell Epitope Discovery Program”
2003 NIH study section: Immunological Sciences

2004 NIH study section: Immunological Sciences
2004 NIH study section: Hypersensitivity, Autoimmunity and Immune mediated diseases (formerly Immunological Sciences)
2004 NIH study section: Hypersensitivity, Autoimmunity and Immune mediated diseases

2005 NIH study section: Hypersensitivity, Autoimmunity and Immune mediated Diseases
2007 Canada Foundation for Innovation: Research infrastructure grants
2008 NIH Special Review Panel: Autoimmunity Centers of Excellence RFA
2009 NIH Special Review Panel: ARRA Challenge grants.
2010 NIH Special Review Panel: HAI conflict R01 grants.
2011 NIH R13 Conference grant review panel
2013 NIH study section: Hypersensitivity, Autoimmunity and Immune mediated diseases, ad hoc.
2014 NIH Immunology special emphasis panel. June 26, 2014.
2014 NIH study section: Hypersensitivity, Autoimmunity and Immune mediated diseases, ad hoc. October 9-10, 2014
2016 NIH Special Emphasis Panel: "Rapid Assessment of Zika Virus (ZIKV) Complications". September 20-21, 2016.
2018 NIH Innovative Immunology Small Business Study Section, May 31, 2018.
2019 NIH Special Emphasis Panel: Immuno-Oncology Translation Network U01, June 13-14, 2019

Full Study Section Memberships:

1985-1991 NIH Study Section: Immunology, Virology and Pathology (formerly Clinical Sciences_I)
1991-present NIH Reviewers Reserve
2002-2005 National Arthritis Foundation Molecular Immunology Study section
2005-2008 NIH study section: Hypersensitiviy, Allergy and Immune mediated diseases (formerly Immunological Sciences)
2008-2009 Chairman, National Arthritis Foundation Molecular Immunology Study section

TEACHING:

1984 MI 811, Immunology and Infectious Disease for Medical Students
1985 Initiated new course: MI 595, Immunology Lab, Course Director. Contributing lecturer in MI 811
1986 Course director, MI 595, Contributing lecturer in MI 811
1987 Course Director, MI 685, Advanced Immunobiology, 4 credits.
1988 Course Director, MI 685
1989 Course Director, MI 685
1990 Course Director, MI 685
1991 Course Director, MI 685
1992 Course Director, MI 685

1993 Course Director, MI 685
1994 Contributing lecturer in MI 685
1995 Initiated new graduate course, MI 710 (MI 604), Experimental Genetics
1996 Course Director, MI 604
1997 Course Director, MI 604
1998 Course Director, MI 604
1999 Course Director, MI 604
2000 Reorganized and expanded MI 604 (IBS 605) for the new IBS program
2001 Course Director, IBS 605
2002 Course Director, IBS 605
2003 Course Director, IBS 605
2004 Contributing lecturer in MI 685, IBS 601 (Biochemistry) and IBS 606 (Physiology)
2005 Contributing lecturer in MI 685, IBS 601 and IBS 606
2006 Contributing lecturer in MI 685, IBS 601 and IBS 606
2007 Contributing lecturer in MI 685, IBS 601 and IBS 606
2008 Contributing lecturer in MI 685, IBS 601 and IBS 606
2009 Contributing lecturer in MI 685 (6 lectures) and IBS 606 (6 Lectures)
2010 Contributing lecturer in MI 685 (6 lectures) and IBS 606 (6 Lectures)
2010 Course director, MI 707 Special Topics in Immunology: Virology (28 contact hrs).
Yearly participation: Student seminar, MI 772 and Special Topics, MI 707
2010 Visiting professor, American University of the Caribbean: Spring Sem. Vaccines and Autoimmunity (8 lectures)
2010 Visiting professor, American University of the Caribbean: Fall Sem. Vaccines and Autoimmunity (8 lectures)
2010 Lecture to the Ophthalmology Residents: Occular Immunology (2 hrs)
2011 Visiting professor, American University of the Caribbean: Summer Sem. Vaccines and Autoimmunity (8 lectures).
2011 Visiting professor, American University of the Caribbean: Fall Sem. Vaccines and Autoimmunity (8 lectures)
2011 Contributing lecturer in MI 685 (6 lectures)
2011 Contributing lecturer in IBS 606 (6 lectures)
2011 Contributing lecturer in OBI 828 (3 lectures).
2011 Lecture to the Ophthalmology Residents: Occular Immunology (2 hrs)
2012 Contributing lecturer in OBI 828 (3 contact hrs)
2012 Contributing lecturer in IBS 606 (6 contact hrs)
2012 Contributing lecturer in MI 685 (6 contact hrs)
2012 Course Director, MI 707, Special topics in Micro and Immuno: Vaccines (28 contact hrs)
2012 Lecture to the Ophthalmology Residents: Occular Immunology (2 hrs)
2012 Visiting professor, American University of the Caribbean: Fall sem. Vaccines and Autoimmunity (8 lectures)
2013 Contributing lecturer in OBI 828 (3 contact hrs)
2013 Visiting professor, American University of the Caribbean: Spring Sem. Vaccines and Autoimmunity (7 lectures).

2013 Contributing lecturer in IBS 606 (6 contract hrs)
2013 Lecture to the Ophthalmology Residents: Occular Immunology (2 hrs)
2013 Contributing lecturer in OBI 828 (3 contact hrs)
2013 Contributing lecturer in MI 685 (6 contact hrs)
2014 Course Director: MI 707, Translational Approaches in Microbiology and Immunology
2014 Contributing lecturer in IBS 606 (6 contract hrs)
2014 Contributing lecturer in OBI 828 (3 contact hrs)
2014 Contributing lecturer in MI 685 (6 contact hrs)
2015 Contributing lecturer in IBS 606 (7 contract hrs)
2015 Contributing lecturer in OBI 828 (3 contact hrs)
2015 Contributing lecturer in MI 685 (10 contact hrs)
2015 Contributing lecturer in IBS 608 (minicourse, 6 contact hours).
2015 Contributing lecturer in MI 710 (2 contact hours)
2016 Contributing lecturer in IBS 606 (Spring, 7 contact hours)
2016 Contributing lecturer in OBI 828 (Fall, 3 contact hours)
2016 Contributing lecturer in MI 685 (Fall, 10 contact hours)
2016 Course director, MI 707 (Spring, 26 contact hours)
2016 Contributing lecturer in IBS 608 (Spring, 2 contact hours)
2016 Contributing lecturer in MI 710 (Spring, 2 contract hours)
2017 Contributing lecturer in IBS 606 (Spring, 7 contact hours)
2017 Contributing lecturer in OBI 828 (Fall, 3 contact hours)
2017 Contributing lecturer in MI 710 (Spring, 2 contract hours)
2017 Contributing lecturer in MI 685 (Fall, 10 contact hours)
2018 Contributing lecturer in IBS 606 (Spring, 7 contact hours)
2018 Contributing lecturer in MI 710 (Spring, 2 contract hours)
2018 Contributing lecturer in OBI 828 (Fall, 3 contact hours)
2018 Contributing lecturer in MI 685 (Fall, 10 contact hours)
2019 Contributing lecturer in IBS 606 (Spring, 7 contact hours)
2019 Contributing lecturer in MI 710 (Spring, 2 contract hours)
2019 Contributing lecturer in OBI 828 (Fall, 3 contact hours)
2019 Contributing lecturer in MI 685 (Fall, 10 contact hours)
2020 Contributing lecturer in IBS 606 (Spring, 7 contact hours)
2020 Contributing lecturer in MI 710 (Spring, 2 contract hours)
2020 Contributing lecturer in MI 685 (Fall, 8 contact hours)
2020 Contributing lecturer in OBI 828 (Fall, 3 contact hours)

TRAINEES

Postdoctoral:

Catherine Breathnach	A transgenic model for autoimmune uveitis: 7/04-12/05
Marina Tuzova, Ph.D	In vivo responses of CD4 T cells, 7/01-6/03
Rita Munn, M.D.	Regulation of the MHC class II genes 7/91-6/93
P. Michael Stuart, Ph.D.	Bacterial superantigens 7/88-7/94
Rita Egan, M.D., Ph.D.	Transgenic mouse model for Immunologic tolerance 7/88-6/92
Alex Alexander, M.D.	Molecular Genetic Analysis of the Equine MHC 7/88-7/89
Asad Abrahamian, Ph.D.	Immunologic Tolerance In the Eye 8/94-8/9

Faculty

Michael Carrithers, M.D., PhD	Official mentor on NIH K08 award, 2003. Migration of Pioneer T lymphocytes into the Brain.
Andrew Bernard, M.D.	Official mentor on K23 application, 2008. Transfusion and T cell function-Implications for surgical patients
Alexandra Kejner, M.D.	Official mentor on ACS institutional grant: "Characterizing Tumor-Specific T cells in HPV-16 Positive Oropharyngeal Squamous Cell Carcinoma". 6/1/20-5/31/21.
Zach Porterfield, M.D., Ph.D	MIMG mentoring committee, Fall 2020-.

Predoctoral

Michael Kern	Analysis of Trans-Acting Factors Regulating Ia Gene Expression
Alex Alexander	Molecular Genetic Analysis of the Equine MHC
Jeff Brockman	Transcriptional Control of Class II Mhc genes
David Martin	Tolerance in MHC Transgenic Mice
Wai Khan Loh	The role of cytokines in Tolerance
Ruth Djigbenou	T cell memory
Patience Murapa	HSF-1 activation in T cells
Rahul Matnani	Autoimmune uveitis
Siva Gandhapudi	The role of HSF1 in the immune response
Sarah Parker	Nanoparticle activation of inflammasomes
Grant Jones	Rotation student, Spring 2 2013
Marissa Kamelgarn	Rotation student, Fall 1 2013
Joshua Ferrell	Rotation student, Fall 2 2013
Alex Gjevre,	Rotation student, Spring 2016
Sam Gruber	Rotation Student, Fall, 2015
David Henson	Rotation MD/PhD student, Fall, 2015
Elle Ogden	High school student, Summer 2016:
John Peyton Bush	MS Mentor: Type I IFN stimulation by cationic lipids, Spring 2019

Dissertation committees
Past:
L. Banerjei, P. Haddix, G. Cooper, T. Liles, B. Sauer, K. Davis, C. Bruins, R. Jamison, M. Dunn, B. Bowman, J. Graff, C. Chen, J. Wolfe, E. Ostlund, R. Willison, N. Selliah, K. Li., Y. Li, G. Bikah, M. Devalaraja, V. Greenberg, J. Lillard, V., Nilikantan, P. Payne, T. Ramish, L. Yixin, S. Crist, M. Rock, M. Huang, Y. Xia, C. Miller, J. Shi, M. Mullins, A. Simmons, D. Galey, M. Jones, B. Robinson, K. Nichols, M. Jernigan, C. Wagner. Elsa Bhou Ghanem, Erica Fleishaker, Jianing Li (Nutrition), Nadeem Mohammed (Nutrition), Luke Heil (MIMG), Annet Kyomuhangi (Vet Sciences), Ethan Stratton (MIMG)
Outside reader: L. Fought, Plant Pathology, Neil Williams, Vet. Sciences.

Current:
David Nardo (Pharmacy), Brock Harvey (Chemistry).

INVITED LECTURES AND ORAL MEETING PRESENTATIONS

Cellular requirements for the in vitro immune response to syngeneic, UV_induced tumors. University of California, Los Angeles. Department of Microbiology and Immunology, February 21, 1979.

Immunobiology of Ultraviolet light induced tumors. Department of Microbiology, University of Southern California, School of Medicine. October 5, 1979.

Cytotoxic T cell responses to ultraviolet light induced tumors. Immunology Branch, National Cancer Institute, National Institutes of Health, Bethesda, Maryland, January 16, 1980.

Antigen specific T cell clones. Department of Neurology, University of Southern California, March 18, 1981.

Functional analysis of Class I MHC genes. Department of Microbiology, St. Louis University, St. Louis, Missouri, September 20, 1982.

Analysis of Class I MHC genes by DNA_mediated gene transfer. Trudeau Institute, Saranac Lake, New York, November 4, 1982.

Identification and characterization of Class I MHC genes by DNA mediated gene transfer. Department of Medical Microbiology and Immunology, University of Kentucky College of Medicine, Lexington, Kentucky, January 13, 1983.

Genetics of the MHC. Department of Allergy, Children's Hospital, Los Angeles, California, April 5, 1983.

Regulation of Major Histocompatibility Complex Class II gene Expression. Department of Biological Sciences, University of Kentucky, October 15, 1987.

Mycoplasma_Macrophage interactions: Specific induction of MHC gene expression by Mycoplasma Products. Department of Microbiology, University of Alabama, Birmingham, AB. February 9, 1989. (Invited)

Identification of a novel superantigen produced by Yersinia enterlcolitica. Department of Microbiology, University of North Carolina, Chapel Hill, NC. December 7, 1990. (Invited)

Discussion Moderator--NIH Workshop on Immune Regulation. Rocky Mountain Laboratories, Hamilton MO. July 13, 1990. (Invited)

Transcriptional Attenuation within the E□-alpha gene. The third IIGB meeting on the Molecular Biology of the Major Histocompatibility complex. Capri, Italy, October 9, 1990.(Oral Meeting presentation)

Co-Chair, Poster Discussion Workshop on Microbial Superantigens. Annual FASEB meeting, Atlanta GA, April 21, 1991. (Invited)

Identification of a novel superantigen produced by Yersinia enterocolitica. Department of Pathobiology, University of Washington, Seattle. January 9, 1992. (Invited)

The New Superantigens and Disease. The joint meeting of the Ohio State and Kentucky State Medical Technologists, Cincinatti, Ohio, April 23, 1992. (Invited)

A Transgenic mouse model for tolerance in the eye. Department of Pathology, Univ. of Utah, Jan. 19, 1993 (invited)

A Transgenic mouse model for tolerance in the eye. The Jules Stein Eye Institute, UCLA, Jan. 20, 1993 (invited).

Lens Defects in transgenic mice expressing a major histocompatibility complex class I gene under the control of the □-A crystallin promoter. Association for Research in Vision and Ophthalmology Annual Meeting, Sarasota FL, May 4, 1993. (Minisymposium presentation.)

Workshop Moderator: Cellular Regulation of the Immune Response. Midwest Autumn Immunology Conference, Chicago IL. November 21, 1993.

A transgenic mouse model for tolerance in the eye: an immunologically priviliged site. AAI annual meeting, Denver, CO, May 22, 1993. (Minisymposium presentation.)

Immunologic and non-immunologic consequences of Major Histocompatibility complex class I expression in the lens of transgenic mice. Department of Microbiology and Immunology, University of Rochester, Rochester, NY. December 13, 1993. Invited.

Immunologic and non-immunologic consequences of Major Histocompatibility complex class I expression in the lens of transgenic mice. National Eye Institute, Bethesda, MD. December 14, 1993. Invited.

Session Moderator, Association for Research in Vision and Ophthalmology (ARVO) annual meeting: Transgenic Animals, Immunologic effects. Sarasota, FL. May 5, 1994. Invited.

Clonal Ignorance in Transgenic Mice Expressing Allo-MHC exclusively in the lens. Association for Research in Vision and Ophthalmology Annual Meeting, Sarasota FL, May 5, 1994. Oral Presentation.

Clonal Ignorance in Transgenic Mice Expressing Allo-MHC exclusively in the lens. Sixth International Symposium of the Immunology and Immunopathology of the eye. Bethesda, MD, June 23, 1994. Oral Presentation.

T cell tolerance in immune priviliged sites: A transgenic approach. University of Southern California Cancer Center, January 27, 1995. Invited seminar.

Chairman of minisymposium at the 1995 Experimental Biology Meeting in Atlanta, *Immune and Autoimmune Mechanisms in the Eye,* Monday, April 10, 1995.

Tolerance in transgenic mice expressing allo-MHC exclusively in the lens. Experimental Biology meeting, Atlanta Georgia, Monday April 10, 1995. Oral Presentation.

Session Moderator, *Transgenic Models for Immunology* at the Annual Meeting of the Association for Research in Vision and Ophthalmology, Fort Lauderdale, FL, Monday, March 15, 1995.

Tolerance in Transgenic Mice expressing allo MHC exclusively in the lens, Annual ARVO meeting, Monday, March 15, 1995. Oral Presentation.

Tracking the antigen specific T cell response in vivo following immunization through the ocular route. Department of Microbiology and Molecular Genetics, UCLA. January 26, 1996. Invited Seminar.

Session Moderator, *Immune Privilege and ACAID*, at the Annual Meeting of the Association for Research in Vision and Ophthalmology, Fort Lauderdale, FL, Friday, April 26, 1996.

Tracking the in vivo antigen specific T cell response to antigen administered via the ocular route. Annual Meeting of the Association for Research in Vision and Ophthalmology, Fort Lauderdale, FL, April 26, 1996. Oral Presentation.

The eye as a model system to study peripheral T-cell tolerance: Tracking the $CD4^+$ T-cell response *in vivo*. Department of Pathology, University of Utah, April 2, 1997. Invited seminar.

Session Moderator, *Immune Regulation: Tolerance and ACAID*, at the Annual Meeting of the Association for Research in Vision and Ophthalmology, Fort Lauderdale, FL, Tuesday, May 13, 1997.

A transgenic mouse model for autoimmune uveitis. Annual Meeting of the Association for Research in Vision and Ophthalmology, Fort Lauderdale, FL, Tuesday, May 13, 1997. Oral Presentation.

Tolerance to conjunctivally administered Ag is a consequence of continuous Ag-specific T cell priming. Annual Meeting of the Association for Research in Vision and Ophthalmology, Fort Lauderdale, FL, Tuesday, May 13, 1997. Oral Presentation.

Naive, in vivo primed, and in vivo tolerized CD4+ T cells show identical in vitro clonal expansion properties in response to optimal antigen/APC stimulation. FASEB Summer Research Conference, Saxons River, Vermont, June, 22, 1997. Poster Presentation.

Tolerance Induced via the Conjunctiva. Workshop on Mucosal Immunology and Ocular Disease. Ettal, Germany, October 23, 1997. Invited Speaker.

Lymphatic drainage and induction of T cell anergy following anterior chamber inoculation of antigen. First Combined International Symposium on Ocular Immunology and Inflammation. Amsterdam, June 29, 1998. Invited Speaker

A transgenic mouse model for autoimmune uveitis. First Combined International Symposium on Ocular Immunology and Inflammation. Amsterdam, June 28, 1998. Invited Speaker.

T cell recognition of intraocular antigens. XIII International Congress of Eye Research. Paris, France, July 27, 1998. Invited Speaker.

Experimental Autoimmune Uveitis in the mouse What is the role of immune privilege? Department of Microbiology, University of Tennessee, Knoxville. November 6, 2000. Invited seminar.

Clonal ignorance and autoimmune disease. Department of Microbiology, University of Southern California. January 26, 2001. Invited seminar.

Clonal ignorance of T cell receptor transgenic T cells toward a neo-antigen expressed in the retina of transgenic mice. Annual Meeting of the Association for Research in Vision and Ophthalmology, Fort Lauderdale, FL, Wednesday, May 2, 2001. Oral Presentation.

Recognition of intraocular antigen: Implications for Tolerance, immune privilege and autoimmunity. Casey Eye Institute, Oregon Health Sciences University, Portland, OR. Sept. 27, 2002. Invited Seminar.

Peripheral recognition of antigens from immune privileged sites: Implications for tolerance and autoimmunity. Keystone symposia: Mechanisms of Immunologic tolerance and its breakdown. Jan. 8, 2003, oral presentation.

T cell recognition of intraocular antigens: Implications for immune privilege, tolerance and autoimmunity. Department of Microbiology and Immunology, University of Louisville. Feb, 27, 2003. Invited Seminar.

Tolerance and Autoimmunity in the Eye. Department of Immunology, Shandong University Medical School, Nov. 11, 2004, invited seminar.

HSF1 is critical for T cell function during fever. Department of Immunology, Shandong University Medical School, Nov. 12, 2004, invited seminar

HSF1 is critical for T cell function during fever. Keystone Symposia on Survival and Death in Immune Tolerance and Homeostasis, Keystone, CO, March 5, 2005, oral presentation.

The effect of fever on T cell function. Department of Immunology, The Mayo Clinic, Rochester, MN. September 8, 2005. Invited seminar.

HSF1, Fever, and the Immune Response. The Trudeau Institute, Saranac Lake, NY, August 13, 2007. Invited seminar.

A Novel Cationic Lipid Adjuvant. Microbiology and Immunology, University of Kentucky Musings presentation, July, 2011

HSF1 is critical for T cell function during fever. Morehead State University, March, 2014.

Mechanism of Action of Cationic Lipid Adjuvants. Presentation to the Board of Directors of PDS Biotechnology, March 9, 2015.

Mechanism of Action of Cationic Lipid Adjuvants: Presentation to Merck Business Development and Licensing, Oncology. June 30, 2016, Kenilworth, New Jersey.

Human Immune monitoring facility: Shared resource facility fair, Markey Cancer Center, Feb 8, 2019

A novel cationic lipid adjuvant: Webinar presentation to the Collaborative Influenza Vaccine Innovation Centers (CIVICs), April 22, 2020. Invited webinar.

SARS-CoV-2 Serology at the University of Kentucky. Zoom Seminar to the Department of Microbiology, Immunology and Molecular Genetics, University of Kentucky. June 9, 2020.

BIBLIOGRAPHY

Full length articles:

1. Daynes, R.A., C.W. Spellman, J.G. Woodward, and D.A. Stewart. 1977. Studies into the transplantation biology of ultraviolet light induced tumors. ***Transplantation*** 23:343_348.
2. Spellman, C.W., J.G. Woodward, and R.A. Daynes. 1977. Modification of Immunological potential by ultraviolet radiation. I. Immune status of short term UV irradiated mice. ***Transplantation*** 24:112_119.
3. Woodward, J.G., R.A. Daynes, and C.W. Spellman. 1977. Suppression of the immune response to UV induced tumors by UV light. In: Regulatory mechanisms in lymphocyte activation. Proceedings of the 11th Leukocyte Culture Conference. Lucas, D.O. (ed.) Academic Press, Inc., New York, pp. 713_715.
4. Woodward, J.G., and R.A. Daynes. 1978. Cell mediated immune response to syngeneic UV induced tumors. I. The presence of tumor associated macrophages and their possible role in the in vitro generation of cytotoxic lymphocytes. ***Cell. Immunol***. 41:304_319.
5. Daynes, R.A., P.A. Fernandez, and J.G. Woodward. 1979. Cell mediated immune response to syngeneic UV induced tumors. II. the properties and antigenic specificities of cytotoxic T_lymphocytes generated in vitro following removal from syngeneic tumor immunized mice. ***Cell. Immunol.*** 45:398_414.
6. Woodward, J.G., P.A. Fernandez and R.A. Daynes. 1979. Cell mediated immune response to syngeneic UV induced tumors. III. Requirement for an Ia+ macrophage in the in vitro differentiation of cytotoxic T lymphocytes. ***J. Immunol.*** 122:1196_1202.
7. Woodward, J.G., P.A Fernandez and R.A. Daynes. 1979. Cell mediated immune response to syngeneic UV induced tumors. IV. The presence of I_A and I_E subregion coded antigens on the accessory cell required for the in vitro differentiation of cytotoxic T lymphocytes. ***J. Immunol.*** 123:1227_1231.
8. Woodward, J.G., Shigekawa, B.L. and J.A. Frelinger. 1982. Bone marrow derived cells are responsible for stimulating I region incompatible skin graft rejection. ***Transplantation*** 33:254_259.
9. Stohlman, S.A., J.G. Woodward and J.A. Frelinger. 1982. Macrophage antiviral activity: Extrinsic vs. intrinsic activity. ***Infect. Immun.*** 36:672_677.
10. Woodward, J.G., A. Orn, R.C. Harmon, E. McLaughlin_Taylor, R.S. Goodenow, L. Hood and J.A. Frelinger. 1982. Biological properties of Class I MHC molecules expressed after DNA_mediated gene transfer. IN: UCLA Symposia on Molecular and Cellular Biology, Volume XXIV. E. Vitetta and C.F. Fox (eds.). Academic Press, N.Y., N.Y., pp. 209_213.
11. Woodward, J.G., A. Orn, R.C. Harmon, R.S. Goodenow, L. Hood and J.A. Frelinger. 1982. Specific recognition of the product of a transferred major

histocompatibility complex gene by cytotoxic T lymphocytes. ***Proc. Natl. Acad. Sci.*** 79:3613_3617.

12. Orn, A., R.S. Goodenow, L. Hood, P.R. Brayton, J.G. Woodward, R.C. Harmon and J.A. Frelinger. 1982. Product of a transferred H_2L^d gene acts as restriction element for LCMV_specific killer T cells. ***Nature*** 297:415_417.
13. Woodward, J.G., J.O. Fleming, G.K. Matsushima, J.A. Frelinger, and S.A. Stohlman. 1983. Fine specificity and genetic restriction of T cell clones specific for mouse hepatitis virus, strain JHM. In: Corona viruses, Molecular Biology and Pathology. P. Rottier, B. Van Der Zeijst et al. (eds). Plenum Press, New York.
14. Santiago_Schwartz, F., J.G. Woodward, J.W. Parker, J.A. Frelinger and R.L. O'Brien. 1983. Low density mononuclear cells: Potent stimulators of the human MLR. ***Transplantation*** 35:463_469.
15. Woodward, J.G., E. McLaughlin_Taylor, M.M. Macchi and J.A. Frelinger. Functional properties of an H_2D^p gene product expressed after DNA_ mediated gene transfer. in Intercellular Communication in Lymphocyte Function. J.W. Parker and R.L. O'Brien (eds.) 1983. John Wiley and Sons Ltd., pp. 359_365.
16. Macchi, M.J., J.G. Woodward, E. McLaughlin_Taylor, J. Griffin, L. Hood, and J.A. Frelinger. 1984. Cloning and identification of the H_2D^p gene. ***Immunogenetics*** 19:195.
17. McLaughlin_Taylor, E., J.G. Woodward, M.J. Macchi, M. McMillan and J.A Frelinger. 1984. Functional characterization of the H_2D^p gene product. ***Immunogenetics*** 19:205.
18. Woodward, J.G., G. Matsushima, J.A. Frelinger, and S.A. Stohlman. 1984. Production and characterization of T cell clones specific for mouse hepatitis virus, strain, JHM. *In vivo* and *in vitro* analysis. ***J. Immunol.*** 133:1016_1021.
19. Santiago_Schwartz, F., A.C. Bakke, J.G. Woodward, R.L. O'Brien, and D.A. Horowitz. 1984. Further characterization of low density mononuclear cells: FACS_assisted analysis of human MLR stimulators. ***J. Immunol.*** 134:779.
20. McLaughlin_Taylor, E., J.G. Woodward, M. McMillan and J.A. Frelinger. 1984. Distinct epitopes are recognized by cytolytic T lymphocyte clones on the same class I molecule: Direct demonstration using DNA transfected targets and long term cytolytic T cell clones. ***Eur. J. Immunol.*** 14:969.
21. Schepart, B.S., J.G. Woodward, M.J. Palmer, M.J. Macchi, P. Basta, E. McLaughlin_Taylor, and J.A. Frelinger. 1985. Expression in L cells of transfected class I genes from the mouse major histocompatibility complex. ***Proc. Natl. Acad. Sci.*** 82:5505.
22. Alexander, A.J., E. Bailey and J.G. Woodward. 1987. Analysis of the Equine Lymphocyte Antigen System by Southern Blot Hybridization. ***Immunogenetics.*** 25:47.
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Published Abstracts

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FUNDING:

Current:

PDS Biotechnology (Woodward, PI) 07/01/20-06/30/21
Validated Vaccine Candidates Product Development Support
The goals of this project are to determine whether nanoparticle based vaccine formulations containing viral or cancer antigens can induce antibody and T cell responses in pre-clinical studies.

PDS Biotechnology (Woodward, PI) 07/01/20-06/30/21
Mechanism of action of Versamune
The goals of this project are to understand how cationic lipids facilitate uptake and cross-presentation of peptide antigens in dendritic cells.

NIAID CIVIC program (Woodward, PI) 08/15/20-08/14/22
Development of a novel universal influenza vaccine
The goals of this project are to test novel influenza vaccines consisting of synthetic hemagglutinin and nanoparticle adjuvants for development of cross protective antibody and T cell responses.

University of Kentucky CCTS award (Woodward, PI) 08/15/20–02/15/21
Identification and characterization of virus specific T cells in humans exposed to SARS-CoV-2
The goas of this project are to perform epitope mapping of SARS CoV2 proteins to discover which epitopes are recognized by T cells from COVID recovered individuals.

University of Kentucky CCTS award (Woodward, PI) 08/15/20–02/15/21
Validation of finger-stick blood for COVID-19 antibody ELISA
The goals of this project are to determine if finger stick blood can be reliably used for SARS CoV2 ELISA assays.

Previous support:

1983-1986 National Arthritis Foundation Investigator Award
"Analysis of MHC Gene Expression"

1984-1988 NIH R01 CA39070 01-04 (Woodward, PI)
"Regulation of Ia gene Expression"

1988-1992 NIH R01 CA39070 04-08 (Woodward, PI)
"Regulation of Ia gene Expression"

1986-1992 The Grayson Foundation, Inc. (Woodward, PI)
"Molecular Genetic Analysis of the Equine Leukocyte Antigen System"

1993-1996 NIH R01 EY09638-01-03 (Woodward, PI)
A Transgenic Mouse Model for Tolerance in the eye.

1996-2000 NIH R01 EY09638-04-07 (Woodward, PI)
A Transgenic Mouse Model for Tolerance in the eye.

2003-2005 NIH R21AI51147 (Mumper, PI, Woodward, Co-I)
Nanoengineered HIV-1 Vaccines Based on Tat

2002-2007 NIH R01EY14060-01-05 (Woodward, PI)
Tolerance and autoimmunity in the eye

2007-2008 University of Kentucky Research Support Grant program (Woodward, PI)
The Role of HSF1 in the Immune Response

2008-2010 NIH R21 EY018952 (Woodward, PI)
TCR transgenic mice specific for IRBP

2005-2010 R01 AI058842-02 (Mumper, PI, Woodward, Co-I)
Nanoparticle HIV protein vaccines for cellular responses

2010-2013 R21 AI088605 (Eckhardt, PI, Woodward Co-I) Role of chylomicrons in intestinal absorption of food antigens.

2010-2015 R01 AR049010-06 (Crofford, PI; Woodward, Co-I)
Microsomal Prostaglandin E Synthase in Rheumatoid Arthritis,

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Tumor regression studies of Versamune HPV vaccine forumlations.

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Fellow: Rita Munn
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NIH F32 AI07344 (Postdoctoral Fellowship)
"Ia Induction and Expression in Non_Bone Marrow Derived Cells".
Fellow: Patrick M. Stuart
Sponsor: Jerold G. Woodward
$50,000 TDC