

CURRICULUM VITAE

Name: *Barbara Anne Osborne*

Home Address: 54 Depot Road, Leverett, MA 01054

Education: June 1970 , B.A. English, Moravian College, Bethlehem, PA
August 1979, Ph. D. Genetics, Stanford University, Stanford, CA

Employment:

1970-1972	Elementary School Teacher, Lindenwold Public Schools
1972-1974	Research Assistant, University of Maryland
1974-1975	Microbiologist, National Institutes of Health
1975-1977	Research Assistant, Stanford University
1977-1979	Graduate Student, Stanford University
1979-1981	Damon Runyon-Walter Winchell Postdoctoral Fellow National Institutes of Health
1981-1983	Staff Fellow, National Institutes of Health
1983-1985	Five Colleges Research Associate, Amherst College
1985-1989	Assistant Professor
1989-1995	Associate Professor
1995-present	Professor Department of Veterinary and Animal Sciences University of Massachusetts Amherst, Massachusetts
1992	Visiting Associate Professor, Department of Biology, MIT Laboratory of Dr. Robert Horvitz
1995	Visiting Scientist, Whitehead Institute, Cambridge, MA Laboratory of Dr. Robert Weinberg
1999-2000	Visiting Professor, Whitehead Institute, Cambridge, MA Laboratory of Dr. Robert Weinberg
1998-2005	Co-founder, Owner and Senior Consultant, Hematech, LLC

Honors:

1977-1979	USPHS Predoctoral Fellowship
1979-1981	Damon Runyon-Walter Winchell Postdoctoral Fellowship
1995	USPHS Senior Fellowship for sabbatical salary support
1996 -	Member, Whitehead Institute Board of Associates
1997	John Amos Comenius Alumni Award for Outstanding Achievement, Moravian College
1999-2000	Samuel Conti Award for excellence in research, Univ. of Mass.
2003	Chancellor's Distinguished Lecturer, Univ. of Mass.
2005	Dean's Award, NRE, Univ. of Mass.
2006	Chancellor's Award for Outstanding Accomplishments in Research

Service:

1987-1993	Member, NIH Immunology, Virology, Pathology Study Section Ad-hoc reviewer, NSF and USDA
1993-present	Senior Editor, East Coast Office of <i>Cell Death & Differentiation</i>
1993-present	Ad-hoc reviewer for NIH grants and site visits
1995-1999	Member, National Multiple Sclerosis Society grant review panel
1998-2005	Editorial Board, Journal of Immunology
	2000-2005 Member, Damon Runyon-Walter Winchell Board of Scientific Advisors
	2000- 2005 Chair, Board of Scientific Counselors, NIAID, NIH
	2001- 2005 FASEB Finance Committee
2001- 2004	AAI Finance Committee

Patents: Expression of Xenogenous (Human) Immunoglobulins in Cloned Transgenic Ungulates. US Patent # 09/988,115.
Production of Ungulates, Preferably Bovines, That Produce Human Immunoglobulins. US Patent # 09/714,185

Current Grants:

NIH RO1 AI49361 10/01/03 – 9/30/08	Notch signaling in T cell function \$345,835/year direct + indirect
NIH RO1 AI057652 10/01/03 – 9/30/06	Polyclonal human antibody in cloned HAC transgenic cows \$379,275/year direct +indirect
P01 AG025531-01 09/01/06-8/31/11	Targeting Multiple Diseases Through γ -Secretase \$1,025,674/year direct + indirect

Publications:

1. Kos, K. A., B. A. Osborne and R. A. Goldsby. 1975. Inhibition of group A arbovirus antigen production and replication in cells enucleated with cytochalsin B. *J. Virol.* 15:913.
2. Glode, L. M., I. Scher, B. A. Osborne and D. L. Rosenstreich. 1976. Cellular mechanism of endotoxin unresponsiveness in C3H/HeJ mice. *J. Immunol.* 116:454.
3. Herzenberg, L. A., S. J. Black, M. R. Loken, K. Okumura, W. van der Loo, B. A. Osborne, D. Hewgill, J. W. Goding, G. Gutman and N. Warner. 1976. Surface markers and functional relationships of cells involved in murine B cell differentiation. In: *Origins of Lymphocyte Diversity*. Proceedings of the Cold Spring Harbor Symposium On Quantitative Biology. Vol. XLI:33.
4. Warner, N. L., J. W. Goding, G. Gutman, G. W. Warr, L. A. Herzenberg, B. A. Osborne, W. van der Loo, S. J. Black and M. R. Loken. 1977. Allotypes of mouse IgM immunoglobulin. *Nature* 265:447.
5. Goldsby, R. A., B. A. Osborne, E. Simpson and L. A. Herzenberg. 1977. Hybrid cell lines with T cell characteristics. *Nature* 267:707.
6. Goldsby, R. A., B. A. Osborne, D. M. Murphy, E. Simpson, J. Schroeder and L. A. Herzenberg. 1978. Somatic cell hybrids with T cell characteristics. In: The *Immune Response: Genetics and Regulation*. Vol. VI:265.
7. Osborne, B. A., R. A. Goldsby and L. A. Herzenberg. 1978. Selective expression of loci in the I-J region on T cell hybrids. *Current Topics in Microbiology and Immunology* 81:217.
8. Goldsby, R. A., B. A. Osborne, D. Suri, A. Mandel, J. Williams, E. Gronowicz and L. A. Herzenberg. 1978. Production of specific antibody without specific immunization. *Current Topics in Microbiology and Immunology* 81:149.
9. Black, S. J., J. W. Goding, G. Gutman, L. A. Herzenberg, M. R. Loken, B. A. Osborne, W. van der Loo and N. L. Warner. 1978. Immunoglobulin isoantigens (allotypes) in the mouse. V. Characterization of IgM allotypes. *Immunogenetics* 7:213.
10. Goldsby, R. A., B. A. Osborne, D. Suri, J. Williams and A. Mandel. 1978. Preservation of the polyclonal response by hybridization: Specific antibody without specific immunization. *Current Microbiology* 2:157.
11. Goldsby, R. A., B. A. Osborne and E. G. Engleman. 1979. Identification, isolation and characterization of a human T cell population by a monoclonal antibody. *Current Microbiology* 3:141.

12. Engleman, E. G., C. Benike, B. A. Osborne and R. A. Goldsby. 1978. Functional characteristics of human T cell subpopulations distinguished by monoclonal antibody. *Proc. Nat. Acad. Sci.* 77:1607.
13. Suomalainen, H. A., R. A. Goldsby, B. A. Osborne and J. Schroder. 1980. Mouse/human T cell hybrids resetting with sheep red blood cells. *Scan. Journal Immunol.* 11: 163.
14. Goldsby, R. A., B. A. Osborne and E. G. Engleman. 1980. Characterization of a human T cell population identified and isolated by a monoclonal antibody. In: Monoclonal Antibodies. R. H. Kennett, T. J. McKean, K. B. Bechtol, eds. p. 121, Plenum Press.
15. Metzger, J-J., G. Gilliland, J. K. Lunney, B. A. Osborne, S. Rudikoff and D. Sachs. 1981. Transplantation in miniature swine. IX. Swine histocompatibility antigens: Isolation and purification of papain solubilized SLA antigens. *J. Immunol* 127:769.
16. Singer, D. S., D. Camerini-Otero, L. Satz, B. A. Osborne, D. Sachs, and S. Rudikoff. 1982. Characterization of a porcine genomic clone encoding a major transplantation antigen: expression in mouse L cells. *Proc. Natl. Acad. Sci.* 79:1403.
17. Osborne, B. A., and S. Rudikoff. 1983. Murine thymocyte and splenocyte Ia antigens are indistinguishable. *J. Immunol.* 131:1386.
18. Roth, J. A., E. A. Grimm, B. A. Osborne, R. K. Gupka and R. S. Ames. 1982. Immunoregulatory factors derived from human tumors. II. Purification and further biochemical characterization of factors that suppress lymphocyte proliferation responses. *J. Immunol.* 130:303.
19. Osborne, B. A., S. Rudikoff, J. Lunney and D. Sachs. 1983. Two-dimensional gel analysis of gene products of the miniature swine SLA and Ia loci. *J. Immunol.* 131:2939.
20. Lunney, J., B. A. Osborne, S. O. Sharron, C. Devaux, M. Pierres and D. Sachs. 1983. Sharing of Ia antigens between species. IV. Interspecies cross reactivity of monoclonal antibodies Directed against polymorphic mouse Ia determinants. *J. Immunol.* 130:2786.
21. Osborne, B. A., T. E. Golde, R. L. Schwartz and S. Rudikoff. 1985. Evolution of the mouse IgA gene: Nucleotide sequence comparison of IgA in Balb/c and *Mus pahari*. *Current Topics in Immunology* 127:141.
22. Osborne, B. A., T. E. Golde, R. L. Schwartz and S. Rudikoff. 1988. Evolution of the IgA heavy chain gene in the genus *Mus*. *Genetics* 119:925.
23. Ferguson, S.E, S. Rudikoff and B.A.Osborne. 1988. Interaction and sequence diversity

among T15 V_H genes in CBA/J mice. *J. Exp. Med.* 168:1339.

24. Ferguson, S. E., M. P. Cancro, S. Rudikoff and B. A. Osborne. 1989. T15 V_H gene evolution in wild mice: The T15 V_H family in two wild populations of *Musculus domesticus*, Centerville Light and Watkins Star. *J. Exp. Med.* 170:1811.
25. Osborne, B.A., S.E. Ferguson, S. Szabo and S. Sylvers. 1989. Evolution of immunoglobulin genes. In: Molecular Evolution. M. Clegg and S. O'Brien, editors, p. 19-28, Wiley-Liss.
26. Ravichandran, K.S., A.R. Semproni, R.A. Goldsby and B.A. Osborne. 1992. Immunoglobulin V. usage analysis by fluorescent *in situ* hybridization and flow cytometry. *J.Immunol. Meth.* 153:249-25
27. Ravichandran, K.S., B.A. Osborne and R.A. Goldsby. 1993. Quantitative analysis of the B cell repertoire by limiting dilution analysis and fluorescent *in situ* hybridization. *Cell. Immunol.* 154:309-327.
28. Schwartz, L.M., S.W. Smith, M.E.E. Jones and B.A. Osborne. 1993. Do all programmed cell deaths occur via apoptosis? *Proc. Natl. Acad. Sci.* 90:980-984.
29. Lowe, S., E.M. Schmitt, S.W. Smith, B.A. Osborne and T. Jacks. 1993. p53 is required for radiation-induced apoptosis in mouse thymocytes. *Nature* 362:847-849.
30. Schwartz, L.M. and B.A. Osborne. 1993. Programmed cell death, apoptosis and killer genes. *Immunol. Today* 14:582-590.
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33. Schwartz, L.M. and B.A. Osborne. 1994. *Ced-3/Ice*: Evolutionarily conserved regulation of cell death. *BioEssays* 16:387-390.
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39. Osborne, B.A. 1994. Intracellular regulators of death. *Cell Death & Differentiation* 2:69.
40. Osborne, B. A., S.W. Smith, Z.-G. Liu, K. McLaughlin, L. Grimm and L. M. Schwartz. 1994. Identification of genes induced during apoptosis in T lymphocytes. *Immunological Reviews*, Vol. 141, 301-320.
41. McLaughlin, K.A., S. W. Smith, C.E. Milligan, W. Bielke, L. M. Schwartz and B.A. Osborne. 1995. The isolation and characterization of cell death genes. In: Handbook of Experimental Immunology, Blackwell Scientific Press, Vol.4.
42. Parng, C.-L., S. Hansal, R.A. Goldsby and B. A. Osborne. 1995. Gene conversion generates immunoglobulin gene diversity in cattle. *Ann. New York Acad. Sci.*, 764:155-157.
43. Osborne, B. A. And L. M. Schwartz. 1995. Cell death suffers a TKO. *BioEssays* 17:557-559.
44. Parng, C.-L, S. Hansal, R.A. Goldsby and B.A. Osborne. 1996. Gene conversion generates immunoglobulin gene diversity in cattle. *J. Immunol.* 157:5478-5486.
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49. Osborne, B. A. 1996. Apoptosis and the maintenance of homeostasis in the immune system. *Current Opinion in Immunology*, 8:245-254.

50. Osborne, B.A., Smith, S.W., McLaughlin, K.A., Grimm, L., Morgan, G.M. and R.A. Goldsby. 1996. Genetic regulation of apoptosis in the mouse thymus. In *Advances in Experimental Medicine and Biology*. Vol. 406:199-208.
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52. Jehn, B. and B.A. Osborne. 1996. Gene Regulation Associated with Apoptosis. *Critical Reviews in Biochemistry*, 7:179-193
53. Osborne, B. A. 1996. Keeping Ahead of the Reaper. *Cell Death and Differentiation*, 3:445.
54. Smith, S.W. and B.A. Osborne. 1997. Private pathways to a common death. *J. of NIH Res.* 9:33-37.
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58. Amsen, D., Osborne, B.A. and A.M. Kruisbeek. 1999. Costimulatory signals re required for induction of Nur77 protein during negative selection of CD4⁺, CD8⁺ thymocytes. *Proc. Natl. Acad. Sci.*, 96: 622-627
59. Osborne, B.A. 1999. Apoptotic signaling pathways in lymphocytes. In *Cell Death*, R. Lockshin, editor, John Wiley & Sons, Inc., in press.
60. Morgan, G., Smith S.W., Pak, J., Marshak-Rothstein, A., Fissore, R. and B. A. Osborne. 1999. Characterization of a mutant T cell line with defects in TCR-mediated apoptosis. *Cell Death & Differen.* 6:36-47.
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62. Miele, L. and B.A. Osborne. 1999. Arbiter of differentiation and death: Notch signaling meets apoptosis. *J Cell Physiol.* 181(3):393-409.
63. Osborne, B.A. and L. Miele. 1999 Notch and the immune system. *Immunity* 11:653-663.

64. Goldsby, R.A., Kindt, T.J. and B.A. Osborne. 1999. **Kuby Immunology**, WH Freeman, NY, NY.
65. Jeong Y., Osborne B.A. and R.A. Goldsby R.A. 2001. Early Vlambda diversification in sheep. *Immunology*. 103:26-34.
66. Osborne BA. 2000. Transcriptional control of T cell development.. *Curr Opin Immunol*. 12:301-6.
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74. Ganguly BJ, Tonomura N, Benson RM, Osborne BA, Granowitz EV. 2002. Hyperbaric oxygen enhances apoptosis in hematopoietic cells. *Apoptosis*. 7:499-510.
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76. Tonomura, N., McLaughlin, K., Grimm, LM, Goldsby, RA and BA Osborne. 2003. Glucocorticoid-induced apoptosis of thymocytes:Requirement of proteasome-dependent mitochondrial activity. *J. Immunol*, 170(5):2469-78.
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