Curriculum Vitae

MARK M. DAVIS

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Date of Birth: November 27, 1952

Place of Birth: Paris, France

Citizenship: United States

Educational Background:

1974 B.A. in Molecular Biology, The Johns Hopkins University, Baltimore, Maryland

1981 Ph.D. in Molecular Biology, California Institute of Technology, Pasadena, California

Professional Experience:

1980-1982	Postdoctoral Fellow, Laboratory of Immunology National Institutes of Health, Bethesda, Maryland
1982-1983	Staff Fellow, Laboratory of Immunology National Institutes of Health, Bethesda, Maryland
June 1983	Instructor, Molecular Cloning Course Cold Spring Harbor Laboratory, Cold Spring Harbor, New York
1983-1986	Assistant Professor, Department of Medical Microbiology Stanford University School of Medicine, Stanford, California
1985-1988	Member Scientific Advisory Board, Damon Runyon-Walter Winchell Cancer Foundation

1986-1991	Associate Professor, Department of Microbiology and Immunology Stanford University School of Medicine
1987-1991	Associate Investigator Howard Hughes Medical Institute at Stanford University
1987	Co-organizer (with John Kappler) of the UCLA Symposium "The T Cell Receptor"
1988-1992	Member of the Allergy and Immunology Study Section Division of Research Grants, National Institutes of Health
1991-Present	Professor, Department of Microbiology and Immunology Stanford University School of Medicine
1991-Present	Investigator Howard Hughes Medical Institute at Stanford University
1994-2000	Director of the Doctoral Program in Immunology, Stanford University School of Medicine
1999-2002	Associate Chair, Department of Microbiology and Immunology Stanford University School of Medicine
2002-2004	Chair, Department of Microbiology and Immunology Stanford University School of Medicine
2004-Present	Director, Stanford Institute for Immunity, Transplantation and Infection

Academic Awards and Honors:

1980	Intra-Science Research Foundation Award
1981	Milton and Frances Clauser Doctoral Prize, California Institute of Technology
1985	The Passano Foundation Young Scientist Award
1985-1989	Scholar of the PEW Foundation
1986	Eli Lilly Award in Microbiology and Immunology

1986	Kayden Award from the New York Academy of Sciences
1988	The Howard Taylor Ricketts Award, The University of Chicago
1989	Gairdner Foundation International Award (shared with T. Mak)
1993	Elected to membership in the National Academy of Sciences, U.S.A.
1995	The King Faisal International Prize in Medicine (Shared with T. Mak and G. Winter)
1996	Alfred P. Sloan Prize from the General Motors Cancer Research Foundation (shared with T. Mak)
1997	Behring-Heidelberger Prize, American Association of Immunologists
1998	Novartis Prize for Basic Immunology (Shared with T. Mak)
2000	William B. Coley Award from the Cancer Research Institute
2000	Elected to membership in the American Academy of Arts and Sciences
2000	Pius XI Award from the Pontificial Academy of Sciences
2000-2001	Newton-Abraham visiting Professor at the University of Oxford
2001-2006	The Burt and Marion Avery Professor of Immunology
2002	The Rose Payne Award, American Society for Histocompatibility and Immunogenetics
2003	The Ernst W. Bertner Memorial Award, The University of Texas M.D. Anderson Cancer Center
2004	Paul Ehrlich and Ludwig Darmstaedter Prize (shared with T. Mak) Paul Ehrlich Institute, Germany
2004	Elected to Membership in the Institute of Medicine of the National Academies of Science
2006	Ellison Medical Foundation Senior Scholars in Aging Award

2007 – Present	The Burt and Marion Avery Family Professor of Immunology

Current Boards:

1996 – Present	Affymetrix Scientific Advisory Board
1997 – Present	Chairman, Scientific Advisory Board La Jolla Institute for Allergy and Immunology
2000 – Present	External Advisory Board Weatherall Institute of Molecular Medicine Oxford, United Kingdom
2002 – Present	Scientific Advisory Board The University of Texas M.D. Anderson Cancer Center
2004 – Present	ForteBio Scientific Advisory Board
2005 – Present	Novartis Science Board

Publications:

1. Johnson, P.Y. and M.M. Davis. The novel synthesis and lack of reactivity of ethyl N-2(1-hydroxy-2-methylpropyl)-3,3'-imino-2,2,2',2'-tetramethyldipropionate-e-lactone. *Tetrahedron Letters,* 4:293-294, 1973.

2. Johnson, P.Y., R.B. Silver, and M.M. Davis. The Mannich reaction. 6-alkoxytetrahydro-5,5-dimethyl-1,3-oxazines. *J. Org. Chem.,* 38:3753-3757, 1973.

3. Galau, G.A., W.H. Klein, M.M. Davis, B.J. Wold, R.J. Britten, and E.H. Davidson. Structural gene sets active in embryos and adult tissues of the sea urchin. *Cell,* 7:487-505, 1976.

4. Angerer, R.C., W.R. Crain, B.R. Hough-Evans, G.A. Galau, W.H. Klein, M.M. Davis, B.J. Wold, M.J. Smith, R.J. Britten, and E.H. Davidson. DNA sequence organization and expression of structural gene sets in higher organisms. In *The Molecular Biology of the Mammalian Genetic Apparatus*, Vol. 2, P.Ts'o (ed.), Elsevier North-Holland Biomedical Press, 1977.

5. Davidson, E.H., W.H. Klein, B.R. Hough-Evans, M.J. Smith, G.A. Galau, W.R. Crain, R.C. Angerer, B.J. Wold, M.M. Davis, and R.J. Britten. The organization of functional DNA sequences in animal genomes. In *The Organization and Expression of the Eukaryotic Genome*, E.M. Bradbury and K. Javaherian (eds.), Academic Press, New York, 373-391, 1977.

6. Early, P.W., M.M. Davis, D.B. Kaback, N. Davidson, and L.E. Hood. Immunoglobulin heavy chain gene organization in mice: Analysis of a myeloma genomic clone containing variable and a constant regions. *PNAS, USA,* 76:857-861, 1979.

7. Davis, M.M., P. Early, K. Calame, D. Livant, and L. Hood. The organization and rearrangement of heavy chain immunoglobulin genes in mice. In *Eukaryotic Gene Regulation*, ICN-UCLA Symposium, Vol. 14, R. Axel, T. Maniatis and C.F. Fox (eds.), Academic Press, New York, 393-406, 1979.

8. Davis, M.M., K. Calame, P.W. Early, D.L. Livant, R. Joho, I.L. Weissman, and L. Hood. An immunoglobulin heavy-chain gene is formed by at least two recombinational events. *Nature,* 283:733-739, 1980.

9. Early, P., H. Huang, M. Davis, K. Calame, and L. Hood. An immunoglobulin heavy chain variable region gene is generated from three segments of DNA: V, D and J. *Cell,* 19:981-992, 1980.

10. Calame, K., J. Rogers, P. Early, M. Davis, D. Livant, R. Wall, and L. Hood. Mouse C heavy chain immunoglobulin gene segment contains three intervening sequences separating domains. *Nature,* 284:452-455, 1980.

11. Early, P., J. Rogers, M. Davis, K. Calame, M. Bond, R. Wall, and L. Hood. Two mRNAs can be produced from a single immunoglobulin m gene by alternative RNA processing pathways. *Cell,* 20:313-319, 1980.

12. Davis, M.M., S.K. Kim, and L.E. Hood. DNA sequences mediating class switching in α-immunoglobulins. *Science,* 209:1360-1365, 1980.

13. Davis, M.M., S.K. Kim, and L. Hood. Immunoglobulin class switching: Developmentally regulated DNA rearrangements during differentiation. *Cell,* 22:1-2, 1980.

14. Kronenberg, M., M.M. Davis, P.W. Early, L. Hood, and J. Watson. Helper and killer T cells do not express B-cell immunoglobulin joining and constant region gene segments. *J. Exp. Med.,* 152:1745-1761, 1980.

15. Hood, L., M. Davis, P. Early, K. Calame, S. Kim, S. Crews, and H. Huang. Two types of DNA rearrangements in immunoglobulin genes. *Cold Spring Harbor Symp. Quant. Biol.,* 45:887-898, 1981.

16. Kim, S., M. Davis, E. Sinn, P. Patten, and L. Hood. Antibody diversity: Somatic hypermutation of rearranged V genes. *Cell,* 27:573-581, 1981.

17. Calame, K., S. Kim, P. Lalley, R. Hill, M. Davis, and L. Hood. Molecular cloning of translocations involving chromosome 15 and the immunoglobulin C gene from chromosome 12 in two murine plasmacytomas. *PNAS, USA* , 79:6994-6998, 1982.

18. Davis, M.M., D.I. Cohen, E.A. Nielsen, A.L. DeFranco, and W.E. Paul. The isolation of B and T cell-specific genes. In *B and T Cell Tumors*, UCLA Symposia on Molecular and Cellular Biology, Vol. 24, E. Vitteta (ed.), Academic Press, New York, 215-220, 1982.

19. DeFranco, A.L., M.M. Davis, and W.E. Paul. WEHI-231 as a tumor model for tolerance induction in an immature B lymphocyte. In *B and T Cell Tumors*, UCLA Symposia on Molecular and Cellular Biology, Vol. 24, E. Vitteta (ed.), Academic Press, New York, 445-450, 1982.

20. Davis, M.M., D.I. Cohen, E.A. Nielsen, M. Steinmetz, W.E. Paul, and L. Hood. Cell-type-specific cDNA probes and the murine I region: The localization and orientation of A. *PNAS, USA,* 81:2194-2198, 1984.

21. Hedrick, S.M., D.I. Cohen, E.A. Nielsen, and M.M. Davis. Isolation of cDNA clones encoding T cell-specific membrane-associated proteins. *Nature,* 308:149-153, 1984.

22. Hedrick, S.M., E.A. Nielsen, J. Kavaler, D.I. Cohen, and M.M. Davis. Sequence relationships between putative T-cell receptor polypeptides and immunoglobulins. *Nature,* 308:153-158, 1984.

23. Chien, Y., N.R.J. Gascoigne, J. Kavaler, N.E. Lee, and M.M. Davis. Somatic recombination in a murine T-cell receptor gene. *Nature,* 309:322-326, 1984.

24. Gascoigne, N.R.J., Y. Chien, D.M. Becker, J. Kavaler, and M.M. Davis. Genomic organization and sequence of T-cell receptor β-chain constant- and joining-region genes. *Nature,* 310:387-391, 1984.

25. Kavaler, J., M.M. Davis, and Y. Chien. Localization of a T-cell receptor diversity-region element. *Nature,* 310:421-423, 1984.

26. Lee, N.E., P. D'Eustachio, D. Pravtcheva, F.H. Ruddle, S.M. Hedrick, and M.M. Davis. Murine T cell receptor β chain is encoded on chromosome 6. *J. Exp. Med.,* 160:905-913, 1984.

27. Davis, M.M., Y. Chien, N.R.J. Gascoigne, and S.M. Hedrick. A murine T cell receptor gene complex: Isolation, structure and rearrangement. *Immunol. Rev.,* 81:235-258, 1984.

28. Chien, Y., D.M. Becker, T. Lindsten, M. Okamura, D.I. Cohen, and M.M. Davis. A third type of murine T-cell receptor gene. *Nature,* 312:31-35, 1984.

29. Patten, P., T. Yokota, J. Rothbard, Y. Chien, K. Arai, and M.M. Davis. Structure, expression and divergence of T-cell receptor β-chain variable regions. *Nature,* 312:40-46, 1984.

30. Hedrick, S.M. and M.M. Davis. Rearrangement and expression of the T cell receptor β chain genes. In *Regulation of the Immune System*, UCLA Symposia on Molecular and Cellular Biology, New Series, Vol. 18, E. Sercarz, H. Cantor and L. Chess (eds.), Alan R. Liss, Inc., New York, 361-368, 1984.

31. Davis, M.M., Y. Chien, N.R.J. Gascoigne, J. Kavaler, N.E. Lee, D.M. Becker, and P. Patten. Genomic organization, rearrangement and chromosomal localization of a murine T cell receptor gene complex. In *Regulation of the Immune System*, UCLA Symposia on Molecular and Cellular Biology, New Series, Vol. 18, E. Sercarz, H. Cantor and L. Chess (eds.), Alan R. Liss, Inc., New York, 369-376, 1984.

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41. Blanckmeister, C.A., K. Yamamoto, M.M. Davis, and G.J. Hammerling. Antigen-specific, I-A-restricted suppressor hybridomas with spontaneous cytolytic activity. Functional properties and lack of rearrangement of the T cell receptor β chain genes. *J. Exp. Med.,* 162:851-863, 1985.

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43. Davis, M.M., R.A. Gatti, and R.S. Sparkes. Neoplasia and chromosomal breakage in ataxia-telangiectasia: A 2:14 translocation. In *Ataxia-Telangiectasia: Genetics, Neuropathology and Immunology of a Degenerative Disease of Childhood*, R.S. Sparks and R.A. Gatti (eds.), Alan R. Liss, Inc., New York, 197-203, 1985.

44. Hedrick, S.M. and M.M. Davis. Expression patterns of the β chain of the T cell receptor for antigen. In *Immune Regulation*, M. Feldmann and N.A. Mitchison (eds.), Humana Press, Clifton, New Jersey, 15-25, 1985.

45. Davis, M.M. and D.I. Cohen. A new, X-chromosomal gene family (XLR) expressed in mature lymphoid cells. In *Recent Advances in Primary and Acquired Immunodeficiencies*, F. Aiuti, F. Rosen and M.D. Cooper (eds.), Raven Press, New York, 37-40, 1986.

46. Davis, M.M., T. Lindsten, N.R.J. Gascoigne, C. Goodnow, and Y. Chien. Paradigm regained: Similarities and differences between T cell receptor and immunoglobulin genes. In *Genes and Proteins in Immunity*, *Biochem. Soc. Symp.* 51, J. Kay, M.A. Kerr, A.F. Williams and K.B.M. Reid (eds.), The Biochemical Society, London, 205-209, 1986.

47. Davis, M.M., T. Lindsten, N.R.J. Gascoigne, C. Goodnow, and Y. Chien. T- cell receptor gene structure and function. *Cell. Immunol.,* 99:24-28, 1986.

48. Gascoigne, N.R.J., S. Waters, J.F. Elliott, C. Victor-Kobrin, C. Goodnow, M.M. Davis, and C.A. Bona. Expression of T-cell receptor genes in an antigen-specific hybridoma and radiation-induced variants. *J. Exp. Med.,* 164:113-130, 1986.

49. Davis, M.M. Chapter 76: Subtractive cDNA hybridization and the T-cell receptor genes. In *Handbook of Experimental Immunology*, Vol. 2: Cellular Immunology, 4th edition, D.M. Weir, L.A. Herzenberg, C.C. Blackwell and L.A. Herzenberg (eds.), Blackwell Scientific Publications, Ltd., Oxford, England, 76.1-76.13, 1986.

50. Davis, M.M., C. Goodnow, N.R.J. Gascoigne, T. Lindsten, and Y. Chien. Murine T-cell receptor genes and the problems of cellular recognition and repertoire selection. In *Regulation of Immune Gene Expression*, M. Feldmann and A. McMichael (eds.), The Humana Press, Clifton, New Jersey, 137-142, 1986.

51. Scott, M.L., M.M. Davis, and M.B. Feinberg. Transformation of T-lymphoid cells by Abelson murine leukemia virus. *J. Virol.,* 59:434-443, 1986.

52. Davey, M.P., K.F. Bongiovanni, W. Kaulfersch, T. Quertermous, J.G. Seidman, M.S. Hershfield, J. Kurtzburg, B.F. Haynes, M.M. Davis, and T.A. Waldmann. Immunoglobulin and T cell receptor gene rearrangement and expression in human lymphoid leukemia cells at different stages of maturation. *PNAS, USA,* 83:8759-8763, 1986.

53. Davis, M.M. and P. Patten. Evolutionary features of T-cell antigen receptor genes. In *Evolution and Vertebrate Immunity*: *The Antigen-receptor and MHC Gene Families*, G. Kelsoe and D.H. Schulz (eds.), The University of Texas Press, Austin, 201-211, 1987.

54. Jongstra, J., T.J. Schall, B.J. Dyer, C. Clayberger, J. Jorgensen, M.M. Davis, and A.M. Krensky. The isolation and sequence of a novel gene from a human functional T cell line. *J. Exp. Med.*, 165:601-614, 1987.

55. Gascoigne, N.R.J., C.C. Goodnow, K.I. Dudzik, V.T. Oi, and M.M. Davis. Secretion of a T cell receptor-immunoglobulin fusion protein. *PNAS, USA,* 84:2936-2940, 1987.

56. Davis, M.M., N.R.J. Gascoigne, T. Lindsten, C. Goodnow, and Y. Chien. Murine T-cell receptor genes. In *Mechanisms of Lymphocyte Activation and Immune Regulation*, S. Gupta, W.E. Paul, and A.S. Fauci (eds.), Plenum Press, New York, 13-17, 1987.

57. Chien, Y., M. Iwashima, K. Kaplan, J. Elliott, and M.M. Davis. A new T cell receptor gene located within the α locus and expressed early in T cell differentiation. *Nature,* 327:677-682, 1987.

58. Gascoigne, N.R.J., C. Goodnow, K. Dudzik, L. Rourke, V.T. Oi, and M.M. Davis. Chimeric proteins produced by T cell receptor-immunoglobulin gene fusions. In *Immune Regulation by Characterized Polypeptides*, UCLA Symposia on Molecular and Cellular Biology, New Series, Vol. 41, G. Goldstein, J-F. Bach and H. Wigzell (eds.), Alan R. Liss, Inc., New York, 617-627, 1987.

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65. Davis, M.M., Y. Chien, T. Lindsten, and N.E. Lee. T cell receptor gene organization and novel rearrangements during thymic ontogeny. In *Molecular Mechanisms in the Regulation of Cell Behavior*, C. Waymouth (ed.), Alan R. Liss, New York, 225-229, 1987.

66. Chien, Y., M. Iwashima, K.B. Kaplan, and M.M. Davis. A new T cell receptor gene located within the α locus and expressed early in T cell differentiation. In *The T Cell Receptor*, UCLA Symposia on Molecular and Cellular Biology, New Series, Vol. 73, M.M. Davis and J. Kappler (eds.), Alan R. Liss, Inc., New York, 17-24, 1988.

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68. Jongstra, J. and M.M. Davis. A molecular genetic analysis of mouse B lymphocyte differentiation. In *Cellular and Molecular Biology of Tumors and Potential Clinical Applications*, UCLA Symposia on Molecular and Cellular Biology, New Series, Vol. 56, J. Minna and W.M. Kuehl (eds.), Alan R. Liss, Inc., New York, 261-268, 1988.

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