

*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

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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 Pontifical 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  $\alpha$ -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.
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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.

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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  $\beta$ -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  $\beta$  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  $\beta$ -chain variable regions. *Nature*, 312:40-46, 1984.
30. Hedrick, S.M. and M.M. Davis. Rearrangement and expression of the T cell receptor  $\beta$  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.
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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.
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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  $\alpha$  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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