

# CURRICULUM VITAE: KATHRYN L. CALAME

## PERSONAL DATA

Business: Department of Microbiology and Immunology  
Columbia College of Physicians and Surgeons  
701 West 168th St.  
New York, N.Y. 10032  
FAX 212-305-1468; email: klc1@columbia.edu

Born: April 23, 1940, Leavenworth, Kansas  
Married, two children

## EDUCATION

1962 B.S.(honors) Chemistry, University of Missouri  
1965 M.S. Biochemistry, The George Washington University  
1975 Ph.D. Biochemistry, The George Washington University

## PROFESSIONAL EXPERIENCE

2008- Professor Emerita of Microbiology & Immunology and Biochemistry &  
Molecular Biophysics  
Columbia University College of Physicians and Surgeons  
1988- 2008 Professor of Microbiology  
Professor of Biochemistry and Molecular Biophysics  
Columbia University College of Physicians and Surgeons  
1990-96 Director, Integrated Program in Cellular, Molecular and Biophysical Studies,  
Columbia University College of Physicians and Surgeons  
1985-87 Associate Professor of Biological Chemistry, UCLA School of Medicine  
1980-85 Assistant Professor of Biological Chemistry, UCLA School of Medicine  
1978-80 Research Fellow, Div. of Biology, California Institute of Technology  
1975 78 Postdoctoral Fellow, Dept. of Biochemistry, University of Pittsburgh

## OUTSIDE PROFESSIONAL ACTIVITY

1984-87 Council member, Midwinter Conference of Immunologists;  
1998-00 Co-organizer, 1987 and 1998 conferences  
1986-88 American Cancer Society, California Division, Fellowship Screening  
Committee  
1986-89 N.I.G.M.S. Cellular and Molecular Basis of Disease Committee;  
Committee Chair 1989-90  
1990 Co-organizer Keystone Symposium on Transcriptional Regulation  
1990-91 Co-organizer and Organizer of FASEB "Cellular and Molecular  
Genetics" Summer Conferences, 1990 and 1991  
1990-96 Leukemia Society of America Grant Review Committee;  
Committee, Chair 1992-96  
1990-93 Member Publications Committee, American Society for  
Biochemistry and Molecular Biology, Committee Chair 1992-93  
1991-01 Board of Trustees, Leukemia Society of America; Executive

	Council Member
1992-2010	Scientific Advisory Council, March of Dimes
1995-99	Member, AAI Committee on the Status of Women
1996-00	Member, Allergy and Immunology Study Section, NIH, Study section Chair 1999-2000
2000-04	Member, Board of Scientific Counselors, National Institute of Child Health and Development
2001	Co-organizer Keystone meeting on B Cells
2002-08	Member, Scientific Review Board, Howard Hughes Medical Institute

## EDITORIAL ACTIVITIES

Gene, editor	1986-89
Nucleic Acids Research, editorial board	1989-92
Mol. Cell. Biol., editorial board	1989-94
Science, reviewing editor	1989-2000
J. Experimental Medicine, advisory board	1991-97
Nucleic Acids Research, Executive Editor	1992-99
J. Clin. Invest., Assoc. Editor	2002-05
Immunity, Assoc. Editor	2005-2009

## SOCIETY MEMBERSHIP

Sigma Xi, American Society for Microbiology, American Association for the Advancement of Science, American Society of Biochemistry and Molecular Biology, New York Academy of Science, American Association of Immunologists

## HONORS

1962	Phi Beta Kappa, American Institute of Chemists Student Award, Merck Award for Achievement in Chemistry
1975	Public Health Service Research Postdoctoral Fellowship
1984-89	Leukemia Society Scholar Award
1985	UCLA Dwyer Award for Outstanding Cancer Research
1989	Stohlman Memorial Award, Leukemia Society
1991	William Pyle Philips Distinguished Visitor, Haverford College
1992	Fellow of the American Association for the Advancement of Science
1994	Kenny Award for Public Service, Leukemia Society of America
1996	Faculty/ Alumni Award, University of Missouri
1998	Dean's Distinguished Lecturer in Basic Science, Columbia College of Physician's and Surgeons
2002	Marion Koshland Memorial Distinguished Lecturer, University of Chicago
2003	Fellow, American Academy of Arts and Science
2005	Fong/Clontech Lecturer, Univ. Indiana Dean's Distinguished Seminar, University Colorado
2006	Member, Faculty of 1000
2007	Member, Institute of Medicine of the National Academy
2008	Distinguished Lecture, AAI National Meeting, San Diego
2009	Kathryn Calame Honorary Lectureship in Microbiology and Immunology, Columbia University, 2009

- 2010 Distinguished Service Award, Columbia Presbyterian College of Physicians and Surgeons  
2011 Honorary D. Sci. from the University of Missouri

## **PUBLICATIONS**

### *Refereed Journals*

1. Calame, K., Gallo, L., Cheriathundim, E., Vahouny, G. and Treadwell, C. (1975) "Purification and Properties of Subunits of Sterol Ester Hydrolase from Rat Pancreas" *Arch. Biochem. Phys.* 168: 57-65.
2. Calame, K. and Ihler, G. (1977) "Visualization of Ribosome-Single Stranded DNA Complexes in the Electron Microscope" *Biochem.* 16: 965-971.
3. Calame, K. and Ihler, G. (1977) "Mapping Ribosome Binding Sites on Lambda DNA" *J. Mol. Biol.* 116:841-853.
4. Calame, K., Nakada, D. and Ihler, G. (1978) "Location of Ribosome Binding Sites on the Tetracycline Resistance Transposon Tn10" *J. Bacteriol.* 135:668-674.
5. Sussman, R., Resnick, J., Calame, K. and Baluch, J. (1978) "Interaction of Bacteriophage Lambda Repressor with Non-Operator DNA Containing Single-strand Gaps" *Proc. Natl. Acad. Sci.* 75:5817-21.
6. Calame, K., Shanblatt, S. and Nakada, D. (1979) "Location of Promoter Sites on Plasmid NTP1 which Contains the Ampicillin Resistance Transposon Tn1701" *J. Mol. Biol.* 127:397-409
7. Yamada, Y., Calame, K. and Nakada, D. (1979) "Location of Ampicillin Resistance Transposon 1701 in a Group of Non-Transferring Plasmids" *J. Bacteriol.* 137:990-999.
8. Davis, M., Calame, K., Early, P., Livant, D., Joho, R., Weissman, I. and Hood, L. (1980) "An Immunoglobulin Heavy Chain Gene is Formed by at Least Two Recombinational Events" *Nature* 283:733-38.
9. Calame, K., Rogers, J., Early, P., Davis, M., Livant, D., Wall, R. and Hood, L. (1980) "The Mouse C $\mu$  Immunoglobulin Heavy Chain Gene Contains Three Intervening Sequences which Appear to Separate Domains" *Nature* 284:452-455.
10. Early, P., Huang, H., Davis, M., Calame, K. and Hood, L. (1980) "An Immunoglobulin Heavy Chain Variable Region Gene is Generated from Three Segments of DNA: VH, D and JH" *Cell* 19:981-92
11. Rogers, J., Early, P., Carter, C., Calame, K., Bond, M., Davis, M. and Hood, L. (1980) "The Immunoglobulin Mu Gene: Two mRNAs with Alternative 3' Ends Encode Membrane and Secreted Forms of Mu Chains" *Cell* 20: 303-12.
12. Early, P., Rogers, J., Davis, M., Calame, K., Bond, M., Wall, R. and Hood, L. (1980) "Developmentally Regulated RNA Processing Pathways Generate Separate Messenger RNAs for Secreted and Membrane-Bound Forms of an Immunoglobulin Heavy Chain" *Cell* 20:313-19.
13. Crews, S., Griffin, J., Huang, H., Calame, K. and Hood, L. (1981) "A Single VH Gene Sequence Encodes the Immune Response to Phosphorylcholine: Somatic Mutation is Correlated with Class Switching" *Cell* 25:59-66.
14. Calame, K., Kim, S., Lalley, P., Hill, R., Davis, M. and Hood, L. (1982) "Molecular Cloning of Translocations Involving Chromosome 15 and the Immunoglobulin C $\alpha$  Gene from Chromosome 12 in Two Murine Plasmacytomas" *Proc. Natl. Acad. Sci.* 79:6994-98.
15. Clarke, C., Berenson, J., Goverman, J., Boyer, P., Crews, S., Siu, G. and Calame, K. (1982) "An Immunoglobulin Promoter Region is Unaltered by DNA Rearrangement and Somatic Mutation During B-Cell Development" *Nuc. Acids Res.* 10:7731-49.
16. Crews, S., Barth, R., Hood, L., Prehn, J. and Calame, K. (1982) "The Mouse c-Myc

- Oncogene is Located on Chromosome 15 and Translocated to Chromosome 12 in Plasmacytomas" *Sci.* 218:1319-21.
17. Mercola, M., Olsen, J., Wang, X. and Calame, K. (1983) "Transcriptional Enhancer Activity in the Immunoglobulin Heavy Chain Locus" *Sci.* 221:663-65.
  18. Prehn, J., Mercola, M., Calame, K. (1984) "Translocation Affects Normal c-Myc Promoter Usage and Activates Fifteen Cryptic c-Myc Transcription Starts in Plasmacytoma M603" *Nuc. Acids Res.* 12:8987-9007.
  19. Brown, N., Liu, C., Berenson, J., Garcia, C., Wang, R., and Calame, K. (1985) "Immunoglobulin JH, Cu and Cg Gene Rearrangements in Human B Lymphocytes Clonally Transformed by Epstein-Barr Virus" *Proc. Natl. Acad. Sci.* 82:556-60.
  20. Mercola, M., Gorman, J., Mirell, C. and Calame, K. (1985) "Immunoglobulin Heavy Chain Enhancer Requires One or More Tissue Specific Factors" *Sci.* 227:266-70.
  21. Wang, X. and Calame, K. (1985) "The Endogenous Immunoglobulin Heavy Chain Enhancer Can Activate Tandem VH Promoters Separated by a Large Distance" *Cell* 43:659-65.
  22. Kakkis, E., Prehn, J. and Calame, K. (1986) "An Active Chromatin Structure Acquired by Translocated c-Myc Genes" *Mol. Cell. Biol.* 6:1357-61.
  23. Brown, N., Liu, C., Garcia, C., Wang, Y-F., Griffith, A., Sparkes, R. and Calame, K. (1986) "Clonal Origins of Lymphoproliferative Disease Induced by Epstein Barr Virus" *J. Virol.* 58:975-78.
  24. Taplitz, S., Calame, K. and Herschman, H. (1986) "Alternative Inducers of the Rat Metallothionein I Gene Cause Distinct Changes in Chromatin Structure in the 5' Region of the Gene" *Mol. Cell. Biol.* 6:2576-81.
  25. Peterson, C., Orth, K., and Calame, K. (1986) "Binding In Vitro of Multiple Cellular Proteins to Immunoglobulin Heavy Chain Enhancer DNA" *Mol. Cell. Biol.* 6:4168-78.
  26. Wang, X. and Calame, K. (1986) "SV40 Enhancer Binding Factors Are Required at the Establishment but not the Maintenance Step of Enhancer-Dependent Transcriptional Activation" *Cell* 47:241-47.
  27. Eaton, S. and Calame, K. (1987) "Multiple Elements Are Necessary for the Function of an Immunoglobulin Heavy Chain Promoter" *Proc. Natl. Acad. Sci.* 84:7634-38.
  28. Kakkis, E. and Calame, K. (1987) "A Plasmacytoma Specific Protein Binds to the c-Myc Promoter Region" *Proc. Natl. Acad. Sci.* 84:7031-35.
  29. Peterson, C. and Calame, K. (1987) "Complex Protein-DNA Interactions on the Mouse Immunoglobulin Heavy Chain Enhancer" *Mol. Cell. Biol.* 7:4194-4203.
  30. Kakkis, E., Mercola, M. and Calame, K. (1988) "Strong Activation of Translocated c-Myc Genes Occurs Without a Strong Nearby Enhancer or Promoter" *Nuc. Acids Res.* 16:77-96.
  31. Tsao, B. Wang, X., Peterson, C., Calame, K. (1988) In vivo Functional Analysis of In Vitro Protein Binding Sites in the Immunoglobulin Heavy Chain Enhancer" *Nuc. Acids Res.* 16:3239-3253
  32. Pei, R. and Calame, K. (1988) "Differential Stability of c-myc mRNAs in a Cell-Free System" *Mol. Cell. Biol.* 8:2860-2868
  33. McDougall, S., Peterson, C. and Calame, K. (1988) "A Transcriptional Enhancer 3' of C $\beta$ 2 in the T Cell Receptor B Locus" *Sci.* 241: 205-208
  34. Peterson, C., Eaton, S. and Calame, K. (1988) "Purified mEBP-E Binds to Immunoglobulin Enhancers and Promoters" *Mol. Cell. Biol.* 8:4972-4980.
  35. Peterson, C. and Calame, K. (1989) "Proteins Binding to Site C2 ( $\mu$ E3) in the Immunoglobulin Heavy Chain Enhancer Exist in Multiple Oligomeric Forms" *Mol. Cell. Biol.* 9:776-786.
  36. Kakkis, E., Riggs, K., Gillespie, W. and Calame, K. (1989) "A transcriptional Repressor of c-Myc" *Nature* 339: 718-21.
  37. Calame, K. (1989) "Immunoglobulin Gene Transcription: Molecular Mechanisms" *Trends in*

38. Tsao, B., Ebling, F., Calame, K. and Hahn, B. (1990) "Molecular Analysis of Pathogenic Antibodies in Autoimmune Mice" *J. Clin. Invest.* 85:530-540.
39. Wu, H., Holcenberg, J., Tomich, J., Chen, J., Jones, P., Huang, S-H. and Calame, K. (1990) "Inhibition of in vitro transcription by specific double-stranded oligodeoxynucleotides" *Gene* 89: 203-209.
40. Roman, C., Platero, J., Shuman, J. and Calame, K. (1990) "Ig/EBP, a Ubiquitously Expressed Immunoglobulin Enhancer Binding Protein That Is Similar to C/EBP and Heterodimerizes with C/EBP" *Genes and Dev.* 4:1404-1416.
41. Taplitz, S., Andersen, R., Oberbauer, A., Calame, K. and Herschman, H. (1990) "Constitutive and Metal-Dependent Binding of Nuclear Factors to the Rat Metallothionein-I Promoter" *Nuc. Acids Res.* 18:6049-55.
42. Artandi, S., Canfield, S., Tao, M.-H., Calame, K., Morrison, S. and Bonagura, V. (1991) "Molecular Analysis of IgM Rheumatoid Factor Binding to Chimeric IgG" *J. Immunol.* 146:603-610.
43. Riggs, K., Merrell, K., Wilson, G. and Calame, K. (1991) "Common Factor 1 Is a Transcriptional Activator Which Binds in the c-Myc Promoter, the Skeletal  $\alpha$ -Actin Promoter and the Immunoglobulin Heavy Chain Enhancer" *Mol. Cell. Biol.* 11: 1765-69.
44. Roman, C., Cohn, L. and Calame, K. (1991) "Creation of a Transdominant Negative Form of Transcription Activator mTFE3 by Differential Splicing" *Sci.* 254:94-97.
45. Webb, C., Das, D., Eaton, S., Calame, K. and Tucker, P. (1991) "Novel Protein-DNA Interactions Associated with Increased Immunoglobulin Transcription in Response to Antigen + Interleukin-5" *Mol. Cell. Biol.* 10:5197-5205.
46. Artandi, S., Calame, K., Morrison, S. and Bonagura, V. (1992) "Monoclonal IgM Rheumatoid Factors Bind IgG at a Discontinuous Epitope Comprised of Amino Acid Loops from Both the CH2 and CH3 Domains" *Proc. Natl. Acad. Sci.* 89:94-98.
47. Roman, C., Matera, G., Cooper, C., Artandi, S., Blain, S., Ward, D. and Calame, K. (1992) "mTFE3, An X-Linked Transcription Activator Containing Basic Helix-Loop-Helix and Zipper Domains, Utilizes the Zipper to Stabilize Both DNA Binding and Multimerization" *Mol. Cell. Biol.* 12: 817-827.
48. Cooper, C., Johnson, D., Roman, C., Avitahl, N., Tucker, P. and Calame, K. (1992) "The C/EBP Family of Transcriptional Activators Is Functionally Important for Immunoglobulin V<sub>H</sub> Promoter Activity *In Vivo* and *In Vitro*" *J. Immunol.* 149: 3225-3231.
49. Numoto, M., Niwa, O., Kaplan, J., Wong, K., Merrell, K., Kamiya, K., Yanagihara, K. and Calame, K. (1993) "Transcriptional Repressor ZF5 Identifies a New Conserved Domain in Zinc Finger Proteins" *Nuc. Acids Res.* 21:3767-75.
50. Riggs, K., Saleque, S., Wong, K., Merrell, K., Shi, Y. and Calame, K. (1993) "Yin-Yang-1 Activates the c-Myc Promoter" *Mol. Cell. Biol.* 13: 7487-95.
51. Shrivastava, A., Saleque, S., Kalpana, G., Artandi, S., Goff, S. and Calame, K. (1993) "c-Myc Association Inhibits Transcriptional Regulator Yin-Yang-1" *Sci.* 262:1889-92.
52. Henderson, A., McDougall, S., Leiden, J. and Calame, K. (1994) "GATA Elements Are Necessary for the Activity and Tissue Specificity of the T-Cell Beta Chain Transcriptional Enhancer" *Mol. Cell. Biol.* 14:4286-94.
53. Avitahl, N. and Calame, K. (1994) "C/EBP Proteins Distort DNA Upon Binding but Do Not Introduce a Large Directed Bend" *J. Biol. Chem.* 269: 23553-23562
54. Artandi, S., Cooper, C. and Calame, K. (1994) "Enhancer-Promoter Interaction Mediated by TFE3 Requires the Basic Helix-Loop-Helix Zipper Domain" *Mol. Cell. Biol.* 14:7704-16.
55. Cooper, C., Berrier, A., Roman, C. and Calame, K. (1994) "Limited Expression of C/EBP Family Proteins During B-Lymphocyte Development: Negative Regulator Ig/EBP Predominates Early and Activator NF- $\kappa$ B Is Induced Later" *J. Immunol.* 153: 5049-58.

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