

CURRICULUM VITAE  
GEOFFREY MYLES WAHL

**PERSONAL:**

Date of Birth: April 6, 1948  
Marital Status: Married - Barbara Parker, M.D./Two children

**EDUCATION:**

1976            Harvard University  
                  Ph.D., Biological Chemistry  
                  Dr. Mario Capecchi, Advisor

1970            University of California, Los Angeles  
                  B. A., Bacteriology  
                  Magna Cum Laude, Phi Beta Kappa

**PROFESSIONAL EXPERIENCE:**

1989 - pres    Professor: The Salk Institute for Biological Studies  
1989 - pres    Adjunct Professor: Dept. of Biology; University of California, San Diego  
1987 - 1989    Senior Member: The Salk Institute for Biological Studies  
1985 - 1989    Adjunct Assoc. Professor: Dept. of Biology; University of California, San Diego  
1984 - 1987    Associate Professor: Gene Expression Laboratory; The Salk Institute  
1979 - 1984    Assistant Professor: Gene Expression Laboratory; The Salk Institute  
1976 - 1979    Postdoc Fellow: Dept. of Biochemistry; Stanford University; Dr. George Stark, Advisor  
1975 - 1976    Research Assistant Professor: Dept. of Biology; University of Utah

**HONORS:**

- First Peter A. Steck Memorial Lecturer, M.D. Anderson Hospital
- National Institutes of Health Postdoctoral Fellowship
- American Cancer Society Senior Fellowship
- American Men and Women of Science
- Award for Outstanding Contributions to Science Education San Diego Science Educators' Assoc.
- "Citation Classic" Designation for One of the Most Highly Cited Scientific Papers, 1961-1982.  
(See Reference #10 and Current Contents, February 24, 1986, Vol. 8(8).
- Senior Member of Sigma Xi
- Life Member of the California Scholarship Federation

**PROFESSIONAL ACTIVITIES:**

**Journal Reviews:**

1987 - 2004    Editorial Board: Molecular and Cellular Biology  
1992            Editorial Board: Journal Clinical Investigation, Cancer Genetics and Cytogenetics  
1997 - 2004    Editorial Board: Cell Growth and Differentiation  
1997 - 2004    Reviewer: Cancer Research, Cell, Genes and Development, Nature, Science, MCB, etc.  
2002 - pres    Editorial Board: DNA Repair  
2002 - pres    Editorial Board: Molecular Cancer Research

**Grant Reviews:**

1984 Ad hoc Reviewer: National Science Foundation, American Cancer Society  
 1986 – 1988 Mammalian Genetics Study Section (NIH);  
 1989 NIH, Human Genome Special Study Section  
 1990 Leukemia Society of America Review Panel  
 1996 NCI Site Review Committee, Washington D.C.  
 1999 – 2000 UCSD Site Review Committee, La Jolla, California  
 2002 DOD, Breast Cancer Panel  
 2004 NCI, Special Emphasis Panel

**Institutional Responsibilities:**

1994 – 1996 Chair: Appointments Committee, The Salk Institute  
 1996 – 1998 Chair: Fellowship Committee, The Salk Institute  
 1997 – 2000 Academic Council Member, The Salk Institute  
 1999 Co-Chair: Microscopy Symposium, The Salk Institute  
 1999 – pres Co-organizer: DNA Replication Meeting (Salk/CalTech/CSHL/USC), The Salk Institute  
 2000 – 2004 Chair: Salk/UCSD Graduate Student Committee  
 2001 – 2004 MSTP Program Member, University of California, San Diego  
 2003 – 2004 Chair: Seminar Committee, The Salk Institute  
 2004 – 2006 Academic Council Member, The Salk Institute  
 2004 – 2005 Chair: Core Committee, The Salk Institute

**Scientific/Organizational Advisory Boards and Positions:**

1997 – 2001 Scientific Advisory Boards, San Antonio Cancer Institute, Roswell Park Institute, Canji, Inc.  
 1997 Co-Founder and Chairman of the Scientific Advisory Board, NewBiotics, Inc.  
 2000 External Advisory Board, University of California, San Diego Cancer Center  
 External Advisory Board, Roswell Park Memorial Institute  
 Elected to the Board of Directors, AACR  
 2001 – 2004 Integration Panel Member, SAIC, DOD, Breast Cancer Research Program  
 2004 – pres Scientific Advisory Board of the Keystone Symposia  
 2005 Elected President, AACR  
 2006-2007 President, AACR  
 2007-present Past President, AACR  
 2007-present Scientific Advisory Board of PanCAN  
 2008-present Scientific Advisory Board TNCI (The Nicholas Conor Institute for Pediatric Cancer)

**National/International Meeting Responsibilities:**

1987 Co-Chairman: FASEB Conference on Somatic Cell Genetics  
 1988 Chairman: FASEB Conference on Somatic Cell Genetics  
 1990 – pres Ad hoc Reviewer: National Science Foundation, American Cancer Society  
 1997 – 2001 Co-Chair: 8-11th Mahajani Symposia, San Diego, California  
 1998 Co-organizer: International meeting on p53  
 1998 - pres Co-organizer: Salk-CalTech Replication and Repair Meeting (international meeting at Salk)  
 1999 Chair: Symposium on Genetic Instability, AACR Annual Meeting  
 1999 – 2000 Co-Chair: p53 Workshop, 2000 Monterey, California  
 1999 – pres Scientist Survivor Program: AACR National meeting  
 2000 Overall Coordinator: Basic Biology Sessions, AACR, San Francisco, California  
 2000 – 2003 Executive Committee Integration Panel Member for DOD Breast Cancer Research Program  
 2001 Chair: Joint Special Conference, Cancer & Chromosomal Organization with Peter Jones  
 2002 Co-Chair: AACR International Meeting with Peter Jones

2003 Co-Chair: AACR International Meeting with Ki Hong  
2004 Program Chair: AACR Annual Meeting  
2007-pres Co-Chair: Keystone Symposium on Development and Cancer

### **Invited Presentations:**

More than 250 invited presentations at Institutes throughout the World and at National/International Meetings Including: Gordon Conferences, Keystone Symposia, p53-workshops, AACR National Meeting and Special Conferences, Cold Spring Harbor Symposia, The 2<sup>nd</sup> 3R Symposium and The 13<sup>th</sup> International Conference – Japan, National and International Meetings on Cell Cycle Control, Tumor Suppressors, DNA Replication, Control of Genetic Stability, First Peter A. Steck Memorial Lecturer, International p53 Conferences, Keynote Address 2007 AACR Annual Conference.

### **MEMBERSHIPS:**

American Association for Cancer Research (since 1988)  
American Association for the Advancement of Science (since 1984)  
American Society for Microbiology  
Human Genome Organization (HUGO)

### **PUBLICATIONS:**

1. Evans, D.A., Bryan, C.A. and Wahl, G.M. (1970) Total Synthesis of Naturally Occurring Substances. The Synthesis of the Hasubanan Carbocyclic System. J. Org. Chem. 35: 4122-4126.
2. Sigman, D.S., Wahl, G.M., and Creighton, D.J. (1972) Models for Metalloenzymes. Zinc ion Catalyzed Phosphorylation of 1, 10- Phenanthroline-2-Carbinol by Adenosine Triphosphates. Biochem. 11:2236- 2241.
3. Capecchi, M.R., Capecchi, N.E., Hughes, S.H. and Wahl, G.M. (1974) Selective Degradation of Abnormal Proteins in Mammalian Tissue Culture Cells. Proc. Nat. Acad. Sci. USA 71: 4732-4736.
4. Hughes, S.H., Wahl, G.M. and Capecchi, M.R. (1975) Purification and Characterization of Mouse Hypoxanthine-Guanine Phosphoribosyl Transferase. J. Biol. Chem. 250:120-126.
5. Wahl, G.M., Hughes, S.H. and Capecchi, M.R. (1975) Immunological Characterization of Hypoxanthine-Guanine Phosphoribosyl Transferase Mutants of Mouse L Cells: Evidence for Mutations at Different Loci in the HGPRT Gene. J. Cell. Physiol. 85:307-320.
6. Capecchi, M.R., Hughes, S.H. and Wahl, G.M. (1975) Yeast Super- Suppressors are Altered  $\tau$ RNA's Capable of Translating a Nonsense Codon *in vitro*. Cell 6:269-277.
7. Kohli, J., Kwong, T., Altruda, F., Soll, D. (Yale University), and Wahl, G.M. (University of Utah) (1979) Characterization of a UGA-Suppressing Serine  $\tau$ RNA From Schizosaccharomyces Pombe With the Help of a New In Vitro Assay System for Eukaryotic Suppressor  $\tau$ RNA's. J. Biol. Chem. 254:1546-1551.
8. Padgett, R.A., Wahl, G.M., Coleman, P.F., and Stark, G.R. (1979) N- (Phosphonacetyl)-L-Aspartate-Resistant Hamster Cells Over Accumulate a Single mRNA Coding for the Multifunctional Protein That Catalyzes the First Steps of Ump Synthesis. J. Biol. Chem. 254:974-980.

9. Wahl, G.M., Padgett, R.A., and Stark, G.R. (1979) Gene Amplification Causes Overproduction of the First Three Enzymes of UMP Synthesis In N- (Phosphonacetyl)-L- Aspartate-Resistant Hamster Cells. *J. Biol. Chem.* 254:8679-8689.
10. Wahl, G.M., Stern, M., and Stark, G.R. (1979) Efficient Transfer of Large DNA Fragments From Agarose Gels to Diazobenzoyloxymethyl-Paper and Rapid Hybridization by Using Dextran Sulfate. *Proc. Natl. Acad. Sci. USA* 76:3683-3687.
11. Alwine, J.C., Kemp, D.J., Parker, B.A., Reiser, J., Renart, J., Stark, G.R., and Wahl, G.M. (1979) Detection of Specific Rnas or Specific Fragments of DNA by Fractionation In Gels And Transfer To Diazobenzoyloxymethyl Paper. *Methods in Enzymology* 68:220-242.
12. Kohli, J., Altruda, F., Kwong, T., Rafalski, A., Wetzel, R., Soll, D., Wahl, G.M., and Leupold, U. (1980) Nonsense Suppressor tRNA in *Schizosaccharomyces Pombe*. *tRNA: Biological Aspects, Cold Spring Harbor Quant. Biol.* 407-419.
13. Robert de Saint Vincent, B., Delbruck, S., Eckhart, W., Meinkoth, J., Vitto, L., and Wahl, G. (1981) Cloning and Reintroduction Into Animal Cells of a Functional CAD Gene, a Dominant Amplifiable Genetic Marker. *Cell* 27:267-277.
14. Wahl, G.M., Vitto, L., Padgett, R.A., and Stark, G.R. (1982) Single-Copy and Amplified CAD Genes in Syrian Hamster Chromosomes Using A Highly Sensitive Method for in Situ Hybridization. *Mol. Cell. Biol.* 2:308-319.
15. Padgett, R.A., Wahl, G.M., and Stark, G.R. (1982) Structure of the Gene for CAD, the Multifunctional Protein That Initiates UMP Synthesis in Syrian Hamster Cells. *Mol. Cell. Biol.* 2:293-301.
16. Padgett, R.A., Wahl, G.M., and Stark, G.R. (1982) Properties Of Dispersed, Highly Repeated DNA Within and Near the Hamster CAD Gene. *Mol. Cell. Biol.* 2:302-307.
17. Folger, K.R., Wong, E.A., Wahl, G.M. and Capecchi, M.R. (1982) Patterns of Integration of DNA Microinjected Into Cultured Mammalian Cells: Evidence for Homologous Recombination Between Injected Plasmid DNA Molecules. *Mol. Cell Biol.* 2:1372-1387.
18. Wahl, G.M., Allen, V., Delbruck, S., Eckhart, W., Meinkoth, J., Padgett, R., Robert de Saint Vincent, B., Rubintz, J., Stark, G.R. and Vitto, L. (1982) Analysis of CAD Gene Amplification Using Molecular Cloning, Gene Transfer and Cytogenetics. In *Gene Amplification* (R.T. Schimke, ed.) Cold Spring Harbor Laboratory, pp. 167-175.
19. Padgett, R.A., Wahl, G.M., Brison, O., and Stark, G.R. (1982) Use of Recombinant DNA Techniques to Examine Amplified Regions of DNA From Drug-Resistant Mutant Cells, p. 109-131. In A.G. Walton (ed.) *Third Cleveland Symposium on Macromolecules-Recombinant DNA*. Elsevier Scientific Publishing Co., Amsterdam.
20. Chu, B.C.F., Wahl, G.M. and Orgel, L.E. (1983) Derivatization of Unprotected Polynucleotides. *Nucl. Acids Res.* 11:6513-6529.

21. Robert de Saint Vincent, B., and Wahl, G.M. (1983) Homologous Recombination in Mammalian Cells Mediates the Formation of a Functional Gene From Two Overlapping Gene Fragments. *Proc. Natl. Acad. Sci. USA* 80:2002-2006.
22. Redfield, D.C., Richman, D.D., Albanil, S., Oxman, M. and Wahl, G.M. (1983) Detection of Herpes Simplex Virus in Clinical Specimens by DNA Hybridization. *Diagnostic Micro. and Infectious Dis.* 1:117-128.
23. Wahl, G.M., Vitto, L., and Rubnitz, J. (1983) Co-amplification of rRNA Genes with CAD Genes in N-(Phosphonacetyl)-L-Aspartate-resistant Syrian Hamster Cells. *Mol. Cell. Biol.* 3:2066-2075.
24. Wahl, G.M., Robert de Saint Vincent, B. and De Rose, M.L. (1984) Effect of Chromosomal Position on Amplification of Transfected Genes in Animal Cells. *Nature* 307:516-520.
25. Richman, D.D., Cleveland, P.H., Redfield, D.C., Oxman, M.N. and Wahl, G.M. (1984) Rapid Viral Diagnosis. *J. Infec. Diseases* 149:298-310.
26. Wahl, G.M., Allen, V., Delbruck, S., Eckhart, W., Meinkoth, J., Robert de Saint Vincent, B., and Vitto, L. (1984) Analysis of CAD Gene Amplification Using a Combined Approach of Molecular Genetics And Cytogenetics. In "Eukaryotic Cell Cultures: Basics and Applications." Edited by Ronald T. Acton and J. Daniel Lynn, Plenum Press, New York and London. *Advances in Experimental Medicine and Biology*, Vol. 172:319-345.
27. Stark, G.R. and Wahl, G.M. (1984) Gene amplification. *Ann. Rev. Biochem. Annual Reviews of Biochemistry* 53: 447-491.
28. Meinkoth, J. and Wahl, G.M. (1984) Hybridization of Nucleic Acids Immobilized on Solid Supports. *Analytical Biochemistry* 138:267-284.
29. Wahl, G.M., Albanil, S., Ignacio, K. and Richman, D.D. (1985) Nucleic Acid Hybridization: A Powerful Technology Useful for Medical Diagnosis, pp 31-64. In: *Medical Virology IV*, de la Maza, L.M. and Peterson, E.M., eds. Lawrence Erlbaum Associates, Publishers, Hillsdale, New Jersey.
30. Wahl, G.M. (1985) Detection of Adventitious Agents and Sensitivity of Methods. In: *Abnormal Cells, New Products and Risk*. Hopps, H.E. and Petricciani, J.C., eds. Tissue Culture Association, Gaithersburg, Maryland.
31. Gaudray, P., Trotter, J. and Wahl, G.M. (1986). Fluorescent Methotrexate Labeling and Flow Cytometric Analysis of Cells Containing Low Levels of Dihydrofolate Reductase. *J. Biol. Chem.* 261:6285 - 6292.
32. Meinkoth, J.L., Legouy, E., Brison, O. and Wahl, G.M. (1986) New RNA Species is Produced by Alternate Polyadenylation Following a Rearrangement Associated with CAD Gene Amplification. *Som. Cell and Mol. Genet.* 12:339-350.
33. Ruiz, J.C. and Wahl, G.M. (1986) Escherichia Coli Aspartate Transcarbamylase: A Novel Marker for Studies of Gene Amplification and Expression in Mammalian Cells. *Mol. Cell. Biol.* 6:3050-3058.

34. Wahl, G.M., Gaudray, P., Carroll, S. and Proctor, N. (1986) Is Gene Amplification Inducible? In: R. Dulbecco, V. De Vita, L. Santi, L. Zardi, eds. *Cancer Frontiers, Proceedings of the Second International Conference on Progress in Cancer Research*. The Humana Press, pp. 71-98.
35. Wahl, G.M., Carroll, S., Gaudray, P., Meinkoth, J. and Ruiz, J. (1986). Applications of Gene Transfer in the Analysis of Gene Amplification. In: *Gene Transfer* (R. Kucherlapati, ed), Plenum Publishing Corp., pp. 289-323.
36. Wahl, G.M. and Richman, D.D. (1986). Nucleic Acid Probes to Detect Viral Diseases. In: *Concepts in Viral Pathogenesis*. (A.L. Notkins and M.B.A. Oldstone, Eds.) Springer-Verlag, New York, pp. 301-309.
37. Meinkoth, J. and Wahl, G.M. (1987) Chapters concerning Nucleic Acid Hybridization in *Guide to Molecular Cloning Techniques, Methods in Enzymology Vol. 152* (S.L. Berger and A.R. Kimmel, Eds.) New York Academic Press: Chapter 9, 399-407. Nick Translation.
38. Wahl, G.M., Berger, S.L., Kimmel, A.R. Chapter 43, 91-94. *Molecular Hybridization of Immobilized Nucleic Acids: Theoretical Concepts and Practical Considerations*.
39. Wahl, G.M. and Berger, S.L. Chapter 45, 415-423. *Screening Colonies or Plaques with Radioactive Nucleic Acid Probes*.
40. Wahl, G.M., Meinkoth, J. and Kimmel, A.R. Chapter 61, 572-581. *Northern and Southern Blots*.
41. Evans, G.A. and Wahl, G.M. (1987) *Cosmid Cloning Vectors: In Guide to Molecular Cloning Techniques, Methods in Enzymology Vol. 152* (S.L. Berger and A.R. Kimmel, Eds.) New York Academic Press: Chapter 65: 604-610. *Cosmid Vectors for Genomic Walking and Rapid Restriction Mapping*.
42. Wahl, G.M., Carroll, S.M., Gaudray, P., deRose, M.L., Emery, J. and Von Hoff, D.D. (1987) High Frequency Amplification of a Transfected Gene via Excision of an Autonomously Replicating Episome. In *Proceedings of the Workshop on the Role of DNA Amplification in Tumor Initiation and Promotion*. (H. zur Hausen and J.R. Schlehofer, Eds.) J. B. Lippincott Co., Philadelphia, pp. 45-57.
43. Meinkoth, J.L., Killary, A., Fournier, R.E.K. and Wahl, G.M. (1987) Unstable and Stable CAD Gene Amplification: Importance of Flanking Sequences and Nuclear Environment in Gene Amplification. *Mol. Cell. Biol.* 7:1415-1424.
44. Wahl, G.M., Lewis, K.A., Ruiz, J.C., Rothenberg, B., Zhao, J. and Evans, G. (1987) Cosmid Vectors for Rapid Genomic Walking, Restriction Mapping and Gene Transfer. *Proc. Natl. Acad. Sci. USA* 84:2160-2164.
45. Carroll, S., Gaudray, P., DeRose, M.L., Emery, J.F., Meinkoth, J.L., Nakkim, E., Subler, M. and Wahl, G.M. (1987). Characterization of an Episome Produced in Hamster Cells that Amplify a Transfected CAD Gene at High Frequency: Functional Evidence for a Mammalian Replication Origin. *Mol. Cell Biol.* 7:1740-1750.
46. Carroll, S., DeRose, M.L., Gaudray, P., Moore, C., Vandevanter, D.N., Von Hoff, D.D. and Wahl, G.M. (1988) Double Minute Chromosomes Can be Produced From Precursors Derived From a Chromosomal Deletion. *Mol. Cell. Biol.* 8:1525-1533.

47. Von Hoff, D.D., Needham-Vandevanter, D.R., Yucel, J., Windle, B.F. and Wahl, G.M. (1988) Amplified MYC Oncogenes Localized to Replicating Submicroscopic, Circular DNA Molecules. *Proc. Natl. Acad. Sci. USA* 85: 4804-4808.
48. Ruiz, J.C. and Wahl, G.M. (1988) Formation of an Inverted Duplication Can be an Initial Step in Gene Amplification. *Mol. Cell. Biol.* 8:4302-4313.
49. Barclay, B.J., Huang, T., Nagel, M.G., Misener, V.L., Game, J.C., and Wahl, G.M. (1988) Mapping and Sequencing of the Dihydrofolate Reductase Gene (DFR1) of *Saccharomyces cerevisiae*. *Gene* 63:175-185.
50. Ruiz, J., Choi, K., Von Hoff, D.D., Roninson, I.B. and Wahl, G.M. (1989) Autonomously Replicating Episomes Contain *mdr-1* Genes in a Multidrug Resistant Human Cell Line. *Mol. Cell. Biol.* 9:109-115.
51. Wahl, G.M. (1989) The Importance of Circular DNA in Mammalian Gene Amplification. *Cancer Research* 49:1333-1340.
52. Stark, G.R., Debatisse, M., Wahl, G.M. and D. Glover (1989) DNA Amplification in Eukaryotes. IRL Press, B.D. Hanes and D.M. Glover (eds.) *Gene Rearrangement*, pp 99-149.
53. Stark, G.R., Debatisse, M., Giulotto E. and Wahl, G.M. (1989) Recent Progress in Understanding Mechanisms of Mammalian DNA Amplification. *Cell* 57:901-908.
54. Ruiz, J. and Wahl, G.M. (1990) Chromosome Destabilization During Gene Amplification. *Mol. Cell. Biol.* 10:3056-3066.
55. Barringer, K.J., Orgel, L., Wahl, G.M. and Gingeras, T.R. (1990) Blunt-end and Single-strand Ligation by *Escherichia coli* Ligase: Influence on an *in vitro* Amplification Scheme. *Gene* 89:117-122.
56. Windle, B., Draper, B., Yin, Y., O'Gorman, S. and Wahl, G.M. (1991) A Central Role for Chromosome Breakage In Gene Amplification, Deletion Formation and Amplicon Integration. *Genes and Dev.* 5:160-174.
57. O'Gorman, S., Fox, D.T. and Wahl, G.M. (1991) Recombinase-Mediated Gene Activation and Site-Specific Integration in Mammalian Cells. *Science* 251:1351-1355.
58. Benner, S.E., Wahl, G.M. and Von Hoff, D.D. (1991) Double Minute Chromosomes and Homogeneously Staining Regions in Tumors Taken Directly From Patients Versus in Human Tumor Cell Lines. *Anticancer Drugs* 2:11-25.
59. Carroll, S., Trotter, J. and Wahl, G.M. (1991) Replication Timing Control Can be Maintained in Extrachromosomally Amplified Genes. *Mol. Cell. Biol.* 11:4779-4785.
60. Von Hoff, D.D., Waddelow, T., Forseth, B., Davidson, K., Scott, J. and Wahl, G.M. (1991) Hydroxyurea Accelerates Loss of Extrachromosomally Amplified Genes from Tumor Cells. *Cancer Research* 51:6273-6279.
61. Wahl, G.M., Carroll, S. M., and Windle, B.E. (1992) Cytogenetic and Molecular Dynamics of Mammalian Gene Amplification: Evidence Supporting Chromosome Breakage as an Initiating

- Event. In *Gene Amplification in Mammalian Cells: A Comprehensive Guide* R. Kellems, Ed., Marcel Dekker, Inc., New York, pages 513-531.
62. Kimmel, M., Axelrod, D.E. and Wahl, G.M. (1992) A Branching Process Model of Gene Amplification Following Chromosome Breakage. *Mutat. Res.* 276: 225-239.
  63. Windle, B.E. and Wahl, G.M. (1992) Molecular Dissection of Mammalian Gene Amplification: New Mechanistic Insights Revealed by Analyses of Very Early Events. *Mutat. Res.* 276:199-224.
  64. Yin, Y., Tainsky, M.A., Bischoff, F.Z., Strong, L. C. and Wahl, G.M. (1992) Wild-type p53 Restores Cell Cycle Control And Inhibits Gene Amplification in Cells With Mutant p53 Alleles. *Cell* 70:937-948.
  65. Nonet, G.H., Carroll, S.M., DeRose, M.L., Wahl, G.M. (1993) Molecular Dissection of an Extrachromosomal Amplicon Reveals a Circular Structure Consisting of an Imperfect Inverted Duplication. *Genomics* 15: 543-558.
  66. VonHoff, D.D., McGill, J.R., Forseth, B.J., Davidson, K.K., Bradley, T.P., Van Devanter, D.R., and Wahl, G.M. (1992) Elimination of Extrachromosomally Amplified C-Myc Genes From Human Tumor Cells Reduces Their Tumorigenicity. *Proc. Natl. Acad. Sci.* 89: 8165-8169.
  67. Nonet, G. and Wahl, G.M. (1993) Introduction of YACs Containing a Putative Mammalian Replication Origin Into Mammalian Cells Can Generate Structures That Replicate Autonomously. *Somatic Cell Mol. Genet.* 19:171-192.
  68. Carroll, S. M., DeRose, M.L., Kolman, J.L., Nonet, G. H., Kelly, R.E., and Wahl, G.M. (1993) Localization of a Bidirectional DNA Replication Origin in Native Locus and in Episomally Amplified Murine Adenosine Deaminase Loci. *Mol. Cell. Biol.* 13: 2971-2981.
  69. Barclay, B.J., Ondrusek, N.K., Wildenhain, Y.D., Huang, T., Carlone, R.L., Clement, J-M., Wahl, G.M. (1993) Effect Of Genomic Position on Amplification of the DFR1 Gene in *Saccharomyces Cerevisiae*. In *Chemistry and Biology of Pteridines And Folates*. Eds. J. Ayling, M. Nair and C. Baugh, Plenum Press, New York. 338: 545-550.
  70. Almasan, A., Mangelsdorf, D.J., Ong, E.S., Wahl, G.M., Evans, R.M. (1994) Chromosomal Localization of the Human Retinoid X Receptors. *Genomics* 20:397-403.
  71. DiLeonardo, A., Linke, S.P., Yin, Y., Wahl, G.M. (1994) Cell Cycle Regulation of Gene Amplification. *Cold Spring Harbor Symp. Quant. Biol.* 58: 655-667.
  72. Eckhardt, S.G., Dai, A., Davidson, K.K., Forseth, B.J., Wahl, G.M., Von Hoff, D.D. (1994) Induction Of Differentiation in HL60 Cells by the Reduction of Extrachromosomally Amplified c-Myc. *Proc. Natl. Acad. Sci.* Vol. 91: 6674-6678.
  73. Di Leonardo, A., Linke, S.P., Clarkin, K., Wahl, G.M. (1994) DNA Damage Triggers a Prolonged P53-Dependent G<sub>1</sub> Arrest and Long-Term Induction of Cip1 in Normal Human Fibroblasts. *Genes and Development* 8: 2540-2551.

74. Van Den Berg, C.L., McGill, J.R., Kuhn, J.G., Walsh, J.T., De La Cruz, P.S., Davidson, K.K., Wahl, G.M., Von Hoff, D.D. (1994) Pharmacokinetics of Hydroxyurea in Nude Mice. *Anti Cancer Drugs*. 5: 573-578.
75. Almasan, A., Linke, S.P., Paulson, T.G., Huang, L-c., Wahl, G.M. (1995) Genetic Instability as a Consequence of Inappropriate Entry Into and Progression Through S-Phase. *Cancer Metastasis Reviews*. 14: 59-73.
76. Almasan, A., Yin, Y., Kelly, R., Lee, E.Y.-H., Bradley, A., Wahl, G.M. (1995) Deficiency of Retinoblastoma Protein Leads to Inappropriate S-Phase Entry, Activation of E2F-Responsive Genes, and Apoptosis. *Proc. Natl. Acad. Sci.* 92:5436-5440.
77. Kelly, R., DeRose, M.L., Draper, B., and Wahl, G.M. (1995) Identification of an Origin of Bidirectional DNA Replication in the Ubiquitously Expressed Mammalian CAD Gene. *Mol. Cell. Biol.* 15(8):4136-4148.
78. Li, W., Fan, J., Zielinski, Z., Almasan, A., Yin, Y., Kelly, R., Wahl, G.M., Bertino, J.R. (1995) Lack of Functional Retinoblastoma Protein Mediates Increased Resistance to Antimetabolites in Human Sarcoma Cell Lines. *Proc. Natl. Acad. Sci. USA.* 92:10436-10440.
79. Aladjem, M., Groudine, M., Brody, L., Dieken, E., Fournier, R.E., Wahl, G.M., and Epner, E. (1995) Participation of the Human  $\beta$ -Globin Locus Control Region in Initiation of DNA Replication. *Science* 270:815-819.
80. Shimizu, N., Kanda, T., and Wahl, G.M. (1996) Selective Capture of Acentric Fragments by Micronuclei Provides a Rapid Method for Purifying Extrachromosomally Amplified DNA. *Nature Genetics*. 12:65-71.
81. Huang, L-C., Clarkin, K.C., and Wahl, G.M. (1996) Sensitivity And Selectivity of the DNA Damage Sensor Responsible for Activating p53-Dependent G<sub>1</sub> Arrest. *Proc. Natl. Acad. Sci. USA.* 93(10):4827-4832.
82. Linke, S.P., Clarkin, K., DiLeonardo, A., Tsou, A., and Wahl, G.M. (1996) A Reversible, p53-Dependent G<sub>0</sub>/G<sub>1</sub> Cell Cycle Arrest Induced by Ribonucleotide Depletion in the Absence of Detectable DNA Damage. *Genes and Development* 10: 934-947.
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