CURRICULUM VITAE

Melanie Ehrlich

Professor, Tulane Cancer Center, Hayward Human Genetics Center,
and Center for Biomedical Informatics and Genomics
Tulane University School of Medicine
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EDUCATION

Barnard College, New York, N.Y.	A.B.	1966	Biology
State Univ. at Stony Brook, N.Y.	Ph.D.	1970	Molecular Biology
A. Einstein College of Medicine, N.Y., N.Y.	Postdoctoral	1972	Molecular Biology

PROFESSIONAL EXPERIENCE

Visiting Professor, Dept. of Physiology, University of Maryland School of Medicine	10/2005- 08/2006
Core Member of the Hayward Human Genetics Center, Tulane University	1997-present
Core Member of Center for Bioinformatics and Genomics, Tulane University	2013-present
Tulane Cancer Center Core Participant, Tulane University School of Medicine	1995-present
Professor, Tulane University School of Medicine	1982-present
Associate Professor of Biochemistry, Tulane University School of Medicine	1978-1982
Assistant Professor of Biochemistry, Tulane University School of Medicine	1972-1978

HONORS

A. B. cum laude Barnard College, 1966
NDEA and NIH Predoctoral Fellow 1966-1970
Jane Coffin Childs Postdoctoral Fellow 1970-1972 (awarded NIH Postdoctoral Fellowship)
Member Grant Review Committee of Louisiana Heart Association, 1977-1988
American Society for Microbiology Foundation Lecturer, 1979-1980.
Editorial Board: **Nucleic Acids Research,** 1982-1988.
Vice-Chair, Gordon Research Conference, "DNA Alterations in Transformed Cells," New Hampshire, July, 1996
Chairman, FASEB Research Conference, "Biological Methylation," Vermont, June, 1997
Chairman, Gordon Research Conference, "DNA Alterations in Transformed Cells" Aug. 1998
President of the DNA Methylation Society (an international society, which I founded in 1994); 1994-2003; Vice Pres. 2003-present; http://es.landesbioscience.com/pub/
Editorial Boards (three current memberships): **Cancer Biology and Therapy**, **Epigenetics**, and **Epigenomics**

ASSOCIATION MEMBERSHIPS

Charter Member of American Society for Photobiology, 1972-1984
American Society for Microbiology, 1972-2000
Member of American Society for Biological Chemistry and Molecular Biology, 1978-present
Member of the American Association for Cancer Research, 1996-present
Member of the American Society of Human Genetics, 1999-present
Epigenetic Society (formerly, DNA Methylation Society), 1994 - present

PREVIOUS COLLABORATORS FROM OTHER INSTITUTIONS
Charles W. Gehrke, University of Missouri, Columbia, MO
Ronald Trewyn, Ohio State University, Columbus, OH
Sheldon I. Feinstein, Columbia University, New York, NY
J. Craig Cohen, Louisiana State University Medical School, New Orleans, LA
John Mayo, Louisiana State University Medical School, New Orleans, LA
Lars Ljungdahl, University of Georgia, Athens, GA
Geoffrey G. Wilson, New England BioLabs, Beverly, MA
David Bisaro, Ohio State University, Cincinnati, OH
Richard Assoian, University of Miami Medical School, Miami, FL
Alain Niveleau, Pasteur Institute, Lyon, France
Matija Peterlin, University of California, San Francisco, CA
Cathy Tuck-Muller, Dept. of Clinical Genetics, University of South Alabama, Mobile
Dominique Smeets, Clinical Genetics Center, Nijmegen, The Netherlands
Corry M.R. Weemaes, University Medical Center St. Radboud, Nijmegen, The Netherlands
Karl Sperling, Institute of Human Genetics, Berlin, Germany
Bernd H. Belohradsky, Ludwig-Maximilians-Universitat, Munchen, Germany
Niels Tommerup, University of Copenhagen, Denmark
Samir M. Hanash, University of Michigan, Ann Arbor, MI
Gail E. Tomlinson, University Texas, S.W. Medical Center, Dallas, TX
Murali Chintagumpala, Baylor College of Medicine, Houston, TX
Martin Champagne, Ste. Justine Hospital, Montreal, Quebec, Canada
David M. Parham, University Arkansas for Medical Sciences, Little Rock, AK
Karim Malik, School of Medical Sciences, Bristol, Britain
Martin Widschwendter, University of Innsbruck, Innsbruck, Austria
Jeffrey Sawyer, University of Arkansas Medical Sciences, Little Rock, AR
Mimi Yu, University of Southern California, Los Angeles, CA
Louis Dubeau, University of Southern California, Los Angeles, CA
Emerich Fiala, American Health Foundation, Valhalla, NY
Peter W. Laird, University of Southern California, Norris Comprehensive Cancer Center, Los Angeles, CA
David Gisselsohn, University Hospital, Lund, Sweden
Silvere van der Maarel, Leiden University, Leiden, The Netherlands
Sara Winokur, University California, Irvine, CA
V. Vedanarayan, University Mississippi, Jackson, MS
Aaron Bossler, University of Iowa, Iowa City, IA
Sridar Chittur, State University of New York, Albany, NY
Elisabeth Mueller-Holtzner, Innsbruck Medical University, Innsbruck, Austria
David Gilbert, Florida State University, Tallahassee, FL
Rabi Tawil, Rochester University School of Medicine, Rochester, NY
Rick Meyers, HudsonAlpha Institute, Mobile, AL

CURRENT COLLABORATORS:
Michelle Lacey, Math Dept., Tulane University, New Orleans
Sriharsa Pradhan, New England Biolabs, Ipswich, MA
Hong-Wen Deng, Center for Bioinformatics and Genomics, Tulane University
Hui Shen, Center for Bioinformatics and Genomics, Tulane University
Sruti Chandra, Dept. of Cardiology, Tulane University
Carl Baribault, Center for Research and Scientific Computing, Tulane University
Hongmei Xiao, South Central University, Changsha, Hunan, China

TEACHING

Courses Taught at Tulane

1. Medical Biochemistry and Medical Genetics for Medical Students; Introduction to Medical Genetics, Cancer Biology and Pathology, Epigenomic and Epigenetics for graduate students, Bioinformatics for graduate students (DNA methylation, chromatin epigenetics, genome-wide association studies, GWAS)
2. Elective research courses for medical students
3. One-year introductory Graduate Biochemistry (lectures on DNA structure, replication, repair, transcription, recombinant DNA technology, transgenic organisms)
4. Molecular Biology (sole instructor; 4 hours per week, one-semester course)
5. Research Methods in Human Genetics (modern methods of molecular genetic analysis are reviewed in the context of research problems; sole instructor; 2 hours per week, two-semester course)
6. Nineteen tutorial courses in various subjects within molecular biology for graduate students (weekly 1½ h discussions of 1-2 journal articles per week).

GRADUATE STUDENTS

Previous Ph.D. Graduates:

Dr.Weizhen Ji (Ph.D.), Associate Research Scientist, Yale School of Medicine, New Haven, CN
Dr. Guang Qu (M.D., Ph.D.) Hematologist/Oncologist, Univ. Miss., Jackson, MS
Dr. Zubaida Saifudeen (Ph.D.), Assistant Prof., Tulane Med. Sch., Dept. of Pediatrics, New Orleans, LA
Dr. Richard Wang (Ph.D.), Principal Investigator, Warren Grant Maguson Clinical Center, NIH, Bethesda, MD
Dr. Lan-Hsiang Huang (Ph.D.), Division of Heart and Vascular Diseases, NIH, Bethesda, MD
Dr. Miguel Gama-Sosa (Ph.D.), Associate Prof., Dept. of Psychiatry, Mount Sinai School of Medicine, NY
Dr. Suresh Shenoy (Ph.D.), Director of Biotechnology, 454 Life Sciences Roche, Branford, CT
Dr. Clement Asiedu (M.D., Ph.D), Vaccine Research Center, NIH, Bethesda, MD
Dr. Raymundo Hernandez (Ph.D.), Assistant Prof. of Genetics, University of Tabasco State, Mexico
Dr. Sanja Samac (Ph.D.), Research Associate, Medical Biophysics, University of Toronto, Canada
Dr. Ajita Narayan (Ph.D., M.D.), Medical Oncology & Internal Medicine, Lafayette, IN
Dr. Fern Tsien Miller (Ph.D.), Adjunct Faculty, Human Genetics, Louisiana State University, LA
Dr. Kesmic Jackson (Ph.D.), Research Associate, Emory University, Atlanta, GA
Dr. Chunbo Shao, Research Associate, Johns Hopkins School of Medicine, Baltimore, MD

Previous M.S. Graduates:
Yuwen Zhou, Fu-Shun Li, Xinmin Cao, Nilufar Inamdar, Rana Khan, Lixin Qi and Lauren Buckley

Current Ph.D. Student
Xiao Zhang

POST-DOCTORAL FELLOWS AND RESEARCH ASSOCIATES

Dr. John Schedlarski, (Ph.D.), 1979, currently practicing dentist
Dr. Xian-Yang Zhang (Ph.D.), 1985- 1997, head of Children's Hospital Diabetes Research Lab, Metairie, LA and Research Associate, LSU School of Medicine, New Orleans, LA; currently retired.
Dr. Michael Farber (Ph.D, J.D.), 1994, currently Patent Attorney, Carlsbad, CA
Dr. Prakash Supakar (Ph.D.), 1990-1992; Associate Professor, Institute of Life Sciences, Chadreasekharpur, India, currently deceased
Dr. Yi-Sheng Ni, 1993; Center for Biologics, FDA, Silver Spring, MD, currently retired
Dr. Saku Warshamana (Ph.D.), 1993-1995; Sri Lankan citizen
Dr. Peng Yi (M.D.), 1994-1996; currently Research Associate, Tulane Medical School, New Orleans, LA
Dr. Baodong Sun (M.D.), 1999-2001; currently, Asst. Professor of Pediatrics, Duke University, Durham, NC

Dr. Nancy Hopkins (Ph.D.), 2000-2002; currently adjunct faculty, Tulane University, New Orleans, LA
Dr. Guanchao Jiang (MD, PhD), 2000- 2003; currently Professor of Surgery, Beijing University, China
Dr. Fan Yang (M.D.), 2001-2003; currently Assoc. Professor of Surgery, Beijing University, China
Dr. Rie Nishiyama (Ph.D.), 2001-2004; currently research scientist, Univ. Tokyo, Japan
Dr. Mary Ballestas (Ph.D.), 2004-2005; currently Asst. Professor, Infectious Diseases, University of Alabama, Birmingham, AL
Dr. Jianhong Jiang, (M.D.) 2006-2007, currently surgeon, China
Dr. Desheng Chen, 2007-2009, currently Research Associate, Tulane Medical School, New Orleans, LA
Dr. Xueqing Xu (M.D.) 2007-2009, currently Associate Professor, Third Military Medical University, Chongqing, China.
Dr. Koji Tsumagari (M.D., Ph.D.), Res. Asst. Prof., Tulane Medical School, 2004-2012
Dr. Sruti Chandra (Ph.D), 2013- 2015
Dr. Kenneth Ehrlich (Ph.D) 2015 – present, Visiting Scientist

RESEARCH GRANTS
(M. Ehrlich, Principal Investigator Unless Otherwise Stated)

1972-1974: Basic Research Starter Grant from Tulane
Biochemical Analysis of Unusually Modified Bacteriophage DNA.

1972-1974: Jane Coffin Childs Memorial Fund for Medical Research
Biochemistry of Unusually Modified Bacteriophage DNA.

1973-1976: National Institutes of Health (General Medical Sciences), Modified DNA and Gene Therapy.

1974: Cancer Association of Greater New Orleans, The Role of 5-Methylcytosine in DNA of Cancerous Cells.

1975: Cancer Association of Greater New Orleans, The Role of 5-Methylcytosine in DNA of Cancerous Cells.

1977-1980: National Institutes of Health (Cancer Institute), Charles Gehrke of the University of Missouri, Co-investigator 5-Methylcytosine in DNA: Cancer and Development.

1977-1979: Edward G. Schlieder Foundation, 5-Methylcytosine - Rich DNA, Cancer and Development.

1979-1982: National Institutes of Health (General Medical Sciences) 5-Methylcytosine in DNA and Mutagenesis.

1980-1983: National Institutes of Health (Cancer Institute), Charles Gehrke of the University of Missouri, Co-Investigator, 5-Methylcytosine in DNA: Cancer and Development.

1981-1983: Louisiana Board of Regents, DNA Repair and DNA Methylation and Their Relationship to Carcinogenesis.

1983-1985: March of Dimes Research Foundation, Naturally Occurring Modification of Human Sperm Genes.

1983-1986: National Science Foundation, Mutagenesis at 5-Methylcytosine Residues in DNA.

1984-1988: National Institutes of Health (General Medical Sciences), Recognition of Methylated DNA by Mammalian Proteins.

1985-1987: March of Dimes Research Foundation, Naturally Occurring Modification of Human Sperm Genes.

1985-1988: U.S. Department of Agriculture, Plant Proteins Involved in Regulating Expression Through DNA Methylation, Co-Investigator; K. Ehrlich, Principal Investigator.

1987-1990: National Science Foundation, David Bisaro of Ohio State University as Co-Investigator, DNA Mismatch Repair and DNA Methylation in Plants.

1988-1991: National Institutes of Health (General Medical Sciences), Recognition of Methylated DNA by Mammalian Proteins.

1991-1994: DoD, Use of PCR and Cell Selection Assays for Monitoring Spent Munitions Compounds for Genotoxic Effects.

1992-1993: Louisiana Heart Association, Intragenic Regulation of Apolipoprotein(a) Gene Expression. 07/01/92 - 6/30/93

1992-1996: U.S. Army Biomedical Research, PCR and Cell Selection Assays for Short-Term Genotoxicity Testing.

1992-1996: NIH (Environmental Health Sciences), Part of a Program Project Grant
Petrochemical Wastes: Risks and Remediation, PI of whole project- Hans Weill, PI of subproject 1- Melanie Ehrlich,

1993-1997: NIH (General Medical Sciences), Recognition of Methylated DNA by Mammalian Proteins.

1996-2000 Tulane Cancer Center, Testing for Alterations in *BCL-2* Gene Structure Associated with Lymphomas or Breast Carcinoma

1999-2001: NIH, Progenitor Colony RT-PCR Analyses in CML Treatment (Hana Safah and Vincent La Russa, Co-Investigators)

2000-2005: NIH, DNA Hypomethylation and Cancer (Jeffrey Sawyer, Co-Investigator)

2001-2003: FSH Society, DNA Methylation and Chromatin Structure of FSHD-linked Sequences in FSHD Cells, Normal Cells, and Cells from Patients with the ICF Syndrome

2001-2004: NIH (Institute of Neurological Disorders and Stroke), FSHD Syndrome: DNA Repeats, Methylation, and Chromatin

2004-2010: NIH (Institute of Neurological Disorders and Stroke), FSHD: Chromatin Structure, Looping, & Expression

2009 – 2011: NIH (Institute of Neurological Disorders and Stroke), FSHD: Chromatin Structure, Looping, & Expression-Administrative Supplement-

2009-2012: FSHD Global Research Foundation, Comparing the DNaseI-Hypersensitive Chromatin Landscape at 4q35 of FSHD and Control Cells

2011- present: Louisiana Cancer Consortium Grant, DNA Hypo- and Hypermethylation in Cancer

2010-2015: NIH (National Cancer Institute), Active Consultant: DNA Methylation and Differential Breast Cancer Aggressiveness by Race/Ethnicity, P.I., Garth Rauscher, University of Illinois at Chicago.

2017-2018: NIH (Center for Clinical and Translational Science) Epigenetic Insights into the Increased Risk of Heart Disease in Southern United States

2017-2021: NIH (National Institute of Arthiritis and Musculoskeletal and Skin Diseases), Decoding Methylation Mediated Contributions to Male Osteoporosis (Co-Investigator; P.I, Hong-Wen Deng)

2017-2021: NIH (National Institute of Arthiritis and Musculoskeletal and Skin Diseases) Trans-omics integration of multi-omics studies for male osteoporosis (Multiple PI for Project 3; PI, Deng, Hong-Wen).

2020-2021: NIH (National Heart Lung and Blood Institute; LA Clinical and Translational Science Center, Co-Mentor). Epigenetic analysis of regulation of the inflammasome-activating NLRP3 gene in monocytes from atrial fibrillation patients and controls. PI, Sruti Chandra.

INTRAMURAL COMMITTEE WORK

1. Member of Personnel and Honors Committee (2 years)
2. Member of University Senate (2 years)
3. Member of BSRG Grant Review Committee (2 years)
4. Member of the Institutional Biosafety Committee (6 years)
5. Founding member of the Steering Committee for the Molecular and Cellular Biology Program (3 years)
6. Chairman of the Graduate Education Committee of the Biochemistry Department (2 years)
7. Member of the Medical School Grievance Committee (1 year)
8. Tulane Chapter AAUP, Vice President (1 year)
9. Member of Tenure Review Committee at the Medical School (1 year)
10. Chairman of Institutional Biosafety Committee at the Medical School (2 years)
11. Chairman of Biochemistry Dept. Seminar Committee (1 year)
12. Member of Graduate Education Comm. of the Dept. of Biochemistry (16 years)
13. Member of the Tulane Univ. Educational Policy Committee (2 years)
14. Member of the LCME Site Visit Committee for the Medical School (1 year)
15. Member of the Graduate Education Committee of the Human Genetics Program (2 years)

JOURNAL PUBLICATIONS:

1. Ehrlich M. and Riley M., Photolysis of polyribobromouridylic acid, Photochem. Photobiol. 16: 385-395 (1972).

2. Ehrlich M. and Riley M., Oligonucleotide photoproducts formed by photolysis of polyribobromouridylic acid, Photochem. Photobiol. 16: 397-412 (1972).

3. Marmur J., Brandon C., Neubort S., Ehrlich M., Mandel M. and Konvicka J., Unique properties of the nucleic acid from Bacillus subtillis phage SP-15, Nature 239: 68-70 (1972).

4. Ehrlich M. and Riley M., Photolysis of double-stranded ribopolynucleotides containing 5-bromouracil, Photochem. Photobiol. 20: 139-165 (1974).

5. Ehrlich M., Ehrlich K. and Mayo J., Unusual properties of the DNA from Xanthomonas phage XP-12 in which 5-methylcytosine completely replaces cytosine, Biochim. Biophys. Acta 395: 109-119 (1975).

6. Ehrlich M.,Sarafyan L.S., and Meyers D.J., Interaction of microbial DNA with cultured mammalian cells: Binding of the donor DNA to the cell surface, Biochim. Biophys. Acta 454: 397-409 (1976).

7. Sassoon S., Wang S., and Ehrlich M., 5'5'-Diuridinyl, A major photoproduct from UV-irradiation of polynucleotides containing bromouracil, Photochem. Photobiol. 25: 11-14 (1977).

8. Ehrlich M.,Lin F.-H.,Ehrlich K., Brown S.L., and Mayo J.A., Changes in macromolecular synthesis in Xanthomonas oryzae infected with bacteriophage XP-12, J. Virol. 23: 517-523 (1977).

9. Ehrlich M., Sarafyan L.P., Simpson N., and Downing A., Interaction of normal and unusually modified microbial DNA with cultured mammalian cells: Breakdown and reincorporation vs. uptake of polymerized DNA, Biochim. Biophys. Acta 515: 43-54 (1978).

10. Compton S.W., Mayo J.A., Ehrlich M., Ackermann H.W., Tremblay L., Cordes C.E. and Scalett J.V., DNA base composition, nature of intracellular DNA, morphology and classification of a bacteriophage infecting Micrococcus luteus, Can. J. Microbiol. 25: 1027-1035 (1979).

11. Ehrlich M. and Ehrlich K., Separation of six DNA bases by ion pair reversed phase high pressure liquid chromatography, J. Chrom. Sci. 17: 531-534 (1979).

12. Wang R. Y.-H., Schedlarski J., Farber M. and Ehrlich M., Two site-specific endonucleases from Xanthomonas oryzae: Characterization and unusual properties, Biochim. Biophys. Acta 606: 371-385 (1980).

13. Farber M. and Ehrlich M., A phage-induced deoxyribonuclease from XP-12- infected Xanthomonas orzyae, J. Virol. 33: 733-738 (1980).

14. Wang R. Y.-H.,Gehrke C.W., and Ehrlich M., Comparison of bisulfite modification of 5-methyldeoxycytidine and deoxycytidine residues, Nucleic Acids Res. 8: 4777-4790 (1980).

15. Kuo K.C.,Gehrke C.W., McCune R.A., Midgett R.M., and M. Ehrlich, Determination of major and minor nucleoside composition of DNA, Nucleic Acids Res. 8: 4763-4776 (1980).

16. Ehrlich M. and Wang R., 5-Methylcytosine in eucaryotic DNA, Science, 212: 1350-1357 (1981).

17. Ehrlich M. and Ehrlich K., Bacteriophage SP-15 DNA contains glucuronolactone1-phosphate, J. Biol. Chem. 256: 9966-9972 (1981).

18. Wang R., Huang L.-H., and Ehrlich M., A Bacteriophage-induced 5-methyldeoxycytidine 5'-monophosphate kinase, Biochim. Biophys. Acta 696: 31-36 (1982).

19. Wang R. and Ehrlich M., A 5-methyldeoxycytidine 5'-triphosphate deaminase induced by bacteriophage XP-12, J. Virol 42: 42-48 (1982).

20. Huang L.-H., Farnet C.M., Ehrlich K. and Ehrlich M., Digestion of various types of highly modified bacteriophage DNA by restriction endonucleases, Nucleic Acids Res. 10: 1579-1591 (1982).

21. Wang R., Kuo K.C., Gehrke C.W., Huang L.-H., and Ehrlich M., Heat- and alkali-induced deamination of 5-methylcytosine and cytosine residues in DNA, Biochim. Biophys. Acta, 697: 37l-377 (l982).

22. Wang R., Huang L.-H., and Ehrlich M., Enzymatic conversion of dCMP to m^5dCTP, Anal. Biochem. l22: 89-93 (1982).

23. Ehrlich M.,Gama-Sosa M.A., Huang L.-H., Midgett R.M.,Kuo K.C.,McCune R.A., and Gehrke C.W., Amount and distribution of 5-methylcytosine in human DNA from different types of tissues or cells, Nucleic Acids Res. l0: 2709-2721 (1982).

24. Zumwalt R.W., Kuo K.C., Agris P.F.,Ehrlich M., and Gehrke C.W., High performance liquid chromatography of nucleosides in DNA and RNA, J. Liq. Chrom. 5: 2041-2060 (1982).

25. Gama-Sosa M.A., Wang R., Kuo K.C.,Gehrke C.W., and Ehrlich M., The 5-methylcytosine content of highly repeated sequences in human DNA, Nucleic Acids Res. 11: 3087-3095 (1983).

26. Gama-Sosa M.A., Githens S., Midgett R.M.,Kuo K.C., Gehrke C.W., & Ehrlich M., Tissue-specific differences in the DNA methylation in various mammals, Biochim. Biophys. Acta 740: 212-219 (1983).

27. Dove M.F., Ehrlich M., Photolysis at 254 nm of 5-methyldeoxycytidine, Photobiochem. Photobiophys. 6: 121-126 (1983).

28. Cao X.-M., Huang L.-H., Farnet C., and Ehrlich M., Ligation of highly modified bacteriophage DNA, Biochim. Biophys. Acta: 741: 237-243 (1983).

29. M.A. Gama-Sosa, R.M. Midgett, K.C. Kuo, C.W. Gehrke, & M. Ehrlich, 5-methylcytosine content of DNA from human tumors, Nucleic Acids Res. 11: 6883-6894 (1983).

30. Wang R. Y.-H., Shenoy S., and Ehrlich M., DNA methylation inhibits the transfecting activity of replicative-form phiX174 DNA, J. Virol. 49: 674-679 (1984).

31. Wang R. Y.-H.,Huang L.-H., and Ehrlich M., Human placental DNA methyltransferase: DNA substrate and DNA binding specificity, Nucleic Acids Res. 12: 3473-3490 (1984).

32. Bresnik T., Traina-Dorge V., Gama-Sosa M., Gehrke C.W., Ehrlich M., Medina D., Butel J., and Cohen J.C., Mouse mammary tumor virus DNA methylation: tissue-specific variation, Virology 136: 69-77 (1984).

33. Huang L.-H., Wang R.,Gama-Sosa M., Shenoy S., and Ehrlich M., A protein from human placental nuclei binds preferentially to 5-methylcytosine-rich DNA, Nature 308: 293-295 (1984).

34. Gehrke C.W., McCune R.A., Gama-Sosa M.A.,Ehrlich M., and Kuo K.C., Quantitative RP-HPLC of major and modified nucleosides in DNA, J. Chromatog. 301: 199-219 (1984).

35. Shenoy S. and Ehrlich M., Isolation of in vitro-synthesized covalently closed circular, double-stranded DNA by selective denaturation and filtration, Prep. Biochem. 14: 485-497 (1985).

36. Feinstein S.I, Miller D.A., Ehrlich M., Gehrke C.W., and Kuo K.C., DNA methylation is not increased in mouse-human somatic cell hybrids, Biochim. Biophys. Acta 824: 336-340 (1985).

37. Niveleau A., Delain A., and Ehrlich M., Binding to 5-methylcytosine-rich DNA of antibodies against 5-methylcytidine, Eur. J. Biochem. 151: 115-121 (1985).

38. Feinstein S.I., Rancaniello V.R.,Ehrlich M., Gehrke C.W., Miller D.A., and Miller O.J., Pattern of undermethylation of the major satellite DNA of mouse sperm, Nucleic Acids Res. 13: 3969-3978 (1985).

39. Ehrlich M., Gama-Sosa M.A.,Carreira L.H., Ljungdahl L.G., Kuo K.C. and Gehrke C.W., DNA methylation in thermophilic bacteria: N^4-methylcytosine, 5-methylcytosine, and N^6-methyladenine, Nucleic Acids Res. 13: 1399-1412 (1985).

40. Zhang X.-Y., Wang R. Y.-H. and Ehrlich M., Human DNA sequences exhibiting gamete-specific hypomethylation, Nucleic Acids Res. 13: 4837-4851 (1985).

41. Wang R. Y.-H., Zhang X.-Y. and Ehrlich M., A human DNA-binding protein is methylation-specific and sequence-specific, Nucleic Acids Res. 14: 1599-1614 (1986).

42. Shenoy S.,Daigle K., Ehrlich K.C., Gehrke C.W. and Ehrlich M., Hydrolysis by restriction endonucleases at their DNA recognition sequences substituted with mismatched base pairs, Nucleic Acids Res. 14: 4407-4420 (1986).

43. Ehrlich M., Dove M.-F. and Huang L.-H., Photolysis of methylated DNA, Photobiochem. Photobiophys. 11: 73-79 (1986).

44. Ehrlich M., Norris K.F., Wang R. Y.-H.,Kuo K.C. and Gehrke C.W., DNA cytosine methylation and heat-induced deamination, Bioscience Rep. 6: 387-393 (1986).

45. Zhang X.-Y., Ehrlich K.C., Wang and R. Y.-H.,Ehrlich M., Effect of site-specific DNA methylation and mutagenesis on recognition by methylated DNA-binding protein from human placenta, Nucleic Acids Res. 14: 8387-8398 (1986).

46. Wang R. Y.-H.,Zhang, X.-Y. Khan R., Zhou Y.,Huang L.-H. and Ehrlich M., Methylated DNA-binding protein from human placenta recognizes specific methylated sites on several prokaryotic DNAs, Nucleic Acids Res. 14: 9843-9860 (1986).

47. Ehrlich M., Wilson G.G., Kuo K.C., and Gehrke C.W., N^4-Methylcytosine as a minor base in bacterial DNA, J. Bacteriol. 169: 939-943 (1987).

48. Shenoy S., Ehrlich K.C. and Ehrlich M., Repair of thymine□guanine and uracil□guanine mismatched base pairs in bacteriophage M13mp18 DNA heteroduplexes, J. Mol. Biol. 197: 617-626 (1987).

49. Zhang X.-Y., Loflin P.T., Gehrke C.W., Andrews P.A., and Ehrlich M., Hypermethylation of human DNA sequences in embryonal carcinoma cells and somatic tissues but not in sperm, Nucleic Acids Res. 15: 9429-9449 (1987).

50. Supakar P.,Wiest D.,Zhang D., Inamdar N.,Zhang X.-Y.,Khan R., Ehrlich K.C. and Ehrlich M., Methylated DNA-binding protein is present in various mammalian cell types, Nucleic Acids Res. 16: 8029-8044 (1988).

51. Feinberg A.P., Gehrke C.W., Kuo K.C., and Ehrlich M., Reduced genomic 5-methylcytosine content in human colonic neoplasia, Cancer Res. 48: 1159-1161 (1988).

52. Khan R., Zhang X.-Y., Supakar P.,Ehrlich K.C., and Ehrlich M., Human methylated DNA-binding protein: Determinants of a pBR322 recognition site, J. Biol. Chem. 263: 14374-14383 (1988).

53. Zhang X.-Y., Supakar P.C., Khan R., Ehrlich K.C. and Ehrlich M., Related sites in human and herpes virus DNA recognized by methylated DNA-binding protein from human placenta, Nucleic Acids Res. 17: 1459-1474 (1989).

54. Zhang D., Ehrlich K. C.,Supakar P.C. and Ehrlich M., A plant DNA-binding protein which recognizes 5-methylcytosine residues, Molec. Cell. Biol. 9: 1351-1356 (1989).

55. Supakar P.C., Zhang X.-Y., Githens S., Khan R.,Ehrlich K.C., and Ehrlich M., How different DNA sequences are recognized by a DNA-binding protein: Effects of partial proteolysis, Nucleic Acids Res. 17: 8611-8629 (1989).

56. Ehrlich K.C. and Ehrlich M., Repeated sites in the apolipoprotein(a) gene recognized by MDBP, a sequence-specific DNA-binding protein, Molec. Cell Biol. 10: 4957-4960 (1990).

57. Zhang X.-Y., Supakar P.C., Wu K., Ehrlich K.C. and Ehrlich M., An MDBP site in the first intron of the human c-*myc* gene, Cancer Res. 50: 6865-6859 (1990).

58. Asiedu C., Zhang X.-Y., Supakar P.C., Khan R., Ehrlich K.C. and Ehrlich M., Binding sites in mammalian genes and viral gene regulatory regions recognized by methylated DNA-binding protein, Nucleic Acids Res. 18: 6253-6260 (1990).

59. Ehrlich M., Zhang, X.-Y, and N.M. Inamdar, Spontaneous deamination of cytosine and 5-methylcytosine residues in DNA and replacement of 5-methylcytosine residues with cytosine residues, Mutation Res. 238: 277-286 (1990).

60. Zhang X.-Y., Inamdar N.M., Supakar P.C., Wu K., Ehrlich K.C. and Ehrlich M., Three MDBP sites in the enhancer-promoter region of human cytomegalovirus, Virology 182: 865-869 (1991).

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