
CURRICULUM VITAE

R.W. TREWYN, PH.D.

OFFICE: Kansas State University
006 Anderson Hall
Manhattan, KS 66506-0112

HOME: 2001 Rockhill Circle
Manhattan, KS 66502-3952

PHONE: (785) 532-6227

PHONE: (785) 587-9018

FAX: (785) 532-7639

MOBIL: (785) 341-3150

E-MAIL: trewyn@ksu.edu

E-MAIL: rwtrewyn@gmail.com

WEBSITE: www.k-state.edu/nbaf

MILITARY SERVICE: U.S. Army Infantry, 1968-69
RANK: Staff Sergeant, E-6
FOREIGN DUTY: Vietnam

EDUCATION: Oregon State University, Corvallis, OR; Ph.D., 1974
[Major: Microbial Physiology; Minors: Biochemistry and Genetics]
University of Wisconsin–Whitewater, Whitewater, WI; B.S., Magna cum Laude, 1970
[Major: Biology; Minor: Chemistry]
University of Hawaii, Honolulu, HI; 1965-67
[Major: Marine Biology ⇌ Zoology; Minor: Chemistry]
University of Wisconsin–Whitewater, Whitewater, WI; 1964-65
[Major: Business ⇌ Biology; Minor: Chemistry]
Rockford School of Business, Rockford, IL; 1961-63
[Graduated in Accounting]

PROFESSIONAL EXPERIENCE:

National Bio and Agro-defense Facility (NBAF) Liaison, Office of the President,
Kansas State University, 2014-present
Vice President for Research, Kansas State University, 2007-14
Vice Provost for Research and Dean of the Graduate School,
Kansas State University, 1998-2007
President, Kansas State University Research Foundation, 1995-2011
Professor, Division of Biology, Kansas State University, 1994-present
Associate Vice Provost for Research, Kansas State University, 1994-98
Professor, Department of Medical Biochemistry, Ohio State University, 1988-94
Director, Ohio State Biochemistry (Interdisciplinary Graduate) Program, 1989-91; 1993-94
Associate Professor, Department of Medical Biochemistry, Ohio State University, 1983-88
Director, Tissue/Tumor Procurement Service, Comprehensive Cancer Center,
Ohio State University, 1980-92
Assistant Professor, Department of Physiological Chemistry, Ohio State University, 1978-83
Instructor, Department of Biochemistry, Biophysics, and Genetics,
University of Colorado Health Sciences Center, 1977-78
Research Associate, Departments of Surgery and Biochemistry, Biophysics, and Genetics,
University of Colorado Health Sciences Center, 1974-77

ADDITIONAL EXPERIENCE:

Biothreat Team Member, Kansas Intelligence Fusion Center, Topeka, KS, 2011-present
Security Clearance: TS/SCI [provide bio/agrodefense risk analyses]
Consultant, Institute for Physical Sciences, McLean, VA, 2008-2015
Security Clearance: TS/SCI [provided assessments of biological threats to the U.S.]
Commissioner [judicial appointment], Franklin County Veterans Service Commission, OH
[provided emergency relief to veterans in excess of \$1,000,000 annually], 1992-94
Scientific Consultant, Research Advisory Board, Jarrow-Lloyd Pharmaceuticals, Inc.,
Columbus, OH, 1989-93
Scientific Consultant, Board of Directors, Pharmaceutical and Toxicological Research
Institute, Ohio State University, 1984-86
Accountant, Hometown, Inc., Milwaukee, WI, 1963-64

BOARD OF DIRECTORS/TRUSTEES SERVICE:

Colonel Arthur D. Simons Center for the Study of Interagency Cooperation,
Fort Leavenworth, KS, 2010-present
K-State Olathe Innovation Campus Board of Directors, Olathe, KS, 2009-14
K-State Diagnostic and Analytical Services Board of Directors, Manhattan, KS, 2007-14
Kansas Technology Enterprise Corporation Board of Directors, Topeka, KS, 2006-09
BioKansas Board of Directors, Lenexa, KS, 2004-08
Kansas State University Institute for Commercialization Board of Directors, 1998-present
Chairman of Board, 2008-present
Previously named the Mid-American Commercialization Center, 1995-2004; and
the National Institute for Strategic Technology Acquisition and Commercialization,
2004-11.
Kansas State University Research Foundation Board of Directors, 1995-2014
Chairman of the Board, 2011-14
Center for the Study of Veterans in Society Co-Founder and Trustee, Hamilton, OH
[a not-for-profit, 501(c)(3) research organization], 1992-2010
Ohio Cancer Research Associates Board of Trustees, Columbus, OH, 1984-88

PROFESSIONAL SOCIETY MEMBERSHIPS:

American Association for the Advancement of Science (elected fellow; 2012-present)
The Honor Society of Phi Kappa Phi (elected member; 2014-present)
American Association for Cancer Research (elected membership; inactive)
American Society of Biochemistry and Molecular Biology (elected membership; inactive)
Association of University Technology Managers (inactive affiliation)
Council of Graduate Schools (inactive affiliation)
Council on Research Policy and Graduate Education, APLU (inactive affiliation)
Council on Governmental Relations, APLU (inactive affiliation)
Sigma Xi (elected membership; inactive)

FELLOWSHIPS, HONORS AND AWARDS:

National Defense Education Act Title IV Fellowship, 1970-73

National Cancer Institute Individual Postdoctoral Fellowship, 1975-77

Young Investigator Research Award. Eli Lilly and Company, \$12,000, 1980-82

Fellow of the American Association for the Advancement of Science, 2012-present

The Honor Society of Phi Kappa Phi, 2014-present

COMPETITIVE EXTRAMURAL SPONSORED PROJECTS:

American Cancer Society (DHP-37E; competitive renewal of DHP-37D). Leukemia cell differentiation: Epigenetic therapeutics. Direct costs of \$48,800, July 1, 1993 to June 30, 1994. Principal Investigator. Claudia J. Morgan, Ph.D., Co-Principal Investigator.

American Cancer Society (DHP-37C/D; competitive renewal of CH-396B). Leukemia cell differentiation: Epigenetic therapeutics. Direct costs of \$190,400, July 1, 1991 to June 30, 1993. Principal Investigator. Claudia J. Morgan, Ph.D., Co-Principal Investigator.

NATO Travel Grant (RG.86/0140). Inosine biosynthesis in tRNA: Role in regulating gene expression. \$10,833. April 1, 1986 to March 31, 1992. Project Coordinator. Henri Grosjean, Ph.D., Laboratoire D'Enzymologie, Centre National de la Recherche Scientifique, Gif-sur-Yvette, France, Co-Principal Investigator.

Environmental Protection Agency (R-814130-01; competitive renewal of R-810714). Promotion of carcinogenesis: Role of aberrant tRNA modification. Direct costs of \$172,914, March 8, 1989 to March 7, 1992. Principal Investigator.

American Cancer Society (CH-396B; competitive renewal of CH-396). Leukemia cell differentiation: Epigenetic therapeutics. Direct costs of \$172,000, July 1, 1989 to June 30, 1991. Principal Investigator.

National Cancer Institute (U01-CA44971-01). Cooperative human tissue network. Direct costs of \$957,857, January 1, 1987 to December 31, 1990. Program Director. A 5-year competitive renewal of this project was funded at Ohio State with Kathryn P. Clausen, M.D., as Principal Investigator.

Jarrow Formulas. Early cancer detection method. Direct costs of \$67,858, February 1, 1989 to May 31, 1990. Co-Principal Investigator; Steven M. D'Ambrosio, Co-Principal Investigator.

Burroughs Wellcome Company. Purine analogue-induced cell differentiation and queuine hypomodification of tRNA. Direct costs of \$9,091, April 1, 1988 to August 31, 1989. Principal Investigator.

American Cancer Society (CH-396). Leukemia cell differentiation: Epigenetic therapeutics. Direct costs of \$160,744, July 1, 1987 to June 30, 1989. Principal Investigator.

Department of Defense (AFOSR-85-0003; competitive renewal of AFOSR-80-0283). Modulating transfer RNA anticodon modifications and biologic responses in human cells. Direct costs of \$281,864, October 15, 1984 to October 14, 1987. Principal Investigator.

Environmental Protection Agency (R-810714). Promotion of carcinogenesis: Role of aberrant tRNA modification. Direct costs of \$200,008, July 1, 1984 to June 30, 1987. Principal Investigator.

American Cancer Society—Ohio Division. tRNA transglycosylase in neoplastic transformation. Direct costs of \$6,000, October 15, 1980 to October 14, 1981. Principal Investigator.

Department of Defense (AFOSR-80-0283). Chemical carcinogen-induced changes in tRNA metabolism in human cells. Direct costs of \$236,480, October 1, 1980 to September 30, 1984. Principal Investigator.

Battelle Memorial Institute. Markers for selective chemotherapeutic testing *in vitro*. Direct costs of \$10,000, August 1, 1979 to July 31, 1980. Principal Investigator.

Milheim Foundation for Cancer Research. Experimental chemotherapy with tumor explants. Direct costs of \$9,085, July 1, 1979 to June 30, 1980. Principal Investigator.

GRADUATE STUDENTS (M.S. DEGREE MAJOR PROFESSOR):

Lani A. Davakis, M.S., 1983

Thesis: Response of Human Cells to Tumor Promoters

Gina M. Siravo-Sagraves, M.S., 1991

Thesis: Synthetic Oligonucleotide Probes for Detecting Human tRNA Isoacceptors Differing in Post-Transcriptional Modification

GRADUATE STUDENTS (PH.D. DEGREE MAJOR PROFESSOR):

Mark S. Elliott, Ph.D., 1983

Dissertation: Biosynthesis of Queuosine and Inosine in the First Position of the Anticodon in Transfer RNA: Implications in Neoplasia

Keith A. Kretz, Ph.D., 1987

Dissertation: Anticodon Modifications of tRNA and Cell Differentiation

Girija Muralidhar, Ph.D., 1988

Dissertation: Changes in Queuine Modification of tRNA Involved in Promotion of Carcinogenesis

Josiah Ochieng, Ph.D., 1988

Dissertation: Transfer RNA Modifications and Phenotypic Expression in Cultured Cells: Implications in Promotion of Carcinogenesis

POSTDOCTORAL MENTORING:

Bernard T. French, Ph.D., 1986-90

Project: Transfer RNA mediated changes in *c-myc* expression and codon utilization in mammalian cells

Claudia J. Morgan, Ph.D., 1988-90

Project: Altered queuine modification of tRNA in *c-H-ras* transformation

ADDITIONAL RESEARCH TRAINING SUPERVISION:

Mary Lidstrom O'Connor, Undergraduate Honors Student, 1972-73

Honors Thesis: A study of methionine-induced growth inhibition in yeast

Debra A. Heldman, Medical Student, 1981-82

Project: Modified nucleosides as markers for leukemia

Diane S. Gibboney, Undergraduate Honors Student, 1986-87

Honors Thesis: Induction of leukemia cell differentiation with hypoxanthine analogs

Anne-Lise Glasser, French Graduate Exchange Student, 1989

Project: Mechanisms of altered gene expression in cultured mammalian cells

UNIVERSITY TEACHING ASSIGNMENTS:

Advanced Microbial Physiology

September, 1973 to May, 1974

Introduction to Medical Biochemistry

July 14, 1977 to August 23, 1977

Medical Biochemistry Laboratory

September 11, 1977 to December 17, 1977

Medical Biochemistry

October 8, 1979 to November 16, 1979

January 5, 1981 to February 20, 1981

January 4, 1982 to February 19, 1982

February 21, 1983 to April 1, 1983

February 28, 1984 to March 30, 1984

February 25, 1985 to March 29, 1985

February 3, 1986 to March 7, 1986

October 13, 1987 to November 2, 1987

November 3, 1988 to December 10, 1988

February 25, 1993 to March 11, 1993

March 11, 1994 to April 29, 1994

Biochemistry Program Research Colloquium
September 20, 1989 to December 1, 1989
September 19, 1990 to November 30, 1990
Biochemistry Program Student Seminar
January 3, 1990 to June 1, 1990
Biotechnology 1990, Celina High School
October 17, 1990
Neurochemistry 825
February 18, 1993 to March 18, 1993

UNIVERSITY/NON-UNIVERSITY COMMITTEE SERVICE:

Medical Biochemistry Graduate Studies Committee, 1979-89
Committee Chair, 1982-89
University Hazardous Waste Disposal Committee, 1980-81
Institutional Biosafety Committee, 1980-83
College of Medicine Graduate Education Committee, 1982-85
Biochemistry Graduate Program Development Committee, 1983-84
Biochemistry Program Admissions Committee, 1983-84, 1986
Committee Chair, 1983-84, 1986
Clinical Chemistry Graduate Studies Committee, 1983-86
Radiobiology Search Committee, 1984
Medical Biochemistry Search Committee, 1984-85
Comprehensive Cancer Center Space Committee, 1985-94
Medical Radionuclide Committee, 1985-89
Molecular Genetics Search Committee, 1986
Biotechnology Advisory Committee, 1986-94
Medical Molecular Biology Program Committee, 1986-87
Ohio State Biochemistry Program, 1986, 1989-91, 1993-94
Director and Graduate Studies Committee Chair, 1989-91, 1993-94
Biotechnology Graduate Program Committee, 1987-88
University Hazardous and Radioactive Waste Committee, 1987-88
Medical Microbiology and Immunology Search Committee, 1987
Neurobiotechnology Search Committee, 1987-89
NCI Human Tissue Network Coordinating Committee, 1987-90
Medical Biochemistry/Neurology Search Committee, 1988
Rightmire Hall Remodelling Committee, 1988-89
Surgical Oncology Endowed Chair Search Committee, 1988-90
Medical Biochemistry Promotion and Tenure Committee, 1988
Advisory Committee for DNA Instrument Group, 1988-89
Botany/Biotechnology Search Committee, 1988-89
Medical Biotechnology Committee, 1989-90
Committee Chair, 1989-90
Veterans' Action Committee, 1990-92
College of Medicine Senate Caucus Committee, 1991-94
President's Veterans Task Force, 1991

Medical Biochemistry Promotion and Tenure Committee, 1991
Committee Chair, 1991
Medical Scientist Program Committee, 1992-94
American Cancer Society Study Section, 1992
College of Medicine "Med I" Committee, 1992-94
College of Medicine "Med I" Student Evaluation Committee, 1992-94
Vice President's Diversity Training Task Force, 1993
OSU-CCF Research and Graduate Studies Committee, 1993-94
KSU Patent Advisory Committee, 1994-2001
Committee Chair, 1998-2001
KSU Research Compliance Coordinating Committee, 1994-98
Committee Chair, 1994-98
Kansas Council of Presidents' University Economic Impact Committee, 1995-96
Committee Chair, 1995-96
KSU Veterinary Medicine Clinical Sciences' Vision Committee, 1995
Committee Facilitator, 1995
KSU Data Administration Task Force, 1995-97
U.S. Department of Health and Human Services' Advisory Committee on Long-Term Health Effects of Phenoxy Herbicides, 1995-99; 2001-06
Kansas Board of Regents' Intellectual Property Committee, 1997-98
KSU Economic Impact Committee, 1997-98
Committee Chair, 1997-98
KSU Intellectual Property Committee, 1998-99
NASULGC Council on Research Policy and Graduate Education, 1999-2005
Executive Committee Liaison to ESCOP and COTT, 1999-2004
NIEHS Ad Hoc Panel on Vietnam-U.S. Studies of Agent Orange/Dioxin, 2000-02
Kansas Strategic Research Committee, 2000-05
U.S. Army Medical Research and Materiel Command, Panel to Assess the Role of Indications and Warnings for the Prediction and Surveillance of Catastrophic Biological Events, 2004
Office of the Secretary of Defense Basic Research Review Panel, 2006

INVITED SCIENTIFIC/MEDICAL SYMPOSIA PRESENTATIONS:

"Alterations in tRNA Metabolism as Markers of Neoplastic Transformation." NATO Advanced Study Institute, Corfu Island, Greece. *Biochemical and Biological Markers of Neoplastic Transformation*. September 28 to October 10, 1981.

"Clinical Application of Urinary Nucleosides in Cancer." University of Texas M.D. Anderson Hospital and Tumor Institute, Houston, Texas. *Laboratory Testing in Cancer: Current Concepts and Applications*. February 9 and 10, 1984.

"Inosine Biosynthesis in Transfer RNA and its Potential Role in Differentiated Lymphocyte Function." Northeastern University, Boston, Massachusetts. *Nucleosides and Lymphocytes*. October 12 to 14, 1984.

“Queuine Deficient tRNA and Neoplastic Progression.” University of Erlangen-Nürnberg, Erlangen, West Germany. *Symposium on the Transfer-RNA Modification Queuosine*. June 1 to 4, 1985.

“Inosine Biosynthesis in the Anticodon of Transfer RNA.” University of Umeå, Umeå, Sweden. *12th International Workshop on tRNA*. July 3 to 9, 1987.

“Changes in tRNA Anticodon Modification and Induction of Leukemia Cell Differentiation.” University of Umeå, Umeå, Sweden. *Symposium on tRNA Modification*. July 9 to 12, 1987.

“Military Applications of Nanoparticles: Protecting Against Chemical and Biological Threats.” Association of the United States Army, San Antonio, Texas. *Army Medicine Symposium*, May 30 to June 1, 2001.

“Military Applications of Nanoparticles: Protecting Against Chemical and Biological Threats.” Invited (faculty) presentation for the 4th Annual U.S. Army Medical Command’s *Force Health Protection Conference*, Albuquerque, New Mexico. August 26 to 30, 2001.

INVITED FEDERAL CONGRESSIONAL TESTIMONY:

“Title 38, United States Code, Section 4212: Implementation and Enforcement by the U.S. Department of Labor.” Requested written testimony with James A. Stever, Ph.D. to the U.S. House of Representatives’ Veterans Affairs Committee, October 14, 1993.

“Inadequacies of Federal Agent Orange Studies.” Requested testimony to the U.S. House of Representatives National Security, Veterans Affairs, and International Affairs Subcommittee, Washington, DC. *Air Force Ranch Hand Study on the Health Effects of Agent Orange*, March 15, 2000.

INVITED VETERANS AFFAIRS PRESENTATIONS:

“Does Political Correctness Relate to Anti-Veteran Bias on the College Campus?” Ohio Association of Scholars. *Political Correctness in Ohio*. Columbus, Ohio, November 20, 1992.

“U.S. Army Infantry Operations in Vietnam.” Requested testimony to a National Academy of Sciences’ Institute of Medicine Committee, Irvine, California. *Health Effects in Vietnam Veterans of Exposure to Herbicides*. February 8, 1993.

“Veterans’ Rights: What Went Wrong?” Reserve Officers Association. *68th Annual State Convention*. Presentation with James A. Stever, Ph.D. Cincinnati, Ohio, April 23, 1993.

“Unequal Employment Opportunity for Military Veterans.” Keynote address at the *Council of Scholars Colloquium* sponsored by the Vietnam Veterans Institute. Army Navy Club, Washington, D.C. November 12, 1993.

“Welcome Home!” Invited presentation of original prose at the Arts Club of Washington, Washington, D.C. *An Evening of Blues, Poetry, and Prose*. Adrian Cronauer (*Good Morning, Vietnam!* Screenplay Author), Master of Ceremonies. November 12, 1993

“Employment Disparities and the Vietnam Veteran.” Hoffberger Center for Professional Ethics, University of Baltimore, Baltimore, Maryland. *The History and Legacy of Those Who Served in Vietnam*. Presentation with James A. Stever, Ph.D. and William E. Weber, Esq. November 8 to 9, 1994.

INVITED ACADEMIC ADMINISTRATION PRESENTATIONS:

“To Be or Not to Be (a Research University) ... That WAS the Question.” National Association of State Universities and Land Grant Colleges, Key West, Florida. *Council on Research Policy and Graduate Education Summer Forum*, July 17 to 20, 2000.

“Bricks and Mortar: The Crumbling Research Infrastructure.” National Association of State Universities and Land Grant Colleges, Mystic, Connecticut. *Council on Research Policy and Graduate Education Summer Forum*, June 21 to 24, 2002.

“The Academic Response to 9/11.” National Association of State Universities and Land Grant Colleges, Mystic, Connecticut. *Council on Research Policy and Graduate Education Summer Forum*, June 21 to 24, 2002.

“Bricks and Mortar: The Crumbling Research Infrastructure.” Council on Research Policy and Graduate Education Session, Chicago, Illinois. *National Association of State Universities and Land Grant Colleges National Meeting*, November, 10 to 13, 2002.

“Ecological Adaptation: Finding a New Niche (for Human Ecology) in a New Era.” Board on Human Biosciences Session, Chicago, Illinois. *National Association of State Universities and Land Grant Colleges National Meeting*, November 10 to 13, 2002.

PATENTS:

R.W. Trewyn and S.M. D’Ambrosio. Early cancer detection method. Patent No. 4,687,733; August 18, 1987.

PEER-REVIEWED SCIENTIFIC JOURNAL ARTICLES:

Nakamura, K.D., Trewyn, R.W. and Parks, L.W. Purification and characterization of serine transhydroxymethylase from *Saccharomyces cerevisiae*. *Biochim. Biophys. Acta* 327: 328-335, 1973.

Trewyn, R.W., Nakamura, K.D., O'Connor, M.L. and Parks, L.W. An interaction between S-adenosyl-L-methionine and pyridoxal 5'-phosphate and its effect on *Saccharomyces cerevisiae*. *Biochim. Biophys. Acta* 327: 336-344, 1973.

Trewyn, R.W. and Kerr, S.J. The enzymatic synthesis of S-adenosyl-L-[2(n)³H]-homocysteine. *Anal. Biochem.* 82: 310-316, 1977.

Trewyn, R.W. and Kerr, S.J. Altered growth properties of Chinese hamster cells exposed to 1-methylguanine and 7-methylguanine. *Cancer Res.* 38: 2285-2289, 1978.

Trewyn, R.W., Kerr, S.J. and Lehman, J.M. Karyotype and tumorigenicity of 1-methylguanine-transformed Chinese hamster cells. *J. Natl. Cancer Inst.* 62: 633-638, 1979.

Trewyn, R.W. and Kerr, S.J. Cytotoxicity of N⁶-substituted adenosine analogues to cultured trophoblastic tumor cells. *Biochem. Pharmacol.* 28: 607-612, 1979.

Gwebu, E.T., Trewyn, R.W., Cornwell, D.G. and Panganamala, R.V. Vitamin E and the inhibition of platelet lipooxygenase. *Res. Commun. Chem. Path. Pharmacol.* 28: 361-376, 1980.

Trewyn, R.W. and Kerr, S.J. An improved rapid assay for S-adenosyl-L-homocysteine hydrolase. *J. Biochem. Biophys. Methods* 4: 299-307, 1981.

Karpen, C.W., Merola, A.J., Trewyn, R.W., Cornwell, D.G. and Panganamala, R.V. Modulation of platelet thromboxane A₂ and arterial prostacyclin by dietary vitamin E. *Prostaglandins* 22: 651-661, 1981.

Trewyn, R.W., Glaser, R., Kelly, D.R., Jackson, D.G., Graham, W.P. and Speicher, C.E. Elevated nucleoside excretion by patients with nasopharyngeal carcinoma: Preliminary diagnostic/prognostic evaluations. *Cancer* 49: 2513-2517, 1982.

Elliott, M.S. and Trewyn, R.W. Queuine hypomodification of tRNA induced by 7-methylguanine. *Biochem. Biophys. Res. Commun.* 104: 326-332, 1982.

Heldman, D.A., Grever, M.R. and Trewyn, R.W. Differential excretion of modified nucleosides in adult acute leukemia. *Blood* 61: 291-296, 1983.

Heldman, D.A., Grever, M.R., Speicher, C.E. and Trewyn, R.W. Urinary excretion of modified nucleosides in chronic myelogenous leukemia. *J. Lab. Clin. Med.* 101: 783-792, 1983.

Heldman, D.A., Grever, M.R., Miser, J.S. and Trewyn, R.W. Relationship of modified nucleoside excretion to disease status in childhood acute lymphoblastic leukemia. *J. Natl. Cancer Inst.* 71: 269-273, 1983.

Gama-Sosa, M.A., Slagel, V.A., Trewyn, R.W., Oxenhandler, R., Kuo, K.C., Gehrke, C.W. and Ehrlich, M. The 5-methylcytosine content of DNA from human tumors. *Nucleic Acids Res.* 11: 6883-6894, 1983.

Elliott, M.S. and Trewyn, R.W. Inosine biosynthesis in transfer RNA by an enzymatic insertion of hypoxanthine. *J. Biol. Chem.* 259: 2407-2410, 1984.

Geisbuhler, T., Altschuld, R.A., Trewyn, R.W., Ansel, A.Z., Lamka, K. and Brierley, G.P. Adenine nucleotide metabolism and compartmentation in isolated adult rat heart cells. *Circ. Res.* 54: 536-546, 1984.

Trewyn, R.W. and Gatz, H.B. Altered growth properties of normal human cells induced by phorbol 12,13-didecanoate. *In Vitro* 20: 409-415, 1984.

Trewyn, R.W. Inosine biosynthesis in transfer RNA: A postulated role in immune regulation. *Med. Hypoth.* 13: 369-380, 1984.

Elliott, M.S., Katze, J.R. and Trewyn, R.W. Relationship between a tumor promoter-induced decrease in queuine modification of transfer RNA in normal human cells and the expression of an altered cell phenotype. *Cancer Res.* 44: 3215-3219, 1984.

Elliott, M.S., Trewyn, R.W. and Katze, J.R. Inhibition of queuine uptake in cultured human fibroblasts by phorbol 12,13-didecanoate. *Cancer Res.* 45: 1079-1085, 1985.

Trewyn, R.W., Kretz, K.A., Utz, E.D., Patrick, D.E. and Muralidhar, G. Hematopoiesis and the inosine modification in transfer RNA. *Proc. Soc. Exp. Biol. Med.* 179: 497-503, 1985.

Muralidhar, G. and Trewyn, R.W. Enhancement of the chemical transformation of Chinese hamster embryo cells *in vitro* by 7-methylguanine. *Cancer Res.* 47: 2440-2444, 1987.

Kretz, K.A., Katze, J.R. and Trewyn, R.W. Guanine analog-induced differentiation of human promyelocytic leukemia cells and altered queuine modification of tRNA. *Mol. Cell. Biol.* 7: 3613-3619, 1987.

Ochieng, J., Patrick, D.E., Utz, E.D. and Trewyn, R.W. Inhibition of phorbol ester-mediated phenotypic changes in cultured cells by hypoxanthine. *Carcinogenesis* 8: 1629-1633, 1987.

Muralidhar, G., Utz, E.D., Elliott, M.S., Katze, J.R. and Trewyn, R.W. Identifying inhibitors of queuine modification of tRNA in cultured cells. *Anal. Biochem.* 171: 346-351, 1988.

Muralidhar, G., Ochieng, J. and Trewyn, R.W. Altered queuine modification of transfer RNA involved in the *in vitro* transformation of Chinese hamster embryo cells. *Cancer Res.* 49: 7110-7114, 1989.

Gibboney, D.S., French, B.T., Patrick, D.E. and Trewyn, R.W. 6-Ethylmercaptapurine-mediated growth inhibition of HL-60 cells *in vitro* irrespective of purine salvage. *Cancer Chemother. Pharmacol.* 25: 189-194, 1989.

French, B.T., Patrick, D.E., Grever, M.R. and Trewyn, R.W. Differential effect of 6-ethyl-mercaptapurine on *c-myc* expression in wild-type and HGPRT-deficient HL-60 cells. *Cancer Chemother. Pharmacol.* 27: 171-177, 1990.

Milo, G.E., Kurian, P., Shuler, C., French, B.T., Noyes, I., Hollering, J., Mannix, D.G., Sital, N., Schuller, D. and Trewyn, R.W. Nontumorigenic squamous cell carcinoma line converted to tumorigenicity with methyl methanesulfonate without activation of *H-ras* or *myc*. *Proc. Natl. Acad. Sci. U.S.A.* 87: 1268-1272, 1990.

Shuler, C., Kurian, P., French, B.T., Noyes, I., Sital, N., Hollering, J., Trewyn, R.W., Schuller, D. and Milo, G.E. Noncorrelative *c-myc* and *ras* oncogene expression in squamous cell carcinoma cells with tumorigenic potential. *Teratog. Carcinog. Mutagen.* 10: 53-65, 1990.

French, B.T. and Trewyn, R.W. Modification of the anticodon wobble position of tRNA^{Ala} *in vitro* does not require 5' or 3' processing. *Gene* 96: 301-304, 1990.

French, B.T., Patrick, D.E., Grever, M.R. and Trewyn, R.W. Queuine, a tRNA anticodon wobble base, maintains the proliferative and pluripotent potential of HL-60 cells in the presence of the differentiating agent 6-thioguanine. *Proc. Natl. Acad. Sci. U.S.A.* 88: 370-374, 1991.

D'Ambrosio, S.M., Gibson-D'Ambrosio, R.E. and Trewyn, R.W. An enzyme-linked immunosorbent assay (ELISA) for the detection and quantitation of the tumor marker 1-methylinosine in human urine. *Clin. Chem. Acta* 199: 119-128, 1991.

Gündüz, U., Elliott, M.S., Seubert, P.H., Houghton, J.A., Houghton, P.J., Trewyn, R.W. and Katze, J.R. Absence of tRNA-guanine transglycosylase in a human colon adeno-carcinoma cell line. *Biochim. Biophys. Acta* 1139: 229-238, 1992.

Utz, E.D., Siravo-Sagraves, G.M., Trewyn, R.W. and Morgan, C.J. Detection of human tRNAs with antisense oligonucleotides. *Anal. Biochem.* 216: 110-117, 1994.

Morgan, C.J., Chawdry, R.N., Smith, A., Siravo-Sagraves, G.M., and Trewyn, R.W. 6-Thioguanine-induced growth arrest in 6-mercaptapurine-resistant human leukemia cells. *Cancer Res.* 54: 5387-5393, 1994.

Morgan, C.J., Merrill, F.L., and Trewyn, R.W. Defective tRNA queuine modification in C3H10t1/2 murine fibroblasts transfected with oncogenic *ras*. *Cancer Res.* 56: 594-598, 1996.

Auxilien, S., Crain, P., Trewyn, R.W., and Grosjean, H. Mechanism, specificity and general properties of the yeast enzyme catalyzing the formation of inosine-34 in the anticodon of transfer RNA. *J. Mol. Biol.* 262: 437-458, 1996.

SCIENTIFIC BOOK CHAPTERS:

Trewyn R.W. and Kerr, S.J. Regulation of tRNA methyltransferase activity in onco-development systems. In: Onco-Developmental Gene Expression (W.H. Fishman and S. Sell, eds.), pp. 101-106, Academic Press, New York, 1976.

Milo, G.E., Trewyn, R.W., Tejwani, R. and Oldham, J.W. Intertissue variation in benzo(a)pyrene metabolism by human skin, lung, and liver *in vitro*. In: Toxic Hazards in Aviation, AGARD Publication 309, pp. B7 1-9, NATO, Neuilly-sur-Seine, France, 1981.

Tejwani, R., Trewyn, R.W. and Milo, G.E. Kinetics of movement of benzo(a)pyrene into transformable and non-transformable human diploid cells. In: Chemical Analysis and Biological Fate: Polynuclear Aromatic Hydrocarbons (M. Cooke and A.J. Dennis, eds.), pp. 97-107, Battelle Press, Columbus, 1981.

Milo, G.E. and Trewyn, R.W. *In vitro* transformation of cultured human diploid fibroblasts. In: Nitrosamines and Human Cancer (P.N. Magee, ed.), Banbury Report 12, pp. 3-13, Cold Spring Harbor Laboratory, 1982.

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