Daniel W. Rosenberg, Ph.D.
Professor of Medicine and Health Net Inc., Chair in Cancer Biology
Director, Colon Cancer Prevention Program, NEAG Cancer Center
Department of Medicine (primary); Department of Genetics and Developmental Biology (secondary)
Department of Molecular and Cell Biology - Storrs campus (adjunct faculty)

PERSONAL INFORMATION

Business Address:	Center for Molecular Oncology, University of Connecticut Health Center, Farmington, CT
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Home Address:	4 Tiffany Lane, Weston, CT 06883
Home Phone:	(860) 922-7322
Citizenship:	U.S.
Place of birth:	Elizabeth, New Jersey
E-mail address:	Rosenberg@uchc.edu

EDUCATION

	State University of New York, College of Environmental Science and Forestry at Syracuse University, Syracuse, NY
1975	B.S. Biochemistry-State University of New York at Buffalo, Buffalo, NY
1977	M.S. Environmental Health, Toxicology - University of Michigan, Ann Arbor, MI
1982	Ph.D. Environmental Health, Toxicology - University of Michigan, Ann Arbor, MI (Thesis research performed at The Rockefeller University through a joint arrangement with the University of Michigan)

PROFESSIONAL EXPERIENCE

1978	Guest Investigator, The Rockefeller University, New York, NY
1982	Research Associate, The Rockefeller University, New York, NY
1986	Experimental Toxicologist, Chevron Environmental Health Center, Inc., Richmond, CA
1988	Assistant Professor, The Rockefeller University, New York, NY Adjunct Assistant Professor of Biology, Hunter College of the City University of New York, New York, NY
1991	Adjunct Assistant Professor, The Rockefeller University, NY, NY Assistant Professor, The University of Connecticut, Storrs, CT
1996	Associate Professor, The University of Connecticut, Storrs, CT Adjunct Associate Professor, Department of Molecular and Cell Biology and Adjunct Associate Professor, School of Pharmacy, University of Connecticut, Storrs, CT
1996	Visiting Scientist, The Rockefeller University, New York, NY (summer)
1997	Visiting Scientist, The Rockefeller University, New York, NY (summer)
2000	Associate Professor of Medicine and Investigator, Center of Molecular Medicine, University of Connecticut School of Medicine, Farmington, CT
2001	Associate Professor, Department of Genetics and Developmental Biology, UCHC
2003	Director, Colon Cancer Prevention Program, UCHC Adjunct Professor, Dept. of Molecular and Cell Biology, UCONN, Storrs
2004	Professor of Medicine, University of Connecticut Health Center
2004	Professor, Department of Genetics and Developmental Biology, UCHC

AWARDS AND HONORS

1993	American Association of Colleges of Pharmacy New Investigator Award

1996	New Investigator Award, The Donaghue Medical Research Foundation
1997	Best Student Poster (Don Delker), NE-SOT, Ridgewood, CT
1999	Best Student Poster (Alex Papanikolaou), NESOT, Groton, CT
2002	Patterson Trust, Investigator Award
	NIH Cancer Etiology Study Section, Full member
2007	Best Student Poster (David Montrose), NE-SOT, Worcester, MA
2008	Carcinogenesis Mini-Symposium Session Chairman, AACR, San Diego, CA
	Visiting Professor, National Cancer Center Research Institute, Tokyo, Japan (six lectures in two weeks)
	NIH Grant R01CA125691 selected as an Exemplar of NCI-funded Translational Research
2010	Editor, Special Issue of *Mutation Research*, "Application of Genomic Technologies to the Study of Colon Cancer"
	NIH Chemoprevention Study Section, Full member
2011	Elected Member, Connecticut Academy of Science and Engineering (CASE)
2012	Awarded Endowed Professorship - Health Net Inc. Chair in Cancer Biology
2013	Member, External Advisory Committee of the Marshall University COBRE program
2017	National Cancer Institute, Pre-cancer Genome Atlas (PCGA) Think-Tank, NIH

EXTRAMURAL REVIEW PANELS

1997	NIH Site Visit team, University of Texas M.D. Anderson Cancer Center, TX
2001	NIH, Chemical Pathology Study Section, *ad hoc* member
	Special Emphasis Panel Review, NIH, Chemical Pathology
2002 - 2006	Full Member, NIH, Chemical Pathology (Cancer Etiology) Study Section
2002	Special Emphasis Panel Review, NIH, Pathology B
	Department of Defense, Breast Cancer Review Panel, MBG-6
2002 - 2005	Israel Cancer Research Fund, Member
2003	Special Emphasis Panel Review, NIH, Pathology B
	DOD, Breast Cancer Research Program Concept Award, Reviewer
	DOD, Breast Cancer Review Panel, CIT-6
	Cancer Research UK, Reviewer
2004	DOD, Prostate Cancer Research Program Concept Award, Reviewer
	Special Emphasis Panel Review, NIH, ONC-P
2005	Reviewer, Austrian Science Fund
	Reviewer, CRED Pilot Project Program
	NIH Special Emphasis Panel, ZRG1, Cancer Chemoprevention
	NIH, Tumor Microenvironment Study Section, *ad hoc* reviewer
2006	NIH Special Emphasis Panel, Cancer Genetics
	NIH Special Emphasis Panel, Cancer Chemoprevention
	NIH Special Emphasis Panel, Cancer Genetics (Chairman)
	Thesis Examiner, University of New South Wales (Anne Marie Galea)
	Reviewer, COBRE grant application, University of Kansas
	Reviewer, Advanced Study Institute, The Croucher Foundation, Hong Kong
2007	NCI, Special Emphasis Panel, Cancer Genetics, Chairman
	NCI, Special Emphasis Panel, Chemoprevention, Chairman
	Reviewer, Medical Research Council, United Kingdom, New Investigator Award
2008	NCI Site Visit Team, Columbia University Cancer Center, NY, NY
	NCI Site Visit Team, Dartmouth-Hitchcock Medical Center, Hanover, NH
	NCI Chemoprevention PO1 Panel Review, Washington, DC
2009	Reviewer, Medical Research Council, United Kingdom
	NIH, Chemoprevention Study Section, *ad hoc* member
	NCI, Special Emphasis Panel, Epidemiology, Prevention, Control and Population Sciences
2010 - 2014	NCI, Chemoprevention Study Section, Full member
	NCI, Molecular Oncology PO1 Panel Review

2011	NCI, Molecular Oncology PO1 Panel Review, Washington, DC
2013	NCI, Special Emphasis Panel, Cancer Biology and Therapy
	NCI, Special Emphasis Panel, Cancer Prevention
2014	NCI, Special Emphasis Panel, Cancer Chemoprevention
	American Institute Cancer Research, Grant Review Panel, Washington, DC
2015	American Institute Cancer Research, Grant Review Panel, Washington, DC
	NCI, Intramural Program Reviewer, Bethesda, MD
2016	NCI, GI Spore Program Reviewer, Bethesda, MD
2017 - present	NCI PREVENT Cancer Program, Scientific Review Panel, Full Member
2018	NCI, Pre-cancer Genome Atlas (PCGA) Scientific Review Panel, Bethesda, MD
2019	NCI, GI SPORE Review Panel
	American Institute for Cancer Research, Grant Review Panel, Washington, DC
2020	NCI, Chemoprevention Special Emphasis Panel
	American Institute for Cancer Research, Grant Review Panel, Washington, DC
2021	NCI, Chemoprevention Study Section, *ad hoc* reviewer

CONSULTING ACTIVITIES AND SCIENTIFIC ADVISORY BOARDS

Thetis Corporation, LLC
Barnes and Thornberg, Indianapolis, IN
Technology Sciences Group, Washington, DC
Pfizer Inc., Groton, CT
Industrial Environmental Management Consultants (IEMC), Chesterton, IN
Sandoz Pharmaceutical Research Corporation, East Hanover, NJ
Oncologics, Inc., New Hyde Park, NY
Millennium Pharmaceuticals Inc., Cambridge, MA
Boehringer-Ingelheim Inc., Ridgefield, CT
The Advisory Board, Washington, DC

EDITORIAL BOARDS, RESPONSIBILITIES

Associate Editor, *Journal Cancer Prevention*
Associate Editor, *Cancer Prevention Research*
Associate Editor, *Current Pharmacology Reports*
Associate Editor, *Carcinogenesis* (2007-2010)
Associate Editor, *Molecular Carcinogenesis* (2004-2019)
Associate Editor, *Archives Pharmacal Research*
Editorial Board Member, *Journal of Biochemistry and Molecular Biology Research*
Editorial Board Member, *Journal of Cancer Prevention*
Editor, *Mutation Research/Fundamental and Molecular Mechanisms of Mutagenesis* (special issue, 2010)

Review articles on a regular basis for *Cancer Research, Molecular Cell Biology, Clinical Cancer Research, Journal of Clinical Oncology, Toxicology and Applied Pharmacology, Toxicological Sciences, Food and Chemical Toxicology, International Journal of Cancer*

PATENTS

"*Use of cobalt to enhance urinary copper excretion*", DW Rosenberg and A Kappas.
"*Orally administered porphyrins to control intestinal iron absorption*", Daniel W. Rosenberg, George S. Drummond and Attallah Kappas.

PROFESSIONAL SOCIETIES (past and present)

Connecticut Academy of Science and Engineering (elected member, 2011)
American Association for Cancer Research
Society of Toxicology
International Society for the Society of Xenobiotics
American Association for the Advancement of Science
New York Academy of Sciences

OTHER UNIVERSITY SERVICES

UCHC:

2004 - 2014	Conflict of Interest Committee, member
2002 - present	Colon Cancer Prevention Program, Executive Committee (Co-Director)
2000 - present	Cancer Center Planning Committee (Chairman, GI section)
2000 - 2002	Center for Molecular Medicine Seminar Series (Chairman)

UCONN Storrs:

1996 - 1999	Promotion, Tenure and Reappointment Committee (Chairman, 1999)
1995 - 2000	Computer and equipment maintenance committee (Chair)
1991 - 2000	Toxicology Scholars Colloquium Committee, Advisory Board and steering committee
1995 - 1996	Environmental Sciences Program, Curriculum Committee, Advisory Board
1996 - 1999	Agricultural Biotechnology advisory group and building advisory board
1992 - 1994	Member of the Life Sciences Area Review Committee
1994 - 1995	Member of the University-wide Strategic Planning Subcommittee

INDUSTRIAL EXPERIENCE

As an Experimental Toxicologist and Study Director at the Chevron Environmental Health Center in Richmond CA, responsible for subchronic toxicity testing of pesticide products manufactured by Ortho Chemicals. Designed and directed metabolism and dermal penetration studies of pesticide products and formulations. Supervised a biochemical toxicology research team consisting of four research technicians. Completed 18 toxicology reports to support the registration of proprietary pesticide compounds under FIFRA guidelines.

SYMPOSIA ORGANIZER

1995	3rd Annual H.G. Hewitt Symposium, "The discovery of disease genes and their therapeutic implications", Storrs, CT
1996	14th Annual Nutmeg Meeting, Sturbridge, MA
2002	Symposium on Oxidative Stress and Cancer, New York City, NY
2004	Second Annual "Laser Capture Microdissection: Enabling High-Throughput Molecular Fingerprinting for DNA, RNA and Protein Analysis", Boston, MA

RESEARCH INTERESTS

Pathogenesis of early intestinal neoplasia. Targeting the arachidonic acid cascade for the suppression of inflammation-driven cancers. Mechanistic studies of chemoprevention of gastrointestinal cancer using natural food-derived products and non-toxic medicinals. human translational science, including molecular characterization of early intestinal neoplasia, risk factors and the design and implementation of intervention trials. Studies of multi-drug resistance to chemotherapeutic agents and the role of ceramide metabolism in MDR.

ACTIVE GRANTS

R21 CA258188 (NIH/NCI)
DW Rosenberg (PI) 5/01/2021-4/30/2023
Title: Mechanisms for early onset colorectal cancer
We propose that a highly promotional microenvironment in EOCRC precursor lesions drives their rapid progression to advanced cancer at an early age. Specifically, we hypothesize that inappropriate fibroblast activation leads to a hyper-active stroma in patients under 50 that generates a promotional inflammatory microenvironment, rapidly driving cancer progression. We propose that this response has become more pronounced in recent decades, and may be reflected in the consistent year-to-year increases in EOCRC.
Impact Score: 23

R01 CA230086 (NIH/NCI) 4/26/2021-3/25/2026
DW Rosenberg (PI); **G Weinstock (Co-PI)**
Title: Microbiota, metabolites and colon neoplasia
Our approach incorporates personalized nutrition within the context of colonic health and focus on UroA producers and non-producers. Ultimately, our human and pre-clinical mouse studies may lead to prebiotics and probiotics that increase protective urolithins for CRC prevention. These studies are of high significance as they will test the ability of the microbiota to generate agents (e.g., UroA) protective of the colonic mucosa, converting high-risk patients to a protective state by taking probiotics, thereby realizing the full benefits of ET-rich foods.
Impact Score: 24; Percentile: 6.0

American Institute of Cancer Research / California Walnut Commission 12/01/2018-11/30/2021
Principal Investigator: DW Rosenberg
Title: Ellagic acid, walnuts and microbial communities associated with inflammation-associated colonic neoplasia
We *hypothesize* that walnut ingestion in "Phenotype A" participants (producing the highest levels of urolithin) will be associated with a beneficial anti-inflammatory response as tested in colonic mucosa and a higher abundance of bacterial species associated with ellagic acid metabolism (e.g., members of the *Eggerthellaceae* family.

R21 CA231255 (NIH/NCI) 09/06/2018 – 08/31/2021
PI: DW Rosenberg
Title: Dietary Strategies to Enhance 5-FU Cancer Therapies
The major goal of this project is to determine whether reducing dietary methyl donors can increase the efficacy of 5-FU-based cancer therapy in a mouse colorectal cancer.
Impact Factor: 13

R03CA235225 (PI: DW Rosenberg) 01/02/2019 – 12/31/2020
NIH/NCI
Title: Cell specific blockade of PGE2 formation in the colon
The major goal of this project is using a conditional mPGES-1 knockout mouse model we recently generated, we intend to establish the relative contribution of epithelial- *vs* stromal-derived inducible PGE_2 synthesis during inflammation-associated colon carcinogenesis.
Role: Principal Investigator

R21CA245602 (PI: Nakanishi) 12/11/2019-11/30/2020
NIH/NCI
Title: Tumor-specific activation of transgene expression by Scd3 locus
The major goal of this project aims to generate a novel mouse model in which the forced expression of a given gene can be re-introduced through tamoxifen-controlled *Cre* expression in intestinal tumors. We will use *stearoyl-CoA desaturase* (*Scd*)-3 gene as a promoter, which has been found to specifically express within the intestinal tumors.
Role: Co-Investigator

75N91019D00019:75N9109F00132 (**PI: G. Kennedy**) 09/15/2019-09/14/2021
NIH/NCI
Title: Colorectal Cancer Prevention by a novel EPA analogue TP-252 and naproxen in FAP and lynch syndrome models
The major goal of this project is to determine chemopreventive efficacy of TP-252 alone and in combination with naproxen; and to assess tissue and plasma candidate downstream lipid and other biomarkers as
predictive markers for chemopreventive efficacy with EPA-FFA as a comparator in FAP Pirc rat model
Role: Subcontract, Principal Investigator

UCH REP Convergence Grant (PI: DW Rosenberg) 05/01/2019 -01/31/2021
UCH/Storrs
Title: Microbial-epithelial cross-talk modulates UC phenotype via DNA methylation of colon stem cells
The major goal of this project is to determine how the methylome of colon stem cells relates their ability to differentiate in an organoid system, including their ability to express the cell-adhesion proteins required to generate an effective barrier (a common defect in UC patients). We will also begin to address how the microbial community impacts colon stem cell epigenetics and differentiation.
Role: Principal Investigator

R03CA235232 (PI: M Nakanishi) 01/03/2019-12/31/2020
NIH/NCI
Title: Impact of prostanoid metabolism on colon tumor development
The major goal of this project is to examine whether prostanoid redirection associated with *mPGES-1* blockade can drive mast cell towards tumor-suppressive phenotype.
Role: Co-Investigator

Cumberland Pharmaceuticals Inc 04/09/2020-04/08/2021
Title: Ifetroban for chemoprevention of colorectal cancer a pilot study
The major goal of this project is to utilize the *Pirc* rat colon cancer model to test the efficacy of Ifetroban, a thromboxane-prostanoid receptor antagonist, in preventing colon polyp development and reducing polyp burden. We will also compare the efficacy of Ifetroban on small intestinal *versus* large bowel tumors.
Role: Principal Investigator

The Peanut Institute 11/01/2020-10/31/2021
Title: Determining the role of peanut consumption on dietary habits, gut microbiome, and colon biomarkers in a healthy population.
The major goal of this project is to understand if increasing peanut intake influences other dietary habits and gut microbiota composition, and to determine whether changes in dietary habits and gut microbiota mediate the relationship between peanut intake and biomarkers in the colon.
Role: Principal Investigator

California Walnut Commission (Rosenberg) 01/01/2021 -12/31/2021
Title: Ellagic acid, urolithins and microbial communities associated with colonic neoplasia
The major goal of this project is to address the role of ellagic acid (EA) obtained from walnuts and its microbial-derived metabolites (urolithins) on cancer biomarkers in a human clinical trial.
Salary supplement to the AICR matching grant, noted above, to support the Clinical Research Associate assigned to the project. This funding will support the AICR during the NCE that is to be requested and approved by 12/31/2020.
Role: Principal Investigator

PENDING GRANTS

R01 CA255457 (NIH/NCI)
DW Rosenberg (PI)
Title: VDR regulation during CRC development

While epidemiologic studies have suggested that vitamin D may prevent colon cancer, intervention trials in patient cohorts supplemented with vitamin D (and calcium) have generated ambiguous and in some cases troubling results. Recent findings indicate that incomplete protection may result from vitamin D receptor (VDR) loss at early stages of colon tumor formation. Our goal is to define the mechanisms and timing of VDR status relative to tumor initiation in conditional mouse models that recapitulate the conventional adenoma-carcinoma sequence and the 'alternative' serrated pathway, and to identify means of reactivating VDR activity for optimized cancer protection.
Impact Score: 28; Percentile: 22.0

RECENTLY COMPLETED GRANTS

American Institute of Cancer Research / California Walnut Commission
Principal Investigator: DW Rosenberg
Total Research Budget: $311,320
Title: *Beneficial effects of walnut consumption on colon cancer and inflammation*
We hypothesize that long-term walnut consumption will provide an effective population-based strategy for reducing the risk of colon cancer and inflammation-related intestinal diseases.
Grant Number: R21CA158743-01A1 (NIH/NCI)

State of Connecticut Department of Public Health (Contract # 2016-0092)
Principal Investigator: DW Rosenberg
Title: *Risk factors and biomarkers for tobacco-associated colon cancer*
Total Research Budget: $413,302
The overall goal of this project is to evaluate the impact of smoking on adenomas and ACF in the right colon of normal risk subjects in the State of Connecticut. A combination of mutational screening and genomic analysis will be used to assess the impact of tobacco smoke on right-sided colorectal cancer pathogenesis.

Thetis Pharmaceuticals, LLC
Principal Investigator: DW Rosenberg
The effect of magnesium-l-lysinate bis-eicosapentaenoate (TP-252) on colonic polyposis in mice
Total Research Budget: $ 116, 981
The goal of this study is to demonstrate that (a) TP-252 is able to reduce colonic polyps in rodents; (b) TP-252 will increase intestinal mucosal content of EPA in place of ARA; (c) that the beneficial effect of TP-252 is mediated by a prostaglandin switch dependent on COX-2 metabolism of EPA. This study will provide further evidence of the dose ranging effect of TP-252 to establish the basis of prospective dosing in clinical trials.

1R44DK116460-01 SBIR (NIH/NIDDK)
Principal Investigator: Frank Sciavolino; (DW Rosenberg, Co-I)
Title: *Development of TP-317 for the Induction and Maintenance of Remission in Ulcerative Colitis Patients*
Total research budget: $91,775
The goal of this project is to further the development of TP-317 as a therapeutic treatment for inflammatory bowel disease in a mouse model of ulcerative colitis.

Thetis Pharmaceuticals, LLC
1R44DK116463 NIH/SBIR (Sciavolino, PI; DW Rosenberg, Co-I)
Title Development of TP-252 for the Maintenance of Remission in Pediatric Ulcerative Colitis Patients
Major goal is to bridge TP-252 to EPA-FFA, identify an optimal dose of TP-252, and to test this dose in combination with the standard treatment for colitis, 5-ASA.

UCH/UConn Research Excellence Program (REP-UCH) Convergence Grant
Principal Investigator: Christopher Heinen (DW Rosenberg, Co-I)
Senescence as a Biomarker for Colorectal Cancer Risk
Total Research Budget: $100,000
The goal of this study is to define the set of senescence changes induced by the DNA damage response in intestinal organoids.

Grant Number: 1R01CA159976-01 (NIH/NCI)
Principal Investigator: DW Rosenberg
Title: *Are ACF surrogate markers for chemoprevention?*
Total research budget: 1,878,812
In this application, we propose a multi-disciplinary approach combining molecular analysis with an ongoing funded clinical study to evaluate ACF in human subjects and in mouse models. Our studies are also intended to directly address the ongoing debate regarding the general applicability of ACF as a surrogate marker for cancer risk and chemoprevention.

Grant Number: 3R01CA159976-04 (NIH/NCI)
Principal Investigator: DW Rosenberg
Title: *Administrative Supplement- 5R01CA159976 - Are ACF Surrogate Markers for Chemoprevention?*
Total research budget: $49,926
In this supplement, we propose to recruit a cohort of patients newly diagnosed with rectal cancer and collect biopsy specimens and demographic/clinical data. We will generate gene expression data and mutational profiles of these cancers and establish PDX models.

Grant Number: **1RO1CA 138702-01A2**
Principal Investigator: Emmanuelle J Meuillet; DW Rosenberg (Co-Investigator)
8/31/2010 - 7/31/2015
NIH/NCI
Title: *Inhibition of Novel Molecular Targets of Prostaglandin Formation for Anti-Tumor Activity*
Total Costs for Entire Project: $431,002 (includes IDC)
Our subcontract on this project involves conducting all the *in vivo* efficacy studies of novel mPGES-1 inhibitors, using several mouse colon cancer models.

State of CT DPH / Tobacco funds
Principal Investigator: DW Rosenberg
3/01/12 - 2/30/13
Title: *Impact of Smoking on Right-sided Colon Cancer*
Total Direct Costs for Entire Project: $356,000
The overall goal of this project is to evaluate the impact of smoking on adenomas and ACF in the right colon of index colonoscopy subjects in the State of Connecticut. A combination of mutational screening and proteomic analysis will be used to assess the impact of tobacco smoke on right-sided colorectal cancer pathogenesis.

Grant Number: R01 CA125691 (NIH/NCI)
Principal Investigator: DW Rosenberg
8/01/08 - 5/31/13
Title: *Using Mouse Endoscopy for Evaluating Colon Cancer*
Total Costs for Entire Project: $2,125,113
Our goal is to develop a comprehensive understanding of how the molecular profile of an individual's colon lesions relates to their response to specific chemopreventive agents. This approach could ultimately be used to develop safe and effective strategies that fully realize the promise of chemoprevention for reducing mortality and morbidity related to colon cancer.

United States-Israel Bi-National Science Foundation: Award Number 2009095
Principal Investigator: R. Arbesfeld (DW Rosenberg, Co-Investigator)
10/01/10 - 09/30/14
Title: *Restoration of APC in Colon Cancer*
The primary goal is to establish the biological effects of aminoglycosides and other read-through agents on different tumor models harboring APC loss-of-function mutations. We intend to identify the most effective therapeutic agents and to establish optimum conditions for enhancing read-through of mutant APC.

State of CT DPH / Connecticut Innovations

Principal Investigator: DW Rosenberg
9/01/08 - 8/31/12
Title: *Targeting lineage committed stem cells to damaged intestinal mucosa*
Total Direct Costs for Entire Project: $450,000
The overall goal of this project is to develop new methodologies for working with human embryonic stem cells that induce their lineage commitment into multi-potent intestinal stem cells. We hypothesize that lineage-committed stem cells will migrate and home to the damaged intestinal epithelium, undergo engraftment, differentiate and reconstitute a fully functional mucosa.

State of CT DPH / Tobacco funds
Principal Investigator: DW Rosenberg
3/01/12 - 2/30/13
Title: *Impact of Smoking on Right-sided Colon Cancer*
Total Direct Costs for Entire Project: $356,000
The overall goal of this project is to evaluate the impact of smoking on adenomas and ACF in the right colon of index colonoscopy subjects in the State of Connecticut. A combination of mutational screening and proteomic analysis will be used to assess the impact of tobacco smoke on right-sided colorectal cancer pathogenesis.

Thetis Pharmaceuticals, LLC
Principal Investigator: DW Rosenberg
Title: The effect of magnesium-l-lysinate bis-eicosapentaenoate (TP-252) on colonic polyposis in mice.
Total Research Budget: $ 33,936
The goal is to validate successful polyp burden reduction by repeat dosing of EPA-FFA via nutritional supplementation.

UCH/UConn Spark Award
Principal Investigator: Charles Giardina (DW Rosenberg, Co-I)
Development of compounds synthetically lethal to APC-mutant cancer cells
Total funding for subcontract: $21,000
The goal of this study is to develop and validate a novel set of compounds that are synthetically lethal to APC-mutant cancer cells.

PREVIOUS FUNDED GRANTS

1980 - 1985	NIH/NIEHS. Studies in Environmental Pharmacology. $1,101,455 (A. Kappas, PI)
1991 - 1992	Memorial Sloan-Kettering Cancer Center. Influence of dietary factors on human intestinal heme metabolism. $15,000.
1992 - 1993	University of Connecticut Research Foundation. Altered cytochrome P450 phenotype underlies strain differences in mouse colorectal tumor formation in response to carcinogens. $21,758.
1992 - 1995	Sandoz Pharmaceutical Corporation. Comparative metabolism of cyclosporin A and cyclosporin G in the isolated perfused intestinal loop model. $20,000.
1992 - 1993	University of Connecticut Research Foundation. Altered cytochrome P450 phenotype underlies strain differences in mouse colorectal tumor formation in response to carcinogens. $21,758.
1993 - 1994	American Cancer Society Institutional Research Grant. Role of colonic biotransformation in chemical carcinogenesis. $15,000.
1994 - 1995	American Association of Colleges of Pharmacy. Metabolite-specific sorting of drug conjugates in cultured human intestinal cells. $7,500.
1994 - 1997	State of Connecticut Critical Technology Program. Modulation of colon tumors by chemopreventive agents, $2,500.
1995	American Heart Association Summer Research Program. Analysis of DNA methyl adducts in mouse colon by fluorescence-HPLC analysis. $2,500.
1996	American Heart Association Summer Research Program. Functional characterization of the H,K-ATPase in cultured colonic epithelial cells. $2,500.

1996 - 1997 Boehringer-Ingelheim Graduate Research Fellowship, $18,000. Awarded to Don Delker (graduate student).

1996 - 1997 University of Connecticut Research Foundation. Influence of chimerism of Min^{Apc} phenotype in mouse colon. $15,384.

1995 - 1998 Donaghue Medical Research Foundation New Investigator Award. The influence of crypt lineage on colon cancer in the mouse chimera. $198,0000.

1995 - 1999 NIH/NCI. Cellular basis underlying tumor susceptibility phenotype in mouse colon. $109,000.

1995 - 2000 National Institutes of Environmental Health Sciences Toxicology Training Grant. (S. D. Cohen, PI). $702,000.

2000 - 2002 NIH/NCI, P20. Effects of oxidant balance on colon and breast cancer. (DW Rosenberg, PI) $161,993.

2001 - 2002 Boeringher-Ingelheim Pharmaceuticals, Inc., Toxicogenomics of Methotrexate and Taxol in Human Patient Populations. (DW Rosenberg, PI) $200,000.

1999 - 2003 NIH/NCI. Molecular characterization of ACF progression in mice. (DW Rosenberg, PI) $996,131.

1998 - 2003 NIH/NCI. Colon cancer chemopreventive agents and apoptosis. $350,000. (Charles Giardina, PI)

2000 - 2003 NIEHS. Mechanisms of intestinal carcinogenesis of DBPs. (DW Rosenberg, PI) $140,500.

2002 - 2004 Patterson Trust. Gene profiling of premalignant colon lesions. (DW Rosenberg, PI) $80,000.

2002 - 2003 Boeringher-Ingelheim Pharmaceuticals, Inc. Toxicogenomics of Methotrexate and Taxol in Human Patient Populations. (DW Rosenberg, PI) $233,000.

2002 - 2003 TAP Pharmaceutical Products, Inc., Genomic profiling in the progression of Barrett's metaplasia to dysplasia using cDNA arrays and laser-capture microdissection (DW Rosenberg, PI), $14,500.

2005 - 2006 Boeringher-Ingelheim Pharmaceuticals, Inc., Toxicogenomics of Methotrexate in Human Patient Populations. (DW Rosenberg, PI) $50,000.

2007 NEAG Comprehensive Cancer Center Award (D.W. Rosenberg, PI) $25,000

2007 Cancer Prevention and Control Seed Grant (D.W. Rosenberg, PI) $12,500

2006 - 2008 NIH/NCI, R21 ES013775. Mustard Gas Exposure and Carcinogenesis of the Lung. (C. Giardina, PI). Annual Direct Costs for subcontract: $3,885

2003 - 2008 NIH/NCI, 2PO1 CA073992-06, University of Utah – R. Burt (PI). Molecular and clinical approaches to colon cancer. Annual Direct Costs for subcontract: $70,727

2004 - 2008 Merck-Frosst. Rosenberg (PI). The role of mPGES-1 in mouse tumor models. Annual Direct Costs: $19,841

2004 - 2009 NIH/NCI. Molecular characterization of ACF progression. (DW Rosenberg, PI) $1,279,750

2009 - 2011 State of CT, Department of Public Health (DW Rosenberg, PI). Total Direct Costs: $366,000

2008 - 2010 NIH/NCI, R21 CA125592. C. Giardina (PI) Targeting p53 for Colon Cancer Treatment & Prevention Subcontract from The University of Connecticut, Total Direct Costs for Entire Project: $32,000

2010 - 2011 NIH/NCI, RO1 GM077391. Myles Cabot (PI); DW Rosenberg (Co-Investigator) Ceramide, Membrane Glycolipids and Glycoprotein Expression. Annual Direct Costs for subcontract: $73,608

2006 - 2012 NIH/NCI, RO1 CA114365. DW Rosenberg (PI), Altered Arachidonic Acid Balance and Colon Cancer. Total Costs for Entire Project: $1,584,970

2008 - 2010 UConn Incentive Pilot Grant Program. DW Rosenberg and C Giardina (co-PIs), Black Raspberry Components as Anti-Inflammatory Agents for Inflammatory Bowel Disease. Total Costs for Entire Project: $50,000.

FOUNDATION AWARDS

Yellin Golf Foundation
Direct costs: $150,000 (funds used to purchase a Veritas Laser Capture Microdissection Instrument with matching funds from the NEAG Cancer Center)

Jimmy V Foundation
Title: Development of a Colon Cancer Research Registry
Direct Costs: $50,000
The primary goal of this project is to establish a web-based research registry that provides detailed patient information for epidemiological analysis.

Colon Cancer Foundation - Private Gift I
Title: Modulation of Dietary Methyl donor Status for Colon Cancer Prevention
Direct costs: $33,000

Colon Cancer Foundation - Private Gift II
Title: Modulation of Dietary Methyl Donor Status for Colon Cancer Prevention
Direct costs: $15,000

Colon Cancer Prevention - Private Gift (Dr. Thomas Devers)
Title: Serrated Adenomas and Colon Cancer Risk
Direct costs: $20,000

TEACHING EXPERIENCE

Graduate Teaching
Advanced Pharmacology (PHAR 372), Advanced Toxicology (PHAR 355), Cancer Biology (MEDS 413), Course Founder and Director

Undergraduate Teaching
Toxic Chemicals and Health (PHAR 150), Introduction to Toxicology (PHAR 225), Chemotherapy of Infectious Diseases, course coordinator (PHAR 224)

Medical School Teaching
Mechanisms of Disease, Oncology Section
Biomedical Scholars Track Tutorial
Division of Gastroenterology/Hepatology, GI Fellowship Summer Program

MENTORSHIP

Postdoctoral Fellows (previous)
Qian-Shu Wang, PhD (1996 - 1999)
Devakhi Sadhu, PhD (2000 - 2001)
Hongyi Cui, MD, PhD (2000 - 2002)
Kuniko Naoi, PhD (2009 - 2011)
James Madigan, PhD (2009 - 2012)
Shingo Miyamoto, PhD (2009 - 2014)
Masako Nakanishi, PhD (2008 -2013)

Postdoctoral Fellows (present)
Takayuasu Ideta, PhD (2017 - present)
Bruno Lemos, PhD (2019 - present)

Junior Faculty (present)
Masako Nakanishi, PhD (Assistant Professor)

Graduate Students - Doctoral completed (previous)
Don Delker, Ph.D., Toxicology (Storrs) - Primary Advisor (completed, 1998)
Alex Papanikolaou, Ph.D., Toxicology (Storrs) - Primary Advisor (completed, 1999)
Max Rasmussen, Ph.D., Animal Science (Storrs) - Associate Advisor (completed, 1999)
Mehmet Inan, Ph.D., Molecular and Cell Biology (Storrs) - Associate Advisor (completed, 2000)
Birgit Christmann, PhD – Associate Advisor (completed, 2004)
Mei Dong, Ph.D., Molecular Pharmacology – Primary Advisor (completed, 2004)
Kishore Guda, Ph.D., Molecular Pharmacology -Primary Advisor (completed, 2004)
Prashant Nambiar, Ph.D., Pathobiology - Primary Advisor (completed, 2004)
Jillian Marino, PhD, Developmental Biology – Primary Advisor (completed, 2005)
Christopher Flynn, MD-PhD – Medicine – Primary Advisor (completed 2006)
Masako Nakanishi, Cell Biology – Primary Advisor (completed 2008)
David Montrose - Doctoral candidate, Cell Biology - Primary Advisor (completed, 2010)
Emily Greenspan – Doctoral candidate, Cell Biology - Primary Advisor (completed, 2010)
Krishna Kadaveru – Doctoral candidate, Cell Biology - Primary Advisor (completed, 2012)
Melissa Fox - Doctoral Candidate, Cell Biology, Associate Advisor (completed, 2012)
Li Cao - Doctoral candidate, Molecular Cell Biology (Storrs) - Associate Advisor (completed, 2013)
David Drew - Doctoral candidate, Genetics and Developmental Biology - Primary Advisor (completed, 2014) - Lepow Award for Graduate Student Excellence; American Association for Cancer Research Scholar in Training Award, 2014

Matthew Hanley - Doctoral candidate, Genetics and Developmental Biology, Primary Advisor - American Association for Cancer Research Research Scholar in Training Award, 2015
Allen Mo - MD, PHD Candidate, Genetics and Developmental Biology, Primary Advisor
Charan Devarkonda - PhD Candidate, Cell Biology, Associate Advisor
Josh Jadwin - MD, PhD Candidate, Genetics and Developmental Biology, Associate Advisor
Avijeet Chopra - Doctoral Candidate, Molecular Cell Biology (Storrs), Associate Advisor
Khong Ng - Doctoral Candidate, Genetics and Developmental Biology, Associate Advisor
Debargha Basuli - Doctoral Candidate, Cell Biology, Associate Advisor
Stavros Koptiaftos - Doctoral Candidate, Cell Biology, Associate Advisor
Huakung Huang - Doctoral Candidate, Genetics and Developmental Biology, Primary Advisor (completed, 2019)

Doctoral (active)
Oladimeji Aladelokun
Ryan Beach

Masters
Dayna Mankowski, M.S., Toxicology - Primary Advisor (completed, 1993)
Diane Sahakian, M.S., Toxicology - Associate Advisor (completed, 1996)
Andrew Bolt, M.S., Toxicology - Primary Advisor (completed, 1999)
Jennifer Goldsby, M.S., Toxicology - Primary Advisor (completed, 1999)
Melissa Jablonski, M.S. - Primary Advisor (completed, 2006)
Yijian Zhou, M.S. - Primary Advisor (completed, 2008)

YIIP Students
Tebyan Khalfalla (2020-2021)

Rotation Students
Jonathan Shubert. Jennifer Jacobs, Brian Adams, Chad Siegel, Sierra Seaman, Parul Sharma, Yijian Zhou, Jason White, Krishna Kadaveru, Vanessa Piccuillo, Charan Devarakonda, Stavros Kopstiaftos, Yuvabharath Kondaveeti, Cory Brennick, Joseph Ryan, Elizabeth Kurowski, Yuliana Tan, Hanshu Wang, Hao Du

Undergraduate Students
Have hosted more than 20 undergraduate students and honors students as part of the UCONN Graduate Fellowship Program

Magistere of Genetics of the Paris Diderot University Graduate Student Mentorship Program
Alexander Plessier
Lucille Vignaut

MEDICAL EDUCATION

Medical students
2003 Hiro Takata participated in the **Medical Student Academic Enrichment Fellowship**, an intensive, one-year mentored experience in human disease-oriented and/or clinical/translational research.

Medical Fellowship Program - Mentorship
2002 Anahita Rezaie, MD
2003 Son Do, MD
2016-2018 Michael DiSiena, MD

Medical Residency Program - Mentorship
2009 Tarun Rustagi, MD

Medical Student Summer Fellowship Program

2016 William Santiago
Ardian Latifa

2017 Santiago Alday

INVITED LECTURES (Since 1998)

1998

- Parke-Davis Pharmaceutical Research, Signal Transduction Seminar Series, Ann Arbor,MI
- Starr Center for Human Genetics, HHMI, Rockefeller University, NY, NY
- 1st Annual Meeting on Rodent Models in Modern Risk Assessment, The Jackson Laboratory, Bar Harbor, ME

1999

- National Institute of Environmental Health Sciences, Research Triangle Park, NC
- Department of Medical Oncology, Brown University, Pathobiology Seminar Series, Providence, RI
- Department of Pharmacology and Toxicology, Medical College of Virginia, Richmond, VA
- University of Puerto Rico, Department of Biochemistry, San Juan, PR

2000

- Department of Human Genetics, UMDNJ at Rutgers University, Piscataway, NJ
- Department of Pathology, Yale University School of Medicine, New Haven, CT

2001

- M.D. Anderson Cancer Center, University of Texas, Science Park, TX
- American Association of Cancer Research, Mini-symposium, New Orleans, LA

2002

- Huntsman Cancer Institute, Salt Lake City, UT
- University of Massachusetts School of Medicine, Worcester, MA
- Symposium on the Effects of Oxidant Balance on Breast and Colon Cancer, New York, NY
- Keynote Lecture, 2nd Australian Microarray Conference, Courant Cove, Australia
- Molecular Profiling of Normal Development and Pathology in Tissues: Integrating Laser Microdissection and Microanalysis, NIH, Bethesda, MD
- Invited Speaker, Department of Environmental Medicine, New York University, Tuxedo, NY
- Enabling Molecular Profiling with Cellular Resolution, Cambridge HealthTech Institute, San Diego, CA

2003

- UCLA-Harbor Medical Center, Torrance, CA
- University of Arizona Cancer Center, Tucson, AZ
- Genomic and Proteomic Sample Preparation Short Course, Boston, MA (Co-Chair)
- Liver Hepatoxicity Mini-Symposium, Boehringer-Ingelheim, Ridgefield, CT
- Department of Pharmaceutical Sciences, University of Pittsburgh, PA
- University of Illinois, School of Veterinary Sciences, Champagne-Urbana, IL
- Environmental Protection Agency, Research Triangle Park, NC

2004

- Cambridge HealthTech Institute 2nd Annual LCM symposium, Boston, MA
- Boehringer-Ingelheim, "Experts meeting on Toxicogenomics and Pharmacogenomics", NY, NY
- IHC Meeting, Invited presentation at Workshop on LCM, San Diego, CA
- Arcturus Engineering, Palo Alto, CA
- Mini-symposium, "ACF pathobiology and its implications for biomarker development related to colorectal cancer risk and preventive response", NCI, Rockville, MD
- IPMC, Sophia-Antipolis, France
- International PAF/Phospholipase Conference, Berlin, Germany

2005

- Division of Biology, City of Hope, Duarte CA
- American Association for Cancer Research, Anaheim, CA (oral presentation)
- Invited Seminar, STADY Conference, Tel Aviv University, Israel

2006

- Department of Cell Biology, Albert Einstein College of Medicine of Yeshiva University, Bronx, NY
- Pathology Lecture Series, Wayne State University School of Medicine, Detroit, MI
- "Gene Expression in Tumors - Discovery and Diagnostics", Longwood Medical Center, Boston, MA

2007

- Oklahoma Medical Research Foundation, Oklahoma City, OK

- Burnham Institute, La Jolla, CA
- FASEB Summer Conference on Bioactive Lipid Mediators, Indian Wells, CA
- Bioactive Lipids in Cancer, Inflammation and Related Diseases, Montreal, Canada
- International Symposium on Genetic, Pharmacologic and Nutritional Modulation of Carcinogenesis, Seoul, Korea
- 9th International Conference on Mechanisms of Anti-mutagenesis and Anti-carcinogenesis, Jeju Island, Korea

2008

- Louisiana State University Cancer Center, New Orleans, LA
- American Association for Cancer Research, San Diego, CA (two oral presentations)
- Session Chairman, American Association for Cancer Research, San Diego, CA
- National Cancer Center Research Institute, Tokyo, Japan
- Tokyo Metropolitan Medical Institute, Tokyo, Japan
- Kyoto University School of Medicine, Kyoto, Japan
- Kanazawa Medical University, Kanazawa, Japan
- Kanazawa University School of Medicine, Kanazawa, Japan
- NCI Translates, Washington, DC
- Lombardi Cancer Center, Georgetown University, Washington, DC
- University of Pittsburgh, Pittsburgh, PA
- University of Colorado, Denver, CO

2009

- Lombardi Cancer Center, Georgetown University, Washington, DC
- Arizona Comprehensive Cancer Center, University of Arizona, Tuscan, AZ
- Sylvester Cancer Center, University of Miami, Miami, FL
- 4th International conference on Phospholipase A_2 and Lipid Mediators, Tokyo, Japan
- Gifu University, Institute for Cancer Research, Gifu, Japan
- Lipid Signaling Pathways in Cancer, FASEB Summer Research Conference, Carefree, AZ
- Weill-Cornell Medical College, Department of Surgery, New York, NY
- Invited Plenary Lecture, Eighth Annual AACR Conference on *Frontiers in Cancer Prevention Research*, Houston, TX

2010

- University of New Mexico Cancer Center, Albuquerque, NM
- John Wayne Cancer Institute, Santa Monica, CA
- University of Kansas School of Medicine, Cancer Center, Kansas City, KA
- Fox-Chase Cancer Center, Philadelphia, PA
- Invited Lecture, *The International Cancer Research Symposium 2010: Defining and Translating Science Behind the Disease*, Thiruvananthapuram, India

2011

- University of Tel Aviv, Tel Aviv, Israel
- Ichilov Hospital, Tel Aviv, Israel
- New York Medical College, Valhalla, NY
- Invited Speaker, Berry Health Benefits Symposium, West Lake Village, CA
- Department of Chemical Biology, Rutgers University, NJ
- University of Arizona Cancer Center, Tucson, AZ

2012

- Kansas State University, Invited Speaker to COBRE Program, Manhattan, KS
- Invited Speaker, Seoul National University Cancer Research Institute Symposium, Seoul, Korea
- Guest Faculty Lecture, Center for Tumor Microenvironment, College of Pharmacy, Seoul National University
- Invited Speaker, AACE Consensus Conference on Diabetes and Cancer, New York, New York

2013

- Obesity Research Symposium, Marshall University School of Medicine, Huntington, WVA

2014

- Invited Speaker, SNUCRI Cancer Symposium, Mokpo, Korea
- Speaker, Nutrition Graduate Seminar Series, Texas A&M University, College Station, TX

- Expert Member and Speaker, International Symposium on Microgenomics 2014, Paris, France
- Invited Lecturer, Tel Aviv University Sackler School of Medicine, Israel
- Invited Speaker, Ichilov Hospital, Dept. of Gastroenterology, Tel Aviv, Israel
- Invited Speaker, CSSI Science Day, National Cancer Institute, Bethesda, MD
- Invited Speaker, Cancer Center, SUNY, SB, Stony Brook, NY
- Invited Speaker, Microgenomics Thought Leader Summit, Thermo-Fischer, South San Francisco, CA
- American Society Human Genetics, Genomics Application Workshop Presentation, San Diego, CA
- Invited Speaker, American Institute of Cancer Research, Annual Meeting, Washington, DC

2015

- Invited Lecture, Cancer Center, Stony Brook University, New York
- Invited Lecture, Seoul National University, Seoul, South Korea
- Invited Lecture, Seoul National University College of Medicine, Seoul, South Korea
- Invited Speaker, Asian Congress of Nutrition, Yokohama, Japan
- Invited Lecture, Japanese National Cancer Center, Tokyo, Japan
- Invited Lecture, Gifu Municipal Hospital, Gifu, Japan
- Invited Lecture, Van Andel Institute, Grand Rapids, Michigan

2016

- Invited Lecture, University of South Carolina School of Medicine, Columbia, SC
- Invited Lecture, University of Maryland School of Medicine, Baltimore, MD
- Invited Lecture, CURE: Digestive Diseases Research Center, UCLA, Los Angeles, CA
- Oral Presentation, American Association for Cancer Research, New Orleans, LA
- SAB meeting, California Walnut Commission, Maui, HI
- Invited Speaker, "Cancer chemoprevention with botanicals, herbal medicines, and phytochemicals", Rutgers University, New Brunswick, NJ
- Invited Lecture, Department of Nutrition, Purdue University, Lafayette, IN
- Invited Lecture, Center for Epigenetics and Disease Prevention, Texas A&M University, Health Science Center, Houston, TX

2017

- Oral Presentation, Digestive Disease Week, Chicago Illinois
- Speaker, National Cancer Institute, Pre-cancer Atlas (PCA) Think Tank Meeting, Bethesda, MD
- Speaker, Scientific Advisory Committee, California Walnut Board and Commission, Carmel, CA
- Speaker, Ventana Distinguished Research Seminar Series, Tuscan, AZ
- Speaker, ThermoFisher Genomics Workshop, Society for the Immunotherapy of Cancer, Washington, DC
- Speaker, International Cancer Microbiome Consortium (ICMC), London, United Kingdom

2018

- Speaker, FoodFluence 2018, Lisbon, Portugal
- Invited Lecture, Albert Einstein College of Medicine, Bronx, NY

2019

- Speaker, 3rd Meeting of the International Society of Precision Cancer Medicine, Seoul, South Korea
- Invited Lecture, Seoul National University School of Bioengineering, Seoul, South Korea
- Invited Lecture, Cha Bio Complex, CHA University, Seongnam, South Korea
- Speaker, Scientific Advisory Committee, California Walnut Board and Commission, San Diego, CA
- Invited Lecture, University of Illinois, Champagne-Urbana, Ill

UCONN LECTURES (Since 1998)

1998

- Center for Molecular Medicine, University of Connecticut Health Center, Farmington, CT

1999

- Comparative Pathology Seminar Series, Department of Pathobiology, University of Connecticut, Storrs

2001

- Department of Dermatology, UCHC, Farmington, CT
- Department of Genetics, UCHC, Farmington, CT
- Department of Gastroenterology, UCHC, Farmington, CT
- Department of Pathology, UCHC, Farmington

2002

- Department of Pathology, UCHC, Farmington, CT
- Department of Human Genetics, UCHC, Farmington, CT

2003

- Department of Rheumatology, 'Toxicogenomics of Methotrexate'

2008

- UCHC, Recent Advances in Internal Medicine, 'Molecular models for chemoprevention in the future'

2010

- Molecular and Cell Biology, University of Connecticut, Storrs, CT

2019

- Grand Rounds, School of Medicine, UCONN Health Center, Farmington, CT
- School of Nutrition, University of Connecticut, Storrs, CT

PUBLICATIONS

JOURNAL COVERS

- ***Cancer Prevention Research***, 8(5):387-99. 2015. Epigenetic regulation of VDR expression in *Apc*-mutant mice, human colon cancers and adenomas. (Giardina et al.)
- ***Molecular Cancer Research***, 12:823-9. 2014. HD Chromoendoscopy coupled with DNA Mass Spectrometry Profiling Identifies Somatic mutations in microdissected human proximal aberrant crypt foci. (Drew et al.)
- ***Cancer Research,*** 68(9):3251-9, 2008. Genetic deletion of mPGES-1 suppresses intestinal tumorigenesis. (Nakanishi et al).
- ***Molecular Carcinogenesis***, 46(2): 2007. Expression of secretory phospholipase A_2 in colon tumor cells potentiates tumor growth (Belinsky et al.)
- ***Cancer Research,*** 65:2636-2643, 2005. Cytoplasmic phospholipase A2 deletion enhances colon tumorigenesis. (Ilsley et al).
- ***Molecular Carcinogenesis,*** 31:204-213, 2001. Aberrant transforming growth factor-ß signaling in azoxymethane-induced mouse colon tumors. (Guda et al).
- ***Molecular Carcinogenesis,*** 28:139-147, 2000. Differential expression of $p16^{INKa}$ in azoxymethane-induced mouse colon tumorigenesis. (Wang et al)

PEER-REVIEWED RESEARCH PUBLICATIONS

1. **Rosenberg DW**, Drummond GS, Cornish HH, Kappas A. 1980. Prolonged induction of hepatic heme oxygenase and decreases in cytochrome P-450 content by organotin compounds. *Biochemical Journal*, 190:465-468.
2. Drummond GS, **Rosenberg DW**, Kappas A. 1982. Metal induction of haem oxygenase without concurrent degradation of cytochrome P-450. Protective effects of SKF 525A on the haem protein. *Biochemical Journal*, 202:59-66.
3. **Rosenberg DW**, Drummond GS, Kappas A. 1982. The influence of organometals on heme metabolism - in vivo and in vitro studies with organotins. *Molecular Pharmacology*, 21:150-158.
4. **Rosenberg DW,** Drummond GS. 1983. Direct in vitro effects of bis(tri-n- butyltin)oxide on hepatic cytochrome P-450. *Biochemical Pharmacology,* 32:3823-3829.
5. **Rosenberg DW,** Anderson KE, Kappas A. 1984. The potent induction of intestinal heme oxygenase by the organotin compound, bis(tri-n-butyltin) oxide. *Biochemical Biophysical Research Communications*, 119:1022-1027.
6. **Rosenberg DW**, Sardana MK, Kappas A. 1985. The altered induction response of hepatic cytochrome P-450 to phenobarbital, 3-methylcholanthrene, and ß-naphthoflavone in organotin-treated animals. *Biochemical Pharmacology,* 34:997-l006.
7. **Rosenberg DW**, Kappas A. 1989. The actions of orally administered organotin compounds on heme metabolism and cytochrome P-450 content and function in intestinal epithelium. *Biochemical Pharmacology*, 38(7), 1155-1161.
8. **Rosenberg DW,** Kappas A. 1989. The comparative ability of exogenously administered metals to alter urinary copper and zinc metabolism. Pharmacology, 38(3), 159-166.
9. **Rosenberg DW**, Kappas A. 1989. Route of administration as a determinant of organotin effects on hepatic and intestinal cytochrome P-450 content and function. *Main Group Metal Chemistry,* 12(1), 17-29.
10. **Rosenberg DW**, Kappas A. 1989. Trace metal interactions in vivo: Inorganic cobalt enhances urinary copper excretion without producing an associated zincuresis in rats. *Journal of Nutrition*, 119:1259-1268.
11. **Rosenberg DW**, Kappas A. 1989. Characterization of heme oxygenase in the small intestinal epithelium. *Archives of Biochemistry and Biophysics*, 274:471-480.
12. **Rosenberg DW**, Drummond GS, Kappas A. 1989. The In vitro and in vivo inhibition of intestinal heme oxygenase by tin-protoporphyrin. *Pharmacology*, 39:224229.
13. Drummond GS, **Rosenberg DW**, Kihlström-Johanson AC, Kappas A. 1989. The effects of tin-porphyrins on developmental changes in hepatic cytochrome P450 content, selected cytochrome P450-dependent drug metabolizing enzyme activities and brain glutathione levels in the newborn rat. *Pharmacology*, 39:273-284.
14. **Rosenberg DW,** Roque H, Kappas A. 1990. A highly sensitive fluorometric method for measuring ethoxycoumarin O-deethylase activity by reversed-phase high performance chromatography. *Analytical Biochemistry*, 191:354-358.

15. Stimpfel T, Volin C, **Rosenberg DW**, Gershey EL. 1991. Factors affecting lead concentrations in drinking water: Solder and Sediment. *Applied Occupational and Environmental Hygiene*, 6:44-48.
16. **Rosenberg DW.** 1991. Tissue specific induction of the carcinogen inducible cytochrome P450 isoform, P450IAI in colonic epithelium. *Archives of Biochemistry and Biophysics*, 284:223-226.
17. Babich H, Martin-Alguacil N, **Rosenberg DW**, Borenfreund, E. 1991. Response of cultured human cells to polycyclic aromatic hydrocarbons: Establishing an in vitro alternative to the Draize rabbit skin irritancy test. *Ecotoxicology and Environmental Safety* 19:65-71.
18. Martin-Alguacil N, Babich H, **Rosenberg DW**, Borenfreund, E. 1991. *In vitro* response of the brown bullhead catfish cell line, BB, to aquatic pollutants. *Archives Environmental Contamination and Toxicology*, 20:113-117.
19. **Rosenberg DW**, Kappas A. 1991. Induction of heme oxygenase in the small intestinal epithelium: A response to oral cadmium exposure. *Toxicology*, 67: 199-210.
20. Babich H, **Rosenberg DW**, Borenfreund E. 1991. In vitro cytotoxicity with the fish hepatoma cell line, PLHC-1(*Poeciliopsis lucida*). *Ecotoxicology and Environmental Safety*, 21:327-336.
21. **Rosenberg DW.** 1991. Dietary modulation of cytochrome P450 in the small intestinal epithelium. *Pharmacology*, 43:36-46.
22. Albers R, **Rosenberg DW**. 1991. *In vivo* intestinal metabolism of 7-ethoxycoumarin in the rat: Production and distribution of phase I and phase II metabolites in the isolated, perfused intestinal loop. *Toxicology and Applied Pharmacology*, 109:507-513.
23. Drummond GS, **Rosenberg DW**, Kappas A. 1992. Inhibition of intestinal heme oxygenase activity and increased iron production in the bile of rats by synthetic metalloporphyrins. *Gastroenterology*, 102:1170-1175.
24. Michnovicz J, **Rosenberg DW**. 1992. Oxidative metabolism of estrogens in rat intestinal mitochondria. *Biochemical Pharmacology*, 43:1847-1852.
25. **Rosenberg DW,** Leff T. 1993. Regulation of cytochrome P450 in cultured human colonic epithelial cells (CaCo-2). *Archives of Biochemistry and Biophysics* 300:186-192.
26. **Rosenberg DW**. 1993. Comparative pharmacokinetics of cobalt chloride and cobalt protoporphyrin. *Drug Metabolism and Disposition* 21:846-849.
27. Schacter NS, Hayek T, Leff T, Smith JD, **Rosenberg DW**, Walsh A, Ramakrishnan R, Ginsberg HN, Breslow JL. 1994. Overexpression of Apolipoprotein CII causes hypertriglyceridemia in transgenic mice. *Journal of Clinical Investigation* 93:1683-1690.
28. Mankowski D, **Rosenberg DW.** 1994. Induction of cyp2e-1 protein in mouse colon. *Carcinogenesis,* 15:73-78.
29. Parke B, Ying L, Averill D Jr, Jackman MI, **Rosenberg DW**. 1995. Cytochemical localization of a cytochrome P450 isoform, cyp2e-1, within mouse colon. *Pharmacology* 50:339-347.
30. **Rosenberg D,** Kappas A. 1995. The comparative abilities of inorganic cobalt and cobalt protoporphyrin to affect copper metabolism and produce a prolonged elevation in plasma ceruloplasmin. *Pharmacology* 50:201-208.
31. **Rosenberg DW**, Liu Y. 1995. Induction of aberrant crypts in murine colon with varying sensitivity to colon carcinogenesis. *Cancer Letters*, 92:209-214.
32. **Rosenberg DW**, Drummond GS, Smith TJ. 1995. Thyroid hormone regulation of cytochrome P450 is independent of heme oxygenase induction. *Pharmacology*, 51:254-262.
33. **Rosenberg DW.** 1995. Non-homogeneous marking of distal colonic mucosa using *Dolichos biflorus* lectin. *Cancer Letters*, 98: 33-37.
34. Delker DA, Bammer T, Eaton D, **Rosenberg DW**. 1996. Comparative metabolic response to the colon carcinogen, 1,2-dimethylhydrazine, in inbred mice. *Drug Metabolism and Disposition*, 24: 408-413.
35. Papanikolaou A, Shank RL, Delker D, Povey A, Cooper DP, **Rosenberg DW**. 1998. Initial levels of azoxymethane-induced DNA methyl adducts are not predictive of tumor susceptibility in inbred mice.6 *Toxicology and Applied Pharmacology* 150: 196-203.
36. Papanikolaou A, Wang Q-S, Delker DA, **Rosenberg DW.** 1998. Azoxymethane-induced colon tumors and aberrant crypt foci in mice of different genetic susceptibility. *Cancer Letters*, 130:29-34.
37. Delker DA, McKnight S, **Rosenberg DW**. 1998. Rodent strain and species differences in the bioactivation of the colon carcinogen methylazoxymethanol by alcohol dehydrogenase. *Toxicological Sciences*, 45:66-71.
38. Wang Q-S, Papanikolaou A, Sabourin,CLK, **Rosenberg DW**. 1998. Altered expression of Cyclin D1 and Cyclin-dependent Kinase 4 in azoxymethane-induced mouse colon tumorigenesis. *Carcinogenesis*, 19:2001-2006.
39. Delker DA, Wang Q-S, Papanikolaou A, Whiteley HE, **Rosenberg DW.** 1999. Quantitative assessment of azoxymethane-induced aberrant crypt foci in inbred mice. *Experimental and Molecular Pathology*, 65:141-149.

40. Wang Q-S, Goldsby J, Walsh A, Bolt A, **Rosenberg DW.** 1999. Preliminary analysis of azoxymethane-induced colon tumorigenesis in mouse aggregation chimeras. C*arcinogenesis, 20:* 691-697.
41. Papanikolaou A, Wang Q-S, **Rosenberg DW**. 2000. Expression analysis of the group IIA secretory phospholipase A2 in mice with differential susceptibility to azoxymethane-induced colon tumorigenesis. *Carcinogenesis* 21:133-138.
42. Delker DA, Papanikolaou A, Suhr YJ, **Rosenberg, DW**. 2000. Diallyl sulfide enhances azoxymethane-induced preneoplasia in Fischer 344 rat colon. *Chemico-Biological Interactions* 124:149-160.
43. Inan MS, Rasoulpour RJ, Yin L, Hubbard AK, **Rosenberg DW**, Giardina C. 2000. The luminal short-chain fatty acid butyrate modulates NF-kappaB activity in a human colonic epithelial cell line. *Gastroenterology*. 118(4): 724-34.
44. Bolt A, Papanikolaou A, Delker DA Wang QS, **Rosenberg DW**. 2000. Azoxymethane induces K-ras activation in the tumor resistant AKR/J mouse colon. *Molecular Carcinogenesis* 27:210-218.
45. Wang QS, Papanikolaou A, Nambiar PR, **Rosenberg DW**. 2000. Differential expression of $p16^{INKa}$ in azoxymethane-induced mouse colon tumorigenesis. *Mol. Carcinogenesis*, 28:139-147. *(This paper was featured on the cover of this issue)*
46. Papanikolaou A, Wang QS, Papanikolaou D, Whiteley HE, **Rosenberg** DW. 2000. Sequential and morphological analyses of aberrant crypt foci formation in mice of differing sensitivities to azoxymethane-induced colon tumorigenesis. *Carcinogenesis,* 21:1567-1572.
47. Inan MS, Tomacheva V, Wang QS, **Rosenberg DW**, Giardina CG. 2000. Transcription factor NF-kB participates in the regulation of epithelial cell turnover in the colon. *Am. J. Physiology* 279:G1282-G1291.
48. Wang QS, Guda K, Papanikolaou A, Dong M, **Rosenberg DW.** 2000. Expression of transforming growth factor-ß1 and its type II receptor in mouse colon tumors induced by azoxymethane. *International Journal of Oncology,* 17:551-558.
49. Inan MS, Place R, Tolmacheva V, Wang QS, Hubbard AK, **Rosenberg DW**, Giardina C. 2000. I-kappaB-beta related proteins in normal and transformed colonic epithelial cells. *Molecular Carcinogenesis*. 29: 25-36.
50. Guda K, Giardina C, Nambiar P, Cui H, **Rosenberg DW.** 2001. Aberrant transforming growth factor-ß signaling in azoxymethane-induced mouse colon tumors. *Molecular Carcinogenesis* 31:204-213 (*This paper was featured on the cover of this issue)*.
51. Cui H, Dong M, Sadhu D, **Rosenberg DW.** 2002. Suppression of kinesin expression disrupts adematous polyposis coli (APC) localization and affects ß-catenin turnover in young adult mouse colon. *Experimental Cell Research.* 280:12-23.
52. Nambiar PR, Giardina C, Guda K, Aizu W, Raja R, **Rosenberg DW.** 2002. Role of the alternating reading frame (P19)-p53 pathway in an *in vivo* murine colon tumor model. *Cancer Research* 62:3667-3674.
53. DeAngelo AB, Geter DR, **Rosenberg DW**, Crary KC, George MH. 2002. The induction of aberrant crypt foci (ACF) in the colons of rats by trihalomethanes administered in the drinking water. *Cancer Letters*, 187(1-2):25-31.
54. Girnun GD, Smith WM, Drori S, Sarraf P, Mueller E, Eng C, Nambiar P, **Rosenberg DW**, Bronson RT, Edelmann W, Kucherlapati R, Gonzalez FJ, Spiegelman BM. 2002. APC-dependent suppression of colon carcinogenesis by PPARγ, *Proceedings of the National Academy of Sciences, USA*, Oct 15;99(21):13771-6.
55. Nambiar PR, Girnun G, Lillo NA, Guda K, Whiteley HE, **Rosenberg DW**. 2003. Preliminary analysis of azoxymethane induced colon tumors in inbred mice commonly used as transgenic/knockout progenitors*. International Journal of Oncology*, 22:145-150.
56. Dong M, Guda K, Nambiar PR, Rezaie A, Belinsky GS, Lambeau G, Giardina C, **Rosenberg DW**. 2003. Inverse association between phospholipase A_2 and COX-2 expression during mouse colon tumorigenesis. *Carcinogenesis*,24:307-315.
57. Guda K, Cui H, Garg S, Dong M, Nambiar PR, Achenie LE, **Rosenberg DW**. 2003. Multistage gene expression profiling in a differentially susceptible mouse colon cancer model. *Cancer Letters* 191:17-25.
58. Stevens RG, Morris JE, Cordis GA, Anderson LE, **Rosenberg DW**, Sasser, LB. 2003. Oxidative damage in colon and mammary tissue of the HFE-knockout mouse. *Free Radical Biology* 34:1212-1216.
59. Guda K, Claffey KP, Dong M, Nambiar PN, **Rosenberg DW**. 2003. Defective processing of transforming growth factor-beta1 in azoxymethane-induced mouse colon tumors. *Molecular Carcinogenesis* 37:51-59*.*
60. Aizu W, Guda K, Nambiar P, Xin T, Thibodeau M, **Rosenberg DW**, Giardina C. 2003. p53 and its co-activator p300 are inversely regulated in the mouse colon in response to carcinogen. *Toxicology Letters* 144: 213-224.
61. Guda K, Upender MB, Belinsky G, Flynn C, Nakanishi M, Marino JN, Ried T, **Rosenberg DW**. 2004. Carcinogen-induced colon tumors in mice are chromosomally stable and are characterized by low-level microsatellite instability. *Oncogene* 23:3813-3821.

62. Taylor TB, Nambiar PR, Raja R, Cheung E, **Rosenberg DW**, Anderegg B. 2004. Microgenomics: Identification of new expression profiles via small and single-cell sample analyses. *Cytometry* 59A(2):254-61.
63. Ilsley JN, Leung SF, Belinsky GS, Guda K, Zhang Q, Huang X, Blumberg JB, Milbury PE, Roberts Li LJ, Stevens RG, **Rosenberg DW**. 2004. Dietary iron promotes azoxymethane-induced colon tumors in mice. *Nutr and Cancer* 49: 162-9.
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