ROBERT S. CHAPKIN April 2025

Distinguished Professor
Allen Endowed Chair in Nutrition & Chronic Disease Prevention
National Cancer Institute (NCI) R35 Outstanding Investigator
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EDUCATION

BSc., Nutrition and Biochemistry, June 1981
University of Guelph, Ontario, Canada

MSc., Nutrition, February 1983
University of Guelph, Ontario, Canada

Ph.D., Nutrition and Physiological Chemistry, December 1986
University of California, Davis, California

LEADERSHIP

Chair, Intercollegiate Faculty of Nutrition, Texas A&M University, 2002 - 2005
Deputy Director, NIEHS Center for Translational Environmental Health Research, Texas A&M University, 2013 - 2016
Chair, American Institute for Cancer Research (AICR) Study Section Panel, 2014 – 2019
President - Sigma Xi Texas A&M University Chapter, 2015 – 2016
Allen Endowed Chair in Nutrition & Chronic Disease Prevention, Department of Nutrition, Texas A&M University, 2017 – Present
Deputy Director – CPRIT Regional Center for Excellence in Cancer Research, Texas A&M University, 2023 - Present

MENTORSHIP

Graduated 10 M.S., 4 M.S./R.D. and 23 Ph.D. students and trained 32 Post-Doctoral fellows. I also recently received a Distinguished Achievement Award in Graduate Mentoring from Texas A&M University (2017). This demonstrates my dedication to mentorship and the training of the next generation of scientists in Nutrition Life Sciences and Cancer Biology.

HONORS AND AWARDS

From the NIH "First Award" in 1988 to launch my university career to my appointment as Distinguished Professor in 2014, the top honor at Texas A&M University, I have received numerous awards to acknowledge my research accomplishments and status in my field, e.g., NIH R35 Outstanding Investigator (2016-2023), American Association for the Advancement of Science (AAAS) Fellow (2018) and American Society of Nutrition Fellow (2024).

SCHOLARSHIP

Received over $67 million in peer reviewed funding over the past 36 y ($40 million in the past 12 years) at TAMU has resulted in:

283 peer-reviewed publications with 7 submitted (in review)
39 invited reviews
27 book chapters
H-Index = 79, i10-Index = 285, Citations = 21,423

PROGRAM DESCRIPTION

Program Description: I am an NIH/NCI R35-Outstanding Investigator Awardee and an American Association for the Advancement of Science (AAAS) Fellow.

In terms of **research experience**, I am an expert in dietary chemoprevention of colon cancer and inflammatory bowel diseases and have been continuously funded by NIH/NCI for the past 35 years. Highly significant contributions to cancer chemoprevention in five specific areas have been made during my career: (i) establishment of models for cancer prevention studies, (ii) elucidation of colon cancer epigenetics and signal transduction processes in the GI tract, (iii) investigation of the role of adaptive/innate immune response and chronic inflammation as a critical factor in colon cancer development, and its modulation by diet, (iv) membrane biology and nutritional modulation of epithelial and immune cell membrane structure and function, and (v) development of novel noninvasive Systems Biology-based methodologies to monitor diet/gene expression profiles and its application to translational research. These activities, together with a history of basic and translational (biomarkers) research using cutting-edge technologies, demonstrate my scientific credentials which make me a leader in the chronic disease prevention field.

In ground-breaking studies, the Chapkin lab demonstrated that both oncogenes, dietary n-3 polyunsaturated fatty acids (PUFA) and adiponectin modulate Wnt Receptors, KRas and epidermal growth factor (EGFR) signaling by reshaping plasma membrane nanoscale proteolipid composition. This work is highlighted in several novel publications explaining how dietary fat modulates colorectal cancer (CRC) risk. His highly significant findings also indicate that pesco-vegetarian diets, e.g., n-3 PUFA from fish and butyrate from bacterial fiber fermentation, reduce cancer risk by inducing intrinsic mitochondrial Ca^{2+}-mediated lipid oxidation-dependent programmed cell death (ferroptosis/oxytosis) in the colon. In addition, we demonstrated that diet and microbe-derived tryptophan metabolites mediate Aryl Hydrocarbon Receptor (AhR) dependent $Lgr5^{+}$ stem cell renewal by suppressing FoxM1 signaling in the colon. This is noteworthy because stem cells are considered the cells of origin of intestinal cancer. Collectively, these results provide a new paradigm in understanding the molecular mechanisms through which diet and gut microbes modulate cancer risk. In addition, over the past 2 decades, the Chapkin lab spearheaded the discovery of the field of non-invasive precision *exfoliomics*, i.e., development of mRNA-based biomarkers using stool derived exfoliated cells shed from the gut. This transformative body of work has enabled multi-omic longitudinal applications in deep phenotyping related to the analysis of gut microbe (prokaryotic) and host (eukaryotic) crosstalk in response to diet and chronic disease risk. Using this novel, cost-effective, non-invasive approach, we are currently evaluating differences in global gene expression signatures in the stool exfoliome using RNA-Seq.

In terms of **administrative experience**, I have served as Chair of the Intercollegiate Faculty of Nutrition, Deputy Director of the Center for Translational Environmental Health Research (NIH P30ES023512), as well as Director of an NIEHS Pilot Project Grants Program and Director of the

Genomics & Bioinformatics Core at Texas A&M. I have utilized my extensive team building skills to reach across silos at the university to build a synergistically motivated NIEHS P30 Center for Translational Environmental Health Research. The Center incorporated programs in Nutrition & Toxicology, the Colleges of Engineering, Science, Veterinary Medicine and Biomedical Sciences, and the Health Science Center (TAMHSC), home to the School of Medicine, School of Public Health, School of Pharmacy, Nursing, Dentistry, the Institute for Biosciences and Technology, as well as faculty from Baylor College of Medicine and the University of Houston. My strong leadership and team building skills have resulted in formulation of several programmatic grants designed to train the next generation of researchers in the areas of: **(i)** Nutrition, **(ii)** Biostatistics, Computational Biology, Single Cell Data Science, and **(iii)** Cancer Biology, e.g., *NCI-funded T32 training program* (T32 CA090301) in Biostatistics, Bioinformatics, Nutrition and a CPRIT Cancer Center (RP230204). Currently, I serve as the Deputy Director – CPRIT Regional Center of Excellence in Cancer Research – Texas A&M University.

EMPLOYMENT

1986-1988	Postdoctoral fellow, Immunology-Tumor Biology Laboratory, Department of Cell Biology and Human Anatomy, School of Medicine, University of California, Davis.
1988-1993	Assistant Professor, Human Nutrition and Molecular & Cell Biology Sections, Department of Animal Science, Texas A&M University.
1994-1999:	Associate Professor, Human Nutrition and Molecular & Cell Biology Sections, Department of Animal Science, Texas A&M University.
2000-2013	Professor, Department of Nutrition, Texas A&M University
2014 – present	Distinguished Professor, Department of Nutrition, Texas A&M University

PROFESSIONAL EXPERIENCE

Present:	**University Distinguished Professor, Allen Endowed Chair in Nutrition & Chronic Disease Prevention and NCI (R35) Outstanding Investigator**, **Regents Professor and University Faculty Fellow**, Program in Integrative Nutrition & Complex Diseases, Departments of Nutrition, Biochemistry & Biophysics, Veterinary Integrative Biosciences, Texas A&M University and the Department of Microbial Pathogenesis & Immunology, Texas A&M Health Science Center
Present:	Deputy Director – CPRIT Regional Center for Excellence in Cancer Research
2022-Present:	Scientific Review Panel, NCI PREVENT Cancer Preclinical Drug Development Program.
2017-2022:	Co-Director, NCI T32 Biostatistics, Bioinformatics, Nutrition and Cancer Training Program
2016:	Editorial Board: Current Pharmacology Reports
2013-2016:	Deputy Director, NIEHS P30 Center for Translational Environmental Human Research.
2016-2023:	National Cancer Institute (NCI) R35 Outstanding Investigator
2015-Present:	Editorial Board: Frontiers in Immunology and Nutrition
2015-2016:	President - Sigma Xi Texas A&M University Chapter
2014-Present:	Distinguished Professor, Texas A&M University System Chair, American Institute for Cancer Research (AICR) Study Section Panel
2011-Present:	Deputy Director, NIEHS Center for Translational Environmental Human Research (CTEHR) at Texas A&M/Baylor College of Medicine
2011:	Distinguished Achievement Award – Research, Texas A&M University
2010-Present:	Regents Professor, Texas A&M University System

2002-2005: Chair, Faculty of Nutrition, Texas A&M University
2002-2005: Standing Member of the Metabolic Pathology and the Chemo-Dietary Prevention (CDP) Study Sections, National Cancer Institute, NIH
2001-2007: Faculty Fellow - Texas A&M University
1999-2000: Chair, Diet-Cancer Research Interest Section, American Society for Nutritional Sciences (ASN).
1999-2007: Chair of the Pilot Project Program and Member of the Center for Environmental and Rural Health, NIEHS/Texas A&M University
1992: Pew National Nutrition Program Scholar. Sabbatical in the laboratory of Dr. Jorge Moscat, Department of Molecular Biology, Hospital Gregorio Maranon, Madrid, Spain.
1991-Present: Associate Member of the Department of Biochemistry and Biophysics, Texas A&M University.

PROFESSIONAL SOCIETY MEMBERSHIPS

American Association for the Advancement of Science 1989-Present
American Society for Nutrition, 1989-Present
Sigma Xi, 1991-Present
American Association for Cancer Research, 1993-Present
American Society for Cell Biology, 2004-2024
American Association of Immunologists, 2006-2024
American Physiological Society, 2012-Present
International Society for Stem Cell Research, 2013-2024
Biophysical Society, 2020-Present

EDITORIAL BOARDS

Editorial Board of *Prostaglandins, Leukotrienes and Essential Fatty Acids*, 1989-Present
Editorial Board of *Chemistry and Physics of Lipids*, 2005-Present
Honorary Editorial Board Member of *Cell Communication Insights*, 2008-2017
Editorial Board of *Advances in Nutrition: An International Review Journal*, 2010-2014
Editorial Board of the *British Journal of Nutrition*, 2011-2013
Review Editor – *Frontiers in Nutrigenomics*, 2011-2013
Review Editorial Board – *Frontiers in Gastrointestinal Cancer,* 2012-2014
Editorial Board of the *Journal of Nutrition*, 2002-2004
Associate Editor, American Society for Nutritional Sciences Newsletter, 1993-1999

HONORS AND AWARDS

American Society for Nutrition (ASN) Fellow, 2024
American Society for Nutrition (ASN) Mary Swartz Rose Senior Investigator Award, 2023
Research Scientist of the Year Award, Texas A&M AgriLife, 2020
American Association for the Advancement of Science (AAAS) Fellow (Biological Sciences), 2018
Allen Endowed Chair in Nutrition & Chronic Disease Prevention, Texas A&M University, 2017-Present
National Cancer Institute (NCI) R35 Outstanding Investigator Award, 2016-2023
Texas A&M University Association of Former Students Distinguished Achievement Award in Graduate Mentoring, 2017
Texas A&M AgriLife Vice Chancellor's Award in Excellence, January 16, 2016
Texas A&M University System Distinguished Professor, 2014-Present
American Society for Nutrition (ASN) Osborne and Mendel Award, 2013

Texas A&M University Association of Former Students Distinguished Achievement Award in Research, 2011
Texas A&M University System Regents Professor, 2010-Present
Vegetable & Fruit Improvement Center, Texas AgriLife Research Director's Award, 2009
NASA Space Act Award, 2008
Senior Faculty Fellow Award, Texas A&M University, 2007
Sigma Xi Distinguished Scientist Award, Texas A&M University Chapter, 2006
Texas A&M University Faculty Fellow Award, 2001-Present
Texas Agricultural Experimentation Station (TAES) Faculty Fellow Award, 2000
American Society for Nutrition (ASN) Bio Serv Award in Experimental Animal Nutrition, 1996
American Oil Chemists' Society, Outstanding Paper Presentation, May 1995
PEW National Nutrition Program Faculty Scholar Award, 1991-1992
National Institutes of Health "First Award", 1989-1994

PATENTS

United States Patent, "Noninvasive detection of colonic biomarkers using fecal messenger RNA." July 10, 2001 (6,258,541). **R.S. Chapkin**, L.A. Davidson and J.R. Lupton.

United States Provisional Patent, "Gene expression profiles from colonocyte mRNA isolated from feces." August 29, 2005 (TAMU 1014). **R.S. Chapkin**, L.A. Davidson, N. Wang and J.R. Lupton.

United States Provisional Patent, "Non-invasive diagnosis of gastrointestinal diseases". Application No. 62/578,760, filed October 30, 2017. **R.S Chapkin**, C. Whitfield-Cargile, L.A. Davidson, K. He, L.A. Davidson and N. Cohen.

United States Provisional, "A novel non-invasive, stool-derived mRNA-based method for assessing gut health and development" (TAMC:087USP1), filed October 31, 2024. **R.S. Chapkin** and L.A. Davidson.

PUBLICATIONS

Papers

1. L.U. Thompson, K. Boland, **R.S. Chapkin** and J.D. Jones. Nutritional evaluation of residual meal from rapeseed protein concentration process in rats. Nutrition Reports International 25(4):621-628, 1982.

2. **R.S. Chapkin**, B. Haberstroh, T. Liu and B.J. Holub. Characterization of the individual phospholipids and their fatty acids in serum and high-density lipoproteins of the renal patient on long term maintenance hemodialysis. Journal of Laboratory and Clinical Medicine 101:726-735, 1983. PMID: 6833842

3. **R.S. Chapkin**, B. Haberstroh, T. Liu and B.J. Holub. Effect of vitamin E supplementation on serum and high-density lipoprotein-cholesterol in renal patients on maintenance hemodialysis. American Journal of Clinical Nutrition 38:253-256, 1983. PMID: 6881082

4. **R.S. Chapkin** and V.A. Ziboh. Inability of skin enzyme preparations to biosynthesize arachidonic acid from linoleic acid. Biochemical and Biophysical Research Communications 124(3):784-792, 1984. PMID: 6439197

5. **R.S. Chapkin** and V.A. Ziboh. Metabolism of essential fatty acids by human epidermal enzyme preparations: Evidence of chain elongation. Journal of Lipid Research. 27:945-954, 1986. PMID: 3097227

6. **R.S. Chapkin**, V.A. Ziboh and J.L. McCullough. Dietary influences of evening primrose and fish oils on skin of essential fatty acid deficient guinea pigs. Journal of Nutrition 117:1360-1370, 1987. PMID: 3625311

7. R.R. Isseroff, V.A. Ziboh, **R.S. Chapkin** and D.T. Martinez. Conversion of exogenous linoleic acid into arachidonic acid by cultured murine and human keratinocytes: Evidence for an alternate pathway. Journal of Lipid Research 28:1342-1349, 1987. PMID: 2448410

8. V.A. Ziboh and **R.S. Chapkin**. Biologic significance of polyunsaturated fatty acids in the skin. Archives of Dermatology 123:1686a-1690, 1987. PMID: 3688908

9. **R.S. Chapkin**, S.D. Somers, L. Schumacher and K.L. Erickson. Fatty acid composition of macrophage phospholipids in mice fed fish or borage oil. Lipids 23:380-383, 1988. PMID: 3398727

10. **R.S. Chapkin**, C.C. Miller, S.D. Somers and K.L. Erickson. Utilization of dihomogammalinolenic acid (8,11,14-eicosatrienoic acid) by murine peritoneal macrophages. Biochimica et Biophysica Acta 959:322-331, 1988. PMID: 3128337

11. **R.S. Chapkin**, S.D. Somers and K.L. Erickson. Inability of murine peritoneal macrophages to convert linoleic acid into arachidonic acid: Evidence of chain elongation. Journal of Immunology 140:2350-2355, 1988. PMID: 3127464

12. **R.S. Chapkin**, C.C. Miller, S.D. Somers and K.L. Erickson. Ability of monohydroxyeicosatrienoic acid (15-OH-20:3) to modulate macrophage arachidonic acid metabolism. Biochemical and Biophysical Research Communications 153:799-804, 1988. PMID: 3132920

13. **R.S. Chapkin**, S.D. Somers and K.L. Erickson. Dietary manipulation of macrophage phospholipid classes: Selective increase of dihomogammalinolenic acid. Lipids 23:766-770, 1988. PMID: 3185109

14. N.E. Hubbard, **R.S. Chapkin** and K.L. Erickson. Inhibition of linoleate-enhanced metastasis of a transplantable mouse mammary tumor by indomethacin. Cancer Letters 43:111-120, 1988. PMID: 3203321

15. **R.S. Chapkin**, N.E. Hubbard, D.K. Buckman and K.L. Erickson. Linoleic acid metabolism in metastatic and nonmetastatic murine mammary tumor cells. Cancer Research 49:4724-4728, 1989. PMID: 2503244

16. S.D. Somers, **R.S. Chapkin** and K.L. Erickson. Alteration of *in vitro* murine peritoneal macrophage function by dietary enrichment with eicosapentaenoic acid and docosahexaenoic acids in menhaden fish oil. Cellular Immunology 123:201-211, 1989. PMID: 2550148

17. **R.S. Chapkin** and C.C. Miller. Chain elongation of eicosapentaenoic acid in the macrophage. Biochimica et Biophysica Acta 1042:265-267, 1990. PMID: 2302426

18. D.K. Buckman, **R.S. Chapkin**, and K.L. Erickson. Modulation of mouse mammary tumor growth and linoleic acid enhanced metastasis by oleic acid. Journal of Nutrition 120:148-157, 1990. PMID: 2313378

19. **R.S. Chapkin** and S.L. Carmichael. Effect of dietary blackcurrant seed oil on macrophage subclasses of choline and ethanolamine glycerophospholipids. Journal of Nutrition 120:825-830, 1990. PMID: 1974284

20. **R.S. Chapkin**, N.E. Hubbard and K.L. Erickson. 5-series peptido-leukotriene synthesis in mouse peritoneal macrophages: Modulation by dietary n-3 fatty acids. Biochemical and Biophysical Research Communications 171:764-769, 1990. PMID: 2119578

21. C.C. Akoh and **R.S. Chapkin**. Composition of mouse peritoneal macrophage phospholipid molecular species. Lipids 25:613-617, 1990. PMID: 2079868

22. **R.S. Chapkin** and S.L. Carmichael. Effects of dietary n-3 and n-6 polyunsaturated fatty acids on macrophage phospholipid classes and subclasses. Lipids 25:827-834, 1990. PMID: 2093145

23. **R.S. Chapkin** and K.J. Coble. Remodeling of mouse kidney phospholipid classes and subclasses by diet. Journal of Nutritional Biochemistry 2:158-164, 1991.

24. **R.S. Chapkin**, C.C. Akoh and C.C. Miller. Influence of dietary n-3 fatty acids on macrophage glycerophospholipid molecular species and peptido leukotriene synthesis. Journal of Lipid Research 32:1205-1213, 1991. PMID: 1940643

25. **R.S. Chapkin** and K.J. Coble. Utilization of gammalinolenic acid by mouse peritoneal macrophages. Biochimica et Biophysica Acta 1085:365-370, 1991. PMID: 1655039

26. D.Y. Lee, J.R. Lupton and **R.S. Chapkin**. Prostaglandin profile and synthetic capacity of the colon: Comparison of tissue sources and subcellular fractions. Prostaglandins 43:143-164, 1992. PMID: 1542741

27. Y.Y. Fan and **R.S. Chapkin**. Enhancement of mouse peritoneal macrophage prostaglandin E_1 by dietary gamma-linolenic acid. Journal of Nutrition 122:1600-1606, 1992. PMID: 1322453

28. **R.S. Chapkin**, L.D. Davidson and L.A. Davidson. Phospholipid molecular species composition of mouse liver nuclei: Influence of dietary n-3 fatty acid ethyl esters. Biochemical Journal 287:237-240, 1992. PMID: 1417777 PMCID: PMC1133149

30. H. Aukema, **R.S. Chapkin**, K. Tomobe, H. Takahashi and B.J. Holub. *In vivo* detection of phosphatidylinositol-3-phosphate and association with polycystic renal disease. Experimental & Molecular Pathology 57:39-46, 1992. PMID: 1327862

31. **R.S. Chapkin**, J. Gao, D-Y K. Lee, and J.R. Lupton. Effect of dietary fibers and fats on rat colon protein kinase C activity: Correlation to cell proliferation. Journal of Nutrition 123:649-655, 1993. PMID: 8385211

32. D.E. Barre, B.J. Holub and **R.S. Chapkin**. The effect of borage oil supplementation on human platelet aggregation, thromboxane B_2, prostaglandin E_1 and E_2 formation. Nutrition Research 13:739-751, 1993.

33. D.C. Gaudette, H.M. Aukema, C.A. Jolly, **R.S. Chapkin** and B.J. Holub. Mass and fatty acid composition of the 3-phosphorylated PIP_2 isomer in stimulated human platelets. Journal of Biological Chemistry 268:13773-13776, 1993. PMID: 8390977

34. E. Berra, M.T. Diaz-Meco, I. Dominguez, M.M. Municio, L. Sanz, J. Lozano, **R.S. Chapkin** and J. Moscat. Protein kinase C zeta isoform is critical for mitogenic signal transduction. Cell 74:555-563, 1993. PMID: 7688666

35. D.Y.K. Lee, **R.S. Chapkin** and J.R. Lupton. Dietary modulate colonic cell proliferation in an interactive site-specific manner. Nutrition and Cancer 20:107-118, 1993. PMID: 8233976

36. Y.Y. Fan and **R.S. Chapkin**. Phospholipid sources of metabolically elongated gammalinolenic acid: Conversion to prostaglandin E_1 in stimulated mouse macrophages. Journal of Nutritional Biochemistry 4:602-607, 1993.

37. K.H. Fowler, **R.S. Chapkin**, and D.N. McMurray. Effects of purified dietary n-3 ethyl esters on murine T-lymphocyte function. Journal of Immunology 151:5186-5197, 1993. PMID: 8228217

38. D.Y. Lee, J.R. Lupton, H.M. Aukema and **R.S. Chapkin**. Dietary fat and fiber alter rat colonic mucosal lipid mediators and cell proliferation. Journal of Nutrition 123:1808-1817, 1993. PMID: 8229295

39. K.H. Fowler, D.N. McMurray, Y.Y. Fan, H.M. Aukema and **R.S. Chapkin**. Purified dietary n-3 polyunsaturated fatty acids alter diacylglycerol mass and molecular species composition in concanavalin A stimulated murine splenocytes. Biochimica et Biophysica Acta 1210:89-96, 1993. PMID: 8257724

40. L.A. Davidson, Y.H. Jiang, J.N. Derr, H.M. Aukema, J.R. Lupton and **R.S. Chapkin**. Protein kinase C isoforms in human and rat colonic mucosa. Archives of Biochemistry and Biophysics 312:547-553, 1994. PMID: 8037470

41. N.E. Hubbard, **R.S. Chapkin** and K.L.Erickson. Effect of linseed oil on tumoricidal activity and altered eicosanoid production in murine macrophages. Lipids 29:651-655, 1994. PMID: 7815900

42. H.M. Aukema, L.A. Davidson, J.R. Lupton and **R.S. Chapkin**. Diet modulation of rat colonic cAMP-dependent protein kinase activity. Biochemica et Biophysica Acta 1224:51-60, 1994. PMID: 7948042

43. L.A. Davidson, J.R. Lupton, J.H. Jiang, W.C. Chang, H.M. Aukema and **R.S. Chapkin**. Dietary fat and fiber alter rat colon protein kinase C isozyme expression. Journal of Nutrition 125:49-56, 1995. PMID: 7815176

44. H.M. Aukema, T. Yamaguichi, K. Tomobe, D.J. Philbrick, **R.S. Chapkin**, H. Takahashi and B.J. Holub. Diet and disease alter phosphoinositide composition and metabolism in murine polycystic kidneys. Journal of Nutrition 125:1183-1191, 1995. PMID: 7738678

45. X. Ou, **R.S. Chapkin** and K.S. Ramos. Interference with PKC-related mitogenic signal transduction by benzo (a) pyrene is associated with inhibition of quail aortic smooth muscle cell proliferation. Archives of Biochemistry and Biophysics 318:122-130, 1995. PMID: 7726552

46. J.S. Pickering, J.R. Lupton and **R.S. Chapkin**. Dietary fat, fiber and carcinogen alter fecal diacylglycerol composition and mass. Cancer Research 55:2293-2298, 1995. PMID: 7757978

47. J.B. Carrick, J.N. Moore, **R.S. Chapkin** and R.G. Schnellmann. Thioglycollate elicitation increases phospholipid arachidonic acid content, decreases eicosanoid synthesis and increases TNF synthesis by rat peritoneal macrophages. Shock 3:284-291, 1995. PMID: 7600195

48. Y.Y. Fan, **R.S. Chapkin** and K.S. Ramos. A macrophage-smooth muscle cell co-culture model: Applications in the study of atherogenesis. In Vitro Cellular and Developmental Biology 31:492-493, 1995. PMID: 8528495

49. Y.Y. Fan, K.S. Ramos and **R.S. Chapkin**. Dietary gammalinolenic acid modulates macrophage-vascular smooth muscle cell interactions: Evidence for a macrophage-derived soluble factor which downregulates DNA synthesis in smooth muscle cells. Arteriosclerosis, Thrombosis and Vascular Biology 15:1397-1403, 1995. PMID: 7670954

50. Y.H. Jiang, L.A. Davidson, J.R. Lupton and **R.S. Chapkin**. A rapid RT-PCR method for detection of intact RNA in formalin-fixed paraffin-embedded tissues. Nucleic Acids Research 23:3071-3072, 1995. PMID: 7544892 PMCID: PMC307153

51. L.A. Davidson, Y.-H. Jiang, J.R. Lupton and **R.S. Chapkin**. Non-invasive detection of putative biomarkers for colon cancer using fecal mRNA. Cancer Epidemiology, Biomarkers and Prevention 4:643-647, 1995.

52. Y.H. Jiang, H.M. Aukema, L.A. Davidson, J.R. Lupton and **R.S. Chapkin**. Localization of protein kinase C isozymes in rat colon. Cell Growth & Differentiation 6:1381-1386, 1995. PMID: 8562476

53. J.C. Laurenz, J.M. Gunn, C.A. Jolly and **R.S. Chapkin**. Alteration of glycerolipid and sphingolipid-derived second messenger kinetics in ras transformed 3T3 cells. Biochimica et Biophysica Acta 1299:146-154, 1996. PMID: 8555247

54. Y.H. Jiang, L.A. Davidson, J.R. Lupton and **R.S. Chapkin**. Rapid competitive PCR determination of relative gene expression in limiting tissue samples. Clinical Chemistry 42:227-231, 1996. PMID: 8595715

55. C.A. Jolly, J.C. Laurenz, D.N. McMurray and **R.S. Chapkin**. Diacylglycerol and ceramide kinetics in primary cultures of activated T-lymphocytes. Immunology Letters 49:43-48, 1996. PMID: 8964608

56. Y.Y. Fan, K.S. Ramos and **R.S. Chapkin**. Cell cycle-dependent inhibition of DNA synthesis in vascular smooth muscle cells by prostaglandin E_1: Relationship to intracellular cAMP levels. Prostaglandins, Leukotrienes and Essential Fatty Acids. 54:101-107, 1996. PMID: 8848428

57. T.J. Weber, **R.S. Chapkin**, L.A. Davidson and K.S. Ramos. Modulation of protein kinase C (PKC)-related signal transduction by 2,3,7,8-tetrachlorodibenzo-*p*-dioxin exhibits cell cycle-dependence. Archives of Biochemistry and Biophysics 328:227-232, 1996. PMID: 8644998

58. Y.H. Jiang, J.R. Lupton, C.A. Jolly, L.A. Davidson, H.M. Aukema and **R.S. Chapkin**. Dietary fat and fiber differentially regulate intracellular second messengers during tumor development in rat colon. Carcinogenesis 17:1227-1233, 1996. PMID: 8681436

59. K.S. Ramos, Y. Zhang, D.N. Sadhu and **R.S. Chapkin**. The induction of proliferative vascular smooth muscle cell phenotypes by benzo (a) pyrene is characterized by up-regulation of inositol phospholipid metabolism and c-Ha-ras gene expression. Archives of Biochemistry and Biophysics 332:213-222, 1996. PMID: 8806728

60. Y.Y. Fan, **R.S. Chapkin** and K.S. Ramos. Dietary lipid source alters macrophage/vascular smooth muscle cell interactions *in vitro*. Journal of Nutrition 126:2083-2088, 1996. PMID: 8814195

61. H.M. Aukema, L.A. Davidson, B.C. Pence, Y.H. Jiang, J.R. Lupton and **R.S. Chapkin**. Butyrate alters activity of specific cAMP-receptor proteins in a transgenic mouse colonic cell line. Journal of Nutrition 127:18-24, 1997. PMID: 9040538

62. C.A. Jolly, Y.H. Jiang, **R.S. Chapkin** and D.N. McMurray. Dietary n-3 polyunsaturated fatty acid modulation of murine lymphoproliferation and interleukin-2 secretion: Correlation with alterations in diacylglycerol and ceramide mass. Journal of Nutrition 127:37-43, 1997. PMID: 9040541

63. D.L. Zoran, R. Barhoumi, R.C. Burghardt, **R.S. Chapkin** and J.R. Lupton. Diet and carcinogen alter luminal butyrate concentration and intracellular pH in isolated rat colonocytes. Nutrition and Cancer 27:222-230, 1997. PMID: 9919620

64. Y.H. Jiang, J.R. Lupton and **R.S. Chapkin**. Dietary fish oil blocks carcinogen-induced down-regulation of colonic protein kinase C isozymes. Carcinogenesis 18:351-357, 1997. PMID: 9054628

65. K.G. Maciorowski, J.R. Lupton, **R.S. Chapkin**, C.L. Shermer, S.D. Ha and S.C. Ricke. The effect of diet and carcinogen on colonic microbial populations in rats. Journal of Nutrition 127:449-457, 1997. PMID: 9082029

66. M.W. Hong, W.-C.L. Chang, **R.S. Chapkin** and J.R. Lupton. Relationship between colonocyte proliferation, differentiation and apoptosis as a function of diet and carcinogen. Nutrition and Cancer 28:20-29, 1997. PMID: 9200146

67. W.-C.L. Chang, **R.S. Chapkin** and J.R. Lupton. Predictive value of proliferation, differentiation and apoptosis as intermediate markers for colon tumorigenesis. Carcinogenesis 18:721-730, 1997. PMID: 9111206

68. Y.Y. Fan, K.S. Ramos and **R.S. Chapkin**. Dietary gamma-linolenic acid enhances release of macrophage-derived prostaglandin E_1 leading to inhibition of mouse vascular smooth muscle cell proliferation. Journal of Nutrition 127:1765-1771, 1997. PMID: 9278557

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132. A.H. Newton, N.D. Turner, M.Y. Hong, L.A. Davidson, L.M. Sanders, **R.S. Chapkin**, M.E. Murphy, R.J. Carroll and J.R. Lupton. Dietary fish oil and butyrate may protect against colon cancer by inducing mitochondrial-dependent apoptosis in the promotion stage of carcinogenesis. Presented at the 2004 Experimental Biology Meeting, Washington D.C., April 17, 2004.

133. J. Vanamala, T. Leonardi, M.E. Murphy, S.S. Taddeo, B.S. Patil, L.M. Pike, **R.S. Chapkin**, J.R. Lupton and N.D. Turner. Natural and irradiated grapefruit pulp and their functional compounds suppress aberrant crypt foci and colonocyte proliferation. Presented at the 2004 Experimental Biology Meeting, Washington D.C., April 17, 2004.

134. M.Y. Hong, N.D. Turner, S.S. Taddeo, M.E. Murphy, R.J. Carroll, **R.S. Chapkin** and J.R. Lupton. Influence of dietary lipid and butyrate on the coordination of proliferation, p27, differentiation and apoptosis in the same cell during the initiation stage of colon carcinogenesis. Presented at the 2004 Experimental Biology Meeting, Washington D.C., April 17, 2004.

135. M.Y. Hong, N.D. Turner, M.E. Murphy, R.J. Carroll, **R.S. Chapkin** and J.R. Lupton. Relationship among proliferation, p27, differentiation and apoptosis measured by colocalization in the same cell as a function of carcinogen administration. Presented at the 2004 Experimental Biology Meeting, Washington D.C., April 17, 2004.

136. J.C. Mann, N. Popovic, S.S. Taddeo, M.M. Murphy, **R.S. Chapkin**, N.D. Turner and J.R. Lupton. The effects of diet and ionizing radiation on AOM-induced colon carcinogenesis. Presented at the 2004 Experimental Biology Meeting, Washington D.C., April 17, 2004.

137. N.D. Turner, N. Popovic, M.Y. Hong, S.S. Taddeo, L.A. Davidson, L.A. Braby, J.R. Ford, Q. Zhang, D.V. Nguyen, R.J. Carroll, **R.S. Chapkin** and J.R. Lupton. Radiation enhances azoxymethane-induced colon cancer development. Presented at the 3rd International Workshop on Space Radiation Research and the 15th Annual NASA Space Radiation Health Investigators' Workshop, Port Jefferson, NY May 16, 2004.

138. N.D. Turner, C.A. Warren, K.J. Paulhill, T. Leonardi, J. Vanamala, **R.S. Chapkin** and J.R. Lupton. Chemoprevention in the rat azoxymethane model of colon cancer by bioactive compounds in fruits and vegetables. Presented at the American Association for Horticultural Science Meeting, Austin TX, June, 2004.

139. N.D. Turner, J. Vanamala, T. Leonardi, B.S. Patil, M.E. Murphy, N. Wang, L.M. Pike, **R.S. Chapkin** and J.R. Lupton. Grapefruit and its isolated bioactive compounds act as colon cancer chemoprotectants in rats. Presented at the American Chemical Society National Meeting, Philadelphia, PA, August 22, 2004.

140. D.R. Hill, D.W.L. Ma, J.R. Lupton, **R.S. Chapkin** and R.H. Finnell. Folate transport gene ablation in mice increases sensitivity to colon carcinogenesis. Presented at the Folic Acid, Vitamin B_{12} and One-Carbon Metabolism, FASEB Summer Research Conference, July 31-August 5, 2004, Snowmass, CO.

141. N.D. Turner, N. Popovic, J.C. Mann, W. Fu, L.A. Davidson, R.B. Isett, R.J. Carroll, L.A. Braby, J.R. Ford, **R.S. Chapkin** and J.R. Lupton. Simulated galactic cosmic radiation enhances colon cancer in the rat, which is mediated by changes in gene expression that are influenced by dietary intervention. Presented at the AACR Frontiers in Cancer Prevention Research Conference, October 16-20, 2004, Seattle, WA.

142. J.R. Lupton, L.M. Sanders, J.C. Mann, N. Popovic, A.A. Glagolenko, L.A. Davidson, L.A. Braby, J.R. Ford, R.J. Carroll, **R.S. Chapkin**, and N.D. Turner. 2005. Colon carcinogenesis in response to radiation and a chemical carcinogen: The role of diet as a countermeasure. Bioastronautics Investigators' Workshop. January 10-12, 2005, Galveston, TX.

143. N.D. Turner, L.A. Davidson, L.A. Braby, J.R. Ford, R.J. Carroll, N. Wang, **R.S. Chapkin** and J.R. Lupton. 2005. Global transcriptional profiling using fecal material as a non-invasive biomarker of colon carcinogenesis. Bioastronautics Investigators' Workshop. January 10-12, 2005, Galveston, TX.

144. P. Zhang, R. Smith, D.N. McMurray and **R.S. Chapkin**. Dietary fish oil suppresses clonal expansion during antigen-stimulated murine Th1 differentiation. Presented at the Experimental Biology Meeting, April 2-5, 2005, San Diego, CA. Faseb J. 19, A1343, 2005.

145. J. Seo*, R. Barhoumi, J.R. Lupton and **R.S. Chapkin**. Docosahexaenoic acid-induced inhibition of plasma membrane targeting is reversible and selective to lipidated cytosolic proteins. Presented at the Experimental Biology Meeting, April 2-5, 2005, San Diego, CA. Winner of the 2005 American Society of Nutritional Sciences (ASNS) Graduate Student Award. Faseb J, 19, A1455, 2005.

146. M.Y. Hong, N.D. Turner, M.E. Murphy, R.J. Carroll, **R.S. Chapkin** and J.R. Lupton. Dietary fish oil may decrease colonic cell proliferation by upgrading p27Kip 1 level in actively proliferating cells. Presented at the Experimental Biology Meeting, April 2-5, 2005, San Diego, CA. Faseb J, 19, A1694, 2005.

147. L.M. Sanders, G. Wu, N.D. Turner, **R.S. Chapkin** and JR. Lupton. Dietary fat and fiber modulate the colonic redox environment during the initiation stage of radiation-enhanced colon carcinogenesis in rats. Presented at the Experimental Biology Meeting, April 2-5, 2005, San Diego, CA. Faseb J. 19, A776, 2005.

148. M.Y. Hong, N.D. Turner, M.E. Murphy, R.J. Carroll, **R.S. Chapkin** and J.R. Lupton. Dietary fish oil reduces N^7-deoxymethylguanine adducts by enhancing apoptosis at the initiation stage of carcinogenesis in the small (SI) and large intestine (LI). Presented at the Experimental Biology Meeting, April 2-5, 2005, San Diego, CA. Faseb J. 19, A80, 2005.

149. M.Y. Hong, N.D. Turner, R.J. Carroll, **R.S. Chapkin** and J.R. Lupton. Higher DNA adduct levels and lower apoptosis may explain the higher cancer susceptibility in the distal colon compared to the rest of the gastrointestinal tract. Presented at the Experimental Biology Meeting, April 2-5, 2005, San Diego, CA. Faseb J. 19, A760, 2005.

150. J. Vanamala, T. Leonardi, M.E. Murphy, S.S. Taddeo, B.S. Patil, L.M. Pike, **R.S. Chapkin**, J.R. Lupton and N.D. Turner. Reduced iNOS and COX-2 levels are associated with enhanced apoptosis induced by grapefruit pulp and limonin in rat colonocytes. Presented at the Experimental Biology Meeting, April 2-5, 2005, San Diego, CA, Faseb J. 19, A775, 2005.

151. C.T. McFarland, Y.Y. Fan, **R.S. Chapkin**, S.S. Allen, H. Cho, L.H. Ly and D.N. McMurray. Dietary polyunsaturated fatty acids and the host immune response to Tuberculosis. Presented at the Tuberculosis: Integrating Host and Pathogen Biology (Keystone) Meeting, April 2005, British Columbia, Canada.

152. N.D. Turner, C.A. Warren, K.J. Paulhill, L.M. Sanders, M.Y. Hong, K.L. Covert, L.A. Davidson, **R.S. Chapkin** and J.R. Lupton. Fermentation products in colon health: mediators of cell kinetics and gene expression. Presented at the Conference on Gastrointestinal Function, April 2005, Chicago, IL.

153. **R.S. Chapkin**, Y. Ng, R. Barhoumi, R.B. Tjalkens, Y.Y. Fan, S. Kolar, N. Wang, and J.R. Lupton. The role of docosahexaenoic acid in mediating mitochondrial membrane lipid oxidation and apoptosis in colonocytes. Presented at the Eicosanoids & Other Bioactive Lipids in Cancer, Inflammation & Related Diseases Meeting, San Francisco, CA, September 12, 2005.

154. **R.S. Chapkin**, N. Wang, J.R. Lupton, and I.A. Prior. Docosahexaenoic acid alters the size and distribution of lipid rafts. Presented at the American Society for Cell Biology Meeting, San Francisco, CA, December 13, 2005.

155. W. Kim, P. Zhang, R. Smith, D.N. McMurray and **R.S. Chapkin**. Dietary fish oil alters accumulation of antigen-specific $CD4^+$ T-cells in the lymph nodes of recipient mice following adoptive transfer and immunization. Presented at Experimental Biology, April 2, 2006, San Francisco, CA.

156. S.S. Kolar, R. Barhoumi, J.R. Lupton and **R.S. Chapkin.** Chemoprotective nutrients modulate intracellular calcium compartmentalization and store-operated channel entry to induce colonocyte apoptosis. Presented at Experimental Biology, April 2, 2006, San Francisco, CA.

157. J. Vanamala, A. Glagolenko, R.J. Carroll, M.E. Murphy, S.S. Taddeo, **R.S. Chapkin**, N.D. Turner and J.R. Lupton. Fish oil and pectin enhance apoptosis in irradiated rat Colonocytes via suppression of PGE synthase-2 and Wnt pathway. Presented at Experimental Biology, April 2, 2006, San Francisco, CA.

158. M.Y. Hong, N.D. Turner, M.E. Murphy, R.J. Carroll, L.K. Bancroft, L.A. Davidson, **R.S. Chapkin** and J.R. Lupton. Dietary fish oil down-regulates pro-inflammatory gene expression in colonocytes. Presented at Experimental Biology, April 2, 2006, San Francisco, CA.

159. G.D. Zhou, M Richardson, J.R. Lupton, N.D. Turner, **R.S. Chapkin**, and K.C. Donnelly. Colonic cyclopurines induced by azoxymethane and irradiation are decreased by dietary fish oil. Presented at the 97th Annual American Association for Cancer Research Meeting, April, 2006, Washington D.C.

160. J. Vanamala, A. Glagolenko, R.J. Carroll, M.E. Murphy, S.S. Taddeo, **R.S. Chapkin**, N.D. Turner and J.R. Lupton. Combination of fish oil and pectin suppressed beta catenin nuclear translocation, an important molecular event in colon carcinogenesis. Presented at the American Institute for Cancer Research Annual Meeting, Washington, D.C., July, 13, 2006.

161. **R.S. Chapkin**, J.R. Lupton and D.N. McMurray. Fatty acids, anti-inflammatory compounds and colon cancer. Presented at the American Institute for Cancer Research Annual Meeting, Washington, D.C., July 13, 2006.

162. J.R. Lupton, N.D. Turner, L. Braby, J. Ford, R. Carroll and **R.S. Chapkin**. A combination of omega-3 fatty acids and a butyrate-producing fiber mitigates colon cancer development. Presented at the International Astronautical Federation Meeting, Valenica, Spain, October 2, 2006.

163. S.S.N. Kolar, R. Barhoumi, E. Callaway, J.R. Lupton and **R.S. Chapkin**. Combination chemotherapy modulates mitochondrial calcium compartmentalization to induce colonocyte apoptosis. Presented at the American Association for Cancer Research, Frontiers in Cancer Prevention Research meeting, Boston, MA, November 12-15, 2006.

164. N.D. Turner, L.A. Davidson, M. Vannucci, Q. Mo, R.J. Carroll, **R.S. Chapkin** and J.R. Lupton. Differential expression of genes over time induced by radiation and diet in exfoliated rat colonocytes. Presented at the NASA Human Research Program Investigator's Workshop, February 11-14, 2007, Galveston, TX.

165. S.S.N. Kolar, R. Barhoumi, E. Callaway, J.R. Lupton and **R.S. Chapkin**. Docosahexaenoic acid and butyrate synergistically induce colonocyte apoptosis by enhancing mitochondrial Ca^{2+} accumulation. Presented at Experimental Biology, Washington D.C., April 28, 2007.

166. K.J. Paulhill, S.S. Taddeo, R.J. Carroll, **R.S. Chapkin**, J.R. Lupton and N.D. Turner. Quercetin does not significantly affect the protection of a fish oil diet in early colon carcinogenesis. Presented at Experimental Biology, Washington D.C., April 28, 2007.

167. J. Vanamala, A. Glagolenko, P. Yang, R.J. Carroll, M.E. Murphy, R.A. Newman, **R.S. Chapkin**, N.D. Turner and J.R. Lupton. A diet containing fish oil and pectin ameliorates radiation-enhanced colon carcinogenesis by suppression of PPARδ and PGE synthase-2 ($PGES_2$) and elevation of PGE_3. Presented at Experimental Biology, Washington D.C., April 28, 2007.

168. R.H. Finnell, B.A. Kamen, E.S. Callaway, L.A. Davidson and **R.S. Chapkin**. Use of novel genetic mouse models to investigate the health benefits of folate in colon cancer. Presented at the American Association for Cancer Research meeting, Los Angeles, CA, April 14-18, 2007.

169. D.N. McMurray and **R.S. Chapkin**. n-3 PUFA, T cell inflammation and colon cancer. Presented at the 2007 FASEB Summer Conference on "Nutritional immunology: Its role in health and disease, Tucson, AZ, July 28 – August 2, 2007.

170. Q. Jia*, R. Smith, B.R. Weeks, E. Callaway, L.A. Davidson, W. Kim, J.R. Lupton, D.N. McMurray and **R.S. Chapkin**. Reduced colitis-associated colon cancer in fat-1 (n-3 fatty acid desaturase) transgenic mice. Presented at the 2007 FASEB Summer Conference on "Nutritional immunology: Its role in health and disease, Tucson, AZ, July 28 – August 2, 2007. *Q. Jia is a FASEB travel award recipient.

171. W. Kim*, R. Smith, L. Zhou, N. Wang, B.S. Patil, G.K, Jayaprakasha, D.N. McMurray and **R.S. Chapkin**. Dietary curcumin and limonin suppress antigen-induced $CD4^+$ T-cell proliferation in an NF-kB independent manner. Presented at the 2007 FASEB Summer Conference on "Nutritional immunology: Its role in health and disease, Tucson, AZ, July 28 – August 2, 2007. Wooki Kim is a recipient of the American Society for Nutrition Predoctoral Fellowship from McNeil Nutritionals.

172. N.D. Turner, L.A. Davidson, M. Vannucci, Q. Mo, R.J. Carroll, **R.S. Chapkin** and J.R. Lupton. Radiation- and diet-induced differential expression of genes measured over time in exfoliated rat colonocytes. Presented at the 18th Annual NASA Radiation Investigators' Workshop, Rohnert Park, CA, July 13, 2007.

173. W. Kim, R. Smith, L. Zhou, N. Wang, B. Patil, D.N. McMurray, and **R.S. Chapkin**. Dietary limonin suppresses antigen-induced $CD4^+$ T-cell proliferation via down-regulation of NF-kB nuclear translocation. Presented at the 2nd International Symposium on the Human Health Effects of Fruits and Vegetables, Houston, TX, October 10, 2007.

174. N.D. Turner, K.J. Paulhill, C.A. Warren, R.J. Carroll, N. Wang, **R.S. Chapkin** and J.R. Lupton. Quercetin suppresses early colon carcinogenesis partly through inhibition of inflammatory mediators. Presented at the 2nd International Symposium on the Human Health Effects of Fruits and Vegetables, Houston, TX, October 10, 2007.

175. N.D. Turner, K.J. Paulhill, C.A. Warren, R.J. Carroll, N. Wang, **R.S. Chapkin** and J.R. Lupton. Quercetin suppresses COX-1, COX-2 and iNOS expression during early-stage colon carcinogenesis. To be presented at the annual American Institute for Cancer Research meeting, Washington, D.C., November, 2007.

176. N.D. Turner, T. Leonardi, J. Vanamala, L.A. Davidson, B.S. Patil, N. Wang, R.J. Carroll, **R.S. Chapkin** and J.R. Lupton. Apigenin and narigenin favorably modulate aberrant crypt foci development and colonic cell cytokinetics. To be presented at the AACR Frontiers in Cancer Prevention Meeting, Philadelphia, PA, November, 2007.

177. K.J. Paulhill, S.S. Taddeo, G. Wu, R.J. Carroll, **R.S. Chapkin**, J.R. Lupton and N.D. Turner. Quercetin-dependent induction of colonocyte apoptosis depends on the dietary lipid source. To be presented at the AACR Frontiers in Cancer Prevention Meeting, Philadelphia, PA, November, 2007.

178. Y.M. Cho, H.M. Kim, N.D. Turner, S.S. Taddeo, L.A. Davidson, N. Wang, M. Vannucci, **R.S. Chapkin**, R.J. Carroll and J.R. Lupton. Monitoring dietary countermeasure effectiveness with colon gene expression profiles using a non-invasive technology. To be presented at the NASA Human Research Program Investigators' Workshop, League City, Texas, February 4, 2008.

179. N.D. Turner, L.M. Sanders, G. Wu, L.A. Davidson, L.A. Braby, J.R. Ford, R.J. Carroll, **R.S. Chapkin** and J.R. Lupton Dietary mitigation of the oxidative damage resulting from radiation exposure. Presented at the 79th Aerospace Medical Association meeting, May 11, 2008 (Aviation Space Environ. Med 79:215-216).

180. *W. Kim, Y.Y. Fan, R. Barhoumi, D.N. McMurray and **R.S. Chapkin**. Genetically-derived n-3 polyunsaturated fatty acids promote the formation of lipid rafts at the immunological synapse: a site of T-cell activation. Presented at Experimental Biology, 2008, San Diego, CA. *Winner of the 2008 American Society of Nutritional Sciences (ASNS) Graduate Student Award.

181. *Q. Jia, B.R. Weeks, E.S. Callaway, L.A. Davidson, Y.Y. Fan, L. Zhou, J.R. Lupton, **R.S. Chapkin** and D.N. McMurray. Dietary lipids and curcumin interact to affect mortality of DSS treated mice by modulating colonic epithelial injury. Presented at Experimental Biology, 2008, San Diego, CA. *Winner of the 2008 American Society of Nutritional Sciences (ASNS) Graduate Student Award.

182. Y. Cho, J.G. Martinez, N.D. Turner, S.S. Taddeo, L.A. Davidson, N. Wang, M. Vannucci, R.J. Carroll, **R.S. Chapkin** and J.R. Lupton Fish oil and pectin may suppress colon carcinogenesis via inhibition of MAPK and TGFb pathways. Presented at Experimental Biology, 2008, San Diego, CA.

183. H. Kim, N.D. Turner, S.S. Taddeo, L.A. Davidson, N. Wang, M. Vannucci, **R.S. Chapkin**, R.J. Carroll and J.R. Lupton. A fish oil/pectin diet beneficially altered gene profiles during radiation-enhanced colon carcinogenesis. Presented at Experimental Biology, 2008, San Diego, CA.

184. *K.J. Paulhill, S.S. Taddeo, G. Wu, R.J. Carroll, **R.S. Chapkin**, J.R. Lupton and N.D. Turner. Endogenous antioxidant enzyme activities and colonocyte balance are altered by dietary lipids and quercetin. Presented at Experimental Biology, 2008, San Diego, CA. *Winner of the 2008 American Society of Nutritional Sciences (ASNS) Graduate Student Award.

185. N.D. Turner, L. Sanders, G. Wu, L.A. Davidson, J. Ford, L. Braby, R. Carroll, **R.S. Chapkin** and J. Lupton. Relationship between oxidative damage and colon carcinogenesis in irradiated rats: Influence of dietary countermeasures. Presented at the 37th Committee on Space Research Meeting, Montreal, Canada, July 13, 2008.

186. **R.S. Chapkin**, L.A. Davidson, N. Colburn, E. Lanza, T. Hartman, J.R. Lupton, E. Dougherty, C. Zhao and I. Ivanov. Non-invasive detection of candidate molecular biomarkers in patients at high risk for colorectal adenoma recurrence. Presented at the NCI Translational Science Meeting, Bethesda, MD, November 7-9, 2008.

187. M.R Young, M.I. Kang, C. Henrich, P. Brown, G. Bobe, R. Mento-Marcel, T. Hartman, **R.S. Chapkin**, E. Lanza, J. Milner, Y. Kim and N.H. Colburn. Discovery and validation of molecular targets, biomarkers and non-toxic interventions for cancer prevention. Presented at the NCI Translational Science Meeting, Bethesda, MD, November 7-9, 2008.

188. C. Zhao, I. Ivanov, E.R. Dougherty, T.J. Hartman, E. Lanza, N.H. Colburn, J.R. Lupton, L.A. Davidson and **R.S. Chapkin**. Ranked molecular biomarkers for patients at high risk for colorectal adenoma recurrence. Presented at the MidSouth Computational Biology and Bioinformatics Society (MCBIOS) meeting, Starkville, Mississippi, February 20, 2009.

189. *R. Yog, R. Barhoumi, D.N. McMurray and **R.S. Chapkin**. n-3 Polyunsaturated fatty acids suppress T-cell mitochondrial translocation to the immunological synapse. Presented at the Annual Experimental Biology Meeting, New Orleans, LA, April, 2009. *Winner of the 2009 American Society of Nutritional Sciences (ASN) Graduate Student Award.

190. K.J. Paulhill, S.S. Taddeo, L.A. Davidson, R.J. Carroll, **R.S. Chapkin**, J.R. Lupton and N.D. Turner. Dietary lipid source alters quercetin effects on antioxidant enzyme/phase I and II gene expression in rat colon. Presented at the Annual Experimental Biology Meeting, New Orleans, LA, April, 2009.

191. W. Kim, Y.Y. Fan, R. Smith, B. Patil, K. Jayaprakasha, D.N. McMurray and **R.S. Chapkin**. Dietary curcumin and limonin suppress murine $CD4^+$ T-cell activation. Presented at the Annual Experimental Biology Meeting, New Orleans, LA, April, 2009.

192. H. Kim, N.D. Turner, S.S. Taddeo, L.A. Davidson, N. Wang, M. Vannucci, **R.S. Chapkin**, R. J. Carroll and J.R. Lupton. A fish oil/pectin diet suppresses radiation-enhanced colon carcinogenesis via down-regulation of the beta-catenin signaling pathway. Presented at the Annual Experimental Biology Meeting, New Orleans, LA, April, 2009.

193. Q. Jia, B.R. Weeks, J.S. Goldsby, J.R. Lupton, **R.S. Chapkin** and D.N. McMurray. Dietary lipids and curcumin interact to affect gene expression in a mouse model of DSS induced chronic colitis. Presented at the Annual Experimental Biology Meeting, New Orleans, LA, April, 2009.

194. Y. Cho, N.D. Turner, S.S. Taddeo, L.A. Davidson, N. Wang, M. Vannucci, R. J. Carroll, **R.S. Chapkin** and J.R. Lupton. Chemoprotective fish oil/pectin diets temporarily alter gene expression profiles in exfoliated colonocytes. Presented at the Annual Experimental Biology Meeting, New Orleans, LA, April, 2009.

195. L.A. Davidson, C. Zhao, I. Ivanov, E.R. Dougherty, T.J. Hartman, E. Lanza, N.H. Colburn, J.R. Lupton and **R.S. Chapkin**. Non-invasive identification of ranked molecular markers for patients at high risk of colorectal adenoma recurrence. Presented at the Frontiers of Cancer Research Conference, Houston, TX, March 26-27, 2009.

196. Y.Y. Fan, E.S. Callaway, Q. Ran, J.R. Lupton and **R.S. Chapkin**. The apoptotic effects of n-3 fatty acids are enhanced in oxidatively stressed transgenic mouse models. Presented at the Frontiers of Cancer Research Conference, Houston, TX, March 26-27, 2009.

197. **R.S. Chapkin**, L.A. Davidson, N. Wang, I. Ivanov, J. Goldsby and J.R. Lupton. Identification of actively translated mRNA transcripts in a rat model of early stage colon carcinogenesis. Presented at the Frontiers of Cancer Research Conference, Houston, TX, March 26-27, 2009.

198. N.D. Turner, K.J. Paulhill, S.S. Taddeo, G. Wu, R.J. Carroll, **R.S. Chapkin** and J.R. Lupton. Dietary lipids and Quercetin alter endogenous antioxidant enzyme activities and colonocyte redox balance. Presented at the Frontiers of Cancer Research Conference, Houston, TX, March 26-27, 2009.

199. N.D. Turner, S.S. Taddeo, L.A. Davidson, **R.S. Chapkin**, R.J. Carroll, J.R. Ford, L.A. Braby and J.R. Lupton. Radiation-induced gene expression changes in colonic mucosa at initiation through tumor development. To be presented at the Frontiers of Cancer Research Conference, Houston, TX, March 26-27, 2009.

200. H.F. Turk, S.S. Kolar, Y.Y. Fan, C.A. Cozby, J.R. Lupton and **R.S. Chapkin**. Linoleic acid and butyrate synergize to increase bcl-2 levels in colonocytes. Presented at the Frontiers of Cancer Research Conference, Houston, TX, March 26-27, 2009.

201. M.S. Shah, L.A. Davidson, I. Ivanov, N. Wang, J.R. Lupton and **R.S. Chapkin**. Establishment of a cell culture model to examine dietary regulation of microRNA expression in the colon. Presented at the Keystone Symposia on "MicroRNA and Cancer", Breckenridge, CO, June 10-15, 2009.

202. Q. Jia, W. Kim, R. Alaniz, D.N. McMurray and **R.S. Chapkin**. n-3 PUFA favorably modulate T cell polarization during DSS induced experimental colitis. Presented at the VFIC annual meeting, Austin, TX, August 23, 2009.

203. W. Kim, R. Barhoumi, D.N. McMurray and **R.S. Chapkin**. n-3 polyunsaturated fatty acids enhance immunosuppressive effects of botanicals in part by suppressing the localization and activation of signaling proteins at the immunologic synapse in murine $CD4^+$ T cells. Presented at the VFIC annual meeting, Austin, TX, August 23, 2009.

204. C.M. Ferguson, K. Pokusaeva, I. Zorych, L.N. Thomas, S.S. Taddeo, E.S. Callaway, Y.Y. Fan, N.D. Turner, **R.S. Chapkin**, J.R. Lupton, and J.M. Sturino. Resistant Starch Differentially Stimulates the Proliferation of Native Gastrointestinal Bifidobacteria. Presented at the United States National Academy of Sciences Sackler Symposium on Microbes and Health (Irvine, CA), October, 2009.

205. S.M. Donovan, L.A. Davidson[2], C. Zhao, I. Ivanov, J. S. Goldsby, J.R. Lupton[2], R.A. Mathai, M. H. Monaco, D. Rai, M. Russell, E.R. Dougherty and **R.S. Chapkin**. Non-invasive stool-based detection of newborn infant gastrointestinal development using gene expression profiles derived from exfoliated epithelial cells. Presented at the Annual Experimental Biology Meeting, Anaheim, CA, April, 2010.

206. N.D. Turner, S.S. Taddeo, E.S. Callaway, Y.Y. Fan, L.A. Davidson, L.N. Thomas, C.M. Ferguson, J.M. Sturino, **R.S. Chapkin**, and J.R. Lupton. Differential activation of NF-kB in colonic mucosa of DSS-challenged rats consuming fermentable fiber sources. Presented at the Annual Experimental Biology Meeting, Anaheim, CA, April, 2010.

207. Y.Y. Fan, S. Toyokuni, E.S. Callaway, Q. Ran, J.R. Lupton, and **R.S. Chapkin**. n-3 polyunsaturated fatty acids promote apoptosis in oxidatively stressed transgenic mouse models. Presented at the Annual American Association for Cancer Research Meeting, Washington, D.C., April, 2010.

208. R. Alaniz, T. Shepherd, K. Ryden, Q. Jia, L. Davidson and **R.S. Chapkin**. Humanized mouse model of inflammatory bowel disease and microbial immunity. Presented at the 5th International Meeting on Inflammatory Bowel Diseases, Capri, Italy, April 8-10, 2010.

209. H.F. Turk, J.R. Lupton, and **R.S. Chapkin**. Docosahexaenoic acid alters the spatio-temporal segregation and activation of the EGF receptor. Presented at the Annual American Association for Cancer Research Meeting, Washington, D.C., April 11, 2010.

210. M. Saldua, C. Olsovsky, E. Callaway, **R.S. Chapkin** and K. Maitland. Extended frames of chronic inflammation in the mouse colon using a rapid stage scanning confocal fluorescence microscope. Presented at the Biomedical Engineering Society Conference, Austin, TX, October 6-9, 2010.

211. S.M. Donovan, L.A. Davidson, C. Zhao, I. Ivanov, J.S. Goldsby, J.R. Lupton, R.A. Mathai, M.H. Monaco, D. Rai, M. Russell, E.R. Dougherty and **R.S. Chapkin**. Non-invasive assessment of intestinal gene expression profile in breast- and formula-fed human infants using exfoliated cells collected from stool. To be presented at the 7th International Symposium: Milk genomics & Human Health Meeting, University of California-Davis, October 20-22, 2010.

212. S.M. Donovan, L.A. Davidson, C. Zhao, I. Ivanov, J.S. Goldsby, J.R. Lupton, R.A. Mathai, M.H. Monaco, D. Rai, M. Russell, E.R. Dougherty and **R.S. Chapkin**. Non-invasive assessment of the intestinal transcriptome of breast and formula-fed infants. To be presented at the 15th International ISRHML Conference, Lima, Peru, October 8-12, 2010.

213. C. Zhao, I. Ivanov, M. Shah, L.A. Davidson, **R.S. Chapkin** and E.R. Dougherty. Conditioning-based model for the regulatory activities of microRNAs in specific dietary contexts. Presented at the 9th IEEE International Workshop on Genomic Signal Processing and Statistics (GENSIPS), Cold Spring Harbor Laboratory, November 10-12, 2010, DOI:10.1109/GENSIPS.2010.5719690.

214. **R.S. Chapkin**, M. Shah, I. Ivanov, J.R. Lupton and L.A. Davidson. Identification of dietary modifiers of crypt stem cells – the cells of origin of intestinal cancer. Presented at the Cancer Prevention and Research Institute of Texas (CPRIT) Conference, November 17-19, 2011, Austin, Texas.

215. Y. Cho, N.D. Turner, L.A. Davidson, **R.S. Chapkin** and J.R. Lupton. A chemoprotective fish oil/pectin diet regulates the expression of bcl-2 oncogene by altering CpG island methylator phenotype (CIMP) in colon cancer. Presented at the Annual Experimental Biology Meeting, Washington, D.C., April, 2011.

216. *H.M. Turk, R. Barhoumi, J.R. Lupton and **R.S. Chapkin**. A novel role for n-3 polyunsaturated fatty acids in inhibition of EGFR signal transduction. Presented at the Annual Experimental Biology Meeting, Washington, D.C., April 11, 2011. *Winner of the 2011 American Society of Nutritional Sciences (ASN) Graduate Student Award.

217. M.S. Shah, S.L. Schwartz, C. Zhao, L.A. Davidson, B. Zhou, J.R. Lupton and **R.S. Chapkin**. Integrated microRNA and mRNA expression profiling in a rat colon carcinogenesis model: Effect of a chemoprotective diet. Presented at the 102nd American Association for Cancer Research annual meeting, Orlando, FL, April 2-6, 2011.

218. S.L. Schwartz, I. Friedberg, I.V. Ivanov, L.A. Davidson, J.S. Goldsby, D.B. Dahl, E.R. Dougherty, D. Herman, M. Wang, S.M. Donovan and **R.S. Chapkin**. Breast milk and infant formula: Prediction, correlation, and classification within the joint gut transcriptome and microbiota. Presented at the Nature "Microbiota and mucosal immunology: the interface in health and disease" meeting, San Francisco, CA, April 14-16, 2011.

219. J.M. Monk, Q. Jia, E.S. Callaway, B. Weeks, R.C. Alaniz, D.N. McMurray, and **R.S. Chapkin**. n-3 PUFA decrease Th17 polarization in the colonic mucosa during chronic DSS-induced colitis. Presented at the Nature "Microbiota and mucosal immunology: the interface in health and disease" meeting, San Francisco, CA, April 14-16, 2011.

220. S.M. Donovan, M. Wang, S.L. Schwartz, I.V. Ivanov, L.A. Davidson, J.S. Goldsby, D.B. Dahl, E.R. Dougherty, I. Friedberg, D. Herman and **R.S. Chapkin**. Transcriptome of the Human Infant Intestinal Ecosystem. Presented at The first International Conference on the Glycobiology of Human Milk Oligosaccharides Copenhagen, Denmark May 16 & 17, 2011.

221. J.M. Monk, Q. Jia, E.S. Callaway, B. Weeks, R.C. Alaniz, D.N. McMurray, and **R.S. Chapkin**. Colonic mucosal Th17 cell polarization is favorably modulated by n-3 PUFA during chronic DSS-induced colitis. Presented at the Canadian Nutrition Society annual meeting, Guelph, Ontario, Canada, June 2-4, 2011.

222. S.L. Schwartz, I. Friedberg, I.V. Ivanov, L.A. Davidson, J.S. Goldsby, D.B. Dahl, E.R. Dougherty, D. Herman, M. Wang, S. M. Donovan and **R.S. Chapkin**. The human gut ecosystem: Gut microbiome and host transcriptome in breast-fed vs. formula-fed infants. Presented at the International Conference on Intelligent Systems for Molecular Biology and 10th European Conference on Computational Biology, Vienna, Austria, July, 12, 2011.

223. S.M. Donovan, S.L. Schwartz, I.V. Ivanov, L.A. Davidson, J.S. Goldsby, D.B. Dahl, E.R. Dougherty, I. Friedberg, D. Herman, M. Wang and **R.S. Chapkin**. Host-microbe interactions in neonatal intestinal development: Role of early nutrition. Presented at the Society of Ingestive Behavior (SSIB) meeting, Clearwater, FL, July 12, 2011.

224. N.H. Colburn, G. Bobe, R. Mentor-Marcel, T. Hartman, **R.S. Chapkin**, E. Lanza, J. Milner, Y. Kim, A. Cross and M.R. Young. Biomarkers of response to dietary interventions for colon cancer prevention. Presented at the National Cancer Institute Translates meeting, Washington, D.C., July 28, 2011.

225. T.Y. Hou, J.M. Monk, Y.YFan, Rola Barhoumi, Y. Chen, G.M. Rivera, D.N. McMurray, and **R.S. Chapkin**. n-3 polyunsaturated fatty acids suppress phosphatidylinositol-(4,5)-bisphosphate dependent actin remodeling during $CD4^+$ T cell activation. Presented at the FASEB Summer conference on "Nutritional Immunology: Role in Health and Disease, Carefree, AZ, July 10-15, 2011.

226. J.M. Monk, Q. Jia, E.S. Callaway, B. Weeks, R.C. Alaniz, D.N McMurray and **R.S. Chapkin**. n-3 PUFA decrease the proportion of Th17 cells in the inflamed colonic mucosa by affecting differentiation, function and trafficking during chronic DSS-induced colitis. Presented at the FASEB Summer conference on "Nutritional Immunology: Role in Health and Disease, Carefree, AZ, July 10-15, 2011.

227. M.R. Young, G. Bobe, R. Mentor-Marcel, T. Hartman, **R.S. Chapkin**, E. Lanza, J. Milner, Y. Kim, A. Cross and N.H. Colburn. Biomarkers of response to dietary interventions for colon cancer prevention. Presented at the American Institute for Cancer Research Conference, Washington, D.C., November 3-4, 2011.

228. L.A. Davidson, E.S. Callaway, J.S. Goldsby and **R.S. Chapkin**. The intestinal stem cell signature is altered by wounding and dietary modifiers. Presented at the CPRIT annual conference, Austin, TX, November 15-17, 2011.

229. C. Zheng, S. Schwartz, **R.S. Chapkin**, R.J. Carroll and I. Ivanov. Integrated data analysis of host-metabiome interactions. Presented at the KAUST Research Poster Competition for Undergraduates, Saudi Arabia, January 14-29, 2012.

230. *H.F. Turk and **R.S. Chapkin**. DHA alters EGFR spatiotemporal dynamics to suppress signal transduction. Presented at the Annual Experimental Biology Meeting, San Diego, CA, April 21-25, 2011. *Winner of the 2012 American Society of Nutritional Sciences (ASN) Graduate Student Award.

231. C. Zheng, S. Schwartz, **R.S. Chapkin**, R.J. Carroll and I. Ivanov. Feature selection for high-dimensional integrated data. Presented at the SIAM International Conference on Data Mining, Anaheim, CA, April 26-28, 2012.

232. J.M. Monk, T.Y. Hou, H.F. Turk, E.C. Callaway, C. Wu, D.N. McMurray and **R.S. Chapkin**. Dietary polyunsaturated fatty acids alter the Th17 cell-mediated pathogenesis of inflammatory bowel disease in obese mice. Presented at the Canadian Nutrition Society Annual Meeting, Vancouver, British Columbia, May 23-26, 2012.

233. T.Y. Hou, J.M. Monk, Y.Y. Fan, R. Barhoumi, Y.Q. Chen, G.M. Rivera, D.N. McMurray and **R.S. Chapkin**. n-3 polyunsaturated fatty acids suppress phosphatidylinositol-4,5-bisphosphate dependent actin remodeling during $CD4^+$ T cell activation. Presented at the 10^{th} Congress of the International Society for the Study of Fatty Acids & Lipids (ISSFAL), Vancouver, Canada, May 26-30, 2012.

234. H.M. Turk, R. Barhoumi and **R.S. Chapkin**. Docosahexaenoic acid alters EGFR localization and inhibits signal transduction. Presented at the 10^{th} Congress of the International Society for the Study of Fatty Acids & Lipids (ISSFAL), Vancouver, Canada, May 26-30, 2012.

235. J.M. Monk, Q. Jia, H.F. Turk, E.S. Callaway, B. Weeks, R.C. Alaniz, D.N. McMurray and **R.S. Chapkin**. n-3 polyunsaturated fatty acids antagonize Th17 cell biology during experimental colitis. Presented at the 10^{th} Congress of the International Society for the Study of Fatty Acids & Lipids (ISSFAL), Vancouver, Canada, May 26-30, 2012.

236. I. Friedberg, S. Schwartz, I.V. Ivanov, L.A. Davidson, J.S. Goldsby, D.B. Dahl, D. Herman, M. Wang, S.M. Donovan and **R.S. Chapkin**. A metagenomic study of diet-dependent interaction between gut microflora and host in infants. Presented at the International Society for Computational Biology (ISMB) Meeting, Long Beach CA, July 15-17, 2012.

237. Y.Y. Fan, J. M. Monk, T.Y. Hou, E. Callway[1], L. Vincent, B. Weeks, P. Yang and **R.S. Chapkin**. Characterization of an arachidonic acid-deficient (*Fads1* knockout) mouse as a model for identifying new drug targets upstream of COX-2. Presented at the Annual Cancer Prevention and Research Institute of Texas (CPRIT) meeting, Austin, TX, October 24, 2012.

238. K. Triff, K. Konganti, B. Zhou, I. Ivanov and **R.S. Chapkin**. A genome wide analysis of the rat colon reveals site-specific differences in histone modifications and proto-oncogene expression. Presented at the Keystone – Nutrition, Epigenetics and Human Disease (B5) Meeting, Santa Fe, NM, February 19-24, 2013.

239. M. Wang, M. Li, **R.S. Chapkin**, I. Ivanov and S.M. Donovan. Fecal microbiome and metabolites differ between breast and formula-fed human infants. Presented at the Experimental Biology Meeting, Boston, MA, April 20-24, 2013.

240. M.S. Shah, L.A. Davidson and **R.S. Chapkin**. Identification of miR-26b and miR-203 gene targets in colon cancer cells. Presented at the Experimental Biology Meeting, Boston, MA, April 20-24, 2013.

241. M. Wang, M. Li, C.B. Lebrilla, **R.S. Chapkin**, I. Ivanov and S.M. Donovan. Gut microbota composition of breast-fed infants differs from formula-fed and is correlated with human milk oligosaccharides consumed. Presented at the European Society for Pediatric Gastroenterology Hepatology Meeting, London, England, May 8-11, 2013.

242. M.S. Shah, E. Kim, L.A. Davidson, E. Kim, J. Knight, R. Zoh, J. Goldsby, E. Callaway, I. Ivanov and **R.S. Chapkin**. Modulation of colonic stem cell microRNA expression by a chemoprotective diet. Presented at the ISSCR (International Society for Stem Cell Research) conference, Boston, MA, June 12-15, 2013.

243. R. Zoh, B. Mallick, R.J. Carroll, J.W. Lampe, M.A. Hullar, **R.S. Chapkin** and I. Ivanov. Probabilistic correlation analysis of the metagenome and host transcriptome: A tale of two non-normal data sets. Presented at the NIH Human Microbiome Science: Vision for the Future Meeting, Bethesda, MD, July 24-26, 2013.

244. S.M. Steelman, D.M. Hood, Y.Y. Fan, **R.S. Chapkin**, B.P. Chowdhary. Fish oil is a modulator of neutrophil function in chronic laminitis. Presented at the International Laminitis Conference, West Palm Beach, FL, November, 2013.

245. M.J. Allen, J.M. Monk, Y.Y. Fan, T. Hou, R. Barhoumi, D.N. McMurray and **R.S. Chapkin**. Modification of membrane composition decreases Th17 cell proliferation via the IL-6 signaling pathway. Presented at the FASEB Research Conference on Protein Lipidation, Signaling, and Membrane Domains, Saxton River, Vermont, July 14-19, 2013.

246. T.Y. Hou, R. Barhoumi, G.M. Rivera, D.N. McMurray and **R.S. Chapkin**. n-3 polyunsaturated fatty acids modulate lipid bilayer properties in primary mouse $CD4^+$ T cells. Presented at the FASEB Research Conference on Protein Lipidation, Signaling, and Membrane Domains, Saxton River, Vermont, July 14-19, 2013.

247. N.R. Fuentes and **R.S. Chapkin**. Determining the effects of lipophilic natural compounds on Ras activation using intramolecular FRET biosensors. Presented at the Texas A&M University System 11th Annual Pathways Student Research Symposium, Kingsville, TX, November 8, 2013.

248. V. DeClercq, J.M. Monk, Y.Y. Fan, D.N. McMurray and **R.S. Chapkin**. Dietary chemoprevention in obesity-related colorectal cancer. Presented at the Energy Balance in Cancer Prevention and Survivorship Meeting, Duncan Family Institute, MD Anderson Cancer Center, February 12, 2014.

249. E.J. Kim, L.A. Davidson, B.S. Patil, G.K. Jayaprakasha, E.S. Callaway, N.D. Turner and **R.S. Chapkin**. Effects of chemoprotective diets on crypt adult stem cells-the cells of origin of colon cancer. Presented at the Experimental Biology Meeting, San Diego, CA, April 26-30, 2014.

250. J. Allen, Y.Y. Fan, J.M. Monk, R. Barhoumi, D.N. McMurray and **R.S. Chapkin**. n-3 polyunsaturated acids reduce Th17 polarization by decreasing responsiveness to interleukin-6. Presented at the Experimental Biology Meeting, San Diego, CA, April 26-30, 2014.

251. T.Y. Hou*, R. Barhoumi, G.M. Rivera, D.M. McMurray and **R.S. Chapkin**. Lipophilic natural compounds (n-3 polyunsaturated fatty acids) modulate plasma membrane organization in mouse $CD4^+$ T cells. Presented at the Experimental Biology Meeting, San Diego, CA, April 26-30, 2014. *Winner of the 2014 American Society of Biochemistry & Molecular Biology Graduate Student Award.

252. K. Triff, R. Zoh, J. Knight, B. Zhou, I. Ivanov, and **R.S. Chapkin**. Epigenetic mechanisms by which chemoprotective natural compounds promote Wnt induction and reduce colon cancer progression. Presented at the Epigenetics & Chromatin Meeting, Cold Spring Harbor, September 9-13, 2014.

253. C.R. Martin, J.M. Knight, L.A. Davidson, D. Herman, J.S. Goldsby, I.V. Ivanov, S.M. Donovan, and **R.S. Chapkin**. Non-invasive nutrigenomic strategies to define intestinal host responses in the preterm infant. To be presented at the 17th International Society for Research in Human Milk and Lactation (ISRHML) Conference: From Human Milk Molecules to Population Health: Research Advances, Kiawah Island Golf Resort Kiawah Island, South Carolina, USA, October 23-27, 2014.

254. V.C. DeClercq, D.N. McMurray and **R.S. Chapkin**. Dysfunctional adipose tissue drives obesity-related colorectal cancer. Presented at Obesity Week, Boston, MA, November 2-7, 2014.

255. J.M. Knight, I. Ivanov, K. Triff, **R.S. Chapkin** and E.R. Dougherty. Detecting multivariate gene interactions in RNA-Seq data using optimal Bayesian classification. To be presented at the IEEE Global SIP14-workshop on Genomic Signaling Processing and Statistics, Atlanta, Georgia, December 3-5, 2014.

256. N.R. Fuentes, R. Barhoumi, I. Levental and **R.S. Chapkin**. Use of innocuous natural products to modulate membrane-cytoskeletal dependent Ras signaling. Presented at the Society for Toxicology Meeting, San Diego, CA, March 23-26, 2015.

257. S.M. Donovan, M.H. Monaco, J.M. Drnevich, L.A. Davidson, I. Ivanov, B. Lönnerdal and **R.S. Chapkin**. Programming of Intestinal Gene Expression by Mother's Milk: Evidence from Monkeys and Man. Presented at the Human Biology Association annual meeting, St. Louis, MO, March 25-26, 2015.

258. E. Kim, L.A. Davidson, B.S. Patil, G.K. Jayaprakasha, E.S. Callaway, N.D. Turner and **R.S. Chapkin**. Chemoprotective natural compounds targeting DNA damaged stem cells- the cells of origin of colon cancer. Presented at the Experimental Biology Annual Meeting, Boston, MA March 28- April 1, 2015.

259. K. Triff, J. Knight, I. Ivanov, B. Zhou and **R.S. Chapkin**. Epigenetic mechanisms by which natural chemoprotective natural compounds promote RXR/FXR signaling and reduce colon cancer progression. Presented at the Experimental Biology Annual Meeting, Boston, MA, March 28- April 1, 2015.

260. S. Athinarayanan, Y.Y. Fan, **R.S. Chapkin** and W. Liu. Role of fatty acid desaturase 1 (FADS1) in nonalcoholic liver disease (NAFLD). Presented at the 66th Annual Meeting of the American Association for the Study of Liver Diseases (AASLD), San Francisco, CA, November 13-17, 2015.

261. N.R. Fuentes, R. Barhoumi, I. Prior and **R.S. Chapkin**. Disruption of oncogenic Ras-driven dependencies using membrane targeted dietary bioactive (MTDBs). Presented at the NIH Ras Initiative Symposium, Frederick National Laboratory for Cancer Research, Frederick, MD, December 15-16, 2015.

262. A. Bahadorinejad, I. Ivanov, W. Qian, U. Braga-Neto and **R.S. Chapkin**. A Bayesian approach to the classification of microbial communities on rDNA16S sequencing data. Presented at the 3rd IEEE Global Conference on Signal & Information Processing, Orlando, FL, December 14-16, 2015.

263. **R.S. Chapkin**, V. DeClercq, L.A. Davidson and D.N. McMurray. Obesity promotes colonic stem cell expansion during cancer initiation. Presented at the 2016 Energy Balance and Cancer Research Retreat, M.D. Anderson Cancer Center, Houston Texas, January 26, 2016.

264. D.V. Seidel, J.R. Ford, R.J. Carroll, **R.S. Chapkin** and N.D. Turner. Epigenetic regulation of apoptosis in adult colon stem cells: Response to radiation and dietary interventions. Presented at the NASA Human Research Meeting, Galveston TX, February 8-11, 2016.

265. E. Kim, L.A. Davidson, M.E. Hensel, E.S. Callaway, N.D. Turner, B. Weeks and **R.S. Chapkin**. Rapidly cycling Lgr5^{+} stem cells are exquisitely sensitive to bioactive compounds that modulate colon cancer risk. Presented at the Keystone Stem Cells and Cancer Meeting, Breckenridge, CO, March 6-10, 2016.

266. S.M. Donovan, M. Wang, L.A. Davidson, I. Ivanov and **R.S. Chapkin**. Microbial modulation of the neonatal immune system: Lessons from infants and piglets. Presented at the Comparative Gut Physiology Program, American Society for Animal Science Joint Meeting, July 21, 2016.

267. K. He, J. Huang, X. Qian, S. Donovan, **R.S. Chapkin** and I. Ivanov. Sparse canonical correlation analyses of multimodal omics data. Presented at the Biomath 2016 conference, Blagoevgrad, Bulgaria, June 19, 2016.

268. U.H. Jin, Y. Cheng, M. Denison, A. Shoshilov, **R.S. Chapkin**, A. Jayaraman, C. Allred, L. Davidson and S. Safe. 1,4-Dihydroxy-2-Naphthoic Acid (1,4-DHNA) and related compounds as Ah receptor ligands: SARs. Presented at the AhR International Scientific Conference, Rochester, NY, August 3-6, 2016.

269. E. Kim, I. Ivanov, J. Hua, **R.S. Chapkin** & E.R. Dougherty. Model-based study of the effectiveness of reporting lists of small feature sets using RNA-Seq data. Presented at the 7th ACM Conference on Bioinformatics, Computational Biology, and Health Informatics conference, Seattle, WA, October 2-5, 2016.

270. C. Whitfield-Cargile and **R.S. Chapkin**. Non-invasive transcriptome is reflective of tissue-level transcriptome and reveals information related to microbiota-host interaction in a mouse model of NSAID enteropathy. Presented at the International Human Microbiome Consortium Congress (IMHC 2016), Houston, TX, November 9-11, 2016.

271. D. Seidel, K. Wahl, J. Ford, R. Carroll, **R.S. Chapkin** and N.D. Turner. Differential adult colon stem cell response to radiation source and dietary intervention. Presented at the NASA ASA Human Research Program Investigator's Workshop, January 23-27, 2017, Galveston, TX.

272. M.L. Salinas, N.R. Fuentes, R. Barhoumi and **R.S. Chapkin**. Dietary amphiphilic polyphenols modulate the biophysical properties of plasma membrane organization and membrane-dependent macropinocytosis. Presented at the American Associate for Cancer Research Annual Meeting, Washington D.C., April 1-5, 2017.

273. N.R. Fuentes, R. Barhoumi, M. Mlih, J. Karpac, P. Hardin, T. Steele, S. Behmer, I. Prior and **R.S. Chapkin**. Plasma membrane lipid therapy: Disruption of oncogenic Ras spatiotemporal organization by membrane targeted dietary bioactives (MTDB). Presented at the American Associate for Cancer Research Annual Meeting, Washington D.C., April 1-5, 2017.

274. E.L. Garcia-Villatoro, L.A. Davidson, E.S. Callaway, K.F. Allred, M.E. Hensel, A. Jayaraman, S. Safe, **R.S. Chapkin** and C.D. Allred. The aryl hydrocarbon receptor is a repressor of colorectal cancer development induced by a high-fat diet in mice. Presented at the Experimental Biology Annual Meeting, Chicago, IL, April 22-26, 2017.

275. **R.S. Chapkin**, E. Kim, L. Levy, L.A. Davidson, J.S. Goldsby, F.L. Miles, S.L. Navarro, T.W. Randolph, I. Ivanov, A.M. Kaz, C. Damman, D. Hockenbery, M.A. Hullar and J.W. Lampe. Microbial modification of colonic mucosal gene expression response to a flaxseed lignan extract intervention in humans. Presented at the Emerging Themes NIH microbiome workshop, Washington, D.C., August 16-18, 2017.

276. N.R. Fuentes, R. Barhoumi, M. Mlih, J. Karpac, P. Hardin, T. Steele, S. Behmer, I. Prior and **R.S. Chapkin**. Dietary bioactives disrupt oncogenic Ras spatiotemporal organization and reduce colon cancer risk. Presented at the Lone Star Society of Toxicology Meeting., Baylor University, Waco, TX, October 12, 2017.

277. U. Jin, Y. Cheng, H.J. Park, L.A. Davidson, E.S. Callaway, **R.S. Chapkin**, A. Jayaraman, A. Asante, C. Allred, E.A. Weaver and S. Safe. Synergistic interactions of Ah Receptor ligands and short chain fatty acids in colon-derived cells. Presented at the Lone Star Society of Toxicology Meeting., Baylor University, Waco, TX, October 12, 2017.

278. E.L. Garcia-Villatoro, L.A. Davidson, E.S. Callaway, K.F. Allred, M.E. Hensel, R. Menon, A. Jayaraman, S. Safe, **R.S. Chapkin** and C.D. Allred. Targeted deletion of the aryl hydrocarbon receptor in the colonic epithelium promotes the development of aberrant crypt foci in mice fed a high fat diet. Presented at the Cancer Prevention Research Institute of Texas Annual Meeting, Austin, TX, November 13-14, 2017.

279. U. Jin, H. Park, L.A. Davidson, B. Patil, G. Jayaprakasha, P. Tamamis, A.A. Ora, L. Mao, **R.S. Chapkin**, A. Jayaraman, C. Allred and S. Safe. Isoflavonoids as aryl hydrocarbon receptor agonists and antagonists: Structure-activity relationships. Presented at the Society of Toxicology Meeting., San Antonio, TX, March 10-15, 2018.

280. R. Fuentes, M. Mlih, R. Barhoumi, Y.Y. Fan, P. Hardin, T. Steele, S. Behmer, I.A. Prior, J. Karpac and **R.S. Chapkin**. Long chain n-3 fatty acids attenuate oncogenic Ras-driven proliferation by altering plasma membrane nanoscale proteolipid composition. Presented at the National Cancer Institute-American Society for Cell Biology subcellular to cellular cancer imaging workshop, Bethesda, MD, April 5-6, 2018.

281. E. Kuklinski, M. Horn, M. Milton, M.G. Maguire, G.S. Ying, M.C. Lin, **R.S. Chapkin** and P. Asbell. Association of systemic omega-3 fatty acids with dry eye signs and symptoms in the DRy Eye Assessment and Management (DREAM) study cohort at baseline. To be presented at the Association for Research in Vision and Ophthalmology (ARVO) meeting, Honolulu, HI, April 29 – May 3, 2018.

282. U.H. Jin, H. Park, X. Li, L.A. Davidson†, C. Allred, B. Patil, G. Jayaprakasha, A.A. Orr, L. Mao, **R.S. Chapkin**, A. Jayaraman, P. Tamamis and S. Safe. Structure-dependent modulation of aryl hydrocarbon receptor-mediated activities by flavones. Presented at the NIH Centers for Advancing Research on Botanicals and Other Natural Products (CARBON) Program Annual Meeting, NIH Campus, Bethesda, MD, May 21, 2018.

283. N.R. Fuentes, M. Mlih, R. Barhoumi, Y.Y. Fan, P. Hardin, T. Steele, S. Behmer, I.A. Prior, J. Karpac and **R.S. Chapkin**. Plasma membrane lipid therapy: Disruption of oncogenic KRas nanoscale proteolipid composition by membrane targeted dietary bioactives (MTDB). Presented at the International Society for the Study of Fatty Acids and Lipids (ISSFAL) Meeting, Las Vegas, NV, May 27-31, 2018.

284. E. Kim, N.R. Fuentes, M.L. Salinas, A. Erazo-Oliveras, M.J. George, R.S. Zoh, M.E. Hensel, B.S. Patil, G.K. Jayaprakasha, I. Ivanov, N.D. Turner, B.R. Weeks and **R.S. Chapkin**. Increased plasma membrane order associated with oncogenic Apc and Kras signaling promotes cell proliferation in colonocytes. Presented at the International Society for the Study of Fatty Acids and Lipids (ISSFAL) Meeting, Las Vegas, NV, May 27-31, 2018.

285. R. Menon, E.L. Garcia-Villatoro, R. Riodan, L.A. Davidson, E.S. Callaway, K.F. Allred, S. Safe, **R.S. Chapkin**, C.D. Allred and A. Jayaraman. Aryl hydrocarbon receptor modulates microbiome composition and colon aberrant crypt foci formation with high fat diet in a sex-dependent manner. Presented at the American Society for Microbiology (ASM) Microbe Meeting, Atlanta, GA, June 7-11, 2018.

286. N.R. Fuentes, M. Milh, R. Barhoumi, Y.Y. Fan, P. Hardin, T.J. Steele, S. Behmer, I.A. Prior, J. Karpac and **R.S. Chapkin**. Long chain n-3 fatty acids attenuate oncogenic KRas-driven proliferation by altering plasma membrane nanoscale proteolipid composition. Presented at the 8th Annual Postdoctoral Science Symposium (APSS), October 2, 2018, MD Anderson Cancer Center, Houston, Texas.

287. A. Erazo-Oliveras, N.R. Fuentes, M.L. Salinas, K.K. Landrock and **R.S. Chapkin**. Emerging role for membrane therapy in shaping aberrant Wnt signaling. Presented at the 8th Annual Postdoctoral Science Symposium (APSS), October 2, 2018, MD Anderson Cancer Center, Houston, Texas.

288. H. Han, L.A. Davidson, K.K. Landrock, G. Yoon, I. Ivanov, J.S. Goldsby, C.D. Allred, A. Jayaraman, S.H. Safe and **R.S. Chapkin**. Protective role of aryl hydrocarbon receptor in regulating colonic stem cell and progenitor cell homeostasis. Presented at the American Association for Cancer Research (AACR) Intestinal Stem Cells and Colon Cancer: Biology to Therapy Meeting, Washington, D.C., September 27-30, 2018.

289. A. Erazo-Oliveras, N.R. Fuentes, M.L. Salinas, K.K. Landrock and **R.S. Chapkin**. Emerging role for membrane therapy in shaping aberrant Wnt signaling. Presented at the American Association for Cancer Research (AACR) Intestinal Stem Cells and Colon Cancer: Biology to Therapy Meeting, Washington, D.C., September 27-30, 2018.

290. D. Zhao, M. Kogut, K. Genovese, L.A. Davidson, **R.S. Chapkin**, M. Farnell and Y. Farnell. Establishment of three-dimensional organoids from chicken cecal crypts. Presented at the Symposium on Gut Health in Production of Food Animals, St. Louis, MO, November 5-7, 2018.

291. N.R. Fuentes, M. Mlih, J. Karpac, I. Corbin, and **R.S. Chapkin**. Remodeling of plasma membrane proteolipid composition by environmental chemicals and membrane-targeted dietary bioactives. Presented at the 58th Annual meeting of the Society of Toxicology (SOT), Baltimore, MD, March 10-14, 2019.

292. N.R. Fuentes, M. Mlih, R. Barhoumi, Y.Y. Fan, P. Hardin, T. Steele, S. Behmer, I. Prior, J. Karpac and **R.S. Chapkin**. Utilizing Drosophila to explore the role of dietary lipids in shaping EGFR/Ras signaling by altering plasma membrane nanoscale proteolipid composition. Presented at the 60th Annual Drosophila Research Conference - Genetics Society of America, Dallas, TX March 27-31, 2019.

293. H. Han, L.A. Davidson, Y.Y. Fan, J.S. Goldsby, G. Yoon, G.A. Wright, K.K. Landrock, B.R. Weeks, C.D. Allred, A. Jayaraman, I. Ivanov, J. Roper, S. H. Safe and **R.S. Chapkin**. Loss of aryl hydrocarbon receptor potentiates FoxM1 signaling to enhance self-renewal of colonic stem cell and progenitor cells. Presented at the American Institute for Cancer Research (AICR) 2019 Research Conference- Diet, Obesity, Physical Activity and Cancer - Beyond the Blueprint, University of North Carolina, Chapel Hill, NC, May 15-17, 2019.

294. Y.Z. Farnell, D. Zhao, M. Kogut, K. Genovese, L.A. Davidson and **R.S. Chapkin**. Development and establishment of organoid biobanking: long-term *ex vivo* cultures for three-dimensional organoids from chicken intestinal crypts. Presented at the Poultry Science Association (PSA) Annual Meeting, Montreal, Quebec, Canada, July 15-18, 2019.

295. A. Erazo-Oliveras, N.R. Fuentes, M.L. Salinas, K.K. Landrock and **R.S. Chapkin**. Dysregulation of plasma membrane homeostasis by mutant APC alters Wnt receptor spatial dynamics and drives aberrant Wnt signaling. Presented at the FASEB Gastrointestinal Tract XVIII Conference: Integrated biology of the GI super-organ, July 28-August 2, 2019.

296. H. Han, L.A. Davidson, Y.Y. Fan, J.S. Goldsby, G. Yoon, G.A. Wright, K.K. Landrock, B.R. Weeks, C.D. Allred, A. Jayaraman, I. Ivanov, J. Roper, S.H. Safe and **R.S. Chapkin**. Loss of aryl hydrocarbon receptor potentiates FoxM1 signaling to enhance self-renewal of colonic stem cell and progenitor cells. Presented at the FASEB Gastrointestinal Tract XVIII Conference: Integrated biology of the GI super-organ, July 28-August 2, 2019.

297. M.S. Salinas, N.R. Fuentes, R. Choate, D.N. McMurray and **R.S. Chapkin**. Adiponectin modulates membrane biophysical properties which may contribute to a reduction in colon cancer risk. Presented at the FASEB Gastrointestinal Tract XVIII Conference: Integrated biology of the GI super-organ, July 28-August 2, 2019.

298. J.A. DeLuca, A. Ufondu, F. Yang, R. Menon, M. Hensel, K.K. Landrock, K.F. Allred, S. Safe, **R.S. Chapkin**, A. Jayaraman and C.D. Allred. Loss of AhR in intestinal epithelial cells does not increase colon tumor formation, but increases beta-catenin expression and nuclear localization and changes in bacterial populations. Presented at the FASEB Gastrointestinal Tract XVIII Conference: Integrated biology of the GI super-organ, July 28-August 2, 2019.

299. H. Han, L.A. Davidson, Y.Y. Fan, J.S. Goldsby, G. Yoon, G.A. Wright, K.K. Landrock, B. Weeks, C.D. Allred, A. Jayaraman, I. Ivanov, J. Roper, S.H. Safe and **R.S. Chapkin**. Loss of aryl hydrocarbon receptor potentiates self-renewal of colonic stem and progenitor cells. Presented at the Bioactives, Botanicals and Redox Mechanisms meeting, Oregon State University, Corvallis, OR, August 14-16, 2019.

300. N.R. Fuentes, M. Mlih, G. Webster, J. Karpac, I. Corbin and **R.S. Chapkin**. Elucidating the impact of environmental chemicals and membrane-targeted dietary bioactives on EGFR nanocluster formation. Presented at the Lone Star Chapter of the Society of Toxicology 2019 Fall Meeting. Toxicology: A Multi-Disciplinary Translational Science. University of Texas Medical Branch, Galveston, Texas, November 14-15, 2019.

301. X. Wang, Y.Y. Fan, Z. Liu, **R.S. Chapkin** and W. Liu. Reduced fatty acid desaturase 1 function alters glucose metabolism and leads to hepatic stellate cell activation. To be presented at the American Society for Biochemistry and Molecular Biology Deuel Conference on Lipids, Coronado, CA, March 3-6, 2020. (Meeting cancelled, Covid-19).

302. M.L. Salinas, N.R. Fuentes, X. Wang, Y.Y. Fan, E.S. Callaway, K. Landrock, D.N. McMurray, and **R.S. Chapkin**. High-fat diet-induced obesity modulates colonic $Lgr5^{+}$ stem cell homeostasis by dysregulating plasma membrane organization. To be presented at the American Society for Nutrition meeting, Seattle, WA, May 30- June 2, 2020. (Meeting cancelled, Covid-19).

303. S.L. Navarro, L. Levy, T.W. Randolph, L. Bettcher, N. Ngyen, F.C. Neto, D. Raftery, **R.S. Chapkin**, J.W. Lampe[1], M.A.J. Hullar. Effect of a flaxseed lignan intervention on plasma bile acids in a randomized, crossover trial. To be presented at the American Society for Nutrition meeting, Seattle, WA, May 30- June 2, 2020. (Meeting cancelled, Covid-19).

304. A. Erazo-Oliveras, M. Mlih, M.L. Salinas, K.K. Landrock, R.C. Wright, J. Karpac and **R.S. Chapkin**. A novel role for APC in coupling changes in plasma membrane organization with dysregulation of WNT receptor activity during colon cancer initiation. To be presented at the Biophysical Society Molecular Biophysics of Membranes conference, Lake Tahoe, CA, June 7-12, 2020. (Meeting cancelled, Covid-19).

305. M.L. Salinas, N.R. Fuentes, R. Choate, K.H. Jung, R.C. Wright and **R.S. Chapkin**. AdipoRon attenuates WNT signaling by reducing cholesterol-dependent plasma membrane rigidity. To be presented at the Biophysical Society Molecular Biophysics of Membranes conference, Lake Tahoe, CA, June 7-12, 2020. (Meeting cancelled, Covid-19).

306. A. Erazo-Oliveras, M. Mlih, M. Munoz-Vega, E. Kim, M.L. Salinas, S. Wang, K. Landrock, J. Roper, J. Karpac and **R.S. Chapkin**. Oncogenic APC enhances Wnt signaling by reshaping cholesterol-dependent plasma membrane organization. Presented at the NIH Professional Development Workshop and Mentored Mock Review Meeting, July 20-21, 2021.

307. K. Mohankumar, **R.S. Chapkin** and S. Safe. A novel nuclear receptor 4A1 (NR4A1) antagonist attenuates T-cell exhaustion in colorectal cancer. Presented at Society of Immunotherapy & Cancer (SITC) 36th Annual Meeting & Preconference Programs, Washington, D.C, November 10-14, 2021.

308. M. Munoz-Vega, A. Erazo-Oliveras, M.L. Salinas, X. Wang, J.S. Goldsby and **R.S. Chapkin**. Apc mutant colonocyte endomembranes accumulate unesterified cholesterol as assessed by RNAseq and confocal microscopy. Presented at the American Society of Biochemistry and Molecular Biology (ASBMB) Deuel Conference on Lipids, Monterey, CA, March 1-4, 2022.

309. M.L. Salinas, N.R. Fuentes, X. Wang, A. Erazo-Oliveras, R. Choate, R.C. Wright and **R.S. Chapkin**. AdipoRon attenuates Lgr5^{+} stem cell Wnt signaling and oncogenic APC-driven polyp formation by reducing cholesterol-dependent plasma membrane rigidity and Wnt nanocluster formation. Presented at the American Society of Biochemistry and Molecular Biology (ASBMB) Deuel Conference on Lipids, Monterey, CA, March 1-4, 2022.

310. A. Erazo-Oliveras, M. Mlih, M. Muñoz-Vega, E. Kim, R.C. Wright, M.L. Salinas, X. Wang, Kerstin K. Landrock, J. Roper, J. Karpac and **R.S. Chapkin**. Orthogonal model analyses reveal a novel role of mutant APC and n3-PUFA in reshaping cholesterol-dependent Wnt nanocluster structure-function and feedforward amplification of oncogenic β-catenin. Presented at the American Society of Biochemistry and Molecular Biology (ASBMB) Deuel Conference on Lipids, Monterey, CA, March 1-4, 2022.

311. K. Mohankumar, G. Wright, S. Kumaravel, R. Shrestha, L. Zhang, M. Abdelrahim, **R.S. Chapkin**, and S. Safe. Nuclear receptor 4A1 ligands target T-cell exhaustion in colorectal cancer. Presented at the American Association for Cancer Research Annual Meeting, Apr 8-13, 2022. Philadelphia (PA): AACR; Cancer Res 2022;82(12_Suppl):Abstract nr 236.

312. S. Safe, H. Han, Y. Yan, A. Jayaraman, L.A. Davidson, C.D. Allred, I. Ivanov, J.J. Cai and **R.S. Chapkin**. Aryl hydrocarbon receptor (AhR) signaling in colonic cells and tumors. Presented at the AhR Symposium, Penn State University, June 19-23, 2022.

313. X. Wang, Y.Y. Fan, Z. Peng, Y. Zhang, Z. Long, G. Heravi, Z. Liu, **R.S. Chapkin** and W. Liu. Role of fatty acid desaturase 1 (FADS1) in non-alcoholic fatty liver disease (NAFLD). Presented at the Society for Chinese Bioscientists in America (SCBA) meeting, Boston, MA, June 19-23, 2022.

314. M. Munoz-Vega, A. Erazo-Oliveras, M.L. Salinas, X. Wang, J.S. Goldsby and **R.S. Chapkin**. Endomembranes accumulate unesterified cholesterol in Apc mutant models and humans with CRC as assessed by RNAseq and confocal microscopy. Presented at the Precision Prevention, Early Detection, and Interception of Cancer meeting, American Association for Cancer Research (AACR), Austin, TX, November 17-19, 2022. Cancer Prevention Research 16:1 Supplement: P016, 2023. https://doi.org/10.1158/1940-6215.PrecPrev22-P016

315. A. Erazo-Oliveras, M. Mlih, M. Muñoz-Vega, E. Kim, R.C. Wright, M.L. Salinas, X. Wang, K.K. Landrock, J. Roper, J. Karpac and **R.S. Chapkin**. A novel role of mutant APC and n3-PUFA in reshaping cholesterol-dependent Wnt pathway-associated proteolipid nanocluster organization and signaling in colorectal cancer. Presented at the Precision Prevention, Early Detection, and Interception of Cancer meeting, American Association for Cancer Research (AACR), Austin, TX, November 17-19, 2022. Cancer Prevention Research 16:1 Supplement: P014, 2023. https://doi.org/10.1158/1940-6215.PrecPrev22-P014

316. K.F. Allred, E.L. Garcia-Villatoro, J. DeLuca, V. Tepe, Z. Bomstein, A. Ufondu, S.H. Safe, **R.S. Chapkin**, A. Jayaraman and C.D. Allred. Aryl hydrocarbon receptor and its ligands influence the formation of colonic tertiary lymphoid tissues. To be presented at the American Association for Cancer Research Annual Meeting, Orlando, FL, April 14-19, 2023. Cancer Res 2023;83(7_Suppl):Abstract nr 3443.

317. Y. Yang, G. Li, Y. Zhong, Q. Xu, B.J. Chen, Y.T. Lin, **R.S. Chapkin** and J.J. Cai. Gene knockout inference via variational graph autoencoder learning for single-cell gene regulatory networks. Presented at the RECOMB 2023 (27th Annual International Conference on Research in Computational Molecular Biology), Istanbul, Turkey, April 16-19, 2023.

318. M.L. Salinas, N.R. Fuentes, X. Wang, and **R.S. Chapkin**. AdipoRon attenuates *Lgr5*$^{+}$ stem cell Wnt signaling and oncogenic *APC*-driven colonic polyp formation by reducing cholesterol-dependent plasma membrane rigidity and *Wnt* nanocluster formation. Presented at CPRIT Innovations in Cancer Prevention and Research Conference, Galveston, Texas, October 2-3, 2023.

319. A. Erazo-Oliveras, M. Munoz-Vega, M. Mlih, V. Thiriveedi, J. Roper and **R.S. Chapkin**. Novel role of mutant APC in reshaping cholesterol-dependent Wnt signaling nanocluster structure-function and feedforward amplification of oncogenic β-catenin during colorectal cancer development. Presented at the CPRIT Innovations in Cancer Prevention and Research Conference, Galveston, Texas, October 2-3, 2023.

320. D. Ackley, K. Widrick, K Jarvinen-Seppo, S. Sonawane, D.A Mullens, J.S Goldsby, I. Ivanov, L.A. Davidson, **R.S. Chapkin** and B. Young. Infants breastfed by mothers with mild insulin resistance exhibit differences in intestinal gene expression suggesting alterations in immune development. Presented at the Pediatric Academic Societies (PAS) meeting, Toronto, Canada, May 2-6, 2024.

321. W. Mei, K. Widrick, S. Sonawane, G. Black, D.A. Mullens, J.S. Goldsby, I. Ivanov, L.A. Davidson, **R.S. Chapkin** and B. Young. Intestinal expression of growth factors is lower in infants consuming glucose-containing formula compared to lactose-based formula and breastfeeding – a pilot study. Presented at the Pediatric Academic Societies (PAS) meeting, Toronto, Canada, May 2-6, 2024.

322. D. Moosavi, D. Mullens, L. Levy, S.L. Navarro, L.A. Davidson, I.V. Ivanov, D. Rafferty, J.W. Lampe, **R.S. Chapkin** and M.A.J. Hullar. A randomized pilot study of the combined Effects of fish oil and fermentable dietary fiber on the gut microbiome. Presented at the American Society for Nutrition meeting, Chicago, IL, June 29-July 2, 2024.

323. M.L. Salinas, B.K. Mulakala, L.A. Davidson, S.M. Donovan, **R.S. Chapkin** and L. Yeruva. Single-cell RNA sequencing reveals that breastfeeding shapes IL-4 and IL-13 signaling in neonatal peripheral blood mononuclear cells. Presented at the American Society for Nutrition meeting, Chicago, IL, June 29-July 2, 2024.

324. B.K. Mulakala, M.L. Salinas, J.R. Rearick, B. Onyewell, M. Gurung, M.L. Ruebel, J. Dada-Fox, J.A Zeledon, R. Talatanne, L. A. Davidson, **R.S. Chapkin**, S.M. Donovan and L. Yeruva. Human milk oligosaccharides and *Bifidobacteria infantis* interactively shape mouse splenic immune responses. Presented at the American Society for Nutrition meeting, Chicago, IL, June 29-July 2, 2024.

325. S. Romero, S. Gupta, V. Gatlin, **R.S. Chapkin** and J.J. Cai. Enhancing Single-cell RNA-seq Feature Selection using Quantum Annealing-Empowered Quadratic Unconstrained Binary Optimization (QUBO). Presented at the 2024 International Conference on Intelligent Biology and Medicine (ICIBM 2024), Houston, TX, October 10-12, 2024.

326. A.J. Clevenger, M.L. Salinas, **R.S. Chapkin**, J. Cai and S.A. Raghavan. Transcriptomic mechano-immunology landscape in colorectal cancer in response to peristalsis. To be presented at the 2025 Cellular and Molecular Bioengineering Conference, Carlsbad, CA, January 3-6, 2025.

INVITED EXTRAMURAL SEMINARS

1. Presented seminar entitled "Phospholipid alteration in the HDL of patients following dialysis", Nutrition Graduate Group, University of California, Davis, CA. January 31, 1983.

2. Presented seminar entitled "Significance of dietary polyunsaturated fatty acids in cutaneous biology", Nutrition Graduate Group, University of California, Davis, CA. September 29, 1986.

3. Presented seminar entitled "Essential fatty acid metabolism in the macrophage", Department of Human Anatomy, University of California, Davis, CA. November 30, 1987.

4. Presented seminar entitled "Essential Fatty Acid Metabolism in the Skin", School of Dietetics and Human Nutrition, Macdonald College of McGill University, Montreal, Canada. October 14, 1987.

5. Presented seminar entitled "Essential Fatty Acid Metabolism in the Macrophage", Department of Foods and Nutrition, University of Alberta, Alberta, Canada. April 18, 1988.

6. Presented seminar entitled "Utilization of EFA by Macrophages", Research and Development Department, The Proctor & Gamble Company. May 24, 1988.

7. Presented seminar entitled "The ability of dietary lipids to influence macrophage metabolism", Department of Biochemistry, School of Medicine, Emory University, Atlanta, GA. June 6, 1988.

8. Presented seminar entitled "The Effect of Polyunsaturated Fatty Acids on Macrophage Function", Kraft, Inc., Technology Center, Glenview, IL. June 27, 1988.

9. Presented seminar entitled "Eicosanoids and macrophage metabolism", Department of Nutritional Sciences Rutgers University, New Brunswick, NJ. August 15, 1988.

10. Presented seminar entitled "Effects of Dietary Manipulation on Prostaglandin Metabolism", Department of Animal Science, Texas A&M University, College Station, TX. February 3, 1989.

11. Presented seminar entitled "Modulation of Carcinogenesis by Dietary Fatty Acids: Potential Role of Eicosanoids", Environmental Toxicology and Pharmacology Department, Texas A&M University, College Station, TX. February 5, 1990.

12. Presented seminar entitled "Effect of dietary n-3 fatty acids on macrophage phospholipid/eicosanoid metabolism and function", Department of Pathology, School of Veterinary Medicine, University of Guelph, Guelph, Ontario, Canada. December 13, 1990.

13. Presented seminar entitled "Effect of dietary lipids on cell signal transduction", American Health Foundation, Valhalla, NY. January 7, 1991.

14. Presented seminar entitled "The great health food store rip-off", Department of Student Health Services, Texas A&M University, College Station, TX. April 3, 1991.

15. Presented seminars entitled "Colonic cytokinetics and cell signaling: dietary effects" and "Diet modulation of macrophage anti-atherogenic potential," Hamilton Civic Hospitals Research Centre, Hamilton, Ontario, Canada, November 5-6, 1992.

16. Presented seminar entitled "Diet and colonic cell signaling," University of Illinois at Chicago, Department of Nutritional Sciences, Chicago, IL, November 12, 1992.

17. Presented keynote address entitled "Dietary modulation of colonic cell proliferation and signal transduction," Texas Carcinogenesis Meeting IX, Nutritional and Genetic Approaches to Cancer Prevention. M.D. Anderson Cancer Center, University of Texas, February 5, 1993.

18. Presented seminar entitled "Diet modulation of colonocyte intracellular signal transduction," Department of Nutritional Sciences, Faculty of Medicine, University of Toronto, Ontario, Canada, January 19, 1994.

19. Presented seminar entitled "Nutrition and the college student," A.P. Beutel Health Center, Department of Student Health Services, Texas A&M University, February 12, 1994.

20. Presented seminar entitled "Diet modulation of colonocyte signal transduction," the University of Texas at Austin Nutritional Sciences Seminar Series, March 25, 1994.

21. Presented seminar entitled "Effects of diet and carcinogen on colonic intracellular signal transduction," Department of Nutritional Sciences, University of Guelph, Canada, February 24, 1995.

22. Presented seminar entitled "Dietary modulation of colonic intracellular signal transduction: Relevance to colon cancer," Centro De Biologia Molecular, Universidad Autonoma, Madrid, Spain, June 27, 1995.

23. Presented keynote address entitled "Select dietary fats and fibers block carcinogen-induced alterations of colonic intracellular second messengers," American Institute for Cancer Research Annual Research Conference on "Dietary Fat and Cancer: Genetic and Molecular Interactions," Washington, D.C., August 29, 1996.

24. Presented seminar entitled "Modulation of intracellular second messengers by dietary fat during tumor development in rat colon," Center for Nutritional Sciences, University of Florida, Gainesville, FL, October 24, 1996.

25. Presented seminar entitled "Modulation of colonic epithelial programmed cell death by diet," Purdue University Cancer Research Center, West Lafayette, IN, April 30, 1997.

26. Presented seminar entitled "Select dietary lipids block carcinogen-induced changes in colonic epithelial proliferation and apoptosis," Sealy Cancer Center for Oncology and Hematology, University of Texas Medical Branch, Galveston, TX, May 9, 1997.

27. Presented seminar entitled "Putative mechanisms by which dietary n-3 PUFAs reduce colon cancer risk," Graduate Faculty of Nutrition, University of Illinois, Champaign, IL, November 12, 1997.

28. Presented seminar entitled "Dietary modulation of colonocyte signal transduction," Department of Cell Biology, University of Texas M.D. Anderson Cancer Center, Houston, TX, December 16, 1997.

29. Presented keynote address entitled “Cell proliferation and apoptosis in rodent species: Modulation by diet” at the 8th Annual Research Conference on Colon Cancer Prevention and Dietary Modulation of Cellular and Molecular Mechanisms, American Institute for Cancer Research, September 4, 1998.

30. Co-chaired mini-symposium on “Lipid and Fatty Acid Metabolism and Transport I” and presented overview seminar entitled “Dietary lipids - molecular mechanisms of action” at the Experimental Biology 99 Meeting, Washington, D.C., April 19, 1999.

31. Presented continuing education course entitled “Molecular mechanisms in the prevention of carcinogenesis: Role of diet” at the XXXVII European Congress of Toxicology, Oslo, Norway, June 27, 1999.

32. Presented a seminar entitled “Diets high in n-3 polyunsaturated fatty acids reduce the formation of DNA adducts during the initial stages of colon tumorigenesis” at the Paterson Institute for Cancer Research, Christie Hospital Trust, Manchester, U.K., July 1, 1999.

33. Presented an invited seminar entitled “Dietary n-3 polyunsaturated fatty acids alter the subcellular localization of oncongenic ras: colon cancer implications” at the Department of Biology, Indiana University - Purdue University at Indianapolis, September 17, 1999.

34. Presented an invited seminar entitled “How does dietary fish oil reduce colon cancer risk?” at the Department of Agricultural, Food and Nutritional Science and Department of Medicine, March 1, 2000 at the University of Alberta, Edmonton, Canada.

35. Presented invited seminars entitled "n-3 PUFA: Too good to be true?" and "Dietary GLA retards atherogenic progression" at the 2000 American Oil Chemists Meeting, April 25, 26, San Diego, CA.

36. Presented an invited seminar entitled “Diet modulation of apoptosis” at the NIAID, NCCAM, NIH – sponsored meeting on “The importance of omega-3 fatty acids in the attenuation of immune-mediated diseases", September 18, 2000, Bethesda, MD.

37. Presented an invited seminar entitled "Antitumorigenic properties of marine oils", Department of Nutrition, School of Medicine, University of North Carolina, Chapel Hill, April 19, 2001.

38. Presented an invited seminar entitled "n-3 PUFA modulation of cell membranes: Effect on cell function", at the Cellular and Molecular Aspects of Omega-3 Fatty Acids and Cancer meeting, June 28-30, 2001, Breckenridge, CO.

39. Presented an invited seminar entitled "Dietary PUFAs: Molecular mechanisms of action". Nutracon, 2001. San Diego, CA. July 10, 2001

40. Presented an invited seminar entitled "Response of colonocytes to dietary intervention" at the Albert Einstein College of Medicine and Cancer Center, Montefiore Hospital, New York, December 19, 2001.

41. Presented invited talk entitled "Noninvasive detection of colon cancer biomarkers" at the Activities to Promote Research Collaborations (APRC) Workshop, Division of Cancer Biology, NCI, January 8, 2002.

42. Presented invited talk entitled "Chemopreventive properties of n-3 PUFA - New perspectives in signal transduction", Department of Food Science and Human Nutrition, Colorado State University, Fort Collins, CO, July 15, 2002.

43. Presented invited talk entitled "Diet and colon cancer, mechanisms of action", Naylor Dana Institute for Disease Prevention, Valhalla, NY, January 10, 2003.

44. Presented invited talk entitled, "Can diet modulate oxidative susceptibility in the colon", American Gastrointestinal Association Annual Meeting, Orlando, FL., May 18, 2003.

45. Presented invited talk entitled, "Changes in gene expression in exfoliated cells: role of bioactive food components", at the NIH Exfoliated Cells, Bioactive Food Components and Cancer Prevention Workshop, Bethesda, MD. May 23, 2003.

46. Presented invited talk entitled, "Molecular mechanisms of n-3 (PUFA)-induced modulation", at the FASEB Summer Conference on the Impact of Nutritional Status on Immune Functions and Health, Saxtons River, VT, July 5-10, 2003.

47. Presented invited talk entitled "Efficacy of n-3 PUFA as a chemotherapeutic agent", Department of Nutrition, University of Tennessee, Knoxville, TN, November 5, 2003.

48. Presented invited talk entitled "Dietary lipids in colon cancer prevention: Mechanisms of action", Fred Hutchinson Cancer Research Center, Division of Public Health Science, Seattle, WA, November 12, 2003.

49. Presented invited talk entitled “Chemopreventive Lipids: Molecular Mechanisms of Action”, Western Human Nutrition Research Center, University of California-Davis, CA April 26, 2004.

50. Presented invited talk entitled “Dietary lipids and colon cancer: a fishy perspective”, Comprehensive Cancer Center, The Ohio State University, Columbus, OH June 11, 2004.

51. Presented invited talk entitled “Dietary lipids and colon cancer” Department of Physiology, University of Liverpool, Liverpool, England, July 14, 2004.

52. Presented invited talk entitled “Dietary modulation of intestinal membrane structure and function”. Institute for Molecular Biosciences, University of Queensland, Brisbane, Australia, August 11, 2004.

53. Presented invited talk entitled Dietary lipids, chronic inflammation and colon cancer: an n-3 PUFA perspective.” Mead Johnson Nutritionals, Evansville, IN, January 7, 2005.

54. Presented an invited talk entitled “Chemoprotective/anti inflammatory fatty acids: implications of lipid microdomains”. Department of Nutrition, University of North Carolina, Chapel Hill, NC May 19, 2005.

55. Presented invited talk entitled “Noninvasive profiling of intestinal gene expression by targeting exfoliated cells.” Division of Gastroenterology, Scott & White Hospital, Texas A&M Health Science Center, Temple, TX, September 27, 2005.

56. Presented an invited talk entitled “Docosahexaenoic acid: an important membrane-altering omega-e fatty acid” at the Omega-3 Fatty Acids: From Bench to Bedside Symposium, University of Guelph, Guelph, Ontario, Canada, October 21, 2005.

57. Presented an invited talk entitled “Membrane altering properties of omega-3 fatty acids” at the Signaling Defects in Aging Immune Cells Symposium, NIH, October 24-25, 2005.

58. Presented an invited talk entitled “How folic acid protects colon cells from cancer” at the Center for Environmental and Rural Health symposium on “Folic acid: from prevention to intervention. How a B-vitamin can impact human health”, Texas A&M University, College Station, TX, December 16, 2005.

59. Presented an invited talk entitled “Why are Omega -3 fatty acids chemo-protective?” at the M.D. Anderson Cancer Center, Integrative Medicine Program Lecture Series, February 16, 2006.

60. Presented an invited talk entitled “Effects of dietary n-3 PUFA on T-cell membrane composition and function: a unifying hypothesis, at the Experimental Biology meeting symposium on “Dietary lipids and cell membrane structure/function in immunity and inflammation”, April 2, 2006, San Francisco, CA.

61. Presented an invited talk entitled “n-6 and n-3 polyunsaturated fatty acids and cancer” at the 97th Annual American Oil Chemists’ Society meeting, St. Louis, MO, May 3, 2006.

62. Presented an invited talk entitled “Inflammation link to colon cancer” at the Department of Dermatology, School of Medicine, University of California-Davis, June, 26, 2006.

63. Presented an invited talk entitled “"Immunomodulatory effects of omega-3 fatty acids: Putative link to inflammation and colon cancer” at the American Institute for Cancer Research International Conference, Washington, D.C., July 13-14, 2006.

64. Presented an invited talk entitled “Fatty acids and colon cancer: novel mechanisms of action” at the Children’s Nutrition Research Center (CNRC), Baylor College of Medicine, Houston, TX, October 12, 2006.

65. Presented an invited talk entitled “Colon genomics, a non-invasive approach”, at the Texas Medical Center Digestive Diseases Center, GI Research Forum, Baylor College of Medicine, Houston, TX, October 12, 2006.

66. Presented an invited talk entitled “Promoting Apoptosis as a Strategy for Dietary/Chemoprevention of Cancer”, at the Department of Biochemistry and Microbiology, Marshall University School of Medicine, Huntington, WV, March 30, 2007.

67. Presented an invited talk entitled “Bioactive dietary long chain fatty acids: Emerging mechanisms of action”, at the International Congress on Conjugated Linoleic acid (CLA): From Experimental Models to Human Application. Villasimius, Italy, September 22, 2007.

68. Presented an invited talk entitled “Dietary EPA/DHA: Emerging mechanisms of action” at the Long Chain Omega-3 conference, OmegaPure, Houston, TX, November, 15, 2007.

69. Presented an invited talk entitled “Intestinal homeostasis, inflammation and neoplasia: Dietary chemoprevention strategies” at the Cancer Prevention Fellowship Program, Gene Regulation Section, Office of Preventive Oncology, National Cancer Institute, NIH, Frederick, MD, February 13, 2008.

70. Presented an invited talk entitled "Dietary chemoprevention strategies" at the University of Alabama-Birmingham Comprehensive Cancer Center, May 5, 2008.

71. Presented an invited talk entitled "Combination chemotherapy in the colon: Can the efficacy of fish oil be enhanced?, at the International Society for the Study of Fatty Acids & Lipids Meeting, Kansas City, MO, May 17-22, 2008.

72. Presented an invited talk entitled "Intestinal homeostasis and neoplasia: Dietary chemoprevention strategies" at the Canadian Society for Nutritional Society (CSNS) meeting in Toronto, Canada, May 29-31, 2008.

73. Presented an invited talk entitled "Docosahexaenoic acid: An emerging mediator of inflammation" at the Martek Workshop on DHA as a Required Nutrient in Baltimore, MD, June 20-21, 2008.

74. Presented an invited talk entitled "Omega-3 fatty acids and cancer prevention" at the American Institute for Cancer Research (AICR) Research Conference on Food Nutrition, Physical Activity and Cancer, Washington, D.C., November 6-7, 2008.

75. Presented an invited talk entitled "How do n-3 PUFA suppress chronic inflammation?: Mechanisms of action" at the 2nd International Zone Conference on "Anti-inflammatory Medicine", Cancun, Mexico, November 12-15, 2008.

76. Presented an invited talk entitled "Cancer and inflammation: chemoprotective effects of n-3 polyunsaturated fatty acids" at the ILSI North America Meeting, Tucson, Arizona, January 19-21, 2009.

77. Presented an invited talk entitled "Cancer and inflammation: Chemoprotective effects of n-3 PUFA" at the University of North Carolina at Chapel Hill, Gillings School of Global Public Health, Department of Nutrition and the Lineberger Cancer Center, March 3, 2009.

78. Presented an invited talk entitled "Enabling personalized cancer medicine through non-invasive analysis of gene-expression patterns" at the University of Texas MD Anderson GI Research Seminar Series, Houston, Texas, April 9, 2009.

79. Presented an invited talk entitled "Anti-inflammatory properties of n-3 polyunsaturated fatty acids – Old concepts and new insights" at the Pediatric Academic Societies Annual Meeting, Baltimore, MD, May 4, 2009.

80. Presented an invited talk entitled "Fatty acids, lipid rafts and cell signaling" at the Fatty Acids in Cell Signaling meeting, Keble College, Oxford University, UK, July 14, 2009.

81. Presented an invited talk entitled "Modulation of non-coding RNA signatures: Cancer chemoprevention implications" at the "Dietary regulation of microRNA expression and cancer prevention symposia, Experimental Biology Meeting Annual Meeting, Anaheim, CA, April 25, 2010.

82. Presented an invited talk entitled "The protective role of diet in mediating oxidative stress and apoptosis in the colon" at the Department of Cellular and Structural Biology, Barshop Aging

Institute, University of Texas Health Science Center, San Antonio, TX, Tuesday, May 11, 2010.

83. Presented an invited talk at the "Nutritional Solutions to Cancer" Symposium at the Canadian Nutrition Society Annual Meeting, Edmonton, Alberta, June 4, 2010.

84. Presented an invited talk as part of the Sonia Wolf Wilson Lectureship entitled "Cancer Biology - Complex role of dietary lipids", Department of Nutritional Sciences, University of Texas at Austin, September, 17, 2010.

85. Presented an invited talk entitled "Integrated microRNA and mRNA expression profiling in a colon carcinogenesis model: Effect of a chemoprotective diet", Department of Food Science and Nutrition, University of Minnesota, St. Paul, MN, December 14, 2010.

86. Presented an invited talk entitled "Regulatory activity of PUFAs in T cell signaling" at the Symposia for Metabolic Regulation and Immune Cells: Implication for Chronic and Infectious Diseases, Experimental Biology Meeting, Washington D.C., April 11, 2011.

87. Presented an invited talk entitled "Lipid rafts and immune function" at the Nutritional Immunology: Role in Health and Disease FASEB Summer Research Conference, Carefree, AZ, July 11, 2011.

88. Presented an invited talk entitled "Polyunsaturated fatty acids and their impact on the immune system" at the Linus Pauling Institute conference on "Diet and Optimum Health", Oregon State University, Corvalis, OR, September 14, 2011.

89. Presented an invited talk entitled "Molecular mechanisms of chemoprotective properties of n-3 fatty acids: New insights" at the American Institute for Cancer Research Conference, Washington, D.C., November 3-4, 2011.

90. Presented an invited talk entitled "Novel mechanistic insights into the actions of n-3 PUFA on mucosal biology" at the 10th Fatty Acids in Cell Signaling Meeting, Louisiana State University Health Sciences Center, New Orleans, LA, November 8, 2011.

91. Presented an invited talk entitled "Teaming with Engineers to make sense of nutrition genomic data" at the Institute for Genomic Biology, University of Illinois, Champaign, IL, April 3, 2012.

92. Presented an invited talk entitled "Dietary chemoprevention: How to get to the 4th percentile" at the University of Tennessee, College of Veterinary Medicine, Knoxville, TN, April 16, 2012.

93. Presented a plenary lecture entitled "Why is it important to study the effects of dietary lipids on membranes?" at the 10th Congress of the International Society for the Study of Fatty Acids & Lipids (ISSFAL), Vancouver, Canada, May 26-30, 2012.

94. Presented an invited talk entitled "Diet, lipid rafts, inflammation and cancer" at the 6th International Immunonutrition Workshop, Palma de Mallorca, Spain, October 15-17, 2012.

95. Presented an invited talk entitled "Dietary chemoprevention: the missing ingredient" at the Department of Clinical Cancer Prevention, MD Anderson Comprehensive Cancer Center, Houston, TX, November 27, 2012.

96. Presented an invited talk entitled "Effect of diet on gut physiology: From membrane structure to genomic diagnosis" at the Saban Research Institute, Children's Hospital Los Angeles, December 5, 2012.

97. Presented an invited talk entitled "How diet regulates colon cancer development" at the Canadian Digestive Diseases Week Meeting, Victoria, British Columbia, Canada, March 1, 2013.

98. Presented an invited talk entitled "Teaming up with the Physical Sciences to make sense of chemoprevention data", Departments of Computer and Mathematical Sciences and Natural Sciences, University of Houston-Downtown, April 5, 2013.

99. Presented an invited talk entitled "Dietary fish oil: A magic bullet?", at the Texas Academy of Nutrition & Dietetics Annual Meeting, Austin, TX, April 12, 2013.

100. Presented an invited talk entitled "Dietary chemoprevention: Why membranes matter", at the Department of Veterinary and Biomedical Sciences, The Pennsylvania State University, April 17, 2013.

101. Presented an invited talk entitled "Chemoprevention using dietary agents", at the Molecular Medicine Seminar Series, UT Health Science Center, San Antonio, April 24, 2013.

102. Presented an invited talk entitled "Dietary chemoprevention as a tool to thwart cancer development and recurrence," Georgia Regents University Cancer Center, May 23, 2013.

103. Presented an invited talk entitled "Emerging role for chemoprotective fatty acids in shaping plasma membrane rafts", at the FASEB Research Conference on Protein Lipidation, Signaling, and Membrane Domains, Saxton River, Vermont, July 14-19, 2013.

104. Presented an invited talk entitled "Why do we need to invest in dietary chemoprevention" at MD Anderson Cancer Center's Integrative Medicine Program Lecture Series, Houston, TX, October 15, 2013.

105. Presented an invited talk entitled "Fat-fiber combination: the missing ingredient?" at the 12th Annual AACR Conference on Frontiers of Cancer Prevention Research, National Harbor, MD, October 27-30, 2013.

106. Presented an invited talk entitled "Dietary regulation of microRNA and gene expression profiling in a preclinical model of colon carcinogenesis", at the American Institute for Cancer Research Conference, Washington, D.C., November 7-8, 2013.

107. Presented an invited talk entitled "Nutritional chemoprevention – the missing ingredient", at the 11th Annual Nutrition & Health Conference, Dallas TX, May 4-5, 2014.

108. Presented invited talks entitled "Diet and epigenetics: Is this the key to personalized cancer prevention" and "Diet and stem cells: A new possibility in cancer prevention", at the VI

Brazilian Conference on Nutrition & Cancer, Gaepao 2014 and IV International Conference on Nutritional Oncology (ICNO), Sao Paulo, Brazil, May 12-15, 2014.

109. Presented an invited talk entitled "Why cancer centers need to embrace dietary chemoprevention", at the Department of Medicine, University of Florida & Shands, September 2, 2014.

110. Presented an invited talk entitled "Diet and stem cells – an evolving paradigm", at the University of Texas San Antonio CTRC Annual Symposium, September 26, 2014.

111. Presented an invited talk entitled "Diet-derived bioactive agents: Role in chemoprevention", at the Department of Human Health and Nutritional Sciences Department, University of Guelph, Guelph, Ontario, Canada, November 24, 2014.

112. Presented an invited talk entitled "Non-invasive strategies to define intestinal host responses in the human infant", at the Children's Environmental Health Network Meeting, UT Austin, February 6, 2015.

113. Presented an invited talk entitled "Diet, gut microbiology, and host phenotype relationships: Non-invasive strategies to assess functional interactions in the human infant", at the Gut Microbiota for Health World Summit, Barcelona Spain, March 14, 2015.

114. Presented the 27th Annual Virginia A. Beal lecture entitled "Winning the chemoprevention war: Reducing inflammation through nutrition", at the University of Massachusetts-Amherst, April 21, 2015.

115. Presented an invited talk entitled "Diet, gut microbiology, and host phenotype relationships: Non-invasive strategies to assess functional interactions in the human intestine", at the Cancer Prevention and Control Grand Rounds, MD Anderson Cancer Center, Houston, TX, July 17, 2015.

116. Presented an invited talk entitled "Impact of dietary bioactives on chronic disease risk", at the Malcolm Trout Annual Lecture Series, Michigan State University, September 14, 2015.

117. Presented an invited talk entitled "Crucial role of membrane-based signaling in reducing chronic disease risk", at the "From Genes to Human Physiology" Meeting, Toronto, Canada, October 25-27, 2015.

118. Presented an invited talk entitled "Natural dietary bioactives modulate membrane-cytoskeletal signaling", at the 6th International Conference on Food Factors (ICoFF) Bioconvergence for Food Function Meeting, Seoul, Republic of Korea, November 22-25, 2015.

119. Presented an invited talk entitled "Cancer prevention, gut microbiology, and host phenotype relationships: Non-invasive strategies to assess functional interactions" in the Department of Food Science and Biotechnology, Keung Hee University, Soul, Korea, November 24, 2015.

120. Presented an invited talk entitled "Molecular basis for cancer chemoprevention by dietary constituents" at the Huntsman Cancer Center, University of Utah, Salt Lake City, UT, November 30, 2015.

121. Presented an invited talk entitled "Noninvasive molecular fingerprinting of host microbiome interaction in neonates", at the Microbiome & Cancer Symposium – Environmental Determinants of Disease, Center for Translational Environmental Health Research, Children's Nutrition Research Center, Houston, Texas, December 4, 2015.

122. Presented an invited talk entitled "Molecular basis for dietary chemoprevention" at the Friedman School of Nutrition Science and Policy, and Sackler Graduate School at Tufts University, February 8, 2016.

123. Presented an invited talk entitled "Membrane therapy: Targeting cell membrane composition and structure as a molecular basis for assessing walnut-derived bioactives", at the Walnut Commission Scientific Board Annual Meeting, Maui, HI July 26-28, 2016.

124. Presented an invited talk entitled "Interactions of dietary amphiphiles with membranes: Implications for chronic disease prevention", at the 12th Congress of the International Society for the Study of Fatty Acids and Lipids, Stellenbosch, South Africa, September 7, 2016.

125. Presented an invited talk entitled "Prioritizing molecular targets for cancer prevention using nutritional combinations" at the University of Connecticut Center for Molecular Medicine, Farmington, CT, December 14, 2016.

126. Presented an invited talk entitled "Chemoprotective effects of dietary bioactives - involvement of microbiota-host crosstalk" at the Canadian Nutrition Society Meeting on Advances in Nutrition, Gut Health and Microbiome, January 16, 2017.

127. Presented an invited talk entitled "Development of a predictive model for postnatal intestinal host responses and risk of neonatal disease" at the Human Microbiome Congress, San Diego, CA, January 25, 2017.

128. Presented an invited talk entitled "Emerging role of chemoprotective agents in the dynamic shaping of plasma membrane organization" at the Department of Integrative Biology & Pharmacology, University of Texas Health Science Center, Houston, McGovern Medical School, TX, May 1, 2017.

129. Presented an invited talk entitled "Use of the exfoliome to identify gut microbe-host phenotype relationships in neonates" at the USDA Children's Nutrition Research Center (CNRC), Houston, TX, May 11, 2017.

130. Presented an invited talk entitled "Development of a predictive model for postnatal intestinal host responses and risk of neonatal disease" at the Baylor College of Medicine – Texas Children's Hospital, Houston, TX, May 11, 2017.

131. Presented an invited talk entitled "Expanding the primary cancer chemoprevention armamentarium using dietary combinations" at the Nutritional Activity Affinity Group seminar series, Fred Hutchinson Cancer Center, Seattle, WA, May 31, 2017.

132. Presented an invited talk entitled "Shaping biological membranes using omega 3 fatty acids to reduce cancer risk" at the CPhl Worldwide meeting, Messe Frankfurt, Germany, October 24, 2017.

133. Presented an invited talk entitled "How to combine dietary bioactives to reduce colon cancer risk" at the Society for Integrative Oncology 14th International Conference, Chicago, IL, November 12, 2017.

134. Presented an invited talk entitled "Targeting plasma membrane lipid composition as a novel approach to anti-cancer therapy" at the Integrative Biosciences Center (IBio), Wayne State University, Detroit, MI, March, 7, 2018.

135. Presented an invited talk entitled "Why society needs researchers; How to be a complete scientist" at the American Society for Biochemistry & Molecular Biology (ASBMB) Career Development Program Workshop, Experimental Biology Meeting, San Diego, CA, April 21, 2018.

136. Presented an invited talk entitled "Omega-3 fatty acids, lipid rafts, and T cell signaling" at the FASEB Summer Conference on Nutritional Immunology and the Microbiota: Rules of Engagement in Health and Disease Meeting, Leesburg, VA, June 24-29, 2018.

137. Presented an invited talk entitled "Longitudinal host-microbe multi-omic data integration as a means to predict chronic disease risk" at the Bioinformatics and Cancer Symposium, Center for Statistical Bioinformatics, Institute for Applied Mathematics and Computational Science, Texas A&M University, VA, September 21, 2018.

138. Presented an invited talk entitled "Molecular basis for dietary chemoprevention of cancer: Emerging role of the Aryl Hydrocarbon Receptor" at the Department of Comparative Biosciences, Interdisciplinary Environmental Toxicology Program, Beckman Institute, University of Illinois at Urbana-Champaign, October 5, 2018.

139. Presented an invited talk entitled "Fat-fiber interaction and colon cancer risk" at the International Symposium on Nutrition and Human Health, Texas A&M University, November 3-4, 2018.

140. Presented an invited talk entitled "Expanding the primary cancer prevention armamentarium using dietary combinations & exfoliomics" at the EDRN Great Lakes New England Center Cancer Biomarkers Meeting, Boca Raton, FL, December 2-4, 2018.

141. Presented an invited webinar/talk entitled "Pros and cons of using animal models to advance nutrition research in relation to colon cancer prevention". Sponsored by the Nutrition Science Research Group, Division of Cancer Prevention, National Cancer Institute, February 19, 2019.

142. Presented an invited talk entitled "Role of dietary combinations & exfoliomics in the cancer prevention armamentarium" at the Division of Gastroenterology, Duke University, Durham NC, May 13, 2019.

143. Presented an invited talk entitled "Novel cancer prevention strategies to delineate responses to diet and gut microbial-derived bioactive agents" at the American Institute for Cancer Research (AICR) 2019 Research Conference- Diet, Obesity, Physical Activity and Cancer - Beyond the Blueprint, University of North Carolina, Chapel Hill, NC, May 15-17, 2019.

144. Presented an invited talk entitled "Molecular basis for dietary chemoprevention" at the NIH National Cancer Institute's Outstanding Investigators Award (OIA) program, NCI Campus, Rockville, MD, May 29-30, 2019.

145. Presented an invited talk titled "AhR chemoprevention and exfoliomics: A noninvasive method to monitor host/microbiome crosstalk in the gut" at the Texas Medical Center Digestive Diseases Center, Department of Medicine, Gastroenterology & Hepatology, Baylor College of Medicine, Houston, TX, September 26, 2019.

146. Presented an invited talk titled "New view of the patient: The role of exfoliomics & systems biology in creating a more predictive, preventive & personalized approach to medicine" at the Platinum Summit Meeting, Denver, CO, December 7, 2019.

147. Presented an invited talk titled "Role of integrative nutrition in reducing chronic disease risk: A mechanistic perspective" at the College of Health Solutions, Arizona State University, January 14, 2020.

148. Presented an invited talk "Insights into the role of precision nutrition in reducing cancer risk" at the University of Illinois-Chicago Cancer Prevention & Control meeting, University of Illinois Cancer Center, May 6, 2021.

149. Presented an invited talk "Why does cancer research focus on treatment, not prevention?" at the Foundations of Cancer Therapeutics Workshop, Cancer Therapeutics Training Program, Gulf Coast Consortia for Quantitative Biomedical Science, August 19, 2021.

150. Presented an invited talk "Assessing the multivariate relationship between the human intestinal exfoliated cell transcriptome (exfoliome) and microbiome in response to a leaky gut" at the Pfizer Expert Panel on Clinical and Biomarker Evaluation of Leaky Gut Conference, November 15, 2021.

151. Presented an invited talk "Molecular insights into the role of nutrition in reducing cancer risk -collaborative opportunities" at the Houston Methodist Cancer Center (HMCC) seminar series, December 2, 2021.

152. Presented an invited talk "Molecular insights into the mechanisms linking diet and microbial metabolites to colon cancer risk" at the Animal Models for Cancer Interception and Precision Prevention Virtual Workshop, NIH, October 13, 2022.

153. Presented an invited talk "Precision exfoliomics: non-invasive host-microbiome multi-omic data integration to predict infant health outcomes" at the Microbiome Movement, Maternal & Infant Health Summit, Boston, MA, March 28, 2023.

154. Presented an invited talk "Precision nutrition using non-invasive exfoliomics and microbial metabolite phenotype to stratify subjects", Carolyn Clifford Distinguished Lecture seminar series, Department of Nutrition, UC Davis, April 17, 2023.

155. Presented an invited talk "Targeting plasma membrane spatial dynamics to suppress aberrant Wnt signaling" at the 2nd Annual Cancer Research Symposium, Texas A&M University Regional Center of Excellence in Cancer Research, College Station, TX, May 16, 2024.

156. Presented an invited talk "Dysregulation of cellular membrane lipid homeostasis is a crucial modulator of cancer risk" at the Structural and Functional Lipidomics session, American Chemical Society Meeting, Denver, CO, August 19, 2024.

157. Presented an invited talk "Targeting plasma membrane spatial dynamics to suppress aberrant Wnt signaling" at the Department of Cancer Biology, MD Anderson Comprehensive Center, Houston, TX, November 20, 2024.

Graduate Student and Post-Doctoral Trainee List

M.S. STUDENTS

Yang-Yi Fan, Nutrition, 1991
Kara Fowler, Nutrition,1992
Jennifer Pickering, Nutrition, 1996
*Christin Aymond, Nutrition, 1997
Amy Clark, Nutrition, 1998
Roxanne Brown, Biochemistry, 1999
Esther Collett, Nutrition, 1999
Jennifer Arrington, Nutrition, 2002
Laura Bancroft, Nutrition, 2002
YeeVoon Ng, Nutrition, 2004
**Raje Yog, Nutrition, 2011
Jeannie Allen, Nutrition, 2014
Miranda George, Biotechnology-2018
Bianca Tomaszewski, Biochemistry & Biophysics-2019

Ph.D. STUDENTS

**Dong-Yeon Lee, Nutrition,1992
Yang-Yi Fan, Nutrition,1996
*Yi-Hai Jiang, Nutrition,1996
**Chris Jolly, Nutrition, 1996
Lan Ly, Nutrition, 2004
**Jeongmin Seo, Nutrition, 2004
*Kirsten Switzer, Nutrition, 2004
Ping Zhang, Nutrition, 2005
Satya Kolar, Nutrition, 2007
**Wooki Kim, Nutrition, 2008
*Jia Qian, Nutrition, 2011
Chen Zhao, Electrical Engineering, 2011
Manasvi Shah, Genetics, 2012
**Harmony Turk, Nutrition, 2012
****[1]Tim Hou, Biochemistry, 2014
***Karen Triff, Biology, 2015
Jason Knight, Computational Biology, 2015
Robert Fuentes, Toxicology-2017
Eunjoo Kim, Molecular Medicine-2017
Huajun Han, Biochemistry & Biophysics-2020
Michael Salinas, Nutrition-2022
Yongjian Yang, Electrical & Computer Engineering-2024
Destiny Mullens, Veterinary Integrative Biosciences-Present

***American Society for Nutrition Graduate Student Award Finalist**
****American Society for Nutrition Graduate Student Award Winner**
*****NIH predoctoral recipient - Promote Diversity in Health-Related Research**
******National Sciences and Engineering Research Council of Canada (NSERC) pre-doctoral scholarship recipient.**
[1]American Society for Biochemistry & Molecular Biology Graduate Student Award Winner

POST-DOCTORAL TRAINEES

Casimir Akoh (1990), Vicki Dobre (1992-1994), ***Harold Aukema (1992-1994), Laurie Davidson (1992-Present), Jamie Laurenz (1995), Joan Carrick (1996-1998), Yang-Yi Fan (1996-Present), Yi-Hai Jiang (2002-2004), ***David Ma (2004-2005), Teofila Santos (2005), Jeongmin Seo (2004-

2006), Michael Schwartz (2006-2007), Chandra Emani (2007-2008), Satya Kolar (2009), Wooki Kim (2010), ***Jennifer Monk (2010-2012), Scott Schwartz (2010-2011), Roger Zoh (2012-2014), Vanessa DeClercq (2013-2014), Tim Hou (2015), [+, ++]Alfredo Erazo-Oliveras (2016-Present), Grace Yoon (2017-2020), Robert Fuentes (2018-2019), Alexander Roitershtein (2018-2021); Xiaoli Wang (2019-2022), Monica Munoz Vega (2020-Present), Hee Cheol Chung (2020-2022), Ellen Ruth Morris (2021-2022), Susan Komanetsky (2022-2023), Michael Salinas (2022-Present), Vanessa Montoya Uribe (2023-Present), Pritam Dey (2023-Present), Selim Romero (2023-Present).

*****National Sciences and Engineering Research Council of Canada (NSERC) post-doctoral scholarship recipient.**
[+]Ford Foundation Postdoctoral Fellowship, Office of the National Academies of Sciences, Engineering, and Medicine (2017-2018).
[++]NIH Post-Doctoral Diversity Award in Health-Related Research (2017-2019).