Joshua William Miller, Ph.D.

- Curriculum Vitae -

Work Address and Contact Information

Department of Nutritional Sciences
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Date and Place of Birth:

May 19, 1964; Washington, DC; United States Citizen

Education:

Ph.D.	1993	Nutrition	Tufts University, Medford, MA Thesis Title: "The Pathogenesis of Homocysteinemia due to B Vitamin Deficiencies"
M.S.	1990	Nutrition	Tufts University, Medford, MA
B.A.	1986	Chemistry/Psychology	Swarthmore College, Swarthmore, PA

Professional Positions:

2012-present	Professor (tenured) and Chair (July 2013-present) Department of Nutritional Sciences Rutgers University New Brunswick, NJ
2012-2016	Visiting Professor Department of Medical Pathology & Laboratory Medicine University of California Davis School of Medicine Davis and Sacramento, CA
2011-2012	Professor (tenured) Department of Medical Pathology & Laboratory Medicine University of California Davis School of Medicine Davis and Sacramento, CA
2008-2011	Associate Professor In Residence Department of Medical Pathology & Laboratory Medicine University of California Davis School of Medicine Davis and Sacramento, CA
2004-2008	Associate Adjunct Professor Department of Medical Pathology & Laboratory Medicine University of California Davis School of Medicine Davis and Sacramento, CA

Professional Positions (cont.):

1997-2004	Assistant Adjunct Professor Department of Medical Pathology & Laboratory Medicine University of California Davis School of Medicine Davis and Sacramento, CA
1995-1997	Neurobehavioral Sciences Post-Doctoral Trainee Department of Pharmacology Duke University Medical Center Durham, NC
1993-1995	Research Associate Vitamin Bioavailability and Neuroscience Labs USDA Human Nutrition Research Center Boston, MA
1989-1993	Research Assistant, Vitamin Bioavailability Lab USDA Human Nutrition Research Center Boston, MA
1989 (summer)	Research Assistant, Mineral Bioavailability Lab USDA Human Nutrition Research Center Boston, MA
1986-1988	Middle Science Teacher, Soccer and Wrestling Coach Abington Friends School Jenkintown, PA

Awards:

2004	American Cancer Society "Research Scholar" Award
1997-1999	UC Davis Clinical Nutrition Research Unit "Young Investigator" Award
1992	American Institute of Nutrition Graduate Student Award

Educational Memberships and Activities:

2012-present	Department of Nutritional Sciences, Rutgers University
2019	Co-Instructor 11:709:401: Advanced Nutrition II: Energy and Micronutrients
2019	Co-Instructor 16:709:552: Nutrition: A Biochemical and Physiological Basis
2016-present	Instructor of Record 11:709:255: Nutrition and Health
2015	Co-Instructor 11:709:255: Nutrition and Health
2013-2018	Instructor of Record 11:709:481: Seminar in Nutrition
2012-present	Nutritional Sciences Graduate Program, Rutgers University
2014-2018	Thesis Advisor: 1 Masters Student (graduated in 2018)
2013-present	Co-Instructor of Record 16:709:601: Nutritional Sciences Seminar
2013-present	Thesis Advisor: 3 Doctoral Students (2 graduated in 2017, 1 in progress); Thesis Committee Member: 2 Doctoral Students (graduated in 2016 and 2019); 1 Masters Student (graduated in 2019)
2008-2012	Graduate Group in Comparative Pathology, UC Davis
2008-2011	Faculty Advisor: 1 Doctoral Student

Educational Memberships and Activities (cont.):

2007-2012	Masters in Public Health Program, UC Davis
2008-2010	Faculty Advisor: 4 Masters Students (2 graduated in 2009, 2 in 2010)
2002-2012	Program in International Nutrition, UC Davis
2004-2012	Executive Committee
1999-2014	Graduate Group in Nutritional Biology, UC Davis
2010-2012	Instructor of Record NUB298: Advanced Nutrition III
2009-2011	Co-Instructor NUB298: Advanced Nutrition I
2009-2012	Lecturer NUT252: One-Carbon Metabolism Nutrients and Development
2008-2012	Curriculum Committee
2008-2011	Lecturer NUT104: Folate, B12, DNA, Epigenetics and Toxicology
2001-2012	Preliminary Exam Committee (Chair: 2003-2007)
1999-2014	Thesis Advisor: 6 Doctoral Students (2 graduated in 2006, 1 in 2011, 1 in 2013, 2 in 2014); Thesis Committee Member: 5 Doctoral Students (5 graduated in 2000, 2003, 2007, and 2008 [2])
1999-2009	Lecturer NUT201: Folate, Vitamin B12, and Homocysteine
1997-2012	School of Medicine, UC Davis
2002-2012	Lecturer Metabolism, Endocrinology, Reproduction and Nutrition (MERN): Nutrition and Aging
2001-2008	Faculty Facilitator: Application of Medical Principles
1998-2012	Faculty Supervisor, Edmonson Undergraduate Research Internship (13 summer students)

Patent:

"Assay for Vitamin B12 Absorption and Method of Making Labeled Vitamin B12", Patent Number: 8,202,507, Authors: Peter J. Anderson, Stephen Dueker, Joshua Miller, Ralph Green, John Roth, Colleen Carkeet, Bruce A. Buchholz

Professional Intramural and Extramural Activities:

2016-present	Association of Nutrition Departments and Programs (ANDP) (Chair-Elect: 2016-2017; Chair: 2017-2018; Past-Chair: 2018-present)
2016-2018	Chair, Chairs Council, School of Environmental and Biological Sciences, Rutgers University
2015-present	Associate Editor, Nutrition Reviews
2015	Member, Expert Panel, Identifying Research Needs for Assessing Safe Use of High Intakes of Folic Acid – National Toxicology Program, NIH, Bethesda, MD (May 11-12)
2015	Panel Discussion Leader, The Role of Nutrition in Dementia Prevention and Management – New York Academy of Sciences (March 26-27)
2014-2016	Chair, Folic Acid, Vitamin B12, and One-Carbon Metabolism – FASEB Summer Research Conference (2016)
2013-present	Member, NIEHS Center for Environmental Exposures and Disease at the Environmental and Occupational Health Sciences Institute, Rutgers University
2012-2014	Co-Chair, Folic Acid, Vitamin B12, and One-Carbon Metabolism – FASEB Summer Research Conference (2014)
2011-present	Member, Vitamin B12 Working Group on Biomarkers of Nutrition for Development (BOND), Eunice Kennedy Shriver National Institute of Child Health and Human Development
2011-2012	Laboratory Director, CTSC Clinical Research Center, UC Davis

Professional Intramural and Extramural Activities (cont.):

2009-2010	Acting Chair, Advisory Research Committee, Dept. of Medical Pathology and Laboratory Medicine, UC Davis
2008	Member, Working Group on Vitamin B12 Fortification, Second Technical Workshop on Wheat Flour Fortification, Stone Mountain, GA
2007-present	Member, American Society for Nutrition
2006-2012	Legislative Ambassador, California Division, American Cancer Society
2005-present	Medical Advisory Board, Diabetes Action Research and Education Foundation
2001-2012	Director, Serum/Plasma/DNA Bank, UC Davis Alzheimer's Disease Center
1999	Member, Working Group on Folic Acid Analysis and Sufficiency for Reproductive Outcomes, March of Dimes, White Plains, NY
1998-2002	Contributing Editor, Nutrition Reviews
1998-present	Manuscript and Grant Proposal Reviewer (see below)

Publications:

Peer-Reviewed Papers

1. Bell IR, Edman J, Miller J, Hebben N, Linn RT, Ray D, Kayne HL. Relationship of normal serum vitamin B12 and folate levels to cognitive test performance in subtypes of geriatric depression. Journal of Geriatric Psychiatry and Neurology 3:98-105, 1990. PMID: 2206265

2. Selhub J, Miller JW. The pathogenesis of homocysteinemia: interruption of the coordinate regulation by S-adenosylmethionine of the remethylation and transsulfuration of homocysteine. American Journal of Clinical Nutrition 55:131-138, 1992. (Selected as an "outstanding paper of the year" by the USDA Agricultural Research Service, 1993.) PMID: 1728812

3. Miller JW, Ribaya-Mercado JD, Russell RM, Shepard DC, Morrow FD, Cochary EF, Sadowski JA, Gershoff SN, Selhub J. Effect of vitamin B6 deficiency on fasting plasma homocysteine concentrations. American Journal of Clinical Nutrition 55:1154-1160, 1992. PMID: 1595588

4. Miller JW, Nadeau MR, Smith J, Smith D, Selhub J. Folate-deficiency-induced homocysteinemia in rats: disruption of S-adenosylmethionine's co-ordinate regulation of homocysteine metabolism. Biochemical Journal 298:415-419, 1994. PMID: 8135750; PMCID: PMC1137956

5. Miller JW, Nadeau MR, Smith D, Selhub J. Vitamin B6 deficiency vs folate deficiency: comparison of responses to methionine loading in rats. American Journal of Clinical Nutrition 59:1033-1039, 1994. PMID: 8172087

6. Kim Y-I, Miller JW, da Costa KA, Nadeau MR, Smith D, Selhub J, Zeisel SH, Mason JB. Severe folate deficiency causes secondary depletion of choline and phosphocholine in rat liver. Journal of Nutrition 124(11):2197-2203, 1994. PMID: 7965204

7. Bostom AG, Shemin D, Lapane KL, Miller JW, Sutherland P, Nadeau M, Seyoum E, Hartman W, Prior R, Wilson PW, Selhub J. Hyperhomocysteinemia and traditional cardiovascular disease risk factors in end-stage renal disease patients on dialysis: a case-control study. Atherosclerosis 114:93-103, 1995. PMID: 7605381

Peer-Reviewed Papers (cont.)

8. Bell IR, Amend D, Kaszniak AW, Schwartz GE, Peterson JM, Stini WA, Miller JW, Selhub J. Trait shyness in the elderly: evidence for an association with Parkinson's disease in family members and biochemical correlates. Journal of Geriatric Psychiatry & Neurology 8:16-22, 1995. PMID: 7710641

9. Gospe SM, Gietzen DW, Summers PJ, Lunetta JM, Miller JW, Selhub J, Ellis WG, Clifford AJ. Behavioral and neurochemical changes in folate-deficient mice. Physiology and Behavior 58:935-941, 1995. PMID: 8577891

10. Miller JW, Selhub J, Joseph JA. Oxidative damage caused by free radicals produced during catecholamine autoxidation: protective effects of O-methylation and melatonin. Free Radical Biology and Medicine 21:241-249, 1996. PMID: 8818640

11. Fremeau RT, Valez-Faircloth M, Miller JW, Henzi VA, Cohen SM, Nadler JV, Shafqat S, Blakely RD, Domin B. A novel nonopioid action of enkephalins: competitive inhibition of the mammalian brain high affinity L-proline transporter. Molecular Pharmacology 49:1033-1041, 1996. PMID: 8649341

12. Kim Y-I, Pogribny IP, Basnakian AG, Miller JW, Selhub J, James SJ, Mason JB. Folate deficiency in the rat induces DNA strand breaks and hypomethylation within the p53 tumor suppressor gene. American Journal of Clinical Nutrition 65:46-52, 1997. PMID: 8988912

13. Miller JW, Shukitt-Hale B, Villalobos R, Nadeau MR, Selhub J, Joseph JA. Effect of L-dopa and the catechol-O-methyltransferase inhibitor Ro 41-0960 on sulfur amino acid metabolites in rats. Clinical Neuropharmacology 20:55-66, 1997. PMID: 9037574

14. Daly D, Miller JW, Nadeau MR, Selhub J. The effect of L-dopa administration and folate deficiency on plasma homocysteine concentrations in rats. Journal of Nutritional Biochemistry 8:634-640, 1997. PMID: None

15. Galli A, Jayanthi LD, Ramsey S, Miller JW, Fremeau RT, DeFelice LJ. L-Proline and L-pipecolate induce enkephalin-sensitive currents in HEK-293 cells transfected with the high affinity mammalian brain L-proline transporter. Journal of Neuroscience 19:6290-6297, 1999. PMID: 10414958

16. Dueker SR, Lin Y, Jones AD, Mercer R, Fabbro E, Miller JW, Green R, Clifford AJ. Determination of blood folate using acid extraction and internally standardized GCMS detection. Analytical Biochemistry 283:266-275, 2000. PMID: 10906248

17. Gielchinsky Y, Elstein D, Green R, Miller JW, Elstein Y, Algur N, Lahad A, Shinar E, Abrahamov A, Zimran A. High prevalence of low serum vitamin B12 in a multi-ethnic Israeli population. British Journal of Haematology 115:707-709, 2001. PMID: 11736958

18. Miller JW, Green R, Mungas DM, Reed BR, Jagust WJ. Homocysteine, vitamin B6, and vascular disease in AD patients. Neurology 58:1471-1475, 2002. PMID: 12034781

19. Miller JW, Ramos MI, Garrod MG, Flynn MA, Green R. Transcobalamin II G775C polymorphism and indices of vitamin B12 status in healthy older adults. Blood 100:718-720, 2002. PMID: 12091374

20. Rogers LM, Boy E, Miller JW, Green R, Rodriguez M, Chew F, Allen LH. Predictors of cobalamin deficiency in Guatemalan school children: diet, *Helicobacter pylori* or bacterial overgrowth? Journal of Pediatric Gastroenterology and Nutrition 36:27-36, 2003. PMID: 12499993

Peer-Reviewed Papers (cont.)

21. Rogers LM, Boy E, Miller JW, Green R, Allen LH. High prevalence of cobalamin deficiency in Guatemalan school children: association with elevated serum methylmalonic acid and plasma homocysteine, and low plasma holotranscobalamin II concentrations. American Journal of Clinical Nutrition 77:433-440, 2003. PMID: 12540405

22. Aisen PS, Egelko S, Andrews H, Diaz-Arrastia R, Weiner M, DeCarli C, Jagust W, Miller JW, Green R, Bell K, Sano M. A pilot study of vitamins to lower plasma homocysteine levels in Alzheimer disease. American Journal of Geriatric Psychiatry 11:246-249, 2003. PMID: 12611755

23. Whitmer RA, Haan MN, Miller JW, Yaffe K. Hormone replacement therapy and cognitive performance: the role of homocysteine. Journal of Gerontology: A Biological Sciences and Medical Sciences 58:M324-M330, 2003. PMID: 12663696

24. Miller JW, Selhub J, Nadeau M, Thomas CA, Feldman RG, Wolf PA. Effect of L-Dopa on plasma homocysteine in PD patients: relationship to B vitamin status. Neurology 60:1125-1129, 2003. PMID: 12682318

25. Miller JW, Green R, Ramos MI, Allen LH, Mungas DM, Jagust WJ, Haan MN. Homocysteine and cognitive function in the Sacramento Area Latino Study on Aging (SALSA). American Journal of Clinical Nutrition 78:441-447, 2003. PMID: 12936927

26. Campbell AK, Miller JW, Green R, Haan MN, Allen LH. Plasma vitamin B-12 concentrations in an elderly Latino population are predicted by serum gastrin concentrations and crystalline vitamin B-12 intake. Journal of Nutrition 133:2770-2776, 2003. PMID: 12949363

27. Esfandiari F, Green R, Cotterman RF, Pogribny IP, James SJ, Miller JW. Methyl deficiency causes reduction of the methyl-CpG-binding protein, MeCP2, in preneoplastic rat liver. Carcinogenesis 24:1935-1940, 2003. PMID: 12949043

28. Luchsinger JA, Tang M-X, Shea S, Miller J, Green R, Mayeux R. Plasma homocysteine levels and risk of Alzheimer's disease. Neurology 62:1972-1976, 2004. PMID: 15184599

29. Lin Y, Dueker SR, Follett JR, Fadel JG, Arjomand A, Schneider PD, Miller JW, Green R, Buchholz BA, Vogel JS, Phair RD, Clifford AJ. Quantitation of in vivo human folate metabolism. American Journal of Clinical Nutrition 80:680-691, 2004. PMID: 15321809

30. Ramos MI, Allen LH, Haan MN, Green R, Miller JW. Plasma folate concentrations are associated with depressive symptoms in elderly Latina women despite folic acid fortification. American Journal of Clinical Nutrition 80:1024-1028, 2004. PMID: 15447915

31. Torres CL, Miller JW, Rogers QR. Determination of free and total cyst(e)ine in plasma of dogs and cats. Veterinary Clinical Pathology 33:228-233, 2004. PMID: 15570560

32. Campbell AK, Jagust WJ, Mungas DM, Miller JW, Green R, Haan MN, Allen LH. Low erythrocyte folate, but not plasma vitamin B-12 or homocysteine, is associated with dementia in elderly Latinos. Journal of Nutrition, Health & Aging 9:39-43, 2005. PMID: 15750664

33. Green R, Miller JW. Vitamin B12 deficiency is the dominant nutritional cause of hyperhomocysteinemia in a folic acid-fortified population. Clinical Chemistry and Laboratory Medicine 43:1048-1051, 2005. PMID: 16197296

Peer-Reviewed Papers (cont.)

34. Ramos MI, Allen LH, Mungas DM, Jagust WJ, Haan MN, Green R, Miller JW. Low folate status is associated with impaired cognitive function and dementia in the Sacramento Area Latino Study on Aging. American Journal of Clinical Nutrition 82:1346-1352, 2005. PMID: 16332669

35. Miller JW, Garrod MG, Rockwood AL, Kushnir MM, Allen LH, Haan MN, Green R. Measurement of total vitamin B12 and holotranscobalamin, singly and in combination, in screening for metabolic vitamin B12 deficiency. Clinical Chemistry 52:278-285, 2006. PMID: 16384886

36. Carkeet C, Dueker SR, Lango J, Buchholz BA, Miller JW, Green R, Hammock B, Roth JR, Anderson PJ. Human vitamin B12 absorption measurement by accelerator mass spectrometry using specifically labeled 14C-cobalamin. Proceedings of the National Academy of Sciences 103:5694-5699, 2006. PMID: 16585531; PMCID: PMC1458635

37. Luchsinger JA, Tang MX, Miller J, Green R, Mehta, PD, Mayeux R. Relation of plasma homocysteine to plasma amyloid beta levels. Neurochemistry Research 32:775-781, 2007. PMID: 17191133

38. Luchsinger JA, Tang MX, Miller J, Green R, Mayeux R. Relation of higher folate intake to lower risk of Alzheimer disease in the elderly. Archives of Neurology 64:86-92, 2007. PMID: 17210813; PMCID: PMC2727706

39. Haan MN, Miller JW, Aiello AE, Whitmer RA, Jagust WJ, Mungas DM, Allen LH, Green R. Homocysteine, B vitamins and incidence of dementia and cognitive impairment: results from the Sacramento Area Latino Study on Aging. American Journal of Clinical Nutrition 85:511-517, 2007. PMID: 17284751; PMCID: PMC1892349

40. Garrod MG, Green R, Allen LH, Mungas DM, Jagust WJ, Haan MN, Miller JW. Fraction of total plasma vitamin B12 bound to transcobalamin correlates with cognitive function in elderly Latinos with depressive symptoms. Clinical Chemistry 54:1210-1217, 2008. PMID: 18451312; PMCID: PMC2752269

41. Miller JW, Garrod MG, Allen LH, Haan MN, Green R. Metabolic evidence of vitamin B12 deficiency, including high homocysteine and methylmalonic acid and low holotranscobalamin, is more pronounced in older adults with elevated plasma folate. American Journal of Clinical Nutrition 90:1586-1592, 2009. PMID: 19726595; PMCID: PMC2777470

42. Reitz C, Tang M-X, Miller J, Green R, Luchsinger JA. Plasma homocysteine and risk of mild cognitive impairment. Dementia and Geriatric Cognitive Disorders 27:11-17, 2009. PMID: 19088473; PMCID: PMC2698462

43. Garrod MG, Allen LH, Haan MN, Green R, Miller JW. Transcobalamin C677G genotype modifies the association between vitamin B12 and homocysteine in older Hispanics. European Journal of Clinical Nutrition 64:503-509, 2010. PMID: 20216556; PMCID: PMC2864787

44. Mungas D, Beckett L, Harvey D, Tomaszewski Farias S, Reed B, Carmichael O, Olichney J, Miller J, DeCarli C. Heterogeneity of cognitive trajectories in diverse older persons. Psychology and Aging 25:606-619, 2010. PMID: 20677882; PMCID: PMC2943999

Peer-Reviewed Papers (cont.)

45. Cheung ATW, Miller JW, Craig SM, To PL, Lin X, Samarron SL, Chen PCY, Zwerdling T, Wun T, Li C-S, Green R. Comparison of real-time microvascular abnormalities in pediatric and adult sickle cell anemia patients. American Journal of Hematology 85:899-901, 2010. PMID: 20872552; PMCID: PMC2964448

46. Gelfand JM, Cree BAC, McElroy J, Oksenberg J, Green R, Mowry EM, Miller JW, Hauser SL, Green AJ. Vitamin D in African-Americans with multiple sclerosis. Neurology 76:1824-1830, 2011. PMID: 21606454; PMCID: PMC3100123

47. Carmichael OT, Mungas D, Beckett L, Harvey D, Farias ST, Reed BR, Olichney J, Miller J, DeCarli C. MRI predictors of cognitive change in a diverse and carefully characterized population. Neurobiology of Aging 33:83-95, 2012. PMID: 20359776; PMCID: PMC2909327

48. Bettcher BM, Wilheim R, Rigby T, Green R, Miller JW, Racine CA, Yaffe K, Miller BL, Kramer JH. C-reactive protein is related to memory and medial temporal brain volume in older adults. Brain, Behavior, and Immunity 26:103-108, 2012. PMID: 21843630; PMCID: PMC3221922

49. Jeon CY, Haan MN, Cheng C, Clayton ER, Mayeda ER, Miller JW, Aiello AE. *Helicobacter pylori* infection is associated with increased rate of diabetes. Diabetes Care 35:520-525, 2012. PMID: 22279028; PMCID: PMC3322696

    49a. Jeon CY, Haan MN, Cheng C, Clayton ER, Mayeda ER, Miller JW, Aiello AE. Response to Comment on: Jeon et al. Helicobacter pylori Infection Is Associated With an Increased Rate of Diabetes. Diabetes Care 2012;35:520-525. Diabetes Care 35:e54, 2012.

    49b. Jeon CY, Haan MN, Cheng C, Clayton ER, Mayeda ER, Miller JW, Aiello AE. Response to Comment on: Jeon et al. Helicobacter pylori Infection Is Associated With an Increased Rate of Diabetes. Diabetes Care 2012;35:520-525. Diabetes Care 35:e56. 2012.

50. Cheung ATW, Miller JW, Miguelino MG, To WJ, Li J, Lin X, Chen PC, Samarron SL, Wun T, Zwerdling T, Green R. Exchange transfusion therapy and its effects on real-time microcirculation in pediatric sickle cell anemia patients: an intravital microscopy study. Journal of Pediatric Hematology and Oncology 34:169-174, 2012. PMID: 22278200; PMCID: PMC3311696

51. Shahab-Ferdows S, Anaya-Loyola MA, Vergara-Castañeda H, Rosado JL, Keyes WR, Newman JW, Miller JW, Allen LH. Vitamin B-12 supplementation of rural Mexican women changes biochemical vitamin B-12 status indicators but does not affect hematology or a bone turnover marker. Journal of Nutrition 142:1881-1887, 2012. PMID: 22915298

52. Zschäbitz S, Cheng TYD, Neuhouser ML, Zheng Y, Ray RM, Miller JW, Song X, Bailey LB, Maneval DR, Beresford SAA, Lane D, Shikany JM, Ulrich CM. B vitamin intakes and incidence of colorectal cancer: Results from the Women's Health Initiative Observational Study cohort. American Journal of Clinical Nutrition 97:332-343, 2013. PMID: 23255571; PMCID: PMC3545682

53. Miller JW, Beresford SAA, Neuhouser ML, Cheng TYD, Song X, Brown EC, Zheng Y, Rodriguez B, Green R, Ulrich CM. Homocysteine, cysteine and risk of incident colorectal cancer in the Women's Health Initiative Observational Cohort. American Journal of Clinical Nutrition 97:827-834, 2013. PMID: 23426034; PMCID: PMC3607656

Peer-Reviewed Papers (cont.)

54. Toriola AT, Cheng TD, Neuhouser ML, Wener MH, Zheng Y, Brown E, Miller JW, Song X, Beresford SA, Gunter MJ, Caudill MA, Ulrich CM. Biomarkers of inflammation are associated with colorectal cancer risk in women but are not suitable as early detection markers. International Journal of Cancer 132:2648-2658, 2013. PMID: 23161620; PMCID: PMC3609926

55. Greibe E, Miller JW, Foutouhi SH, Green R, Nexo E. Metformin increases liver accumulation of vitamin B12 – an experimental study in rats. Biochimie 95:1062-1065, 2013. PMID: 23402786

56. Bettcher BM, Walsh CM, Watson C, Miller JW, Green R, Patel N, Miller B, Yaffe K, Kramer JH. Body mass and white matter integrity: the influence of vascular and inflammatory markers. PLoS One 8:e77741, 2013. PMID: 24147070; PMCID: PMC3797689

57. Bae S, Ulrich CM, Bailey LB, Malysheva O, Brown EC, Neuhouser ML, Cheng TY, Miller JW, Zheng Y, Xiao L, Hou L, Song X, Buck K, Beresford SA, Caudill MA. Impact of folic acid fortification on global DNA methylation and one-carbon biomarkers in the Women's Health Initiative Observational Study cohort. Epigenetics 9:396-403, 2014. PMID: 24300587; PMCID: PMC4053458

58. Abbenhardt C, Miller JW, Song X, Brown EC, Cheng TY, Wener MH, Zheng Y, Toriola AT, Neuhouser ML, Beresford SA, Makar KW, Bailey LB, Maneval DR, Green R, Manson JE, Van Horn L, Ulrich CM. Biomarkers of one-carbon metabolism are associated with biomarkers of inflammation in women. Journal of Nutrition 144:714-721, 2014. PMID: 24647390; PMCID: PMC3985828

59. Hine B, Boggs I, Green R, Miller JW, Hovey RC, Humphrey R, Wheeler TT. Transcobalamin derived from bovine milk stimulates apical uptake of vitamin B12 into human intestinal epithelial cells. Journal of Cellular Biochemistry 115:1948-54, 2014. PMID: 24913691

60. Bettcher BM, Watson CL, Walsh CM, Neuhaus J, Miller JW, Green R, Patel N, Dutt S, Busovaca E, Rosen H, Yaffe K, Miller BL, Kramer JH, Interleukin-6, age, and corpus callosum integrity. PLoS One 9:e106521, 2014. PMID: 25188448; PMCID: PMC4154691

61. Bae S, Ulrich CM, Neuhouser ML, Malysheva O, Bailey LB, Xiao L, Brown EC, Cushing-Haugen KL, Zheng Y, Cheng TY, Miller JW, Green R, Lane DS, Beresford SA, Caudill MA. Plasma choline metabolites and colorectal cancer risk in the Women's Health Initiative Observational Study. Cancer Research 74:7442-7452, 2014. PMID: 25336191; PMCID: PMC4268282

62. Fedosov SN, Brito A, Miller JW, Green R, Allen LH. Combined indicator of vitamin B12 status: modification for missing biomarkers and folate status and recommendations for revised cut–points. Clinical Chemistry and Laboratory Medicine 53:1215-1225, 2015. PMID: 25720072

63. Neuhouser ML, Cheng T-YD, Beresford AA, Brown E, Song X, Miller JW, Zheng Y, Thomson CA, Shikany JM, Vitolins MZ, Rohan T, Green R, Ulrich CM. Red blood cell folate and plasma folate are not associated with risk of incident colorectal cancer in the Women's Health Initiative observational study. International Journal of Cancer 137:930-9, 2015. PMID: 25643945; PMCID: PMC4478092

Peer-Reviewed Papers (cont.)

64. Cheng TY, Makar KW, Neuhouser ML, Miller JW, Song X, Brown EC, Beresford SA, Zheng Y, Poole EM, Galbraith RL, Duggan DJ, Habermann N, Bailey LB, Maneval DR, Caudill MA, Toriola AT, Green R, Ulrich CM. Folate-mediated one-carbon metabolism genes and interactions with nutritional factors on colorectal cancer risk: Women's Health Initiative Observational Study. Cancer 121(20):3684-3691, 2015. PMID: 26108676; PMCID: PMC4592375

65. Frazier DT, Bettcher BM, Dutt S, Patel N, Mungas D, Miller J, Green R, Kramer JH. The relationship between insulin-resistance processing speed and specific executive function profiles in neurologically-intact older adults. Journal of the International Neuropsychological Society 21(8):622-628, 2015. PMID: 26272269; PMCID: PMC4764989

66. Miller JW, Harvey DJ, Beckett LA, Green R, Farias S, Reed BR, Olichney JM, Mungas DM, DeCarli C. Vitamin D status and rates of cognitive decline in a multi-ethnic cohort of older adults. JAMA Neurology 72(11):1295-1303, 2015. PMID: 26366714; PMCID: PMC5023277

    66a. Miller JW, Green R, DeCarli C. 25-Hydroxyvitamin D in patients with cognitive decline-reply. JAMA Neurology 73(3):358, 2016. PMID: 26751272; PMCID: PMC5024784

67. Nathanielsz PW, Yan J, Green R, Nijland M, Miller JW, Wu G, McDonald TJ, Caudill MA. Maternal obesity disrupts the methionine cycle in baboon pregnancy. Physiological Reports 3(11). pii: e12564, 2015. PMID: 26537341; PMCID: PMC4673623

68. Brito A, Verdugo R, Hertrampf E, Miller JW, Green R, Fedosov SN, Shahab-Ferdows S, Sanchez H, Albala C, Castillo, JL, Matamala JM, Uauy R, Allen LH. Vitamin B-12 treatment of asymptomatic, deficient, elderly Chileans improves conductivity in myelinated peripheral nerves, but high serum folate impairs B-12 status response assessed by the combined indicator of vitamin B-12 status. American Journal of Clinical Nutrition 103:250-257, 2016. PMID: 26607937

    68a. Brito A, Fedosov SN, Miller JW, Green R, Uauy R, Allen LH. Reply to LR Solomon. American Journal of Clinical Nutrition 103:1379, 2016. PMID: 27140535

69. Aleliunas RE, Aljaadi AM, Laher I, Glier MB, Green TJ, Murphy M, Miller JW, Devlin AM. Folic acid supplementation of female mice, with or without vitamin B-12, before and during pregnancy and lactation programs adiposity and vascular health in adult male offspring. Journal of Nutrition 146:688-696, 2016. PMID: 26962174

70. Brito A, Grapov D, Fahrmann J, Harvey D, Green R, Miller JW, Fedosov SN, Shahab-Ferdows S, Hampel D, Pedersen TL, Fiehn O, Newman JW, Uauy R, Allen LH. The human serum metabolome of vitamin B-12 deficiency and repletion, and associations with neurological function in elderly adults. Journal of Nutrition 147:1839-1849, 2017. PMID: 28794205; PMCID: PMC5610547

71. Smith AD, Refsum H, Bottiglieri T, Fenech M, Hooshmand B, McCaddon A, Miller JW, Rosenberg IH, Obeid R. Homocysteine and dementia: an international consensus statement. Journal of Alzheimers Disease 62:561-570, 2018. PMID: 29480200; PMCID: PMC5836397

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Abstracts (cont.)

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109. Murphy MA, Breslin PAS, Miller JW. The MTHFR 677TT variant is associated with impaired acute blood pressure response to sodium ingestion. FASEB J 31:802.30, 2017.

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Research Support:

Active

Joshua W. Miller, Co-PI (Paul F. Jacques, Co-PI) 4/1/19-3/31/24
NIH 1 R01 AG059011-01A1 $3,616,985
Title: Vitamin B12 Status, Cognitive Decline and Incident Dementia
Description: The goal of this study is to determine the influence of vitamin B12 status on cognitive decline and incident dementia in the Framingham Study Offspring and Omni cohorts.
Role: Co-PI

Joshua W. Miller (John Olichney, PI) 9/1/17-8/31/22
NIH 5R01AG051618-02 $4,992,021
Title: Phase II RCT of high-dose vitamin D supplements in older adults without dementia
Description: This is This Phase II randomized clinical trial aims to test if supplementation with high dose oral vitamin D (4,000 IU) will successfully correct vitamin D insufficiency and slow cognitive decline in a diverse community- based elderly Alzheimer's disease Center cohort.
Role: Co-Investigator

Pending

Joshua W. Miller (Phoebe G. Stapleton, PI)
NIEHS
Title: Microvascular Mechanisms of Growth Restriction after Environmental Toxicant Exposure
Description: The goal of this project is to use a rat model of environmentally-inducible intrauterine growth restriction to reveal novel mechanisms of altered hemodynamic molecular signaling that contribute to the development of IUGR, as well as test therapeutic interventions (including dietary folic acid) to mitigate IUGR severity.
Role: Collaborator; Submitted: Feb. 2019 (score 34, not funded); Resubmission: Feb. 2020

Completed

Joshua W. Miller (Ranjana Poddar, PI) 5/1/14-4/30/19
NIH 1R01 NS083914 $1,321,252
Title: Molecular basis of hyperhomocysteinemia induced brain injury in ischemic stroke
Description: The objectives of this project are to examine the molecular basis of homocysteine induced neuronal injury and to evaluate the long-term progression of ischemic brain damage and neurological deficits in hyperhomocysteinemic animals.
Role: Co-Investigator

Joshua W. Miller, PI 7/1/15-6/30/18
Rutgers-New Brunswick Chancellor's Office $305,000
Title: The Rutgers One Nutrition Initiative: A Pathway to Prominence
Description: The goals of this initiative are to promote interdisciplinary, collaborative, and translational research at Rutgers, to refine and develop interdisciplinary curricula in nutritional science that serve the undergraduate, graduate, and professional education needs of the 21st century, and promote and increase the visibility of nutritional science at Rutgers.
Role: PI

Joshua W. Miller, PI 2/29/16-2/28/17
EOHSI/NIEHS CEED Pilot Grant $15,000
Title: Towards a Mechanism for Increased Blood Pressure Associated with Reduced Methylenetetrahydrofolate Reductase Function
Description: The goal of this project is to determine the impact of the MTHFR 677TT genotype and beet juice supplements on forearm biochemical and physiological hyperemia responses.
Role: PI

Completed (cont.)

Joshua W. Miller (Charles DeCarli, PI) 7/1/11-6/30/16
NIH 2 P30 AG010129-21 $6,989,039
Title: UC Davis Alzheimer's Disease Core Center
Description: This is a renewal application for the UC Davis Alzheimer's Disease Core Center (ADCC). The theme of this Center was to address how various risk and protective conditions differentially affect cognitive trajectories in older adults.
Role: Co-Investigator

Joshua W, Miller, PI 8/1/12-7/31/14
California Breast Cancer Research Program IDEA Award $149,944
Title: Maternal Folic Acid Intake, Mammary Development, and Cancer
Description: The goal of this project was to determine if *in utero* and post-natal exposure to excess folic acid affects the development of the mammary gland and subsequent susceptibility to tumorigenesis in a mouse model of breast cancer.
Role: PI

Joshua W. Miller, PI 6/1/13-3/31/14
EOHSI/NIEHS CEED Pilot Grant $20,000
Title: The Gut Microbiome and Vitamin B12 Degradation in the Gastrointestinal Tract
Description: The goal of this project was to assess urinary and plasma metabolomic profiles associated with vitamin B12 degradation products observed in urine of humans dosed with carbon-14 labeled vitamin B12
Role: PI

Joshua W. Miller (Cornelia Ulrich, PI) 4/9/08-1/31/14
NIH 1 R01 CA120523-01A1 $3,077,415
Title: A Prospective Study of Colorectal Cancer: One-Carbon Metabolism and Inflammation
Description: The goal of this project was to evaluate the associations of genetic variability and biomarkers in folate-mediated one-carbon metabolism and inflammatory pathways with colorectal cancer etiology in women participating in the Women's Health Initiative.
Role: Co-Investigator

Joshua W. Miller (Mary Haan, PI) 7/1/09-6/30/13
NIH R01 AG012975-12A2 $5,458,156
Title: Epidemiology of Functional Status in Elderly Hispanics
Description: The goal of this project was to evaluate the long-term effects of metabolic and vascular risk factors on cognition, function, and mortality in older Mexican-Americans.
Role: Co-Investigator

Joshua W. Miller (Ralph Green, PI) 4/15/07-4/14/12
NIH 1 R01 HL083276-01A2 $1,453,607
Title: Vitamin B6, Vascular Dysfunction and Adhesion Molecules in Sickle Cell Disease
Description: The goal of this project was to determine if vitamin B6 supplements in adult and pediatric sickle cell disease patients will reduce levels of circulating adhesion molecules and improve microvascular morphology.
Role: Co-Investigator

Joshua W. Miller (Stephen Dueker, Ralph Green Co-PIs) 7/1/08-6/30/11
NIH SBIR 2R44DK077563-02 $896,995
Title: A Finger Prick Medical Diagnostic for B12 Malabsorption: An Early Intervention Tool for Dementia and Anemia
Description: The goal of this project was to develop a new diagnostic test for pernicious anemia and other causes of vitamin B12 malabsorption.
Role: Co-Investigator

Completed (cont.)

Joshua W. Miller, Co-PI (Alexander Borowsky, Co-PI) 9/1/07-8/31/10
W81XWH-07-1-0650 $573,304
DOD Breast Cancer Research Program Synergy Grant
Title: Folate and DNA Methylation in a Mouse Model of Breast Cancer"
Description: The major goal of this project was to assess the influence of folate status and demethylation of DNA on the transformation of pre-malignant mammary lesions to malignancy in a mouse transplant model of mammary intraepithelial neoplasia outgrowths.
Role: Co-PI

Joshua W. Miller 6/1/07-5/31/10
NIH 1 R21 CA116409-01A2 $182,300
Title: Folate, DNA Methylation and Breast Tumorigenesis
Description: The goal of this project was to assess the influence of folate status and demethylation of DNA on DNA methyltransferases, methylated-DNA-binding proteins, and gene expression in a mouse transplant model of mammary intraepithelial neoplasia outgrowths.
Role: PI

Joshua W. Miller (Lindsay Allen, PI) 6/1/07-5/31/10
American Egg Board $295,161
Title: Assessment of Vitamin B12 Bioavailability from Eggs
Description: The purpose of this project was to assess the bioavailability of vitamin B12 from eggs in humans using eggs that have been intrinsically labeled with ^{14}C-B12.
Role: Co-Investigator

Joshua W. Miller 7/1/07-6/30/08
UC Davis Clinical and Translational Science Center $40,000
Title: Replacing the Schilling Test: *In Vivo* Assessment of Vitamin B12 Absorption Using ^{14}C-B12
Description: The purpose of this project was to utilize ^{14}C-B12 to develop a clinical assay for detecting vitamin B12 malabsorption. (Note: award includes $20,000 from the CTSC and $20,000 in matching funds from the UC Davis Department of Medical Pathology and Laboratory Medicine.)
Role: PI

Joshua W. Miller 1/1/06-12/31/07
Bristol-Meyers/Squibb $23,500
(Intramural grant administered by the UC Davis Program in International and Community Nutrition)
Title: B Vitamins, Homocysteine, and Genetic Polymorphisms in Elderly Latinos"
Description: The goal of this project was to determine, in a folic acid-fortified elderly Latino population, the major nutritional and genetic determinants of plasma homocysteine, a risk factor for vascular and neurodegenerative disorders.
Role: PI

Joshua W. Miller 9/1/05-8/31/07
UC Davis Dept. of Med. Pathology and Lab. Medicine $100,000
Title: Vitamin B6, Vascular Dysfunction and Adhesion Molecules in Sickle Cell Disease
Description: The purpose of this project is to determine the effect of vitamin B6 supplements on vitamin B6 status, vascular adhesion molecules, and microvascular morphology and function in sickle cell disease patients.
Role: PI

Completed (cont.)

Joshua W. Miller 7/1/04-6/30/07
American Cancer Society #RSG CNE-107391 $605,487
Title: MeCP2, Methyl Deficiency, and Hepatic Tumorigenesis
Description: The purpose of this project was to investigate the effect of limiting methyl group supply on the hepatic expression of the methylated DNA binding protein, MeCP2, in a rat model of hepatic cancer.
Role: PI

Joshua W. Miller (Charles Halsted, PI) 7/1/00-6/30/06
NIH DK56085-01A2 $1,150,000
Title: Studies of Human Folate Hydrolase
Description: The purposes of this study were 1) to determine the clinical significance of a novel H475Y functional polymorphism in human glutamate carboxypeptidase II (GCPII), and 2) to study the transcriptional regulation of GCPII and the effects of the H475Y polymorphism and a splice variant form on post-transcriptional expression in mammalian cell models.
Role: Co-Investigator

Joshua W. Miller 5/1/03-4/30/05
NIH 1 R21 DK064302-01 $297,000
Title: B12 Absorption, Kinetics, and Transcobalamin Genotype
Description: The goal of this project was to use accelerator mass spectrometry to assess the kinetics of vitamin B12 absorption and metabolism as influenced by the common 776C>G polymorphism in the vitamin B12 transport protein, transcobalamin II.
Role: PI

Joshua W. Miller 11/1/03-10/31/04
National Cattlemen's Beef Association $117,358
Title: In Vivo Enrichment of Beef with [^{14}C]Vitamin B12 for Bioavailability Studies in Humans
Description: To determine the feasibility of enriching beef muscle in vivo with [^{14}C]B12 for subsequent analysis of B12 bioavailability form beef.
Role: PI

Joshua W. Miller 6/30/03-9/1/04
UC Davis Health Systems $149,654
Title: MeCP2, Methyl Deficiency, and Hepatic Tumorigenesis
Description: The purpose of this project is to investigate the effect of limiting methyl group supply on the hepatic expression of the methylated DNA binding protein, MeCP2, in a rat model of hepatic cancer.
Role: PI

Joshua W. Miller, Co-PI (Lindsay Allen, Ralph Green, Co-PI's) 7/1/00-6/30/04
USDA $175,000
Title: HoloTC II: A Non-Isotopic Test for Vitamin B12 Absorption
Description: The goal of this project was to assess holoTC II as an indicator of B12 absorptive capacity.
Role: Co-Investigator

Joshua W. Miller 7/1/01-6/30/03
California Dept. of Health Services $115,399
Title: Vitamin B6, Alzheimer's Disease, and Cognitive Function in Older Adults
Description: To determine if low plasma pyridoxal-5'-phosphate (PLP) concentrations in Alzheimer's patients are indicative of functional B6 deficiency and to determine if low PLP concentrations are associated with indices of cognitive function in Alzheimer's Disease patients and community-dwelling older adults.
Role: PI

Completed (cont.)

Joshua W. Miller 2/15/01-2/14/03
Diabetes Action Research and Education Foundation $27,500
Title: B Vitamin Supplementation in Diabetic Patients with Hyperhomocysteinemia
Description: The purpose of this project was to determine the effectiveness of B vitamin supplements in lowering plasma homocysteine and reducing vascular inflammation in diabetic patients with hyperhomocysteinemia.
Role: PI

Joshua W. Miller (Sano, Aisen, Diaz-Arrastia, Co-PI's) 9/1/00-9/1/02
Institute for the Study of Aging $175,000
Title: Pilot Study of Homocysteine in Alzheimer's Disease
Description: The purpose of this study was to determine the effect of B vitamin supplements (folate, B12, B6) on plasma homocysteine concentrations in patients with Alzheimer's disease.
Role: Co-Investigator

Joshua W. Miller 7/31/01-7/30/02
American Institute for Cancer Research 00B079R $92,027
Title: Effect of Folate and Methyl Deficiency on DNA Methyltransferases and Methylated DNA Binding Proteins
Description: The purpose of this project was to investigate the effect of limiting methyl group supply on the expression of DNA methyltransferases and methylated DNA binding proteins in a rat model of hepatic cancer.
Role: PI

Joshua W. Miller (Andrew Clifford, PI) 7/1/99-6/30/02
NIH/NIDDK R01 DK0459339 $1,019,856
Title: The Dynamic and Kinetic Behavior of Folate Metabolism
Description: The major goals of this project were to conduct a detailed kinetic analysis of the fate of a single [14C]folic acid dose in healthy adults and to relate the behavior of folate metabolism to polymorphisms in key folate enzymes.
Role: Co-Investigator

Joshua W. Miller (Lindsay Allen, PI) 7/1/98-6/30/01
USDA $163,399
Title: Prevalence and Consequences of Vitamin B12 Deficiency in the Elderly
Description: The objective of this project was to correlate the incidence and prevalence of cognitive and physical function deficits with indices of vitamin B12 status in a population of ~1800 elderly Latinos enrolled in an on-going longitudinal study.
Role: Co-Investigator

Joshua W. Miller 7/1/99 - 6/30/01
UC Davis, Hibbard E. Williams Research Fund $36,656
Title: Folic Acid and Depression in Parkinson's Disease
Description: The objective of this study was to assess the efficacy of folic acid supplementation to alleviate depression in patients with Parkinson's disease.
Role: PI

Joshua W. Miller 12/1/98-5/31/00
UC Davis Clinical Nutrition Research Unit $33,950
Title: Methylation Capacity and Neural Tube Defects
Description: The objective of this project is to develop a rat embryo culture model for investigating the role of methylation in neural tube closure.
Comment: Pilot Grant from NIH P30 Grant DK 35747 (PI: Charles H. Halsted, MD)
Role: PI

Completed (cont.)

Joshua W. Miller (Ralph Green, PI) 6/01/98-5/31/01
UC BioSTART Biotechnology Initiative $185,095
Title: Determining Vitamin B12 status using a novel and direct measurement of Holotranscobalamin II
Description: The primary goal of this project was to develop a new assay for the direct measurement of holotranscobalamin II.
Role: Co-Investigator

Joshua W. Miller 7/1/98-6/30/99
UC Davis Alzheimer's Disease Center $19,727
Title: Vitamin B12 Status in Alzheimer's Disease
Description: The primary purpose of this project is to determine the prevalence of vitamin B12 deficiency in Alzheimer's patients for future consideration of a vitamin B12 intervention trial.
Role: PI

Invited Talks and Seminars:

1. "Homocysteine, B Vitamins, and Cognitive Function in Aging and Age-Related Neurodegenerative Disorders." Jean Meyer USDA Human Nutrition Research Center on Aging at Tufts University, Boston, MA, May 15, 2000.

2. "Folic Acid, Vitamin B12, and Neural Tube Defects." Shriner's Hospital, Sacramento, CA, Feb. 14, 2001.

3. "Homocysteine, B Vitamins, and Cognitive Function in Aging and Age-Related Neurodegenerative Disorders." UC Berkeley Department of Nutrition, Berkeley, CA, Feb. 21, 2001.

4. "Homocysteine and Cardiovascular Disease." 13th Mid-Valley Cardiovascular Symposium, Modesto, CA, June 2, 2001.

5. "Homocysteine, Alzheimer's Disease, and Cognitive Function." American College of Nutrition Annual Meeting and Symposium on Advances in Clinical Nutrition, Orlando, FL, Oct. 4, 2001.

6. "B Vitamins and Cognitive Function: Population-Based Studies." Nutrition Week 2002, San Diego, CA, Feb. 25, 2002.

7. "Homocysteine Metabolism and Chronic Disease." Functional Foods for Health Program, 11th Annual Conference, University of Illinois at Urban-Champaign, May 13, 2002.

8. "Methyl Deficiency, Methyl-CpG-Binding Proteins and Hepatic Tumorigenesis." Memorial University, St. John's, Newfoundland, Canada, Sept. 9, 2002.

9. "Homocysteine, B Vitamins, and Cognitive Function in Aging and Age-Related Neurodegenerative Disorders." University of Florida Department of Food Science and Human Nutrition, Gainesville, FL, Oct. 24, 2002.

10. "Methyl Deficiency, Epigenetics, and Hepatic Tumorigenesis." Fred Hutchinson Cancer Research Center, Seattle, WA, July 9, 2003.

11. "Folate, Cognition, and Depression in the Era of Folic Acid Fortification." 12th World Congress of Food Science and Technology, Chicago, IL, July 17, 2003.

12. "Nutritional Genomics." Sacramento Regional Life Sciences Summit, Sacramento, CA, March 4, 2004.

13. "Folate, Vitamin B12, and Vitamin B6: Beyond Homocysteine." Brigham Young University, Provo, UT, March 12, 2004.

14. "Nutritional Genomics." 6th Annual Napa Conference for Environmental Health Scientists, Napa, CA, August 30, 2004.

15. "Homocysteine, B Vitamins, and Cognitive Function in Aging and Neurodegenerative Disease", Symposium on Metabolomic and Proteomic Advances in Nutrition Research, University of British Columbia, Vancouver, British Columbia, April 21, 2005.

16. "Epigenetics, Nutrition, and Cancer", American Cancer Society - Placer County Unit, Volunteer and Recognition Dinner, Oct. 20, 2005.

Invited Talks and Seminars (cont.):

17. "Synthesis of 14C-B12 for Assessment of Vitamin B12 Absorption, Turnover, and Bioavailability in Humans", FASEB Summer Research Conference on Folic Acid, Vitamin B12, and One-Carbon Metabolism, Indian Wells, CA, Aug. 9, 2006.

18. "Epigenetics, Nutrition, and Cancer", American Cancer Society – Research Promotion Training, Newark, CA, May 21, 2007.

19. "Evidence that Associations Between Homocysteine, B Vitamins, and Cognitive Function Persist in a Folic Acid Fortified Population", 6th Conference on Homocysteine Metabolism and World Congress on Hyperhomocysteinemia, Saarbruecken, Germany, June 7, 2007.

20. "Synthesis of 14C-B12 for Assessment of Vitamin B12 Absorption and Bioavailability in Humans", Gordon Research Conference on Vitamin B12 and Corphins, University of New England, Biddeford, ME, July 3, 2007.

21. "Folate, DNA Methylation Machinery, and Breast Tumorigenesis", NIH Symposium on Diet, Epigenetic Events, and Cancer Prevention, Gaithersburg, MD, Sept. 27, 2007.

22. "Folate, DNA Methylation, and Breast Cancer", UC Davis Inaugural Breast Cancer Research Symposium, Sacramento, CA, Oct. 25, 2007.

23. "Perspectives of a 'Pay If…' Researcher", American Cancer Society Campaign for Research Assembly, Los Angeles, CA, Jan. 26, 2008.

24. "Perspectives of a 'Pay If…' Researcher", American Cancer Society Past Officer's Directors Meeting, Los Angeles, CA, June 18, 2008.

25. "B Vitamins, Homocysteine, and Cognitive Function in the Era of Folic Acid Fortification", FASEB Summer Research Conference on Folic Acid, Vitamin B12, and One-Carbon Metabolism, Lucca, Italy, Aug. 15, 2008.

26. "Dichotomous Effects of DNMT1 and MBD2 Inhibition on Gene Expression in Two Liver Cancer Cell Lines", UC Davis Cancer Center Symposium, Sacramento, CA, Sept. 26, 2008.

27. "Inhibition of DNA Methyltransferase 1 in Human MCF7 Cells and in Mouse Intraepithelial Neoplasia Outgrowths: Potential Implications for Treatment of Breast Cancer", UC Davis 2nd Annual Breast Cancer Research Symposium, Sacramento, CA, Oct. 30, 2008.

28. "Physiological Doses of Cyanocobalamin are Modified or Degraded in the Gastrointestinal Tract", Gordon Research Conference on Vitamin B12 and Corphins, Magdalen College, Oxford, UK, Aug. 4, 2009.

29. "Folic Acid and Cancer", Breast Cancer Network of Strength, Davis, CA, Oct. 12, 2009.

30. "After a Decade of Folic Acid Fortification: To B12 or Not to B12, That is the Question", Lerner Research Institute, Cleveland Clinic, Cleveland, OH, Dec. 3, 2009.

31. "Controversies in Meeting Micronutrient Needs: Does Folic Acid Impair Vitamin B12 Status in Older Adults?", Symposium: Aging 2010 - Challenges and New Opportunities for Clinical Nutrition Interventions in the Aged, Experimental Biology 2010, Anaheim, CA, April 24, 2010.

32. "Does it Matter to Your Aging Brain What You Eat?", American Society for Nutrition Conference on Advances and Controversies in Clinical Nutrition, San Francisco, CA, Feb. 27, 2011

Invited Talks and Seminars (cont.):

33. "Going Beyond Your Research: Advocating for Cancer Research and Legislation", UC Davis Cancer Center Symposium, Sacramento, CA, May 12, 2011.

34. "Evidence that Vitamin B12 is Metabolized or Degraded in the Gastrointestinal Tract: Implications for Vitamin B12 Bioavailability and Fortification", NIH Symposium on Applications of Accelerator Mass Spectrometry in Biomedical and Clinical Research, Bethesda, MD, June 22, 2011.

35. "The Link Between B Vitamins, Homocysteine, and Cognitive Function in the Elderly" Council for Responsible Nutrition Day of Science, Rancho Palo Verdes, CA, Oct. 19, 2011.

36. "After a Decade of Folic Acid Fortification: To B12 or Not to B12, That is the Question", Department of Nutritional Sciences, Rutgers University, New Brunswick, NJ, Nov. 29, 2011.

37. "Vitamin D and Cognitive Function in Older Adults: Are We Concerned About D-mentia?" Symposium: Nutritional Prevention of Cognitive Decline, Experimental Biology 2012, San Diego, CA, April 25, 2012.

38. "Vitamin B6 Status and Risk of Colorectal Cancer in the Women's Health Initiative Observational Cohort", FASEB Summer Research Conference on Folic Acid, Vitamin B12, and One-Carbon Metabolism, Kolymbari, Crete, Greece, July 25, 2012.

39. "Vitamin B12, Homocysteine, and Cognitive Function in the Era of Folic Acid Fortification", Vitamin B12 Symposium, Nancy, France, Sept. 22, 2012.

40. "B Vitamins, Homocysteine and Trajectories of Cognitive Change in Older Adults", Department of Nutritional Sciences, Rutgers University, New Brunswick, NJ, Oct. 25, 2012.

41. "After 15 Years of Fortification, Are We Getting Too Much Folic Acid?", Environmental and Occupational Health Sciences Institute, Rutgers University, Piscataway, NJ, Jan. 24, 2013.

42. "Plasma Homocysteine is Directly Correlated with Lateral Ventricular Volume, and Inversely Correlated with Regional Brain Volumes in Folic Acid Fortified, Cognitively Intact Older Adults: A Canary in the Coal Mine?", 9th International Conference on Homocysteine and One-Carbon Metabolism, Trinity College, Dublin, Ireland, Sept. 10, 2013.

43. "B Vitamins, Homocysteine and Trajectories of Cognitive Change in Older Adults", NIH Office of Dietary Supplements, Rockville, MD, Jan. 15, 2014.

44. "B Vitamins, Homocysteine, and One-Carbon Metabolism", Columbia University, New York, NY, Jan. 31, 2014.

45. "Folic Acid Fortification: Progress and Challenges", FASEB Summer Research Conference on Folic Acid, Vitamin B12, and One-Carbon Metabolism, Steamboat Springs, CO, Aug. 3, 2014.

46. "Folic acid, A Single Nucleotide Polymorphism, & Neural Tube Defects' Impact on Public Health Policy: An Illustration of Integrative Nutrition", 1st Annual Nutrition Symposium – *The Positive Impact of Today's Nutrition on Tomorrow's Society: Current Perspectives from the Clinical, Public Health, Food Science, Pharmaceutical and Legal Sectors*, Robert Wood University Hospital, New Brunswick, NJ, March 10, 2015.

Invited Talks and Seminars (cont.):

47. "Population-based Assessment of Vitamin B12 Status in the Era of Folic Acid Fortification", 10th International Conference on One-Carbon Metabolism, Vitamins B and Homocysteine, Nancy, France, July 10, 2015.

48. "To B12 or Not To B12, That is the Question", Department of Microbiology, Biochemistry & Molecular Genetics, International Center for Public Health, Rutgers New Jersey Medical School, Newark, NJ, Nov. 17, 2015.

49. "Role of Micronutrients (B Vitamins and Vitamin D) in Cognitive Impairment and Dementia/Alzheimer's Disease", Rutgers – Robert Wood Johnson Medical School, Piscataway, NJ, Jan. 28, 2016.

50. "Role of Micronutrients (B Vitamins and Vitamin D) in Cognitive Impairment and Dementia/Alzheimer's Disease", Alzheimer's New Jersey Education and Research Conference: New Directions in Research and Care, Somerset, NJ, April 15, 2016.

51. "Micronutrients, Cognitive Impairment, and Dementia/Alzheimer's Disease", University of British Columbia, Child and Family Research Institute, Vancouver, Canada, May 26, 2016.

52. "Can Vitamins Prevent Age-Related Cognitive Decline?" Parker at Stonegate Assisted Living Residence, Highland Park, NJ, November 11, 2016.

53. "Studies on the Influence of Folic Acid, Riboflavin, and the Methylenetetrahydrofolate Reductase (MTHFR) C677T Polymorphism on Nitric Oxide Production and Blood Pressure", 11th International Conference on Homocysteine & One-Carbon Metabolism, Aarhus University, Aarhus, Denmark, May 18, 2017.

54. "Lessons Learned from the Impact on Select Nutrients of Concern: Metformin and PPIs and B12", Symposium - *Micronutrient Status: Modifying Factors – Drugs, Chronic Disease, and Surgery*, Columbia University College of Physicians and Surgeons, New York, NY, June 17, 2017.

55. "Homocysteine, B Vitamins and Vitamin D in Age-Related Cognitive Decline", Dept. of Neurology Grand Rounds, University of California-Davis Medical Center and School of Medicine, Sacramento, CA, June 29, 2017.

56. "Can Vitamins Prevent Age-Related Cognitive Decline?", Community Engagement Seminar, University of California-Davis Alzheimer's Disease Center, Sacramento, CA, June 29, 2017.

57. "Micronutrient Supplementation and the Aging Brain: Can Supplements Prevent Age-Related Cognitive Decline?", Rutgers Catalyst Healthy Aging Symposium, Institute for Health, Health Care Policy, and Aging Research, New Brunswick, NJ, October 18, 2018.

58. "Vitamin B12", Vitamin and Mineral Workshop, Nu Skin Global Headquarters, Provo, UT, March 21, 2019.

59. "The Multidisciplinary Making of the *MTHFR* Story: Past, Present, and Future", 12th International Conference on One Carbon Metabolism, B Vitamins and Homocysteine, Montbrio, Southern Catalonia, Spain, June 10, 2019.

Manuscript Reviews (1998-Present):

Nutrition Journals (#)
Advances in Nutrition (6)
American Journal of Clinical Nutrition (60)
Amino Acids (6)
British Journal of Nutrition (8)
Clinical Nutrition ESPEN (1)
Encyclopedia of Dietary Supplements (1)
European Journal of Clinical Nutrition (3)
Food and Nutrition Bulletin (1)
Genes and Nutrition (1)
Journal of Nutrition (45)
Journal of Nutrition for the Elderly (2)
Journal of Nutritional Biochemistry (3)
Journal of Nutrition, Health, and Aging (4)
Journal of Nutr. in Gerontol. and Geriatrics (1)
Journal of Nutrition and Metabolism (1)
Molecular Nutrition and Food Research (10)
Nutrients (3)
Nutrition (2)
Nutrition and Healthy Aging (1)
Nutrition and Metabolism (1)
Nutrition Journal (1)
Nutrition, Metabolism, & Cardiovasc. Diseases (1)
Nutrition Research (2)
Nutrition Research Reviews (2)
Nutrition Reviews (7)
Nutritional Neuroscience (4)

Neurology Journals (#)
Acta Neurologica Scandinavica (1)
Alzheimer's & Dementia (4)
Alzheimer's Dis. and Assoc. Disorders (7)
Archives of General Psychiatry (1)
Behavioral Brain Research (1)
Biological Psychiatry (2)
Brain Research (2)
Current Alzheimer Research (1)
CNS Spectrums (1)
European Journal of Neurology (1)
Experimental Neurology (1)
International Journal of Geriatric Psychiatry (1)
JAMA Neurology (2)
Journal of Alzheimer's Disease (7)
Journal of Neurological Sciences (3)
Journal of Neurology (1)
Journal of Neuroscience Research (1)
Lancet Neurology (1)
Metabolic Brain Disease (1)
Movement Disorders (5)
Neurobiology of Aging (5)
Neurodegenerative Diseases (1)
Neurology (43)
Neuroscience Letters (3)
Progress in Neurobiology (1)
TouchNEURO (1)

Other Journals (#)
American Journal of Epidemiology (1)
American Journal of Hematology (1)
American Journal of Medicine (1)
American Journal of Physiology (1)
Animal: Intl Journal of Animal Bioscience (1)
Annals of Internal Medicine (1)
Annals of the NY Academy of Sciences (1)
Archives of Biochemistry and Biophysics (1)
Archives of Diseases in Childhood (1)
Arteriosclerosis, Thrombosis & Vasc. Biol. (2)
Arthritis Research and Therapy (1)
Arthritis and Rheumatism (1)
Biochimie (4)
Biofactors (1)
Biological Research for Nursing (1)
Blood (8)
BMC Haematology (1)
Brain, Behavior, and Immunity (1)
British Journal of Cancer (1)
Canadian Medical Association Journal (1)
Cancer Epidemiol., Biomarkers, & Prev. (1)
Cancer Research (1)
Carcinogenesis (5)
Chemico-Biological Interactions (1)
Clinica Chimica Acta (3)
Clinical Chemistry (1)
Clinical Chemistry & Laboratory Medicine (4)
Clinical Medicine and Research (1)
Clinical Medicine Insights: Case Reports (1)
Experimental Biology and Medicine (3)
Experimental Gerontology (2)
FASEB Journal (6)
FEBS Journal (1)
Human Mutation (1)
International Health (1)
International Journal of Medical Sciences (1)
International Journal of Cancer (1)
Journal of Biological Chemistry (4)
J Clinical Endocrinology and Metabolism (1)
Journal of Gerontology: Medical Sciences (1)
Journal of the National Cancer Institute (1)
Journal of Oncology (1)
J Pharmacol and Experimental Therapeutics (1)
Journal of Physiology (1)
Journal of Translational Medicine (1)
Lancet (1)
Life Sciences (2)
Mayo Clinic Proceedings: Innovations, Quality & Outcomes (1)
Metabolism (2)
Molecular and Cellular Biochemistry (1)

Manuscript Reviews (1998-Present) (cont):

Other Journals (#) (cont)
Molecular Genetics & Metabolism Reports (1)
New England Journal of Medicine (1)
OncoTargets and Therapy (1)
Pan American Journal of Public Health (1)
PLOS One (3)
Preventive Medicine (1)
Proc. of the Indian National Sci Academy (1)
Public Health Nutrition (1)
Scientific Reports (1)
SpringerPlus (3)
Trends in Molecular Medicine (1)

Grant Reviews - Organization (years)

Alzheimer's Association (2004, 2007, 2008, 2013, 2016)
Alzheimer's Society – UK (2017)
American Cancer Society (2010)
Bill and Melinda Gates Foundation (2017, 2019)
Breast Cancer Research Campaign (2012)
California Agricultural Research Initiative (2006)
Canadian Diabetes Association (2003)
Diabetes Action, Research, and Education Foundation (2005-2013, 2016)
Genesis Oncology Trust (2004)
Health Canada Genomics Research and Development Initiative (2019)
Health Research Board (Ireland) (2011)
Heart Research UK (Northern Ireland (2019)
Hospital for Sick Children Foundation (2004)
National Sciences and Engineering Research Council of Canada (2009, 2016)
NIH NHLBI Program Project Review Panel (2011)
NIH Special Emphasis Panel for Population Sciences and Epidemiology IRG (2014)
NIH Oncological Sciences Fellowship Review Panel Ad Hoc Mail Reviewer (2015)
Thrasher Research Fund (2011)
USDA (2002)
USDA-ARS Office of Scientific Quality Review Human Nutrition Project Plan Reviews (2018)

External Thesis Committee Member or Reviewer
Theresa H. Schroder – University of British Columbia (Canada) Doctoral Thesis (2017)
Lesley Ann Plumptre – University of Toronto (Canada) Doctoral Thesis (2016)
Grace Cham – Cook University (Australia) Honours Student Literature Review and Thesis (2016)
Rene Lee Jacobs – Memorial University of Newfoundland (Canada) Doctoral Thesis (2002)

External Academic Program Reviewer
Review Team Chair, Univ. of Nebraska-Lincoln, Dept. of Nutrition and Health Sciences (2018)