Patrick J. Stover, PhD
Professor and Director
Institute for Advancing Health through Agriculture
Distinguished Professor
Texas A&M University System
Patrick.Stover@ag.tamu.edu

Education

PhD, 1990, Biochemistry & Molecular Biophysics, Medical College of Virginia, Richmond, VA
Thesis Mentor: Professor Verne Schirch

BS, 1986, Chemistry, Saint Joseph's University, Philadelphia, PA

Postdoctoral Training

1992-94: Nutritional Sciences, University of California at Berkeley, Berkeley, CA
Mentor: Professor Barry Shane

1990-91: Biochemistry & Molecular Biophysics, Medical College of Virginia, Richmond, VA
Mentor: Professor Verne Schirch

Academic Appointments

2022-present: Director, Institute for Advancing Health through Agriculture

2018-2022: Vice Chancellor and Dean, Agriculture and Life Sciences, Texas A&M University System and Texas A&M University

2005-2018: Professor, Cornell University, Division of Nutritional Sciences

2000-2018: Adjunct Professor, Department of Biomedical Sciences, College of Veterinary Medicine, Cornell University

2000-05: Associate Professor, Cornell University, Division of Nutritional Sciences

1994-20: Assistant Professor, Cornell University, Division of Nutritional Sciences

Administrative Appointments

Director, Texas A&M Institute for Advancing Health through Agriculture

Director, Texas A&M AgriLife Research, 2019-2022

Vice Chancellor and Dean for Agriculture and Life Sciences, Texas A&M AgriLife, Texas A&M University System, 2018-2022

Director, Division of Nutritional Sciences, Cornell University, 2005-2018

Director, World Health Organization (WHO) Collaborating Centre on Implementation Research in Nutrition and Global Policy: 2015-2018

Professional Appointments

President, American Society for Nutrition (ASN), 2015-16

Vice-President, American Society for Nutrition (ASN), 2014-15

Vice-President Elect, American Society for Nutrition (ASN), 2013-14

Treasurer, Association of Nutrition Departments and Chairs (ANDP), 1996-2015

Graduate and other Program Memberships

Graduate Field and Center Appointments, Cornell University

Nutritional Sciences, 1994-present

Biochemistry, Molecular and Cellular Biology, 1995-present

Program in Neuroscience, 2002-2018

Bronfenbrenner Center for Translational Research (BCTR), 2012-2018

Comparative Biomedical Sciences, 2015-2018

NIH Training Grant Memberships, Cornell University

Chemistry-Biology Interface Grant, 2010-2018

Biochemistry and Molecular Cell Biology Training Grant, 1995-2018

Nutrition Training Grant, 1994 – 2018

Infant-Maternal Nutrition Training Grant, 2000-2018

Center Memberships, Cornell University

Cancer Center of Weill Cornell Medical College and New York-Presbyterian Hospital, 2015-2018

Awards and Honorary Distinctions

Texas A&M University Distinguished Professor, 2020

Texas A&M University Chapter of Phi Kappa Phi, 2019

National Academy of Sciences, Elected Member, 2016

American Association for the Advancement of Science (AAAS) Fellow, Elected, 2014

SUNY Chancellor's Award for Excellence in Scholarship and Creative Activities, 2014

Osborne and Mendel Award, American Society for Nutrition, 2014

Method to Extend Research in Time (MERIT) Award, NIH-NIDDK, 2012

Honorary Member, Golden Key International Honor Society, 2012

E.R.L. Stokstad Award in Nutritional Biochemistry, ASNS, 1999

Cornell University "Outstanding Educator", Selected by Merrill Presidential Scholar Beatriu Reig, Class of 1999, College of Arts and Sciences, Cornell University

Cornell University "Outstanding Educator", Selected by Merrill Presidential Scholar Eric Epstein, Class of 1998, College of Agriculture and Life Sciences, Cornell University

Cornell University "Outstanding Educator", Selected by Merrill Presidential Scholar Ilya Nasrallah, Class of 1998, College of Arts and Sciences, Cornell University

Presidential Early Career Award for Scientists and Engineers, Awarded by President William J. Clinton, 1997

Outstanding Alumnus Award, Medical College of Virginia, 1997

Cornell University "Outstanding Educator", Selected by Merrill Presidential Scholar Jessica Hills, Class of 1996, College of Human Ecology, Cornell University

International Life Sciences Institute "Future Leader in Nutrition", 1995

Young Scholar Travel Award (100,000 yen) for the 8th International Symposium on Vitamin B6 and Carbonyl Catalysis, Osaka, Japan, 1990

John C. Forbes Research in Progress Award, First Place, Medical College of Virginia, 1990

Reverend Joseph Molloy Award in Chemistry, Saint Joseph's University, 1986

Scientific Advisory Boards and Committees, Panels and Review Teams

Associate Editor, PNAS Nexus, National Academy of Sciences, 2020 – present

Member, Integrated Biomarker and Signaling-Pathways Approaches for Understanding Operational Performance Panel, NASA, 2020

Member, American Society for Nutrition Fellows Selection Panel, 2019-present

Member, Aegean Conferences Advisory Board, 2019-present

Member, FAO Director General's Roundtable on the Future of Food, 2019, Rome Italy

Member, Scientific Advisory Board, International Import Center on Food Nutrition and Human Health, Chinese Agricultural University, Beijing, China, 2017-2018

Chair, National Institutes of Health, Nutrition Research Task Force Thought Leaders Panel, 2017

Chair, Agricultural Research Service (ARS/USDA) Retrospective Review Panel, 2017

Member, Consensus Study, National Academy of Sciences. *The Development of Guiding Principles for the Inclusion of Chronic Disease Endpoints in Future Dietary Reference Intakes*, 2016

Chair, Workshop, Office of Dietary Supplements, NIH, Bethesda, MD. *Iron Screening and Supplementation of Iron-replete Pregnant Women and Young Children*, 2016

Member, NIDCR/NIH Workshop. Bethesda. MD. *Gene-Environment Interaction in Oralfacial Clefting*, 2016

Member, Space Nutrition Workshop, Johnson Space Center in Houston. *Evaluation of the Current Understanding of the Role of Nutrition in Space, to Define Nutritional Requirements for Future Space Exploration Missions*, 2016

Member, Medical Research Council (MRC) Panel Review of *Nutrition and Human Health Research*, London, England, 2016

Member, Fred Hutchinson Cancer Center, External Advisory Committee, Cancer Prevention Training: Epidemiology, Nutrition, Genetics and Survivorship, Seattle, USA, 2016 - present

Member, Biofotis Scientific Advisory Committee, Chicago USA, 2015 - 2019

Chair, Marabou Foundation Scientific Advisory Committee, Stockholm Sweden, 2015 - present

Member, Marabou Foundation Board, Stockholm Sweden 2015 - present

Member, Chobani Scientific Advisory Committee, New York USA, 2015- 2018

Member, Supporters of Agricultural Research (SoAR) Foundation, Scientific Advisory Committee, 2015 - 2019

Member, Committee to Establish a Cochrane Nutrition Field, Cochrane South Africa, Cape Town South Africa, 2015

Member, Nutrition and Dietary Supplements Committee: PhenX Consensus Measures for Phenotypes and Exposures. National Human Genome Research Institute (NIH) and RTI International, 2014-15

Member, Expert Panel: *Achieving a Transparent, Actionable Framework for Public-Private Partnerships*, National Institutes of Health, International Life Sciences Institute, United Sates Department of Agriculture, American Society for Nutritional Sciences, 2014-15

Member and Subpanel Chair: Expert Panel: *Identifying Research Needs for Assessing Safe Use of High Intakes of Folic Acid*, National Toxicology Program, National Institutes of Health, 2014-15

Chair, External Review Committee: Cyclical program review of Department of Food Science and Human Nutrition, Iowa State University, 2014

Member, WHO Guideline Development Group: Optimal Blood Folate Concentrations in Women of Reproductive Age for Prevention of Neural Tube Defects, WHO/HQ Geneva, Switzerland, 2013

Member, Committee: Framework for Assessing the Health, Environmental, and Social Effects of the Food System, Institute of Medicine, National Academies of Sciences, 2013-15

Member, External Review Committee: Cyclical program review of the School of Dietetics and Human Nutrition, McGill University, 2014

Member, External Review Committee: Comprehensive program review of the Department of Nutrition and Toxicology, University of California, Berkeley, 2014

Member, Food and Nutrition Board, Institute of Medicine, National Academies of Science, 2007-13

Chair, External Review Committee: Comprehensive program review of the Sackler Institute for Nutrition Science, New York Academy of Sciences, 2012-13

Member, CDC/WHO Technical Consultation: Optimal Blood Folate Concentrations in Women of Reproductive Age for the Prevention of Neural Tube Defects, Atlanta GA, 2012

Member, Board of Directors, American Society for Nutritional Sciences, 2011-17

Member, External Review Committee: Comprehensive program review of the Human Nutrition, Food and Exercise Department, Virginia Tech University, 2012

Member, Folate Expert Panel: *Biomarkers of Nutrition for Development (BOND) Initiative.* The *Eunice Kennedy Shriver* National Institute of Child Health and Human Development (NICHD)

of the National Institutes of Health (NIH)/U.S. Department of Health and Human Services, 2011–14

Member, Undernutrition Group, Scientific Steering Committee, The Sackler Institute for Nutrition Science, New York Academy of Sciences, 2011-15

Member, International Scientific Advisory Board, Institute for Nutritional Sciences, Shanghai Institutes of Biological Sciences, Chinese Academy of Sciences, 2011-2018

Advisor to the Board, Britannia Nutrition Institute (BNI), Bangalore, India, 2009-14

BNI is an independent, autonomous, non-profit body that leverages the strengths of Britannia's wide stakeholder network to effect policy changes and social awareness regarding child nutrition.

Member, Applied Research and Extension Program Council, Cornell University, 2010-2018

Chair, External Review Committee: Comprehensive program review of the Nutritional Sciences Department, Purdue University, 2012

Member, External Review Committee: Comprehensive program review of Human Graduate Nutrition Program, Oregon State University, 2011

Observer, Thirty-sixth Session of the Committee on World Food Security (CFS), FAO, Italy, 2010

Member, NHANES, National Center for Health Statistics, Planning Advisory Panel, 2010

Member, Steering Committee for FASEB-sponsored conference: Engaging Basic Researchers in the Translational Research Enterprise, 2010-11

Member, Biomarkers of Nutrition for Development: Building a Consensus, National Institute of Child Health and Human Development (NICHD) & UN agencies, Vienna, Austria, 2010

Member, State of the Science Panel, Folic Acid, March of Dimes National Office, 2009

Member, Expert Advisory Committee: *Hot Topics in Preconception Care: Folate and Beyond*, The Association of Reproductive Health Professionals (ARHP), 2009

Chair, Nutrition and Dietary Supplements Committee, PhenX Consensus Measures for Phenotypes and Exposures, National Human Genome Research Institute (NIH) and RTI International, 2008-09

Member, External Review Committee: Comprehensive Program Review of the Food Science and Human Nutrition Department, Institute of Food and Agricultural Science, University of Florida, 2009

Member, Harmonization of Dietary Standards Expert Committee, United Nations University, Florence, Italy, December 2005

Member, Nutrigenomics Workshop Planning Committee, National Academy of Sciences, Institute of Medicine, 2005

Member, Technical Consultation on Folate and Vitamin B12 Deficiency, World Health Organization (WHO), Geneva, 2005

Member, Maternal Folate Supplementation Expert Committee, Food and Drug Administration, 2003

Member, Workshop on Folate Fortification for the Americas, Pan American Health Organization (PAHO) Washington, DC, 2003

Member, Workshop on Exploring a Vision: Integrating Knowledge for Food and Health, National Academies of Science, Washington, DC, 2003

Chair, National Institutes of Health, Nutrition Research Task Force Thought Leaders Panel, 2017

Chair, Agricultural Research Service (ARS/USDA) Retrospective Review Panel, 2017

Member, Consensus Study, National Academy of Sciences. *The Development of Guiding Principles for the Inclusion of Chronic Disease Endpoints in Future Dietary Reference Intakes*, 2016

Chair, Workshop, Office of Dietary Supplements, NIH, Bethesda, MD. *Iron Screening and Supplementation of Iron-replete Pregnant Women and Young Children*, 2016

Member, NIDCR/NIH Workshop. Bethesda. MD. *Gene-Environment Interaction in Oralfacial Clefting*, 2016

Member, Space Nutrition Workshop, Johnson Space Center in Houston. *Evaluation of the Current Understanding of the Role of Nutrition in Space, to Define Nutritional Requirements for Future Space Exploration Missions*, 2016

Member, Medical Research Council (MRC) Panel Review of *Nutrition and Human Health Research*, London, England, 2016

Member, Fred Hutchinson Cancer Center, External Advisory Committee, Cancer Prevention Training: Epidemiology, Nutrition, Genetics and Survivorship, Seattle, USA, 2016 - present

Member, Nutrition and Dietary Supplements Committee: PhenX Consensus Measures for Phenotypes and Exposures. National Human Genome Research Institute (NIH) and RTI International, 2014-15

Member, Expert Panel: *Achieving a Transparent, Actionable Framework for Public-Private Partnerships*, National Institutes of Health, International Life Sciences Institute, United Sates Department of Agriculture, American Society for Nutritional Sciences, 2014-15

Member and Subpanel Chair: Expert Panel: *Identifying Research Needs for Assessing Safe Use of High Intakes of Folic Acid*, National Toxicology Program, National Institutes of Health, 2014-15

Chair, External Review Committee: Cyclical program review of Department of Food Science and Human Nutrition, Iowa State University, 2014

Member, WHO Guideline Development Group: Optimal Blood Folate Concentrations in Women of Reproductive Age for Prevention of Neural Tube Defects, WHO/HQ Geneva, Switzerland, 2013

Member, Committee: Framework for Assessing the Health, Environmental, and Social Effects of the Food System, Institute of Medicine, National Academies of Sciences, 2013-15

Member, External Review Committee: Cyclical program review of the School of Dietetics and Human Nutrition, McGill University, 2014

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Member, CDC/WHO Technical Consultation: Optimal Blood Folate Concentrations in Women of Reproductive Age for the Prevention of Neural Tube Defects, Atlanta GA, 2012

Member, Board of Directors, American Society for Nutritional Sciences, 2011-present

Member, External Review Committee: Comprehensive program review of the Human Nutrition, Food and Exercise Department, Virginia Tech University, 2012

Member, Folate Expert Panel: *Biomarkers of Nutrition for Development (BOND) Initiative.* The *Eunice Kennedy Shriver* National Institute of Child Health and Human Development (NICHD) of the National Institutes of Health (NIH)/U.S. Department of Health and Human Services, 2011–14

Member, Undernutrition Group, Scientific Steering Committee, The Sackler Institute for Nutrition Science, New York Academy of Sciences, 2011-15

Member, International Scientific Advisory Board, Institute for Nutritional Sciences, Shanghai Institutes of Biological Sciences, Chinese Academy of Sciences, 2011-present

Advisor to the Board, Britannia Nutrition Institute (BNI), Bangalore, India, 2009-14

BNI is an independent, autonomous, non-profit body that leverages the strengths of Britannia's wide stakeholder network to effect policy changes and social awareness regarding child nutrition.

Member, Applied Research and Extension Program Council, Cornell University, 2010-present

Chair, External Review Committee: Comprehensive program review of the Nutritional Sciences Department, Purdue University, 2012

Member, External Review Committee: Comprehensive program review of Human Graduate Nutrition Program, Oregon State University, 2011

Observer, Thirty-sixth Session of the Committee on World Food Security (CFS), FAO, Italy, 2010

Member, NHANES, National Center for Health Statistics, Planning Advisory Panel, 2010

Member, Steering Committee for FASEB-sponsored conference: Engaging Basic Researchers in the Translational Research Enterprise, 2010-11

Member, Biomarkers of Nutrition for Development: Building a Consensus, National Institute of Child Health and Human Development (NICHD) & UN agencies, Vienna, Austria, 2010

Member, State of the Science Panel, Folic Acid, March of Dimes National Office, 2009

Member, Expert Advisory Committee: *Hot Topics in Preconception Care: Folate and Beyond*, The Association of Reproductive Health Professionals (ARHP), 2009

Member, External Review Committee: Comprehensive Program Review of the Food Science and Human Nutrition Department, Institute of Food and Agricultural Science, University of Florida, 2009

Member, Harmonization of Dietary Standards Expert Committee, United Nations University, Florence, Italy, December 2005

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Member, Technical Consultation on Folate and Vitamin B12 Deficiency, World Health Organization (WHO), Geneva, 2005

Member, Maternal Folate Supplementation Expert Committee, Food and Drug Administration, 2003

Member, Workshop on Folate Fortification for the Americas, Pan American Health Organization (PAHO) Washington, DC, 2003

Member, Workshop on Exploring a Vision: Integrating Knowledge for Food and Health, National Academies of Science, Washington, DC, 2003

Professional Development

College of Agriculture and Life Sciences Faculty Leadership Program, Cornell University, 2010

Effective Interactions in Organizations Workshop, Cornell University, 2005

Thornfield Teaching Workshop, Cornell University, 1998

Academic Leadership Series Workshop, Cornell University, 1998, 1999, 2001

Molecular Biology of the Mouse course participant, Cold Spring Harbor, 1997

Faculty Workshop on Student Stress, faculty participant, Cornell University, 1996

Scientific, Honorary and Professional Societies

Sigma-XI, Cornell University Chapter, 2012-14

American Society for Nutrition, 1998-present

American Association for the Advancement of Science, 1994-present

American Society for Biochemistry and Molecular Biology, 1994-present

American Chemical Society, 1994-96

Philadelphia Organic Chemists Club, 1984-86

Sigma-XI, Saint Joseph's University Chapter, 1985

Student Organizations/Advising

Cornell University March of Dimes Collegiate Council, Faculty Advisor, 2009-2018

Cornell Freshman Reading Project, Discussion Leader, 2008-15

Cornell Faculty Fellow, Dining Hall Discussion Leader, 2004

Scientific Meetings and Short Courses Organized

Organizer: AAAS 2022 Symposium: Achieving expectations of agriculture as the solution to human, environmental and economic health with evidence-based science. Philadelphia PA, 2022

Co-Organizer: Precision Nutrition in Public Health and Medicine, Aegean Conference Series, Crete, Greece, 2018 - present

Organizer: Cornell University Responsible Conduct of Research Symposium, 2018

Organizer: New York Academy of Sciences, Conference on Distinctive Nutritional Requirements, December 2015

Organizer: WHO/Cochrane Collaboration/Cornell University Summer Institute for Systematic Reviews in Nutrition for Global Policy Making, 2014-2015

Organizing Co-chair: Keystone Conference – Nutrition and Epigenetics, 2013

Organizing Chair: FASEB Summer Conference - Folic Acid, Vitamin B12 and One-Carbon Metabolism, 2004

Organizing Co-Chair: FASEB Summer Conference - Folic Acid, Vitamin B12 and One-Carbon Metabolism, 2002

Chair: American Society for Nutritional Sciences - Initiative on Graduate Education
Ithaca, NY, 2001

Conference Advisory Committees

Marabou Foundation Symposium, Stockholm, Sweden 2015 - present

Living Well to 100 Conference, Tufts University, 2006

Nutritional Genomics Conference, National Academy of Sciences, 2006

International Homocysteine Meeting, 2005, Milan, Italy, 2005

Living Well to 100 Conference, Tufts University, 2004

International Homocysteine Meeting, Basel, Switzerland, 2003

Invited Research Seminars/Discussions

"The Promise of Health Through Agriculture" Alltech ONE Conference 2022 - Health and Wellness Session. Lexington KY, 2022.

"The Promise of Health Through Agriculture" American Association of Public and Land Grant Universities, Southern Region Conference, College Station, Texas 2022.

"Nutrition in Extreme Conditions: Why it Matters! "NASA Johnson Space Center, Human Health and Performance Directorate. Texas, 2022.

"Enhancing the Purpose of Food" Institute for Quantum Science and Engineering (IQSE), Texas A&M University, 2022.

"Enhancing the Purpose of Food" Harkin on Wellness Symposium, Nutrition Security, The Harkin Institute, Drake University. Des Moines Iowa, 2022.

"Enhancing the Purpose of Food" 2022 Hunger Consortium Expo, Texas A&M University, College Station, TX, 2022.

"Bringing Agriculture and Health Together: New Expectations and New Challenges" AAAS 2022 Symposium: Achieving expectations of agriculture as the solution to human, environmental and economic health with evidence-based science. Philadelphia, PA, 2022

"Nuclear One-Carbon Metabolism and Folate-Related Pathologies" Baylor College of Medicine, Houston, TX, 2021

"Nuclear One-Carbon Metabolism and Folate-Related Pathologies" 2nd Aegean Conference on *Precision Nutrition in Public Health and Medicine*, Rhodes, Greece, 2021

"Nuclear One-Carbon Metabolism and Folate-Related Pathologies" *13th International Conference on One Carbon Metabolism, B Vitamins and Homocysteine*, Poznań, Poland, 2021

"Population Heterogeneity and Human Nutrition: Where Do We Go From Here?" UNT Transdisciplinary Conference on Diversifying Genomic Research, Dallas, Texas, 2020

"Food Insecurity and COVID-19: Overview and Snap-Shot of Texas" Food and Nutrition Board, National Academy of Sciences, Engineering and Medicine, Washington D.C., 2020

"The Ties Between Nature, Conservation and Human Health" Keynote Presentation EarthXConservation, Dallas, Texas, 2020

"Special Nutritional Requirements in Extreme Conditions and Disease" NASA Workshop on Circuits and Biomarkers of the CNS Relating to Astronaut Performance, Houston, Texas 2020

"New Expectations of Food Systems and Nutrient and Dietary Recommendations" Society for Nutrition, Education and Behavior: Briggs Symposium Keynote Speaker, 2020

"Strengthening University Partnerships" Academia Perspectives Roundtable, Food and Agriculture Organization of the United Nations, Rome, Italy 2020

"Strengthening Federal Nutrition Research: Gaps and Opportunities, including Lessons from COVID-19". NUTRITION 2020 LIVE ONLINE, 2020

"The Food and Nutrition Board: Authority for Today's Science, Driving Tomorrow's Science". National Academies of Science, Engineering and Medicine 80th Birthday, Washington, D.C. 2020

"In Search of a Common Pathway for Folic Acid-Responsive Neural Tube Defects, Cancers, and Neurodegeneration" NASA, Johnson Space Center, Houston, Texas, 2020

"Folate in Animal Nutrition and Metabolism" *International Conference Green Feeds and Animal Product Safety*, Wuhan, China, 2019

"Overview of Biochemical and Molecular Interactions between Folate and Vitamin B12" *NIH Workshop on Metabolic Interactions between Folic Acid Excess and Vitamin B12 Deficiency*, Bethesda MD, 2019

"Nuclear One-Carbon Metabolism in Embryonic Development and Disease" *12th International Conference on One Carbon Metabolism, B Vitamins and Homocysteine*, Southern Catalonia, Spain, 2019

"In search of a common pathway for folic acid-responsive neural tube defects, cancers and neurodegeneration" Texas A&M, College of Veterinary Medicine, 2019

"In search of a common pathway for folic acid-responsive neural tube defects, cancers and neurodegeneration" Texas A&M, Distinguished Lecture, Department of Nutrition and Food Science, 2019

"Ensuring Trust in Nutrition Research: *Results of the ASN committee on Public Trust*", Council of Scientific Society Presidents, Washington, DC, 2018

"Systems Understanding of the One-Carbon Metabolism Network in Health and Disease" Henderson Lecture, University of Minnesota, Departments of Nutrition and Food Science; Department of Biochemistry, 2018

"Systems Biology is the Future of Human Nutrition Research" Aegean Conference on *Precision Nutrition in Public Health and Medicine*, Crete, Greece, 2018

"Ensuring Trust in Nutrition Research: *Preliminary Results of the ASN committee on Public Trust*" Nutrition 2018, American Society for Nutrition, Boston, MA, 2018

"Understanding of the One-Carbon Metabolism Network in Human Health and Disease" CeMM Research Center for Molecular Medicine, Vienna, Austria, 2018

"Identification and Validation of Biomarkers in Disease States" National Academies of Sciences, Examining Special Nutritional Requirements in Disease States workshop, Washington DC, 2018

"The Underlying Biological Processes for Special Nutritional Requirements" National Academies of Sciences, Examining Special Nutritional Requirements in Disease States workshop, Washington DC, 2018

"Public Trust in Research", Responsible Conduct of Research Symposium, Cornell University, 2018

"Systems Understanding of the One-Carbon Metabolism Network in Health and Disease" UCLA, Department of Medicine, 2018

"Visioning Nutrition in 2028", American Society for Nutrition, Washington, DC, 2017

"Nutrient Requirements as Complex Traits – What Consumers Will Need to Know" National Academies of Sciences, Food Forum, Washington, DC, 2017

"Should We Consider Nutrient Needs in Chronic Disease", National Academies of Sciences, Washington, DC, 2017

"Should We Consider Nutrient Needs in Chronic Disease", 13th China Nutrition Science Congress, Beijing, China 2017

"The Role of Host: Genetic Variation", National Academies of Science, Medicine and Engineering Workshop, Global Harmonization of Methodological Approaches to Nutrient Intake Recommendations, Headquarters of the Food and Agriculture Organization of the United Nations, Rome, Italy, 2017

"Ensuring Trust in Nutrition Research: *Preliminary Results of the ASN committee on Public Trust*" 21st Congress of the International Union of Nutrition Science, Buenos Aires, Argentina, 2017

"Integration of Empirical and Computational Approaches to Identify Metabolic and Nutritional Vulnerabilities in One-Carbon Metabolism", National Institutes of Health, Office of Dietary Supplements, Washington, DC, 2017

"To receive or not to receive (industry funding in academia) ... that is the question", Institute of Food Technologists Annual Meeting, Las Vegas, 2017

"Arsenic Targets Folate-dependent de novo Thymidylate Synthesis in the Nucleus Leading to Neural Tube Defects", 11th International Conference on Pathways, Networks, and Systems Medicine. Crete, Greece, 2017

"Arsenic Targets Folate-dependent de novo Thymidylate Synthesis in the Nucleus Leading to Neural Tube Defects", 11th International Conference on Homocysteine and One-Carbon Metabolism. Aarhus, Denmark, 2017

"Systems Understanding of the One-Carbon Metabolism Network" Braunschweig Biological Lectures, University of Braunschweig. Braunschweig, Germany, 2017

"Challenges and Opportunities: Standards of Evidence to Reach Clinical Guidelines and Distinctive Nutritional Requirements" Experimental Biology Conference, Chicago, Ill, 2017

"Arsenic Targets Folate-dependent de novo Thymidylate Synthesis in the Nucleus Leading to Neural Tube Defects" NICHD's 11th Structural Birth Defects Meeting, Bethesda, MD, 2017

"U.S. Department of Agriculture (USDA) Dialogue with Journal Editors and Scientific Societies on Enhancing Rigor & Reproducibility in the Reporting of Agricultural, Forestry, and Nutrition Research" Webinar, 2017

"Safety of Folic Acid" Technical Consultation for Folate Status in Women and Neural Tube Defects Risk-Reduction. Micronutrient Initiative, Ottawa, Canada, 2016

"The National Nutrition Research Roadmap: Basic Science and Epidemiology of Nutrition: Scientific Premise of Individual Variances in Nutritional Status and Response to Diet" Webinar sponsored by the American Society for Nutrition, 2016

"What Should We Expect from the Food Supply" Beijing Conference on Food Nutrition and Human Health" Beijing, China, 2016

"Nuclear One-Carbon Metabolism" The Folate Receptor Society - 6th Biennial Meeting, Breckenridge CO, 2016

"In search of a common pathway for folic acid-responsive neural tube defects, cancers and neurodegeneration" The Microsoft Research - University of Trento Centre for Computational and Systems Biology, Italy, 2016

"2016 Global Nutrition Report Launch: US Perspective" Senate Dirksen Office Building, Washington DC, 2016

"Systems Approaches to Nutrition: Where we are, and where are we going?" American Society for Nutrition Plenary Session: Presidential Symposium. Organizer and Session Chair. Experimental Biology Meeting, San Diego, CA, 2016

"Functional Roles for Public-Private Partnerships to Support Food and Nutrition Research – Principles and Examples", Experimental Biology Meeting, San Diego, CA. 2016

"The Biochemistry and Nutrition of B-Vitamins and Human Health" University of Massachusetts, Boston, McNair program Recruitment Event, Boston, MA, 2016

"New High-Affinity Targets for an Old Toxin; Arsenic Impairs Folate Metabolism", Columbia University, NY, 2015

"Nutrition and Food Research: Positioning us for Success" Association of Nutrition Departments and Chairs Annual Meeting, Pomona, CA, 2015

"American Society for Nutrition: Alliance with Nutrition Departments and Chairs" Association of Nutrition Departments and Chairs Annual Meeting, Pomona CA, 2015

"In search of a common pathway for folic acid-responsive neural tube defects, cancers and neurodegeneration" Keystone Symposium, Human Nutrition, Environment and Health, Beijing, China, 2015

"In search of a common pathway for folic acid-responsive neural tube defects, cancers and neurodegeneration" Faculty of Medicine and Health Sciences, Stellenbosch University, Cape Town, South Africa, 2015

"In search of a common pathway for folic acid-responsive neural tube defects, cancers and neurodegeneration" 10th International Conference One-Carbon Metabolism, Vitamins B and Homocysteine, Nancy, France, 2015

"In search of a common pathway for folic acid-responsive neural tube defects, cancers and neurodegeneration" 11th Aegean Conference on Pathways, Networks and Systems, Crete, Greece, 2015

"Assessing the Real Impacts of Food", Plenary Presentation, EAT Stockholm Food Forum, Stockholm, Sweden, 2015

"What should we expect from the food supply", Plenary Presentation, Chinese Nutrition Society, Beijing, China, 2015

"In search of a common pathway for folic acid-responsive neural tube defects, cancers and neurodegeneration" Chinese Nutrition Society, Beijing, China, 2015

"Folic Acid and Birth Defect Prevention" Cornell Undergraduate Health Cooperative, Sick in America seminar series, Cornell University, 2015

"What do you expect from the food supply" Public Talk, David H. Murdock Research Institute, Kannapolis, NC, 2015

"In search of a common pathway for folic acid-responsive neural tube defects, cancers and neurodegeneration", University of North Carolina, at Chapel Hill, Nutrition Research Institute, 2015

"Emerging Topics in Nutrigenomics" Health Canada, Science Symposium IV: Food for Thought: Scientific Advances in Nutrition and Food Safety, Ottawa, Canada, 2015

"In search of a common pathway for folic acid-responsive neural tube defects, cancers and neurodegeneration", Universite du Luxembourg, Luxembourg Centre for Systems Biomedicine, 2014

"In Search of a Common Pathway for Folic Acid-Responsive Neural Tube Defects" Ninth Structural Birth Defects Meeting, NIH-NICHD, Bethesda Maryland, 2014

"What you Eat and Why it Matters: the Future of Food and Graduate Education in the Life Sciences at Cornell University" University of Massachusetts, Boston, McNair program Recruitment Event, Boston, MA, 2014

"Metabolic Pathways in Folic-acid Responsive Neural Tube Defects" Department of Nutritional Sciences, University of Texas, Austin, 2014

" One-Carbon Metabolism & Cancer" 4th International Conference on Breast Cancer and Nutrition, Purdue University, Indiana, 2014

"Healthy Eating for Healthy Living: A Look into the Future" Nutrition and Wellness Symposium, Nassau Community College Biology Club, Nassau Community College, New York, 2014

"Systems Biology: A Molecular Nutrition Perspective" Molecular Med Tri-Conference, San Francisco, California, 2014

"Public Health Interventions and Biologically Heterogeneous Human Populations: Nutrition and Birth Defect Prevention" World Health Organization (WHO) Geneva, Switzerland, 2013

"Nuclear One-Carbon Metabolism & Neural Tube Defects" 8th International Conference on Neural Tube Defects, Austin, Texas, 2013

"Folate-Genome Interactions in Folate-Associated Pathologies" Interdisciplinary Program in Genetics, Iowa State University, Ames, Iowa, 2013

"Nuclear One-Carbon Metabolism & Neural Tube Defects" University of Massachusetts, Boston, McNair Lecture Series, Boston, 2013

"Nuclear One-Carbon Metabolism & Neural Tube Defects" 9th International Homocysteine and One-Carbon Metabolism Conference, Dublin, Ireland, 2013

Cornell Adult University Lecture Series in "Healthy Eating for Healthy Living – From the Womb Ward", July 21-27, 2013

Lecture Series in "Workshop on Food and Nutrition in Translational Medicine", June 4-7, Fu-Jen University, Taiwan:

Lecture 1: "Evolutionary Origin of Nutrient-Genome Interactions"

Lecture 2: "Mechanisms of Folate-Responsive Neural Tube Defects"

Lecture 3: "Folate and Folic Acid in Cancer"

Lecture 4: "Nuclear One-Carbon Metabolism in Cancer and Neural Tube Defects"

"Folic Acid, Birth Defects and Colon Cancer: Is There an Epigenetic Explanation? 25th Annual Virginia A Beal Lecture, University of Massachusetts, Amherst, 2013

"Nuclear One-Carbon Metabolism & Neural Tube Defects" John Scott Memorial Symposium, Trinity University, Dublin, Ireland, 2013

"Nutrition and Epigenetics" BeechNut, Amsterdam, New York, 2013

"Nuclear One-Carbon Metabolism and Neural Tube Defects" Ninth Structural Birth Defects Meeting, NIH-NICHD, Bethesda Maryland, 2013

"Nuclear One-Carbon Metabolism and Neural Tube Defects" Keystone Conference on Nutrition and Epigenetics, Santa Fe, Arizona, 2013

"Folate Versus Folic Acid." Purdue University, February 2013

"Nuclear One-Carbon Metabolism and Neural Tube Defects" Universite du Luxembourg, Luxembourg Centre for Systems Biomedicine, December 2012

"Mouse Models for Biomarker Discovery and Mechanism Elucidation of Folate-responsive Neural Tube Defects and Intestinal Cancer" Office of Dietary Supplements, National Institutes of Health, Bethesda, MD, 2012

"Genetic and Epigenetic Contributions to Human Nutrition and Health: Managing Genome-Diet Interactions" University of Massachusetts, Boston, 2012

"Genetic and Epigenetic Mechanisms Underlying the Relationship Between Folate and Neural Tube Defects" CDC/WHO Technical Consultation: Optimal Blood Folate Concentrations in Women of Reproductive Age for the Prevention of Neural Tube Defects, Atlanta GA, 2012

"Nuclear One-Carbon Metabolism and Neural Tube Defects" FASEB Summer Conference on Folate, Vitamin B12 and One-Carbon Metabolism, Crete, Greece, 2012

"FASEB BOND Session: Presentation of Research Priorities" FASEB Summer Conference on Folate, Vitamin B12 and One-Carbon Metabolism, Crete, Greece, 2012

"*De novo* Thymidylate Biosynthesis at the Replication Fork is Essential to Prevent Uracil Incorporation into DNA" 10th International Conference on Pathways, Networks and Systems Medicine, Rhodes, Greece, 2012

"Linking One-Carbon Metabolism to Epigenetic Regulation" Experimental Biology Symposium on "Nutritional Regulation of Epigenetic Changes" San Diego, CA, 2012

"Folate-Genome Interactions: The Role of Metabolic Compartmentation in Managing Gene Expression and Genome Stability" Distinguished Lecture, The Cancer Institute of New Jersey in New Brunswick, NJ, 2011

"Novel Biomarkers and their Application" Cornell Center for Technology, Enterprise and Commercialization, Ithaca, NY, 2011

"Folate-Responsive Neural Tube Defects: Novel Biomarkers and Causal Pathways", Seventh International Conference on Neural Tube Defects, Austin, TX, 2011

"Genetic and Epigenetic Contributions to Human Nutrition and Health: Managing Genome-Diet Interaction" NESTLE Institute of Health Sciences, Lausanne, Switzerland, 2011

"Genetic and Epigenetic Contributions to Human Nutrition and Health: Managing Genome-Diet Interactions", NESTLE - INMEGEN Nutrigenomics Conference, Mexico City, Mexico, 2011

"Harmonizing Nutrition Science and Food Systems to Ensure Human Health"3rd Britannia Nutrition Foundation Symposium, Delhi, India, 2011

"Folate-Responsive Neural Tube Defects: Novel Biomarkers and Causal Pathways" Eighth Structural Birth Defects Meeting, Rockville, MD, 2011

"Identification of a *de novo* Thymidylate Biosynthesis Pathway in Mammalian Mitochondria" 8th International Conference on Homocysteine Metabolism, Lisbon, Portugal, 2011

"Folate-Genome Interactions: The Role of Metabolic Compartmentation in Managing Gene Expression and Genome Stability", 9th International Conference on Pathways, Networks, and Systems Medicine, Chania, Crete, Greece, 2011

"Nuclear Folate Metabolism and Folate-related Cancers and Developmental Anomalies", Boston University, Graduate Program in Nutrition, 2011

"Folate and Cancer Risk: Folate Deficiency and Cancer" Advances and Controversies in Clinical Nutrition Conference, American Society for Nutrition, 2011

"Folate-Genome Interactions: Managing Gene Expression and Genome Stability", University of Nebraska, Department of Nutrition, 2011

"Nuclear Folate Metabolism and Folate-related Cancers and Developmental Anomalies", Wageningen University, Graduate Program in Nutrition, The Netherlands, 2011

"Nuclear Folate Metabolism and Folate-related Cancers and Developmental Anomalies." Institute for Nutritional Sciences, Shanghai Institutes of Biological Sciences, Chinese Academy of Sciences, 2011

"Folate-Genome Interactions: Managing Gene Expression and Genome Stability" Lands Lectureship, University of Michigan, Department of Biochemistry, 2010

"Folate-Genome Interactions: Managing Gene Expression and Genome Stability" 7th Annual Nestle Symposium, Lausanne, Switzerland, 2010

"Science, Research and Malnutrition" 2nd Britannia Nutrition Foundation Presentation, New Delhi, India, 2010

"Nuclear Folate Metabolism and Folate-Associated Cancers and Developmental Anomalies", The University of Wisconsin, 2010

"Nuclear Folate Metabolism and Folate-Associated Cancers and Developmental Anomalies", The University of South Carolina, 2010

"Nuclear Folate Metabolism and Folate-Associated Cancers and Developmental Anomalies", The Pennsylvania State University, 2010

"Engineering Agriculture & Food Systems for Public Health in Diverse Populations: Nurture, Nature and the Hippocratic Oath" Beltsville Human Nutrition Research Center USDA/ARS, 2009

"SHMT1 and the Metabolic Origin of Folate-responsive Neural Tube Defects", NICHD, NIH, 2009

"Possible Risks of Folic Acid – What do We Know about Cancer, the Aging Population, Free Folic Acid, High Folic Acid, Low Vitamin B12 ", State-of-the Science: Folic Acid 2009 Meeting, March of Dimes, White Plains, NY, 2009

"Engineering Agriculture & Food Systems to Alleviate Malnutrition and Promote Health in Diverse Populations" Britiannia Foundation, New Delhi, India, 2009

"Engineering Agriculture & Food Systems for Public Health in Diverse Populations: Nurture, Nature and the Hippocratic Oath", Opening Lecture, 10th Congresso Nacional da SBAN (Brazilian Society for Food and Nutrition), September 2009

"Targeting Maternal Nutrient Interventions for Birth Defect Prevention: Can we reap the benefits while mitigating the risks?" 10th Congresso Nacional da SBAN (Brazilian Society for Food and Nutrition), 2009

"Trafficking of Intracellular Folates" 7th International Conference on Homocysteine, Prague, Czech Republic, 2009

"DNA methylation and Genomic Silencing", Experimental Biology Symposium on Epigenetics, New Orleans, LA, 2009

"Folic Acid, Birth Defects and Colon Cancer: Managing Gene Expression and Genome Stability", Cornell University, Division of Nutritional Sciences, 2008

"Folic Acid, Birth Defects and Colon Cancer: Managing Gene Expression and Genome Stability", FASEB Summer Conference on Folic Acid, Vitamin B12, and One Carbon Metabolism, Lucca, Italy, 2008

"Folic Acid, Birth Defects and Colon Cancer: Managing Gene Expression and Genome Stability", Rutgers University, 2008

"Regulation of One-Carbon Metabolism by Ferritin/Iron Through Cap-Independent Translation", FASEB Summer Conference on Molecular Mechanisms Involved in the Nutrient Control of Cellular Function, Carefree, AZ, 2008

"Translational Regulation of Folate-Mediated One-Carbon Metabolism by Ferritin: Implications for Neural Tube Defects and Colon Cancer", Harvard University, Boston, 2008

"Folic Acid, Birth Defects and Colon Cancer: Managing Gene Expression and Genome Stability", National Chung Hsing University, Taiwan, 2008

"Folic Acid, Birth Defects and Colon Cancer: Managing Gene Expression and Genome Stability", China Medical University, Taiwan, 2008

"Folic Acid, Birth Defects and Colon Cancer: Managing Gene Expression and Genome Stability", University of Illinois, Urbana, 2007

"Mouse Models to Elucidate the Mechanisms of Folate-Related Cancer Pathologies", NCI Conference on Diet, Epigenetic Events, and Cancer Prevention," Gaithersburg, MD, 2007

"Folic Acid, Birth Defects and Colon Cancer: Managing Gene Expression and Genome Stability", Saint Joseph's University, Philadelphia "Frontiers in Science" lecture, 2007

"Folic Acid, Birth Defects and Colon Cancer: Managing Gene Expression and Genome Stability", International Homocysteine Conference, Germany, 2007

"Balancing Genetic and Epigenetic Contributions to Human Phenotypes", University of Colorado, Boulder, for the *Lillian Foundation Smith Conference for Nutrition Educators*, 2007

"Folic Acid, Birth Defects and Colon Cancer: Managing Gene Expression and Genome Stability", Cleveland Clinic Cell Biology Seminar Series, 2007

"Is there a Role for Genomics in Nutrition Curriculum?" American Society for Nutrition, Experimental Biology Nutrition Chairs Breakfast, 2007

"Integrating New Concepts into Graduate Nutrition Curricula: Strategies for Staying at the Forefront While Maintaining our Nutrition Identity", American Society for Nutrition Experimental Biology Nutrition Education Committee, 2007

"Folic Acid, Birth Defects and Colon Cancer: Managing Gene Expression and Genome Stability", USDA Baylor Children's Research Unit, 2007

"Folic Acid, Birth Defects and Colon Cancer: Managing Gene Expression and Genome Stability", University of Tennessee Department of Biomedical Sciences, 2007

"Folic Acid, Birth Defects and Colon Cancer: Managing Gene Expression and Genome Stability", Michigan State University, Department of Food and Nutrition, 2007

"A New Model for Capacity Development Targeting Universities through the United Nations University", Standing Committee of Nutrition Conference, Rome, Italy, 2007

"One-Carbon Metabolism in Network Dynamics", New Paradigms in Vitamin B_{12} Research and 13th Annual Sneha-MRC International Workshop, Lonavala, India, 2007

"A Mammalian Iron-sensing Internal Ribosome Entry Sequence", Case Western Reserve University, 2006

"Folic Acid, Cancer and Birth Defects: Managing Genome Stability and Expression", Cornell University Department of Food Science, 2006

"Network Dynamics: Managing Genome Methylation and Integrity", FASEB Summer Conference on Folic Acid and One-Carbon Metabolism, 2006

"Nutritional Epigenetics", National Academy of Sciences, Nutritional Genomics Symposium, 2006

"New Perspectives on B-vitamin Requirements", National Academy of Sciences, Institute of Medicine, Washington, DC, 2006

"Network Dynamics: Managing Genome Methylation and Integrity", USDA- Western Regional Center, Albany, CA, 2006

"Network Dynamics: Managing Genome Methylation and Integrity", Cornell University Division of Nutritional Sciences, Ithaca, NY, 2005

"Mechanisms of Folate-related Developmental Anomalies", Institute of Biosciences and Technology, The Texas A&M University System Health Science Center, 2005

"Nutrition and Developmental Biology: Implications for Public Health", Marabou Symposium, Stockholm, Sweden, 2005

"Homocysteine - A Branch Point intermediate in One-Carbon Metabolism" Homocysteine Metabolism - 5th International Conference, Milano, Italy, 2005

"10-Formyltetrahydrofolate is a Tight-Binding Inhibitor of Methenyltetrahydrofolate Synthetase: Implications for Regulation of Purine Biosynthesis" 13th International Symposium on Chemistry & Biology of Pteridines & Folates, Egmond aan Zee, The Netherlands, 2005

"Partitioning of One-Carbons Between Nucleotide and S-Adenosylmethionine Synthesis: Evidence for Nuclear Folate Metabolism" University of California-Berkeley Department of Nutrition, 2005

"Genetic Variation and Nutritional Requirements", Living Well to 100 Conference, Boston, MA, 2004

"Nutritional Inputs, Genomic Responses: Regulation of One-Carbon Metabolism", University of Wyoming, Biochemistry, Molecular and Cell Biology, 2004

"Folate, Cancer, Genetic Variation and the Food Supply", Cancer and Environment Forum of the Cornell Program on Breast Cancer and Environmental Risk Factors, Ithaca, NY, 2004

"Human Genetic Variation and Nutritional Requirements", XIV International Congress of Dietetics, Chicago, IL, 2004

"Rational Design of Mouse Models to Understand Folate-Related Pathologies", Linus Pauling Institute, Oregon State University, Corvallis, OR, 2004

"Rational Design of Mouse Models to Understand Folate-Related Pathologies", Purdue University Nutritional Sciences, 2004

"Rational Design of Mouse Models to Understand Folate-Related Pathologies", Cornell University Division of Nutritional Sciences, 2004

"Rational Design of Mouse Models to Understand Folate-Related Pathologies", Advancements in Molecular Medicine, Madrid, Spain, 2003

"Rational Design of Mouse Models to Understand Folate-Related Pathologies", International Mouse Genome Conference (IMGC), Germany, 2003

"Rational Design of Mouse Models to Understand Folate-Related Pathologies", Cornell University Department of Biomedical Sciences, 2003

"Rational Design of Mouse Models to Understand Folate-Related Pathologies", Tufts University/USDA Center, 2003

"Identification of a Ferritin-Responsive Internal Ribosome Entry Sequence in the Cytoplasmic Serine Hydroxymethyltransferase Gene", Experimental Biology Meetings, 2003

"Genome Stability", Nutrition and Genome Workshop, EB 2003 San Diego, CA, 2003

"Nutrition, Genetic Variation and the Food Supply", USDA, Beltsville, MD, 2003

"Nutrition, Genetic Variation and the Food Supply", Vassar Brothers Institute, Poughkeepsie, NY, 2003

"Physiology of Folate in Health and Disease" Pan American Health Organization (PAHO) Workshop on Folate Fortification for the Americas, 2003

"Rational Design of Mouse Models to Understand Folate-Related Pathologies" University of Wisconsin at Madison, 2002

"Opportunities for Nutritional Genomics at Land Grant Universities", BoHS Meetings at NASULGC, Chicago, IL, 2002

"Mouse Models of Serine Hydroxymethyltransferase", FASEB Summer Conference, Snow Mass, CO, 2002

"Nutrition and Genetic Variation" FASEB Experimental Biology Meetings, PIC Symposium, New Orleans, LA, 2002

"Securing the Future of Nutritional Sciences through Graduate Education" Experimental Biology Meetings Symposium on Graduate Education in the Nutritional Sciences, New Orleans, LA, 2002

"Nutrition and Genome Stability and Expression" WHO Workshop on Novel Foods, Melbourne, Australia, 2001

"Bringing Individuality to Public Health Recommendations" NIH Special Conference on Diet, DNA Methylation Processes and Health, Bethesda, MD, 2001

"Effects of Folate on DNA Methylation" Federal Food and Nutrition Board, Woods Hole, MA, 2001

"Iron Regulates Folate Metabolism" 6th International Conference on the Biology and Chemistry of Folic Acid and Pterins, Bethesda, MD, 2001

"Regulation of Folate Metabolism by Iron" Wake Forest University Department of Biochemistry and the Comprehensive Cancer Center, 2001

"Regulation of Folate Metabolism by Iron" University of Alabama at Birmingham, Clinical Nutrition Research Center, 2000

"Structure, Function and Regulation of Serine Hydroxymethyltransferase", Medical College of Virginia Institute for Structural Biology, 2000

"Ferritin Expression Regulates Folate Metabolism" (Session Chair), FASEB Summer Conference, 2000

"Developmental and Homeostatic Regulation of Folate Metabolism" University of North Carolina Department of Nutrition and Department of Genetics, 2000

"Structural Characterization and Developmental Regulation of Serine Hydroxymethyltransferase" Cornell University Graduate Field of Biochemistry, Molecular and Cellular Biology, 2000

"Developmental and Homeostatic Regulation of Folate Metabolism" Cornell University Department of Biomedical Sciences, College of Veterinary Medicine, 2000

"Regulation of Cytoplasmic Serine Hydroxymethyltransferase Gene Expression" (Session Chair), 10th International Symposium on Vitamin B6 and Carbonyl Catalysis, 1999

"Cytoplasmic Serine Hydroxymethyltransferase Regulates Folate Metabolism and Mediates Nutrient Effects on Gene Expression" Vanderbilt University Program in Nutrition, 1999

"Cytoplasmic Serine Hydroxymethyltransferase Regulates Folate Metabolism and Mediates Nutrient Effects on Gene Expression" Sloan-Kettering Institute Department of Clinical Nutrition, 1999

"The Role of Iron in Folate Metabolism" University of Texas at Austin Department of Chemistry and Biochemistry, 1998

"Does Folate Metabolism Regulate Folate Catabolism?" FASEB Summer Conference, 1998

"Regulation of Folate Catabolism" University of Illinois Department of Nutrition, 1997

"Regulation of Folate Catabolism" University of Buffalo Medical College Department of Biochemistry, 1997

11th International Folate and Pteridine Conference, Berchesgarten, Germany, 1997 (Invitation Declined)

"Defining the Metabolic Role of Leucovorin" Medical College of Virginia Forbes Day (Keynote Speaker), 1997

"Defining the Metabolic Role of Leucovorin" University of Montreal Oncology Division, April 1997

"Defining the Metabolic Role of Leucovorin" International Life Sciences Institute Scientific Program, Miami, FL, 1997

"Defining the Metabolic Role of Leucovorin" Cornell University Field of Biochemistry Retreat, 1996

"Defining the Metabolic Role of Leucovorin" Cornell University Division of Nutritional Sciences, 1996

"Defining the Metabolic Role of Leucovorin" Colgate University Chemistry Department, 1996

"Defining the Metabolic Role of 5-Formyltetrahydrofolate" FASEB Summer Conference, 1996

"Cytoplasmic Serine Hydroxymethyltransferase: Does its Reaction Mechanism have Implications in Elucidating its Physiological Function?" Cornell University Field of Biochemistry Seminar Series, 1995

"Defining the Metabolic Roles of Mitochondrial and Cytosolic Serine Hydroxymethyl-transferase and their Influence on Cellular Homeostasis" Health Science Center at Syracuse Department of Biochemistry, 1994

"Defining the Metabolic Roles of Mitochondrial and Cytosolic Serine Hydroxymethyl-transferase and their Influence on Cellular Homeostasis" Cornell University Division of Nutritional Sciences, 1994

"Another Look at the Metabolic Role of Folinic Acid" University of California-Berkeley Department of Nutritional Sciences, 1992

"5-Formyltetrahydrofolate, Biosynthesis and Metabolic Role in One-Carbon Metabolism" Medical College of Virginia Department of Biochemistry, 1991

Example Media Coverage

- Agriculture is the solution to nutrition security | TheHill
- Agriculture's role in improving public health | Morning Ag Clips
- A food system 'awakening'? How the pandemic could change the way we eat (dallasnews.com)
- HNRCA Monday Seminar Feb, 22, 2021 with Patrick Stover, Ph.D. - YouTube
- Personal and Professional Journey
- Launch of the Institute for Advancing Health through Agriculture | Dallas Morning News

External Support

Current

National Institutes of Health (NIH) "Homeostatic Regulation of Folate Metabolism" 07/01/12-06/31/22 R37DK58144, Total direct support - $2,150,000, PI

USDA - Agricultural Research Service "Responsive Agriculture and Food Systems to Promote Health and Quality of Life across the Life Span" 08/01/2018 – 07/31/2021, Total Direct Support - $2,000,000. PI

USDA - Agricultural Research Service "A Systematic Research Approach to Responsive Agriculture for the Advancement of Health "09/01/2021 – 08/31/2026, Total Direct Support - $7,265,000.00. PI

USDA - Agricultural Research Service "Program Development to Address Responsive Agriculture for the Advancement of Health" "09/01/2021 – 08/31/2026, Total Direct Support - $ 10,000,000.00. PI

Expired

National Institutes of Health (NIH) "Gene-Nutrient Interactions in Neural Tube Defects" 07/01/14-06/30/20, R01 HD059120, Total direct support - $1,250,000, PI

National Institutes of Health (NIH) "Nutrition Training" 07/01/17 - 06/30/22 T32-DK007158, Total direct support - $2,423,253, PI

National Institutes of Health (NIH) "Gene-Nutrient Interactions in Neural Tube Defects" 07/01/09-06/30/14, R01 HD059120, Total direct support - $1,250,000, PI

National Institutes of Health (NIH) "Nutrition Training" 12/01/07-11/30/12, T32-DK007158, Total direct support - $2,423,253, PI

U.S. Dept. of Agriculture (USDA-NIFA) "Human Nutrient Requirements in Obesity, Pregnancy and Child Development" 7/01/10-06/30/11, Total direct support - $350,862, PI

U.S. Dept. of Agriculture (USDA-CSREES), Special Research "Biomarkers for Optimal Human Calcium and Choline Requirements during Pregnancy" 7/15/09-1/14/11, Total direct support - $351,472, PI

U.S. Dept. of Agriculture (USDA-CSREES), Special Research, 2006-34324-19780, "Stable Isotope Metabolism and Human Nutritional Requirements" 8/15/06- 8/14/07, Total direct support - $536,048, PI

National Institutes of Health, NCI (NIH) "Folate-Genome Interactions in Colon Cancer" 06/01/04-05/31/08, R01 CA105440-01, Total direct support - $1,961,341, PI

National Institutes of Health (NIH) "Regulation of Folate Catabolism" 12/01/02-11/30/07, R01 HD35687-01, Total direct support - $1,000,000, PI

International Life Sciences Institute (ILSI) "Regulation of 5-formyltetrahydrofolate Synthesis" 01/01/95-12/31/97, Total direct support - $30,000, PI

Kraft Foods/American Dietetic Association, "Regulation of Folate Status in Pregnancy" 6/31/97-6/31/98 (with E. Oppenheim), Total direct support - $5,000, PI

National Institutes of Health (NIH) "Homeostatic Regulation of Folate Metabolism" 07/01/07-06/31/11, R01 DK58144, Total direct support - $1,000,000, PI

U.S. Dept. of Agriculture (HATCH) "Regulation of Glycine Synthesis" 01/01/95-12/31/00, Total direct support - $50,000, PI

Bronfenbrenner Life Course Center "A Cohort Study of Homocysteine, Nutrition and Genetics" 07/01/99-06/30/00, Total direct support - $14,000, Co-PI

National Institutes of Health (NIH) "Regulation of Serine Hydroxymethyltransferase" 08/01/95-07/31/00, 1R29DK49621, Total direct support - $347,000, PI

National Institutes of Health (NIH) "Cysteine Dioxygenase Transgenic Mouse Model" 07/01/00-06/31/01 (PA), Total direct support - $79,500, Co-PI

National Institutes of Health (NIH) "Regulation of Folate Catabolism" 07/01/97-06/31/02 HD35687-01, Total direct support - $823,000, PI

National Institutes of Health (NIH) "FASEB Summer Conference on Folic Acid, Vitamin B12 and One-Carbon Metabolism" 08/01/02 (R13), Total direct support - $33,000, Co-PI

U.S. Dept. of Agriculture (Special Grants Program) "Program Development in Human Nutritional Genomics at Cornell University" 9/01/01 to 8/31/03, Total direct support - $1,163,650, Co-PI

U.S. Dept. of Agriculture (HATCH) "Generation of Transgenic Animals for Nutrition Research" 08/01/99-07/31/03, Total direct support - $30,000, PI

Department of the ARMY, US Medical Research Acquisition Activity, "Direct Effects of Folate Metabolism on Gene Expression on Metastatic Breast Cancer" 6/30/00-5/31/03, Graduate Fellowship for M. Calero, Total direct support - $66,000, PI

National Institutes of Health, NCI (NIH) "Folate-Genome Interactions in Colon Cancer" 07/31/04, R01 CA105440-01 – Supplement, Total direct support - $30,000, PI

National Institutes of Health (NIH) "FASEB Summer Conference on Folic Acid, Vitamin B12 and One-Carbon Metabolism" 08/01/04 (R13), Total direct support - $43,000, PI

U.S. Dept. of Agriculture (Special Grants Program) "FASEB Summer Conference on Folic Acid, Vitamin B12 and One-Carbon Metabolism" 08/01/04, Total direct support - $15,000, PI

U.S. Dept. of Agriculture (Special Grants Program) "Program Development in Human Nutritional Genomics and Human Nutrition at Cornell University" 9/01/03 to 8/31/05, Total direct support - $1,163,650, Co-PI

National Institutes of Health (NIH) "Homeostatic Regulation of Folate Metabolism" 07/01/02-06/31/07, R01 DK58144, Total direct support - $1,250,000, PI

Academic Trainees

Visiting Professors

Professor Rwei-Fen Syu Huang, Department of Nutritional Sciences, Fu-Jen University, Taipei Shan, Taiwan, 2016

Professor Huan Liu, Department of Nutrition and Food Hygiene, School of Public Health, Tianjin Medical University, 2014-15

Professor Anne Parle McDermott, Dublin City University, 2012

Professor Qinghui Ai, Ocean University of China, 2009-10

Junior Faculty K-Award Mentor

Daniel Berry, 2017-present

Rebecca Seguin, 2012-2016

Senior Research Associates

Tomoyuki Mashimo, 2019-present

Martha Field, 2016-2018

U. Per Flodby, 2002-04

Research Associates

Elena Kamynina, 2013-2018

Martha Field, 2009-2016

Postdoctoral Trainees

Joydeep Chakraborty, 2019-present

Lucia Martiniova, 2010-12

Martha Field, 2006-09

Amanda MacFarlane, 2004-08

Collynn Woeller, 2007

Montserrat Anguera, 2003-04

Xiaowen Liu, 1998-01

Current Graduate Students (Chair)

Philip James, London School of Hygiene & Tropical Medicine 2016-present

Kendra Tiani, 2017-present

Degree Completed Graduate Students (Chair)

Jae Rin Suh, PhD in Nutrition, 2000, "Regulation of Folate Catabolism"

Emia Oppenheim, PhD in Nutrition, 2001, "Cellular Iron Status Influences Folate Metabolism"

Katherine Herbig, MS in Nutrition, 2001, "Cytoplasmic Serine Hydroxymethyltransferase Mediates Competition between Deoxyribonucleotide Precursor an S-Adenosylmethionine Synthesis in MCF-7 Cells"

Krista Zanetti, PhD in Nutrition, 2003, "Biochemical Analyses of two Enzymes that Regulate Folate Metabolism"

Montserrat C. Anguera, PhD in Biochemistry, Molecular and Cellular Biology, 2004, "Folate Catabolism and the Regulation of Intracellular Folate Concentrations"

Jennifer Gehman, MS in Nutrition, 2006, "Nuclear One-Carbon Metabolism"

Martha Field, PhD in Biochemistry, Cellular and Molecular Biology, 2006, "Regulation of Methenyltetrahydrofolate Synthetase"

Collynn Woeller, PhD in Biochemistry, Cellular and Molecular Biology, 2007, "Regulation of Serine Hydroxymethyltransferase by Ferritin and Sumoylation"

Michael Walsh, MS in Nutrition, 2008, "Fetal Programming Mediated by Serine Hydroxymethyltransferase"

Anna Beaudin, PhD in Nutrition, 2008, "The Metabolic Origin of Folate-Responsive Neural Tube Defects"

Jennifer Fox, PhD in Biochemistry, Cellular and Molecular Biology, 2009, "Mechanism of the SHMT1 Internal Ribosome Entry Sequence"

Donald Dean Anderson, PhD in Biochemistry, Cellular and Molecular Biology, 2011, "Compartmentation of de novo Thymidylate Biosynthesis at sites of DNA Replication"

Ashley Palmer, PhD in Nutrition, 2016, "Vitamin B12 and Folate Interactions in Nuclear One-Carbon Metabolism"

Judith Alonzo, Biochemistry, Molecular and Cellular Biology, 2017, "Causes and Consequences of Uracil in Mitochondrial DNA"

James Chon, PhD in Biochemistry, Molecular and Cellular Biology, 2019, "Uracil misincorporation into DNA mediates apoptosis and sensitivity to chemotherapeutics in a tissue-specific manner"

Eunice Awuah, PhD in Nutrition, 2019, "Effects of Shmt1 Heterozygosity on Motor Coordination and Peripheral Neuropathy"

Erica Lachenauer, PhD in Integrative Biomedical Sciences, 2019, "Folate One-Carbon Metabolism in Mouse Models of Neural Tube Defects"

Xu Lan, PhD in Nutrition, 2019 "Compartmentation of One-Carbon Metabolism"

Degree Completed Graduate Students (Minor Member)

Katie Hootman, PhD in Nutrition, 2015

Angelos Sikalidis, PhD in Nutritional Biochemistry, 2010

Jennifer Page, PhD in Genetics and Development, 2010

Susan Wernimont, PhD in Nutrition, 2010

Tafadzwa Mandimika, PhD in Nutrition, 2008
Xuan-Mai Nguyen, MS and PhD in Nutrition, 2008
Kelly Lorena Wolfe, PhD in Food Science, 2008
Colleen McGrath, PhD in Biochemistry, Molecular and Cellular Biology, 2007
Farbod Raiszadeh, PhD in Nutrition, 2006
Ying Gao, PhD in Nutrition, 2006
Kristin Burns, PhD in Biochemistry, Molecular and Cellular Biology, 2006
Cindy Berman, PhD in Genetics, 2003
Talia Jacob, MS in Nutritional Sciences, 2003
Tang-Long Shen, PhD in Veterinary Medicine, 2003
Lori Driscoll, PhD in Psychology, 2003
Unhee Lim, PhD in Nutritional Sciences, 2002
Krysta Levac, PhD in Nutritional Sciences, 2001
Leigh Gantner, MS in Nutritional Sciences, 2001
Robert Waterland, PhD in Nutritional Sciences, 2000
Oleg Biloukha, PhD in Nutritional Sciences, 2000
Zhi Zang, PhD in Neurobiology, 1997

External Graduate Students
Jordan Lerner-Ellis, PhD in Genetics, 2008, McGill University
Carolina Vegas, PhD in Nutrition, 2006, Tufts University
Erminia Di Pietro, PhD in Biochemistry, 2003, McGill University
Peter Duncan Pawelek, PhD in Biochemistry, 1999, McGill University
Laura Lee Murley, PhD in Biochemistry, 1996, McGill University

Undergraduate Research Honors Students
Jessica Hills, Honors in Nutritional Sciences, 1996
Sameh Girgis, Honors in Cell Biology, 1996
Ilya M. Nasrallah, Highest Honors in Neurobiology, 1998
Beatriu Reig, Highest Honors in Genetics, 1999
Arjun Joshi, Honors in Human Ecology, 1999
Nishat Shaikh, Honors in Biology, 2001
Joyti Sharma, Honors in Nutritional Sciences, 2004
Renuka Sastry, Honors in Biochemistry, 2004
Paul Ardigues, Honors in Biochemistry, 2004
Bridget Tracy, Honors in Nutrition, 2005

Jennifer Gall, Honors in Nutrition, 2006
Elena Arabinov, Honors in Biochemistry, 2008
Rebecca P. Liebenthal, Honors in Nutrition, 2015

Howard Hughes Scholars
Orpheus Williams, 1995
Ilya M. Nasrallah, 1996-98
Beatriu Reig, 1996-99
Timothy Poole, 1997-99
Renuka Sastry, 2003-05
Kabir S. Matharu, 2004
Jennifer Gall, 2004

Minority High School Student Training Programs
Hilary Bright, 2014, Cornell REU Program
Jodecy Colon, 2013, Cornell REU Program
Nikhil Devulapalli, 2003
Hiral Patel, 2002, NASA/Sharp Summer Program
Kabir S. Matharu, 2001, NASA/Sharp Summer Program
Ogechukwu Ndum, 1999, NASA/Sharp Summer Program
Trae Cambel, 1998, NASA/Sharp Summer Program
Jenny Maldinaro, 1997, NASA/Sharp Summer Program
Renee Poole, 1996, Ford-Mellon Summer Program

Academic Committees

Cornell University Committees
The University Faculty, Academic Programs and Policies Committee, 2013-2017
University Radiation Safety Committee, 2012-2018
STEM Faculty Working Group for Graduate Student Diversity Recruitment, 2012-14
Faculty Search Committee, Director of the Tata Institute, 2012
Cornell-in-China Committee, 2011-12
Search Committee, Director, Baker Institute and the Feline Health Center, College of Veterinary Medicine, 2009-10
Reimagining Cornell: Life Sciences Task Force Planning Committee (Chair), 2009
Reimagining Cornell: College of Human Ecology Planning Committee, 2009

Applied Research and Extension Program Council on Quality of Life for Individuals and Families (QoL), 2007-2009

College of Agriculture and Life Sciences Task Force on Defining the Land Grant Mission, 2006-07

University Lectures Committee, 2006-07

Graduate Admissions Committee, Field of Biochemistry, Molecular and Cellular Biology, 2005-06

Executive Committee Member, Center for Vertebrate Genomics, 2004

Search Committee, Associate Director, Microarray Core Facility, 2004-05

Search Committee, Staff, Veterinarian CARE, 2003-04

Search Committee, Dean, College of Human Ecology, 2003-04

Search Committee, Assistant Professor Mammalian Genomics, Molecular Biology & Genetics, 2003-04

Search Committee, Assistant Professor Mammalian Genomics, Biomedical Sciences, 2002-04

Genomics Fellowship Selection Committee, 2002-03

Search Committee, Chair of Molecular Medicine, 2001

Search Committee, Mammalian Genomics, Biomedical Sciences, 2001

Search Committee, Population Genetics, Molecular Biology & Genetics, 2001

Search Committee, Assistant Director of CRAR, 2001

Search Committee, Clinical Veterinarian CRAR, 2001

University Appeals Panel, 2000

Mammalian Genomics Oversight Committee, Committee Chair for the recruitment of seven positions, 1999-00

Search Committee, Assistant Professor, Animal Quantitative Geneticists, 1999

Oncology Advisory Committee, College of Veterinary Medicine, 1999-02

Search Committee, Chair, Biomedical Sciences, 1998-99

Search Committee, Dean, College of Human Ecology, 1997-98

Cornell Genomics Initiative, Chair, Mammalian Genomics Subcommittee, 1997-00

Pluralism and Unity, Faculty Steering Committee, 1998

Cornell Departmental Committees (Nutrition)

Seminar Committee Chair, Field of Nutrition, 2000-02

Search Committee Chair, Assistant Professor, Mouse Geneticists, 2000-04

Search Committee, Assistant Professor, Epidemiology, 2000-04

Small Grants Committee, 1995-98

Graduate Admissions Committee, 1995-97

Cornell University Service Activities

Member, Provost Committee for Space Planning for the Life Sciences, 2015

Panelist, How to Write a Successful NIH R01 Grant: Tips for Grant Writing and Understanding the Review Process, 2015, Cornell University Office of Sponsored Programs, 2015

Discussion leader, Responsible Conduct of Research Symposium- Authorship, 2015

Discussion leader, Responsible Conduct of Research Symposium- Human Subjects, 2014

Expert, "Web Nutrition Expert", Cornell Cooperative Extension, 1998-99

"1894 Memorial Debate" (Judge), 1998

Evaluator, Health Careers Evaluation Committee, 1995-02

Evaluator, "Student Employee of the Year", 1997

Presenter, "Smart-NY Conference" for the Cornell Genomics Initiative, 1999

Presenter, Exhibit on the genomics initiative in the College of Human Ecology at the NASULGC Congressional Reception, "2001 Agricultural Research and Education Serving the Nation in Food and Health", Washington, DC, 2001

External Committees/Service

Treasurer, Association of Nutrition Departments and Programs (ANDP), 2005-2015

Past-President, American Society for Nutrition (ASN), 2016

President, American Society for Nutrition (ASN), 2015

Vice-President, American Society for Nutrition (ASN), 2014

Vice-President Elect, American Society for Nutrition (ASN), 2013

Council-at-Large Member, American Society for Nutrition (ASN), 2013

Chair, Standing Committee on Nutrition, Working Group on Capacity Development in Food and Nutrition, 2006-09

Committee Member, American Society for Nutrition (ASN) Reviews, Papers, and Guidelines Committee, 2009-10

Committee Member; Chair, American Society for Nutrition (ASN) Public Policy/Public Information Awards Committee, 2008-09; *Chair*, 2008

Spokesperson, American Society for Nutrition, 2008-09

Committee Member; Chair, Public Policy and Communications Committee, American Society for Nutrition (ASN), 2006-09, (*Chair*, 2007-09)

Committee Member; Chair, Nominations Committee, American Society for Nutrition (ASN), Chair, 2007

Committee Member; Chair, Graduate Nutrition Education Committee, American Society for Nutritional Sciences (ASNS), 1999-2003 (*Chair*, 2000-03)

Committee Member, Conrad Elvehjem Award Jury, ASNS, 2000

Courses Taught

NS6200: Translational Research and Evidence-based Policy and Practice in Nutrition, 2 credits, 2012-2017

NS 6310: Micronutrients: Function, Homeostasis, and Assessment, 2013-2017

NS7040: Grant Writing, 2 credits, 2007-2017

NS7030: Graduate Student Seminar, 1 credit, 2008-2010; 2015-2017

NS3200: Human Biochemistry, 4 credits, 1998-2006; 2009-2013

NS4750: Molecular Nutrition and Development, 3 credits, 2000-2005, 2010

NS4000: Directed Readings, 1996-2017

NS4010: Student Research, 1994-2017

BioBM4000: Undergraduate Research, 1995-2017

BioG2000: Research Apprenticeship, 2002-2017

NS6000: Independent Study – Nutritional Genomics, 2000

BioBM7330: Advanced Biochemistry Lecture Series, 1 credit, Fall, 1998

NS3210: Nutrition and Gene Expression, 2 credits, 1996-99

NS6350: Metabolic Regulation, 2 credits, 1997

Editorial/Review

Editor

Annual Reviews of Nutrition, 2014-present

Associate Editor

PNAS NEXUS - 2021-present

Frontiers in Genetics – 2010-2015

Advances in Nutrition - 2010-13

Editorial Boards

American Journal of Clinical Nutrition, 2008-14

Annual Review of Nutrition, 2006; 2008-14

Journal of Biological Chemistry, 2009-14

Nutrition Reviews, 2002-06

Journals (ad hoc reviewer)

Science, Nature, JAMA Internal Medicine, The Journal of Biological Chemistry, Structure, Gene, Biochemistry, Journal of Clinical Nutrition, Analytical Biochemistry, BBA, Blood, Journal of

Molecular Biology, Brain Research, Journal of Nutrition, Analytical Chemistry, Pharmacogenomics, Molecular Genetics and Metabolism, Proceedings of the National Academy of Sciences, Mammalian Genome, Carcinogenesis

National Academies of Sciences Reports

Redesigning the Process for Establishing the Dietary Guidelines for Americans, 2017

Optimizing the Process for Establishing the Dietary Guidelines for Americans, The Selection Process, 2017

An Assessment of Research Doctorate Programs in the United States, 2010

Nanotechnology in Food Products, 2009

Nutrigenomics and Beyond - Informing the Future, 2007

Edited Volumes (Editor or Co-Editor)

Food Biotechnology, a special issue of Current Opinion in Biotechnology, 2017
Nutrigenomics and Proteomics in Health and Disease, Wiley. 2017
Handbook of Vitamins, Fifth Edition. Taylor and Francis Group, LLC. 2012

Granting Agencies (Study Section)

Member, NIH Review Panel. Point of Care Technologies for the Evaluation and Management of Obstetrics, Neonatal, and Pediatric Critical Care Patients, and for Patients with Disorders of Reproductive Tract and Infertility. 2017

Member, NIH Fellowships: Endocrinology, Metabolism, Nutrition, and Reproductive Science. 2017

Member, NASA Directed Study Proposal Review Panel, 2015

Member, The John A. Milner Fellowship Program Review Team – A Joint Activity of the USDA Beltsville Human Nutrition Research Center (BHNRC) and the NIH Office of Dietary Supplements (ODS), 2015

Member, ZES1 LKB-D (CC) NIH Child Health and the Environment Review Committee, Bethesda, MD, 2015

Member, The John A. Milner Fellowship Program Review Team – A Joint Activity of the USDA Beltsville Human Nutrition Research Center (BHNRC) and the NIH Office of Dietary Supplements (ODS), 2014

Chair, NIH Program Project Review Study Section "Multidisciplinary Program to Dissect the Genetics of Neural Tube Defects" 2014.

Member, NIH Integrative Nutrition and Metabolic Processes Study Section (INMP), 2005-10

Member, NIH/NCI Special Study Section RFA CA03-001 "Nutritional Modulation of Genetic Pathways Leading to Cancer", U54 Program Projects, 2002

Granting Agencies (ad hoc or mail reviewer)

Canadian Cancer Society

NSERC/CRSNG

NIH, CORBE Program Projects in Developmental Biology

NIH, SBDD Study Section

NIH, Special Study Section, Risk Factors for Vascular Disease

Health Research Council of New Zealand

Bibliography

Original Research Publications

Bae, S., Kamynina, E., Guetterman, H.M., Farinola, A.F., Caudill, M.A., Berry, R.J., Cassano, P.A., Stover, P.J. 2021. Provision of folic acid for reducing arsenic toxicity in arsenic-exposed children and adults. *Cochrane Database Syst Rev.* PMID: 34661903

Miura, N., Matsumoto, H., Cynober, L., Stover, P.J., Elango, R., Kadowaki, M., Bier, D.M., Smriga, M. 2021. Subchronic Tolerance Trials of Graded Oral Supplementation with Phenylalanine or Serine in Healthy Adults. *Nutrients.* 13(6):1976. PMID: 34201370

Gheller, B.J., Blum, J.E., Lim, E.W., Handzlik, M.K., Hannah Fong, E.H., Ko, A.C., Khanna, S., Gheller, M.E., Bender, E.L., Alexander, M.S., Stover, P.J., Field, M.S., Cosgrove, B.D., Metallo, C.M., Thalacker-Mercer, A.E. 2021. Extracellular serine and glycine are required for mouse and human skeletal muscle stem and progenitor cell function. *Mol Metab*. 43:101106. PMC7691553

Lachenauer, E.R., Stabler, S.P., Field, M.S., Stover, P.J. 2020. p53 Disruption Increases Uracil Accumulation in DNA of Murine Embryonic Fibroblasts and Leads to Folic Acid-Nonresponsive Neural Tube Defects in Mice. *J Nutr*. 150(7):1705-1712. PMC7690762

Misselbeck, K., Marchetti, L., Priami, C., Stover, P.J. and Field, M.S. 2019. The 5-formyltetrahydrofolate futile cycle reduces pathway stochasticity in an extended hybrid-stochastic model of folate-mediated one-carbon metabolism. *Sci Rep.* 9(1): 4322. PMC6416297

Alonzo, J.R., Venkataraman, C., Field, M.S., and Stover, P.J. 2018. The mitochondrial inner membrane protein MPV17 prevents uracil accumulation in mitochondrial DNA. *J Biol Chem.* 293(52):20285-20294. PMC6311524

Field, M.S., Lan, X., Stover, D.M. and Stover, P.J. 2018. Dietary Uridine Decreases Tumorigenesis in the *Apc*$^{Min/+}$ Model of Intestinal Cancer. *Curr Dev Nutr*. 13;2:nzy013. PMC5998365

Dixit, R., Nettem, S., Madan, S.S., Soe, H.H.K., Abas, A.B., Vance, L.D., Stover, P.J. 2018. Folate supplementation in people with sickle cell disease. *Cochrane Database Syst Rev*.16;3:CD011130. PMC6494351

Hootman, K.C., Trezzi, J.P., Kraemer, L., Burwell, L.S., Dong, X., Guertin, K.A., Jaeger, C. Stover, P.J., Hiller, K., and Cassano, P.A. 2017. Erythritol is a pentose-phosphate pathway metabolite and associated with adiposity gain in young adults. *Proc. Natl. Acad. Sci.* 114(21): E4233-E4240. PMC5448202

Palmer, A.M., Kamynina, E., Field, M.S., and Stover, P.J. 2017. Folate rescues vitamin B_{12} depletion-induced inhibition of nuclear thymidylate biosynthesis and genome instability. *Proc. Natl. Acad. Sci.* 114(20): E4095-E4102. PMC5441772

Misselbeck, K., Marchetti, L., Field, M.S., Scotti, M., Priami, C. and Stover P.J. 2017. A hybrid stochastic model of folate-mediated one-carbon metabolism: Effect of the common C677T MTHFR variant on de novo thymidylate biosynthesis. *Sci Rep.* 7(1):797. PMC5429759

Bae, S., Chon, J., Field, M.S., Stover, P.J. 2017. Alcohol Dehydrogenase 5 Is a Source of Formate for *De Novo* Purine Biosynthesis in HepG2 Cells. *J Nutr*. 147(4):499-505. PMC5368588.

Kamynina, E, Lachenauer, ER, DiRisio, AC, Liebenthal, RP, Field, MS, Stover, PJ 2017. Arsenic trioxide targets MTHFD1 and SUMO-dependent nuclear de novo thymidylate biosynthesis. Proc. Natl. Acad. Sci. 21;114(12):E2319-E2326 PMC5373342.

Dixit, R., Nettem, S., Madan, S.S., Soe, H.H., Abas, A.B., Vance, L.D., Stover, P.J. 2016. Folate supplementation in people with sickle cell disease. Cochrane Database Syst Rev. 2:CD011130. PMID:26880182.

MacFarlane, A.J., Behan, N.A., Field, M.S., Williams, A., Stover, P.J., Yauk, C.L. 2015. Dietary folic acid protects against genotoxicity in the red blood cells of mice. *Mutat Res*. 779:105-11. PMID:26177356.

Martiniova, L., Field, M.S., Finkelstein, J.L., Perry, C.A., and Stover, P.J. 2015. Maternal dietary uridine causes, and deoxyuridine prevents, neural tube closure defects in a mouse model of folate-responsive neural tube defects. *Amer. J. Clin. Nutr.* 101(4):860-9. PMC4381776.

Field, M.S., Kamynina, E., Watkins, D., Rosenblatt, D.D. and Stover, P.J. 2015. Human mutations in methylenetetrahydrofolate dehydrogenase 1 impair nuclear *de novo* thymidylate biosynthesis. *Proc. Natl. Acad. Sci*. 112(2): 400-5. PMC4299200.

Field, M.S., Kamynina E., Agunloye, O.C., Liebenthal, R.P., Lamarre, S.G., Brosnan, M.E., Brosnan, J.T., Stover, P.J. 2014. Nuclear enrichment of folate cofactors and methylenetetrahydrofolate dehydrogenase 1 (MTHFD1) protect *de novo* thymidylate biosynthesis during folate deficiency. *J Biol Chem.* 289: 29642-50. PMC4207979.

MacFarlane, A.J., McEntee, M.F. and Stover, P.J. 2014. Azoxymethane-induced colon carcinogenesis in mice occurs independently of de novo thymidylate synthesis capacity. *J. Nutr*. 144: 419-24. PMC: 4083238.

Ash J.A., Jiang X., Malysheva, O.V., Fiorenza, C.G., Bisogni, A.J., Levitsky, D.A., Strawderman, M.S., Caudill, M.A., Stover, P.J., Strupp, B.J. 2013. Dietary and genetic manipulations of folate metabolism differentially affect prefrontal cortical functions in mice. *Neurotoxicology and Teratology*, 38:79-91. PMC5096640.

Abarinov, E.V., Beaudin, A.E., Field, M.S., Perry, C., Allen, R., Stabler, S., Stover, P.J. 2013. Disruption of Shmt1 impairs hippocampal neurogenesis and mnemonic function in mice. *J. Nutr*. 143(7):1028-35. PMC: 3681542.

Scotti M., Stella L., Shearer E.J., Stover P.J. 2013. Modeling cellular compartmentation in one-carbon metabolism. *Wiley Interdiscip Rev Syst Biol Med*. 5(3):343-65 PMID: 23408533.

Field, M.S., Shields, K.S., Abarinov, E., Malysheva, O.V., Allen, R.H., Stabler, S.P., Ash, J.A., Strupp, B.J., Stover, P.J., Caudill, M.A. 2013. Reduced MTHFD1 activity in male mice perturbs folate and choline dependent one-carbon metabolism as well as transsulfuration. *J. Nutr*. 143(1):41-5. PMC: 3521460.

Swayne, B.G., Behan, N.A., Williams, A., Stover, P.J., Yauk, C.L., MacFarlane, A.J. 2012. Supplemental dietary folic acid has no effect on chromosome damage in erythrocyte progenitor cells of mice. *J Nutr.*142(5):813-7. PMC: 3735919.

Wernimont, S.M., Clark, A.G., Stover, P.J., Wells, M.T., Litonjua, A.A., Weiss, S.T., Gaziano, J.M., Vokonas, P.S., Tucker, K.L., Cassano, P.A. 2012. Folate Network Genetic Variation Predicts Cardiovascular Disease Risk in Non-Hispanic White Males. *J. Nutr.* 142(7):1272-9 PMC: 3374665.

Beaudin, A.E., Perry, C.A., Stabler, S.P., Allen, R.H., and Stover, P.J. 2012. Maternal *Mthfd1* disruption impairs fetal growth but does not cause NTDs in mice. *Amer. J. Clin Nutr.* 95(4):882-91. PMC: 3302363.

Anderson, D.D., Woeller, C.F., Chiang, E-P., Shane, B., and Stover, P.J. 2012. SHMT1 and SHMT2 anchor the nuclear *de novo* thymidylate synthesis pathway to the nuclear lamina for DNA replication and repair. *J. Biol. Chem.* 287(10):7051-62. PMC: 3293584.

Beaudin, A.E., Abarinov, E.V., Malysheva, O., Perry, C.A., Caudill, M., and Stover, P.J. 2012. Dietary folate but not choline modifies neural tube defect risk in Shmt1 knock-out mice. *Amer. J. Clin. Nutr.* 95(1):109-14. PMC: 3238454.

Anderson, D.D., Eom, J.Y., and Stover, P.J. 2011. Competition between sumoylation and ubiquitylation of serine Hydroxymethyltransferase 1 determines its nuclear localization and its accumulation in the nucleus. *J. Biol. Chem.* 287(7):4790-9. PMC: 3281627.

Wernimont, S.M., Clark, A.G., Stover, P.J., Wells, M.T., Litonjua, A.A., Weiss, S.T., Gaziano, J.M., Tucker, K.L., Baccarelli, A., Schwartz, J., Bollati, V., and Cassano, P.A. 2011. Folate network genetic variation, plasma homocysteine, and global genomic methylation content: a genetic association study. *BMC Med Genet.* Nov 21;12(1):150. PMC: 3266217.

MacFarlane, A.J., Anderson, D.D., Flodby, P., Perry, C.A., Allen, R.A., Stabler, S.P, and Stover, P.J. 2011. Nuclear localization of the *de novo* thymidylate biosynthesis pathway is required to prevent uracil accumulation in DNA. *J. Biol. Chem.* 286(51):44015-22. PMC: 3243516.

Anderson, D.D., Quintero, C.M., and Stover, P.J. 2011. Identification of a *de novo* thymidylate biosynthesis pathway in mammalian mitochondria. *Proc. Natl. Acad. Sci.* 108(37):15163-8. PMC: 3174652.

Field, M.S., Anderson, D.D., and Stover, P.J. 2011. *Mthfs* is an essential gene in mice and a component of the purinosome. *Front. Gene.* 2:36. PMC3268590.

Beaudin, A.E., Abarinov, E.V., Noden, D.M., Perry, C.A., Chu, S., Stabler, S.P., Allen, R.H., and Stover, P. J. 2011. *Shmt1* and *de novo* thymidylate biosynthesis underlie folate-responsive neural tube defects in mice. *Am. J. Clin. Nutr.* 93(4):789-98. PMC: 3057548.

MacFarlane, A.J., Perry, C.A., McEntee, M.F., Lin, D.M., and Stover, P.J. 2011. *Mthfd1* is a Modifier of Chemically-induced Intestinal Carcinogenesis. *Carcinogenesis* 32(3):427-33. PMC: 3047240.

Wernimont, S.M., Raiszadeh, F., Stover, P.J., Rimm, E., Hunter, D., Tang, W., and Cassano, P.A. 2011. Polymorphisms in Serine Hydroxymethyltransferase 1 and Methylenetetrahydrofolate Reductase Interact to Increase Cardiovascular Disease Risk in Humans. *J Nutr.* 141(2):255-60. PMC: 3021444.

MacFarlane, A.J., Perry, C.A., McEntee, MF., Lin, D.M., and Stover, P.J. 2011. *Shmt1* Heterozygosity Impairs Folate-Dependent Thymidylate Synthesis Capacity and Modifies Risk of Apc^{min}-Mediated Intestinal Cancer Risk. *Can Res.* 71(6):2098-107. PMC: 3059437.

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Bentley, A.R., Raiszadeh, F., Stover, P.J., Hunter, D.J., Hankinson, S.E., and Cassano, P.A. 2010. No association between cSHMT genotypes and the risk of breast cancer in the Nurses' Health Study. *Eur. J. Clin. Nutr.* 64(1):108-10. PMC: 3033771.

Fox, J.T., Shin, W.K., Caudill, M.A., and Stover, P.J. 2009. A UV-Responsive Internal Ribosome Entry Site Enhances Cytoplasmic Serine Hydroxymethyltransferase Expression for DNA Damage Repair. *J. Biol. Chem.* 284(45):31097-108. PMC: 2781509.

Fox, J.T. and Stover, P.J. 2009. Mechanism of the Internal Ribosome Entry Site-mediated Translation of Serine Hydroxymethyltransferase 1. *J. Biol. Chem.* 284(45):31085-96. PMC: 2781508.

Anderson, D.D. and Stover, P.J. 2009. SHMT1 and SHMT2 are Functionally Redundant in Nuclear *de novo* Thymidylate Biosynthesis. *PLoS One* Jun 9;4(6):e5839. PMC: 2688753.

MacFarlane, A.J., Perry, C.A., Girnary, H.H., Gao, D., Allen, R.H., Stabler, S.P., Shane, B., and Stover, P.J. 2009. *Mthfd1* is an Essential Gene in Mice and Alters Biomarkers of Impaired One-Carbon Metabolism. *J. Biol. Chem.* 284(3):1533-9. PMC: 2615521.

Field, M.S., Anguera, M.C., Page, R., and Stover P.J. 2009. 5,10-Methenyltetrahydrofolate Synthetase Activity is Increased in Tumors and Modifies the Efficacy of Antipurine LY309887. *Arch. Biochem. Biophys.* 481(2):145-50. PMID: 19022216.

Macfarlane, A.J., Liu, X., Perry, C.A., Flodby, P., Allen, R.H., Stabler, S.P, and Stover P.J. 2008. Cytoplasmic serine hydroxymethyltransferase regulates the metabolic partitioning of methylene-tetrahydrofolate but is not essential in mice. *J. Biol. Chem* . 283(38):25846-53. PMC: 2533799.

Woeller, C.F., Fox, J.T., Perry, C., and Stover, P.J. 2007. A Ferritin-responsive Internal Ribosome Entry Site Regulates Folate Metabolism. *J. Biol. Chem.* 282(41):29927-35. PMID: 17702748.

Anderson, D.D., Woeller, C.F., and Stover, P.J. 2007. SUMO-1 Modification of Thymidylate Synthase and Dihydrofolate Reductase. *Clin. Chem. Lab. Med.* 45(12): 1760-1763. PMID: 18067453.

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Anguera M.C., Field, M.S., Perry, C., Ghandour, H., Chiang, E.P., Selhub, J., Shane, B. and Stover, P.J. 2006. Regulation of Folate-mediated One-carbon Metabolism by 10-formyltetrahydrofolate Dehydrogenase. *J. Biol Chem*. 281(27):18335-42. PMID: 16627483.

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Lim U., Peng, K., Shane, B., Stover, P.J., Litonjua, A.A., Weiss, S.T., Gaziano, J.M., Strawderman, R.L., Raiszadeh, F., Selhub, J., Tucker, K.L., Cassano, P.A. 2005. Polymorphisms in Cytoplasmic Serine Hydroxymethyltransferase and Methylenetetrahydrofolate Reductase Affect the Risk of Cardiovascular Disease in Men. *J Nutr*. 135(8):1989-94. PMID:16046727.

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Liu, X., Szebenyi, D.M.E., Thiel, D., and Stover, P.J. 2001. Lack of Catalytic Activity of a Murine mRNA Cytoplasmic Serine Hydroxymethyltransferase Splice Variant: Evidence against Alternative Splicing as a Regulatory Mechanism. *Biochem*. 40:4932-4939. PMID: 11305908.

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Oppenheim, E., Nasrallah, I.M., Mastri, M., and Stover, P.J. 2000. Mimosine is a Cell-Specific Antagonist of Folate Metabolism. *J. Biol. Chem*. 275:19268-19274. PMID: 10766749.

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Abstracts

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Patents

U.S. National Patent Application Serial No. 11/571,213, based on PCT International Application No. PCT/US2005/02084 7, filed 13 June 2005, for TREATMENT OR PREVENTION OF CANCER OR CARDIOVASCULAR DISEASE WITH METHENYLTETRAHYDROFOLATE SYNTHETASES, claiming priority from U.S. Provisional Application 60/585,293, filed 02 July 2004 (Inventor: Patrick J. Stover)

PCT International Application No. PCT/US12/34963, filed 25 April 2012, for USE OF URIDINE AND DEOXYURIDINE IN THE TREATMENT OF FOLATE-RESPONSIVE PATHOLOGIES, claiming priority of U.S. Provisional Application Serial Nos. 61/478,669, filed 25 April 2011, and 61/515,356, filed 5 August 2011 (Applicant: Cornell University) (Cornell Ref. 5476-03-PC) (Inventor: Patrick J. Stover)

PCT International Application No. PCT/US2017/040898, filed 06 July 2017, for STABLE PRO-VITAMIN DERIVATIVE COMPOUNDS, PHARMACEUTICAL AND DIETARY COMPOSITIONS, AND METHODS OF THEIR USE, claiming priority to U.S. Provisional Application Serial No. 62/359,040, filed 06 July 2016 (Applicant: Cornell University) (Cornell Reference No.: 7416-02-PC) (Inventors: Patrick J. Stover and Martha S. Field)