Patrick J Stover

List of Publications by Citations

124 papers	5,443 citations	42 h-index	70 g-index
126 ext. papers	6,277 ext. citations	6.1 avg, IF	6.09 L-index

#	Paper	IF	Citations
124	Physiology of folate and vitamin B12 in health and disease. *Nutrition Reviews*, **2004**, 62, S3-12; discussion S13	6.4	308
123	Folate-mediated one-carbon metabolism. *Vitamins and Hormones*, **2008**, 79, 1-44	2.5	263
122	Biomarkers of Nutrition for Development-Folate Review. *Journal of Nutrition*, **2015**, 145, 1636S-1680S	4.1	245
121	New perspectives on folate catabolism. *Annual Review of Nutrition*, **2001**, 21, 255-82	9.9	213
120	Cytoplasmic serine hydroxymethyltransferase mediates competition between folate-dependent deoxyribonucleotide and S-adenosylmethionine biosyntheses. *Journal of Biological Chemistry*, **2002**, 277, 38381-9	5.4	199
119	One-carbon metabolism-genome interactions in folate-associated pathologies. *Journal of Nutrition*, **2009**, 139, 2402-5	4.1	161
118	Biomarkers of vitamin B-12 status in NHANES: a roundtable summary. *American Journal of Clinical Nutrition*, **2011**, 94, 313S-321S	7	131
117	SHMT1 and SHMT2 are functionally redundant in nuclear de novo thymidylate biosynthesis. *PLoS ONE*, **2009**, 4, e5839	3.7	126
116	Unprocessed Red Meat and Processed Meat Consumption: Dietary Guideline Recommendations From the Nutritional Recommendations (NutriRECS) Consortium. *Annals of Internal Medicine*, **2019**, 171, 756-764	8	112
115	Identification of a de novo thymidylate biosynthesis pathway in mammalian mitochondria. *Proceedings of the National Academy of Sciences of the United States of America*, **2011**, 108, 15163-8	11.5	109
114	Insights into metabolic mechanisms underlying folate-responsive neural tube defects: a minireview. *Birth Defects Research Part A: Clinical and Molecular Teratology*, **2009**, 85, 274-84		108
113	The metabolic role of leucovorin. *Trends in Biochemical Sciences*, **1993**, 18, 102-6	10.3	107
112	Cytoplasmic serine hydroxymethyltransferase regulates the metabolic partitioning of methylenetetrahydrofolate but is not essential in mice. *Journal of Biological Chemistry*, **2008**, 283, 25846-53	5.4	103
111	Molecular cloning, characterization, and regulation of the human mitochondrial serine hydroxymethyltransferase gene. *Journal of Biological Chemistry*, **1997**, 272, 1842-8	5.4	102
110	Evidence for small ubiquitin-like modifier-dependent nuclear import of the thymidylate biosynthesis pathway. *Journal of Biological Chemistry*, **2007**, 282, 17623-31	5.4	98
109	Folate-mediated one-carbon metabolism and neural tube defects: balancing genome synthesis and gene expression. *Birth Defects Research Part C: Embryo Today Reviews*, **2007**, 81, 183-203		97
108	5-Formyltetrahydrofolate regulates homocysteine remethylation in human neuroblastoma. *Journal of Biological Chemistry*, **1997**, 272, 4729-34	5.4	92

107	Shmt1 and de novo thymidylate biosynthesis underlie folate-responsive neural tube defects in mice. *American Journal of Clinical Nutrition*, **2011**, 93, 789-98	7	90
106	Molecular cloning, characterization and alternative splicing of the human cytoplasmic serine hydroxymethyltransferase gene. *Gene*, **1998**, 210, 315-24	3.8	87
105	Serine hydroxymethyltransferase anchors de novo thymidylate synthesis pathway to nuclear lamina for DNA synthesis. *Journal of Biological Chemistry*, **2012**, 287, 7051-62	5.4	84
104	Biomarkers of folate status in NHANES: a roundtable summary. *American Journal of Clinical Nutrition*, **2011**, 94, 303S-312S	7	81
103	Trafficking of intracellular folates. *Advances in Nutrition*, **2011**, 2, 325-31	10	79
102	Vitamin B-12 and Perinatal Health. *Advances in Nutrition*, **2015**, 6, 552-63	10	74
101	Polymorphisms in 1-carbon metabolism, epigenetics and folate-related pathologies. *Journal of Nutrigenetics and Nutrigenomics*, **2011**, 4, 293-305		74
100	Regulation of folate-mediated one-carbon metabolism by 10-formyltetrahydrofolate dehydrogenase. *Journal of Biological Chemistry*, **2006**, 281, 18335-42	5.4	71
99	Influence of human genetic variation on nutritional requirements. *American Journal of Clinical Nutrition*, **2006**, 83, 436S-442S	7	70
98	Structure of a murine cytoplasmic serine hydroxymethyltransferase quinonoid ternary complex: evidence for asymmetric obligate dimers. *Biochemistry*, **2000**, 39, 13313-23	3.2	68
97	Genetic and epigenetic contributions to human nutrition and health: managing genome-diet interactions. *Journal of the American Dietetic Association*, **2008**, 108, 1480-7		67
96	Physiology of Folate and Vitamin B12 in Health and Disease. *Nutrition Reviews*, **2004**, 62, 3-12	6.4	66
95	Mthfd1 is an essential gene in mice and alters biomarkers of impaired one-carbon metabolism. *Journal of Biological Chemistry*, **2009**, 284, 1533-9	5.4	59
94	Purification and properties of a folate-catabolizing enzyme. *Journal of Biological Chemistry*, **2000**, 275, 35646-55	5.4	56
93	PhenX: a toolkit for interdisciplinary genetics research. *Current Opinion in Lipidology*, **2010**, 21, 136-40	4.4	55
92	Nuclear enrichment of folate cofactors and methylenetetrahydrofolate dehydrogenase 1 (MTHFD1) protect de novo thymidylate biosynthesis during folate deficiency. *Journal of Biological Chemistry*, **2014**, 289, 29642-50	5.4	53
91	Nuclear localization of de novo thymidylate biosynthesis pathway is required to prevent uracil accumulation in DNA. *Journal of Biological Chemistry*, **2011**, 286, 44015-44022	5.4	53
90	Vitamin B12 and older adults. *Current Opinion in Clinical Nutrition and Metabolic Care*, **2010**, 13, 24-7	3.8	53

89	Safety of folic acid. *Annals of the New York Academy of Sciences*, **2018**, 1414, 59-71	6.5	52
88	Competition between sumoylation and ubiquitination of serine hydroxymethyltransferase 1 determines its nuclear localization and its accumulation in the nucleus. *Journal of Biological Chemistry*, **2012**, 287, 4790-9	5.4	50
87	Small ubiquitin-like modifier-1 (SUMO-1) modification of thymidylate synthase and dihydrofolate reductase. *Clinical Chemistry and Laboratory Medicine*, **2007**, 45, 1760-3	5.9	50
86	Methenyltetrahydrofolate synthetase regulates folate turnover and accumulation. *Journal of Biological Chemistry*, **2003**, 278, 29856-62	5.4	50
85	Human mutations in methylenetetrahydrofolate dehydrogenase 1 impair nuclear de novo thymidylate biosynthesis. *Proceedings of the National Academy of Sciences of the United States of America*, **2015**, 112, 400-5	11.5	48
84	Heavy chain ferritin enhances serine hydroxymethyltransferase expression and de novo thymidine biosynthesis. *Journal of Biological Chemistry*, **2001**, 276, 19855-61	5.4	47
83	Vitamin B-6. *Advances in Nutrition*, **2015**, 6, 132-3	10	45
82	Regulation of de novo purine biosynthesis by methenyltetrahydrofolate synthetase in neuroblastoma. *Journal of Biological Chemistry*, **2006**, 281, 4215-21	5.4	41
81	Dietary folate, but not choline, modifies neural tube defect risk in Shmt1 knockout mice. *American Journal of Clinical Nutrition*, **2012**, 95, 109-14	7	39
80	Synthesis of (6S)-5-formyltetrahydropteroyl-polyglutamates and interconversion to other reduced pteroylpolyglutamate derivatives. *Analytical Biochemistry*, **1992**, 202, 82-8	3.1	39
79	Shmt1 heterozygosity impairs folate-dependent thymidylate synthesis capacity and modifies risk of Apc(min)-mediated intestinal cancer risk. *Cancer Research*, **2011**, 71, 2098-107	10.1	38
78	Polymorphisms in cytoplasmic serine hydroxymethyltransferase and methylenetetrahydrofolate reductase affect the risk of cardiovascular disease in men. *Journal of Nutrition*, **2005**, 135, 1989-94	4.1	38
77	Modeling cellular compartmentation in one-carbon metabolism. *Wiley Interdisciplinary Reviews: Systems Biology and Medicine*, **2013**, 5, 343-65	6.6	37
76	Nutritional genomics. *Physiological Genomics*, **2004**, 16, 161-5	3.6	37
75	Bringing individuality to public health recommendations. *Journal of Nutrition*, **2002**, 132, 2476S-2480S	4.1	35
74	Cell cycle regulation of folate-mediated one-carbon metabolism. *Wiley Interdisciplinary Reviews: Systems Biology and Medicine*, **2018**, 10, e1426	6.6	34
73	Engaging basic scientists in translational research: identifying opportunities, overcoming obstacles. *Journal of Translational Medicine*, **2012**, 10, 72	8.5	34
72	A UV-responsive internal ribosome entry site enhances serine hydroxymethyltransferase 1 expression for DNA damage repair. *Journal of Biological Chemistry*, **2009**, 284, 31097-108	5.4	32

71	A ferritin-responsive internal ribosome entry site regulates folate metabolism. *Journal of Biological Chemistry*, **2007**, 282, 29927-35	5.4	32
70	Mimosine attenuates serine hydroxymethyltransferase transcription by chelating zinc. Implications for inhibition of DNA replication. *Journal of Biological Chemistry*, **2005**, 280, 396-400	5.4	31
69	Astronaut ophthalmic syndrome. *FASEB Journal*, **2017**, 31, 3746-3756	0.9	30
68	Mthfs is an Essential Gene in Mice and a Component of the Purinosome. *Frontiers in Genetics*, **2011**, 2, 36	4.5	30
67	Effect of vitamin B6 availability on serine hydroxymethyltransferase in MCF-7 cells. *Archives of Biochemistry and Biophysics*, **2007**, 462, 21-7	4.1	29
66	Best practices in nutrition science to earn and keep the public's trust. *American Journal of Clinical Nutrition*, **2019**, 109, 225-243	7	29
65	Nuclear Folate Metabolism. *Annual Review of Nutrition*, **2018**, 38, 219-243	9.9	27
64	Knowledge gaps in understanding the metabolic and clinical effects of excess folates/folic acid: a summary, and perspectives, from an NIH workshop. *American Journal of Clinical Nutrition*, **2020**, 112, 1390-1403	7	27
63	Emerging concepts on the role of epigenetics in the relationships between nutrition and health. *Journal of Internal Medicine*, **2018**, 284, 37-49	10.8	26
62	Nutrition research to affect food and a healthy life span. *American Journal of Clinical Nutrition*, **2013**, 98, 620-5	7	26
61	Maternal Mthfd1 disruption impairs fetal growth but does not cause neural tube defects in mice. *American Journal of Clinical Nutrition*, **2012**, 95, 882-91	7	26
60	Arsenic trioxide targets MTHFD1 and SUMO-dependent nuclear de novo thymidylate biosynthesis. *Proceedings of the National Academy of Sciences of the United States of America*, **2017**, 114, E2319-E2326	11.5	25
59	Folate nutrition and blood-brain barrier dysfunction. *Current Opinion in Biotechnology*, **2017**, 44, 146-152	11.4	24
58	Folate rescues vitamin B depletion-induced inhibition of nuclear thymidylate biosynthesis and genome instability. *Proceedings of the National Academy of Sciences of the United States of America*, **2017**, 114, E4095-E4102	11.5	24
57	Targeting nuclear thymidylate biosynthesis. *Molecular Aspects of Medicine*, **2017**, 53, 48-56	16.7	24
56	Maternal dietary uridine causes, and deoxyuridine prevents, neural tube closure defects in a mouse model of folate-responsive neural tube defects. *American Journal of Clinical Nutrition*, **2015**, 101, 860-9	7	23
55	Mthfd1 is a modifier of chemically induced intestinal carcinogenesis. *Carcinogenesis*, **2011**, 32, 427-33	4.6	22
54	Mechanism of the internal ribosome entry site-mediated translation of serine hydroxymethyltransferase 1. *Journal of Biological Chemistry*, **2009**, 284, 31085-96	5.4	20

53	MTHFD1 regulates nuclear de novo thymidylate biosynthesis and genome stability. *Biochimie*, **2016**, 126, 27-30	4.6	19
52	Lack of catalytic activity of a murine mRNA cytoplasmic serine hydroxymethyltransferase splice variant: evidence against alternative splicing as a regulatory mechanism. *Biochemistry*, **2001**, 40, 4932-9	3.2	19
51	Convergence of Genetic, Nutritional and Inflammatory Factors in Gastrointestinal Cancers. *Nutrition Reviews*, **2007**, 65, 157-166	6.4	19
50	A hybrid stochastic model of folate-mediated one-carbon metabolism: Effect of the common C677T MTHFR variant on de novo thymidylate biosynthesis. *Scientific Reports*, **2017**, 7, 797	4.9	18
49	High resolution mapping and positional cloning of ENU-induced mutations in the Rw region of mouse chromosome 5. *BMC Genetics*, **2010**, 11, 106	2.6	18
48	Convergence of genetic, nutritional and inflammatory factors in gastrointestinal cancers. *Nutrition Reviews*, **2007**, 65, S157-66	6.4	18
47	The mitochondrial inner membrane protein MPV17 prevents uracil accumulation in mitochondrial DNA. *Journal of Biological Chemistry*, **2018**, 293, 20285-20294	5.4	18
46	Reduced MTHFD1 activity in male mice perturbs folate- and choline-dependent one-carbon metabolism as well as transsulfuration. *Journal of Nutrition*, **2013**, 143, 41-5	4.1	17
45	Pyridoxal phosphate inhibits dynamic subunit interchange among serine hydroxymethyltransferase tetramers. *Journal of Biological Chemistry*, **2003**, 278, 10142-9	5.4	16
44	Inhibition of 5,10-methenyltetrahydrofolate synthetase. *Archives of Biochemistry and Biophysics*, **2007**, 458, 194-201	4.1	14
43	Cloning, expression, and purification of 5,10-methenyltetrahydrofolate synthetase from Mus musculus. *Protein Expression and Purification*, **2004**, 35, 276-83	2	13
42	5,10-Methenyltetrahydrofolate synthetase activity is increased in tumors and modifies the efficacy of antipurine LY309887. *Archives of Biochemistry and Biophysics*, **2009**, 481, 145-50	4.1	12
41	1. General introduction: the role of science in identifying common ground in the debate on genetic modification of foods. *Trends in Food Science and Technology*, **2003**, 14, 182-190	15.3	12
40	Strengthening national nutrition research: rationale and options for a new coordinated federal research effort and authority. *American Journal of Clinical Nutrition*, **2020**, 112, 721-769	7	12
39	Human nutrition and genetic variation. *Food and Nutrition Bulletin*, **2007**, 28, S101-15	1.8	11
38	Securing the future of nutritional sciences through integrative graduate education. *Journal of Nutrition*, **2002**, 132, 779-84	4.1	11
37	Folate Biochemical Pathways and Their Regulation **2009**, 49-74		11
36	Dietary folic acid protects against genotoxicity in the red blood cells of mice. *Mutation Research - Fundamental and Molecular Mechanisms of Mutagenesis*, **2015**, 779, 105-11	3.3	10

35	Disruption of shmt1 impairs hippocampal neurogenesis and mnemonic function in mice. *Journal of Nutrition*, **2013**, 143, 1028-35	4.1	10
34	Extracellular serine and glycine are required for mouse and human skeletal muscle stem and progenitor cell function. *Molecular Metabolism*, **2021**, 43, 101106	8.8	10
33	New insights into the metabolic and nutritional determinants of severe combined immunodeficiency. *Rare Diseases (Austin, Tex)*, **2015**, 3, e1112479		9
32	Folate network genetic variation predicts cardiovascular disease risk in non-Hispanic white males. *Journal of Nutrition*, **2012**, 142, 1272-9	4.1	9
31	Deoxyuracil in DNA and disease: Genomic signal or managed situation?. *DNA Repair*, **2019**, 77, 36-44	4.3	8
30	Discussion: Folate and Vitamin B12 Metabolism: Overview and Interaction with Riboflavin, Vitamin B6, and Polymorphisms. *Food and Nutrition Bulletin*, **2008**, 29, S17-S19	1.8	8
29	The 5-formyltetrahydrofolate futile cycle reduces pathway stochasticity in an extended hybrid-stochastic model of folate-mediated one-carbon metabolism. *Scientific Reports*, **2019**, 9, 4322	4.9	7
28	The Roles of SUMO in Metabolic Regulation. *Advances in Experimental Medicine and Biology*, **2017**, 963, 143-168	3.6	7
27	Sensitizing cancer cells: is it really all about U?. *Cancer Cell*, **2012**, 22, 3-4	24.3	6
26	Polymorphisms in serine hydroxymethyltransferase 1 and methylenetetrahydrofolate reductase interact to increase cardiovascular disease risk in humans. *Journal of Nutrition*, **2011**, 141, 255-60	4.1	6
25	Provision of folic acid for reducing arsenic toxicity in arsenic-exposed children and adults. *The Cochrane Library*, **2017**,	5.2	5
24	Dietary and genetic manipulations of folate metabolism differentially affect neocortical functions in mice. *Neurotoxicology and Teratology*, **2013**, 38, 79-91	3.9	5
23	Azoxymethane-induced colon carcinogenesis in mice occurs independently of de novo thymidylate synthesis capacity. *Journal of Nutrition*, **2014**, 144, 419-24	4.1	5
22	Mouse models to elucidate mechanisms of folate-related cancer pathologies. *Nutrition Reviews*, **2008**, 66 Suppl 1, S54-8	6.4	5
21	Methenyltetrahydrofolate synthetase is a high-affinity catecholamine-binding protein. *Archives of Biochemistry and Biophysics*, **2006**, 455, 175-87	4.1	5
20	The Role of Brain Barriers in Maintaining Brain Vitamin Levels. *Annual Review of Nutrition*, **2019**, 39, 147-173	9.3	4
19	p53 Disruption Increases Uracil Accumulation in DNA of Murine Embryonic Fibroblasts and Leads to Folic Acid-Nonresponsive Neural Tube Defects in Mice. *Journal of Nutrition*, **2020**, 150, 1705-1712	4.1	4
18	More Nutrition Precision, Better Decisions for the Health of Our Nation. *Journal of Nutrition*, **2020**, 150, 3058-3060	4.1	4

17	Alcohol Dehydrogenase 5 Is a Source of Formate for De Novo Purine Biosynthesis in HepG2 Cells. *Journal of Nutrition*, **2017**, 147, 499-505	4.1	3
16	Food systems: Healthy diet sustains the environment too. *Nature*, **2015**, 522, 287	50.4	3
15	Bringing clarity to the role of MTHFR variants in neural tube defect prevention. *American Journal of Clinical Nutrition*, **2015**, 101, 1111-2	7	3
14	Dietary Uridine Decreases Tumorigenesis in the Model of Intestinal Cancer. *Current Developments in Nutrition*, **2018**, 2, nzy013	0.4	3
13	Emerging Concepts in Nutrient Needs. *Journal of Nutrition*, **2020**, 150, 2593S-2601S	4.1	2
12	Deoxyuracil in DNA in health and disease. *Current Opinion in Clinical Nutrition and Metabolic Care*, **2020**, 23, 247-252	3.8	2
11	Provision of folic acid for reducing arsenic toxicity in arsenic-exposed children and adults. *The Cochrane Library*, **2021**, 10, CD012649	5.2	2
10	Folate, Vitamin B12, and Vitamin B6 **2011**, 209-223		1
9	Nutrition and developmental biology--implications for public health. *Nutrition Reviews*, **2006**, 64, S60-71; discussion S72-91	6.4	1
8	Nutrition and stem cell integrity in aging. *Journal of Internal Medicine*,	10.8	0
7	Nutrigenomics analyses **2017**, 290-317		
6	Genetic or nutritional disturbances in folate-related pathways and epigenetic interactions **2017**, 19-41		
5	Thymidylate Synthesis **2016**, 1-7		
4	Dual RN-RDN program: Training for the future of health and nutrition.. *Clinical Nutrition ESPEN*, **2022**, 47, 288-292	1.3	
3	Ferritin and Serine Hydroxymethyltransferase **2006**, 213-236		
2	Regulation of de novo thymidylate biosynthesis by ubiquitination. *FASEB Journal*, **2010**, 24, 892.5	0.9	
1	Role of Dihydroquinonoid Formation in Substrate Specificity of Escherichia coli Dihydrofolate Synthetase- Folylpolyglutamate Synthetase.. *FASEB Journal*, **2013**, 27, 789.15	0.9	