Svetlana Lutsenko

List of Publications by Year in descending order

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118 papers	10,995 citations	31902 53 h-index	34900 98 g-index
120 all docs	120 docs citations	120 times ranked	7028 citing authors

#	Article	IF	Citations
1	Copper induces cell death by targeting lipoylated TCA cycle proteins. Science, 2022, 375, 1254-1261.	6.0	1,539
2	Function and Regulation of Human Copper-Transporting ATPases. Physiological Reviews, 2007, 87, 1011-1046.	13.1	679
3	Connecting copper and cancer: from transition metal signalling to metalloplasia. Nature Reviews Cancer, 2022, 22, 102-113.	12.8	519
4	Wilson disease. Nature Reviews Disease Primers, 2018, 4, 21.	18.1	466
5	Human copper homeostasis: a network of interconnected pathways. Current Opinion in Chemical Biology, 2010, 14, 211-217.	2.8	362
6	Identification and Analysis of Mutations in the Wilson Disease Gene (ATP7B): Population Frequencies, Genotype-Phenotype Correlation, and Functional Analyses. American Journal of Human Genetics, 1997, 61, 317-328.	2.6	346
7	Human copper transporters: mechanism, role in human diseases and therapeutic potential. Future Medicinal Chemistry, 2009, 1, 1125-1142.	1.1	222
8	N-terminal Domains of Human Copper-transporting Adenosine Triphosphatases (the Wilson's and) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 Copper Per Metal-binding Repeat. Journal of Biological Chemistry, 1997, 272, 18939-18944.	1.6	215
9	High Copper Selectively Alters Lipid Metabolism and Cell Cycle Machinery in the Mouse Model of Wilson Disease. Journal of Biological Chemistry, 2007, 282, 8343-8355.	1.6	200
10	Near-infrared fluorescent sensor for in vivo copper imaging in a murine Wilson disease model. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 2228-2233.	3.3	188
11	Copper handling machinery of the brain. Metallomics, 2010, 2, 596.	1.0	187
12	Null Mutation of the Murine ATP7B (Wilson Disease) Gene Results in Intracellular Copper Accumulation and Late-Onset Hepatic Nodular Transformation. Human Molecular Genetics, 1999, 8, 1665-1671.	1.4	186
13	Consequences of Copper Accumulation in the Livers of the Atp7bâ^'/â^' (Wilson Disease Gene) Knockout Mice. American Journal of Pathology, 2006, 168, 423-434.	1.9	184
14	Cellular multitasking: The dual role of human Cu-ATPases in cofactor delivery and intracellular copper balance. Archives of Biochemistry and Biophysics, 2008, 476, 22-32.	1.4	181
15	The Copper-transporting ATPases, Menkes and Wilson Disease Proteins, Have Distinct Roles in Adult and Developing Cerebellum. Journal of Biological Chemistry, 2005, 280, 9640-9645.	1.6	149
16	Copper regulates cyclic-AMP-dependent lipolysis. Nature Chemical Biology, 2016, 12, 586-592.	3.9	149
17	The Lys1010â€“Lys1325 Fragment of the Wilson's Disease Protein Binds Nucleotides and Interacts with the N-terminal Domain of This Protein in a Copper-dependent Manner. Journal of Biological Chemistry, 2001, 276, 2234-2242.	1.6	140
18	Metallochaperone Atox1 Transfers Copper to the NH2-terminal Domain of the Wilson's Disease Protein and Regulates Its Catalytic Activity. Journal of Biological Chemistry, 2002, 277, 27953-27959.	1.6	140

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19	Copper Capture in a Thioether-Functionalized Porous Polymer Applied to the Detection of Wilsonâ€™s Disease. Journal of the American Chemical Society, 2016, 138, 7603-7609.	6.6	137
20	Copper Transport in Mammalian Cells: Special Care for a Metal with Special Needs. Journal of Biological Chemistry, 2009, 284, 25461-25465.	1.6	134
21	Therapeutic Targeting of ATP7B in Ovarian Carcinoma. Clinical Cancer Research, 2009, 15, 3770-3780.	3.2	128
22	Diverse Functional Properties of Wilson Disease ATP7B Variants. Gastroenterology, 2012, 142, 947-956.e5.	0.6	125
23	Biochemical basis of regulation of human copper-transporting ATPases. Archives of Biochemistry and Biophysics, 2007, 463, 134-148.	1.4	119
24	Solution structure of the N-domain of Wilson disease protein: Distinct nucleotide-binding environment and effects of disease mutations. Proceedings of the National Academy of Sciences of the United States of America, 2006, 103, 5302-5307.	3.3	107
25	The Distinct Roles of the N-terminal Copper-binding Sites in Regulation of Catalytic Activity of the Wilson's Disease Protein. Journal of Biological Chemistry, 2003, 278, 32212-32218.	1.6	104
26	The N-terminal Metal-binding Site 2 of the Wilson's Disease Protein Plays a Key Role in the Transfer of Copper from Atox1. Journal of Biological Chemistry, 2004, 279, 15376-15384.	1.6	101
27	X-ray Absorption Spectroscopy of the Copper Chaperone HAH1 Reveals a Linear Two-coordinate Cu(I) Center Capable of Adduct Formation with Exogenous Thiols and Phosphines. Journal of Biological Chemistry, 2003, 278, 23163-23170.	1.6	100
28	Golgi in copper homeostasis: a view from the membrane trafficking field. Histochemistry and Cell Biology, 2013, 140, 285-295.	0.8	97
29	Wilson Disease at a Single Cell Level. Journal of Biological Chemistry, 2010, 285, 30875-30883.	1.6	95
30	Copper Specifically Regulates Intracellular Phosphorylation of the Wilson's Disease Protein, a Human Copper-transporting ATPase. Journal of Biological Chemistry, 2001, 276, 36289-36294.	1.6	94
31	Copper-transporting ATPases ATP7A and ATP7B: cousins, not twins. Journal of Bioenergetics and Biomembranes, 2007, 39, 403-407.	1.0	94
32	Functional Properties of the Copper-transporting ATPase ATP7B (The Wilson's Disease Protein) Expressed in Insect Cells. Journal of Biological Chemistry, 2002, 277, 976-983.	1.6	93
33	Wilson disease: not just a copper disorder. Analysis of a Wilson disease model demonstrates the link between copper and lipid metabolism. Molecular BioSystems, 2007, 3, 816.	2.9	91
34	The Role of Copper Chaperone Atox1 in Coupling Redox Homeostasis to Intracellular Copper Distribution. Antioxidants, 2016, 5, 25.	2.2	89
35	Copper trafficking to the secretory pathway. Metallomics, 2016, 8, 840-852.	1.0	86
36	Neuronal differentiation is associated with a redox-regulated increase of copper flow to the secretory pathway. Nature Communications, 2016, 7, 10640.	5.8	85

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37	Nanobodies as Probes for Protein Dynamics in Vitro and in Cells. Journal of Biological Chemistry, 2016, 291, 3767-3775.	1.6	84
38	Atp7b â^'/â^' mice as a model for studies of Wilson's disease. Biochemical Society Transactions, 2008, 36, 1233-1238.	1.6	83
39	Activation of liver X receptor/retinoid X receptor pathway ameliorates liver disease in Atp7Bâ^'/â^' (Wilson disease) mice. Hepatology, 2016, 63, 1828-1841.	3.6	82
40	Structural organization of human Cu-transporting ATPases: learning from building blocks. Journal of Biological Inorganic Chemistry, 2010, 15, 47-59.	1.1	81
41	Hepatic copper-transporting ATPase ATP7B: function and inactivation at the molecular and cellular level. BioMetals, 2007, 20, 627-637.	1.8	78
42	Functional Partnership of the Copper Export Machinery and Glutathione Balance in Human Cells. Journal of Biological Chemistry, 2012, 287, 26678-26687.	1.6	76
43	Systems biology approach to Wilsonâ€™s disease. BioMetals, 2011, 24, 455-466.	1.8	70
44	The Role of the Invariant His-1069 in Folding and Function of the Wilson's Disease Protein, the Human Copper-transporting ATPase ATP7B. Journal of Biological Chemistry, 2003, 278, 13302-13308.	1.6	66
45	An Expanding Range of Functions for the Copper Chaperone/Antioxidant Protein Atox1. Antioxidants and Redox Signaling, 2013, 19, 945-957.	2.5	65
46	Obesity is associated with copper elevation in serum and tissues. Metallomics, 2019, 11, 1363-1371.	1.0	65
47	The Function of ATPase Copper Transporter ATP7B in Intestine. Gastroenterology, 2018, 154, 168-180.e5.	0.6	64
48	Urinary Copper Elevation in a Mouse Model of Wilson's Disease Is a Regulated Process to Specifically Decrease the Hepatic Copper Load. PLoS ONE, 2012, 7, e38327.	1.1	63
49	Elevated copper impairs hepatic nuclear receptor function in Wilsonâ€™s disease. Journal of Clinical Investigation, 2015, 125, 3449-3460.	3.9	63
50	The Menkes Disease Protein Binds Copper via Novel 2-Coordinate Cu(I)â^'Cysteinates in the N-Terminal Domain. Journal of the American Chemical Society, 1998, 120, 13525-13526.	6.6	62
51	Modifying factors and phenotypic diversity in Wilson's disease. Annals of the New York Academy of Sciences, 2014, 1315, 56-63.	1.8	62
52	Human copper-transporting ATPase ATP7B (the Wilson's disease protein): biochemical properties and regulation. Journal of Bioenergetics and Biomembranes, 2002, 34, 351-362.	1.0	61
53	Quantitative imaging of metals in tissues. BioMetals, 2009, 22, 197-205.	1.8	59
54	The Distinct Functional Properties of the Nucleotide-binding Domain of ATP7B, the Human Copper-transporting ATPase. Journal of Biological Chemistry, 2004, 279, 36363-36371.	1.6	56

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55	Functional Interactions of Cu-ATPase ATP7B with Cisplatin and the Role of ATP7B in the Resistance of Cells to the Drug. Journal of Biological Chemistry, 2009, 284, 7793-7802.	1.6	56
56	A structural model of the copper ATPase ATP7B to facilitate analysis of Wilson disease-causing mutations and studies of the transport mechanism. Metallomics, 2012, 4, 669.	1.0	56
57	Genome-wide RNAi ionomics screen reveals new genes and regulation of human trace element metabolism. Nature Communications, 2014, 5, 3301.	5.8	54
58	The Activity of Menkes Disease Protein ATP7A Is Essential for Redox Balance in Mitochondria. Journal of Biological Chemistry, 2016, 291, 16644-16658.	1.6	54
59	Molecular Events Initiating Exit of a Copper-transporting ATPase ATP7B from the Trans-Golgi Network. Journal of Biological Chemistry, 2012, 287, 36041-36050.	1.6	53
60	Cellâ€Specific Trafficking Suggests a new role for Renal ATP7B in the Intracellular Copper Storage. Traffic, 2009, 10, 767-779.	1.3	50
61	ATP7A and ATP7B copper transporters have distinct functions in the regulation of neuronal dopamine-Î²-hydroxylase. Journal of Biological Chemistry, 2018, 293, 20085-20098.	1.6	48
62	Copper-dependent amino oxidase 3 governs selection of metabolic fuels in adipocytes. PLoS Biology, 2018, 16, e2006519.	2.6	48
63	Cellular copper levels determine the phenotype of the Arg ⁸⁷⁵ variant of ATP7B/Wilson disease protein. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 5390-5395.	3.3	47
64	Copper Transport and Disease: What Can We Learn from Organoids?. Annual Review of Nutrition, 2019, 39, 75-94.	4.3	46
65	The metal chaperone Atox1 regulates the activity of the human copper transporter ATP7B by modulating domain dynamics. Journal of Biological Chemistry, 2017, 292, 18169-18177.	1.6	45
66	Identification of a Novel Transcription Regulator from Proteus mirabilis, PMTR, Revealed a Possible Role of YJAI Protein in Balancing Zinc in Escherichia coli. Journal of Biological Chemistry, 1998, 273, 21393-21401.	1.6	44
67	Intracellular targeting of copper-transporting ATPase ATP7A in a normal andAtp7b^{â^'/â^'}kidney. American Journal of Physiology - Renal Physiology, 2008, 294, F53-F61.	1.3	44
68	Regulation of Copper Transporters in Human Cells. Current Topics in Membranes, 2012, 69, 137-161.	0.5	44
69	Copper and the brain noradrenergic system. Journal of Biological Inorganic Chemistry, 2019, 24, 1179-1188.	1.1	44
70	Copper transfer to the N-terminal domain of the Wilson disease protein (ATP7B): X-ray absorption spectroscopy of reconstituted and chaperone-loaded metal binding domains and their interaction with exogenous ligands. Journal of Inorganic Biochemistry, 2004, 98, 765-774.	1.5	43
71	Identification of p38 MAPK and JNK as new targets for correction of Wilson diseaseâ€causing ATP7B mutants. Hepatology, 2016, 63, 1842-1859.	3.6	42
72	Interactions between Copper-binding Sites Determine the Redox Status and Conformation of the Regulatory N-terminal Domain of ATP7B. Journal of Biological Chemistry, 2010, 285, 6327-6336.	1.6	41

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73	The Lumenal Loop Met672â€“Pro707 of Copper-transporting ATPase ATP7A Binds Metals and Facilitates Copper Release from the Intramembrane Sites. Journal of Biological Chemistry, 2011, 286, 26585-26594.	1.6	41
74	Distinct phenotype of a Wilson disease mutation reveals a novel trafficking determinant in the copper transporter ATP7B. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, E1364-73.	3.3	40
75	Stabilization of the H,K-ATPase M5M6 Membrane Hairpin by K+ Ions. Journal of Biological Chemistry, 1999, 274, 13737-13740.	1.6	38
76	COMMD1 Forms Oligomeric Complexes Targeted to the Endocytic Membranes via Specific Interactions with Phosphatidylinositol 4,5-Bisphosphate. Journal of Biological Chemistry, 2009, 284, 696-707.	1.6	38
77	Dynamic and cell-specific transport networks for intracellular copper ions. Journal of Cell Science, 2021, 134, .	1.2	38
78	Evolution of Copper Transporting ATPases in Eukaryotic Organisms. Current Genomics, 2012, 13, 124-133.	0.7	37
79	Chemical Modification with Dihydro-4,4â€²-diisothiocyanostilbene-2,2â€²-disulfonate Reveals the Distance between K480and K501in the ATP-Binding Domain of the Na,K-ATPase. Archives of Biochemistry and Biophysics, 1997, 340, 90-100.	1.4	36
80	The Loop Connecting Metal-Binding Domains 3 and 4 of ATP7B Is a Target of a Kinase-Mediated Phosphorylation. Biochemistry, 2009, 48, 5573-5581.	1.2	36
81	A systems approach implicates nuclear receptor targeting in the Atp7bâˆ’/âˆ’ mouse model of Wilson's disease. Metallomics, 2012, 4, 660.	1.0	36
82	Animal models of Wilson disease. Journal of Neurochemistry, 2018, 146, 356-373.	2.1	36
83	Difference in Stability of the N-domain Underlies Distinct Intracellular Properties of the E1064A and H1069Q Mutants of Copper-transporting ATPase ATP7B. Journal of Biological Chemistry, 2011, 286, 16355-16362.	1.6	35
84	Targeted inactivation of copper transporter Atp7b in hepatocytes causes liver steatosis and obesity in mice. American Journal of Physiology - Renal Physiology, 2017, 313, G39-G49.	1.6	35
85	Hepatocyte GP73 expression in Wilson disease. Journal of Hepatology, 2009, 51, 557-564.	1.8	34
86	Human copper transporter ATP7B (Wilson disease protein) forms stable dimers in vitro and in cells. Journal of Biological Chemistry, 2017, 292, 18760-18774.	1.6	34
87	Interactions between Metal-binding Domains Modulate Intracellular Targeting of Cu(I)-ATPase ATP7B, as Revealed by Nanobody Binding. Journal of Biological Chemistry, 2014, 289, 32682-32693.	1.6	33
88	Elevated Copper Remodels Hepatic RNA Processing Machinery in the Mouse Model of Wilson's Disease. Journal of Molecular Biology, 2011, 406, 44-58.	2.0	32
89	ATP binding site of mitochondrial creatine kinase. FEBS Letters, 1990, 273, 139-143.	1.3	31
90	Functional Properties of the Human Copperâ€Transporting ATPase ATP7B (the Wilson's Disease Protein) and Regulation by Metallochaperone Atox1. Annals of the New York Academy of Sciences, 2003, 986, 204-211.	1.8	31

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91	Lumenal Loop M672-P707 of the Menkes Protein (ATP7A) Transfers Copper to Peptidylglycine Monooxygenase. Journal of the American Chemical Society, 2012, 134, 10458-10468.	6.6	29
92	Identification of Two Conformationally Sensitive Cysteine Residues at the Extracellular Surface of the Na,K-ATPase Î±-Subunit. Journal of Biological Chemistry, 1997, 272, 5249-5255.	1.6	27
93	Evidence of a Role for the Na,K-ATPase ?-Subunit in Active Cation Transport. Annals of the New York Academy of Sciences, 1992, 671, 147-155.	1.8	25
94	A mutation in the ATP7B copper transporter causes reduced dopamine beta-hydroxylase and norepinephrine in mouse adrenal. Neurochemical Research, 2003, 28, 867-873.	1.6	25
95	Changes in mammalian copper homeostasis during microbial infection. Metallomics, 2020, 12, 416-426.	1.0	25
96	Myosin Vb mediates copper export in polarized hepatocytes. Journal of Cell Science, 2016, 129, 1179-89.	1.2	23
97	ANKRD9 is a metabolically-controlled regulator of IMPDH2 abundance and macro-assembly. Journal of Biological Chemistry, 2019, 294, 14454-14466.	1.6	18
98	Analysis of Wilson disease mutations revealed that interactions between different ATP7B mutants modify their properties. Scientific Reports, 2020, 10, 13487.	1.6	18
99	Wilson Disease: Update on Pathophysiology and Treatment. Frontiers in Cell and Developmental Biology, 2022, 10, 871877.	1.8	18
100	Systemic deletion of Atp7b modifies the hepatocytesâ€™ response to copper overload in the mouse models of Wilson disease. Scientific Reports, 2021, 11, 5659.	1.6	17
101	Single nucleotide polymorphisms in the human ATP7B gene modify the properties of the ATP7B protein. Metallomics, 2019, 11, 1128-1139.	1.0	15
102	Expression of ZntA, a Zinc-Transporting P 1 -Type ATPase, is Specifically Regulated by Zinc and Cadmium. IUBMB Life, 2000, 49, 297-302.	1.5	12
103	Introduction to Human Disorders of Copper Metabolism. Annals of the New York Academy of Sciences, 2014, 1314, v-vi.	1.8	12
104	pH-regulated metalâ€“ligand switching in the HM loop of ATP7A: a new paradigm for metal transfer chemistry. Metallomics, 2016, 8, 729-733.	1.0	10
105	Localization of the Locus Coeruleus in the Mouse Brain. Journal of Visualized Experiments, 2019, , .	0.2	10
106	Heterologous Expression of the Metal-Binding Domains of Human Copper-Transporting ATPases (P1-ATPases). Annals of the New York Academy of Sciences, 1997, 834, 155-157.	1.8	9
107	Ligand-Induced Conformational Changes in the Na,K-ATPase ? Subunit. Annals of the New York Academy of Sciences, 1997, 834, 45-55.	1.8	6
108	Molecular Architecture of the Copper-Transporting ATPase ATP7B. , 2019, , 33-43.		6

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109	Sending copper where it is needed most. Science, 2020, 368, 584-585.	6.0	6
110	Hepatic Steatosis in the Mouse Model of Wilson Disease Coincides with a Muted Inflammatory Response. American Journal of Pathology, 2022, 192, 146-159.	1.9	5
111	Introduction to the Minireview Series on Modern Technologies for In-cell Biochemistry. Journal of Biological Chemistry, 2016, 291, 3757-3758.	1.6	2
112	ATP7B Function. , 2019, , 23-32.		1
113	Biochemical and Cellular Properties of ATP7B Variants. , 2019, , 33-50.		1
114	Relation of Copper Toxicosis in Dogs and Wilson Disease to the Appearance of a Small Copper Carrier (SCC) in Blood Plasma and Urine. FASEB Journal, 2015, 29, 921.2.	0.2	1
115	Reply. Hepatology, 2016, 64, 1371-1372.	3.6	0
116	Reply. Hepatology, 2017, 65, 755-755.	3.6	0
117	Nanobodies against the metal binding domains of ATP7B as tools to study copper transport in the cell. Metallomics, 2020, 12, 1941-1950.	1.0	0
118	Editor's Note: Therapeutic Targeting of ATP7B in Ovarian Carcinoma. Clinical Cancer Research, 2021, 27, 4454-4454.	3.2	0