Roland Lill

List of Publications by Year
in descending order

124 papers	17,634 citations	9264 74 h-index	16650 123 g-index
129 all docs	129 docs citations	129 times ranked	10323 citing authors

#	Article	IF	Citations
1	Mechanistic concepts of iron-sulfur protein biogenesis in Biology. Biochimica Et Biophysica Acta - Molecular Cell Research, 2021, 1868, 118863.	4.1	113
2	N-terminal tyrosine of ISCU2 triggers [2Fe-2S] cluster synthesis by ISCU2 dimerization. Nature Communications, 2021, 12, 6902.	12.8	15
3	Conformational changes in the yeast mitochondrial ABC transporter Atm1 during the transport cycle. Science Advances, 2021, 7, eabk2392.	10.3	4
4	Structural and functional diversity calls for a new classification of ABC transporters. FEBS Letters, 2020, 594, 3767-3775.	2.8	169
5	Mitochondrial [4Fe-4S] protein assembly involves reductive [2Fe-2S] cluster fusion on ISCA1â€“ISCA2 by electron flow from ferredoxin FDX2. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 20555-20565.	7.1	59
6	Redox Modification of the Iron-Sulfur Glutaredoxin GRXS17 Activates Holdase Activity and Protects Plants from Heat Stress. Plant Physiology, 2020, 184, 676-692.	4.8	33
7	The alarmone (p)ppGpp confers tolerance to oxidative stress during the stationary phase by maintenance of redox and iron homeostasis in Staphylococcus aureus. Free Radical Biology and Medicine, 2020, 161, 351-364.	2.9	27
8	Mechanisms of Mitochondrial Iron-Sulfur Protein Biogenesis. Annual Review of Biochemistry, 2020, 89, 471-499.	11.1	220
9	From the discovery to molecular understanding of cellular iron-sulfur protein biogenesis. Biological Chemistry, 2020, 401, 855-876.	2.5	43
10	Glutaredoxins and iron-sulfur protein biogenesis at the interface of redox biology and iron metabolism. Biological Chemistry, 2020, 401, 1407-1428.	2.5	29
11	Do FeS clusters rule bacterial iron regulation?. Journal of Biological Chemistry, 2020, 295, 15464-15465.	3.4	1
12	Systematic identification of metabolites controlling gene expression in E. coli. Nature Communications, 2019, 10, 4463.	12.8	71
13	Walter Neupert (1939â€“2019), a pioneer of mitochondrial biogenesis and morphology. EMBO Journal, 2019, 38, e103100.	7.8	0
14	Glycogen branching enzyme controls cellular iron homeostasis via Iron Regulatory Protein 1 and mitoNEET. Nature Communications, 2019, 10, 5463.	12.8	34
15	Depletion of thiol reducing capacity impairs cytosolic but not mitochondrial iron-sulfur protein assembly machineries. Biochimica Et Biophysica Acta - Molecular Cell Research, 2019, 1866, 240-251.	4.1	10
16	Biochemical Analyses of Human Ironâ€“Sulfur Protein Biogenesis and of Related Diseases. Methods in Enzymology, 2018, 599, 227-263.	1.0	16
17	Branched late-steps of the cytosolic iron-sulphur cluster assembly machinery of Trypanosoma brucei. PLoS Pathogens, 2018, 14, e1007326.	4.7	2
18	ISCA1 mutation in a patient with infantile-onset leukodystrophy causes defects in mitochondrial [4Feâ€“4S] proteins. Human Molecular Genetics, 2018, 27, 3650-3650.	2.9	6

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19	Function and crystal structure of the dimeric P-loop ATPase CFD1 coordinating an exposed [4Fe-4S] cluster for transfer to apoproteins. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, E9085-E9094.	7.1	26
20	ISCA1 mutation in a patient with infantile-onset leukodystrophy causes defects in mitochondrial [4Feâ€"4S] proteins. Human Molecular Genetics, 2018, 27, 2739-2754.	2.9	25
21	Biochemical Reconstitution and Spectroscopic Analysis of Ironâ€"Sulfur Proteins. Methods in Enzymology, 2018, 599, 197-226.	1.0	61
22	Fe-S cluster coordination of the chromokinesin KIF4A alters its sub-cellular localization during mitosis. Journal of Cell Science, 2018, 131, .	2.0	11
23	A novel complex neurological phenotype due to a homozygous mutation in FDX2. Brain, 2018, 141, 2289-2298.	7.6	29
24	Conserved functions of Arabidopsis mitochondrial late-acting maturation factors in the trafficking of ironâ€'sulfur clusters. Biochimica Et Biophysica Acta - Molecular Cell Research, 2018, 1865, 1250-1259.	4.1	20
25	Ironâ€"sulfur cluster biogenesis and trafficking in mitochondria. Journal of Biological Chemistry, 2017, 292, 12754-12763.	3.4	278
26	Cellular requirements for ironâ€"sulfur cluster insertion into the antiviral radical SAM protein viperin. Journal of Biological Chemistry, 2017, 292, 13879-13889.	3.4	35
27	Evolutionary conservation and in vitro reconstitution of microsporidian ironâ€"sulfur cluster biosynthesis. Nature Communications, 2017, 8, 13932.	12.8	67
28	<i>Cryptococcus neoformans</i> Iron-Sulfur Protein Biogenesis Machinery Is a Novel Layer of Protection against Cu Stress. MBio, 2017, 8, .	4.1	41
29	A novel de novo dominant mutation in<i>ISCU</i>associated with mitochondrial myopathy. Journal of Medical Genetics, 2017, 54, 815-824.	3.2	25
30	The diferric-tyrosyl radical cluster of ribonucleotide reductase and cytosolic iron-sulfur clusters have distinct and similar biogenesis requirements. Journal of Biological Chemistry, 2017, 292, 11445-11451.	3.4	19
31	Structure and functional dynamics of the mitochondrial Fe/S cluster synthesis complex. Nature Communications, 2017, 8, 1287.	12.8	144
32	Role of Nfu1 and Bol3 in iron-sulfur cluster transfer to mitochondrial clients. ELife, 2016, 5, .	6.0	107
33	Mitochondrial Bol1 and Bol3 function as assembly factors for specific iron-sulfur proteins. ELife, 2016, 5, .	6.0	96
34	The conserved protein Dre2 uses essential [2Feâ€"2S] and [4Feâ€"4S] clusters for its function in cytosolic ironâ€"sulfur protein assembly. Biochemical Journal, 2016, 473, 2073-2085.	3.7	35
35	Defects in Mitochondrial Ironâ€"Sulfur Cluster Assembly Induce Cysteine S-Polythiolation on Ironâ€"Sulfur Apoproteins. Antioxidants and Redox Signaling, 2016, 25, 28-40.	5.4	4
36	Compartmentalization of iron between mitochondria and the cytosol and its regulation. European Journal of Cell Biology, 2015, 94, 292-308.	3.6	76

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37	The role of mitochondria and the CIA machinery in the maturation of cytosolic and nuclear ironâ€“sulfur proteins. European Journal of Cell Biology, 2015, 94, 280-291.	3.6	158
38	Fe/S protein assembly gene <i>IBA57</i> mutation causes hereditary spastic paraplegia. Neurology, 2015, 84, 659-667.	1.1	64
39	Biogenesis of cytosolic and nuclear ironâ€“sulfur proteins and their role in genome stability. Biochimica Et Biophysica Acta - Molecular Cell Research, 2015, 1853, 1528-1539.	4.1	192
40	Mutation of the ironâ€sulfur cluster assembly gene <i>IBA57</i> causes fatal infantile leukodystrophy. Journal of Inherited Metabolic Disease, 2015, 38, 1147-1153.	3.6	43
41	The mitochondrial monothiol glutaredoxin S15 is essential for iron-sulfur protein maturation in <i>Arabidopsis thaliana</i>. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 13735-13740.	7.1	84
42	The Basic Leucine Zipper Stress Response Regulator Yap5 Senses High-Iron Conditions by Coordination of [2Fe-2S] Clusters. Molecular and Cellular Biology, 2015, 35, 370-378.	2.3	46
43	The deca-GX3 proteins Yae1-Lto1 function as adaptors recruiting the ABC protein Rli1 for iron-sulfur cluster insertion. ELife, 2015, 4, e08231.	6.0	62
44	Functional reconstitution of mitochondrial Fe/S cluster synthesis on Isu1 reveals the involvement of ferredoxin. Nature Communications, 2014, 5, 5013.	12.8	136
45	Viperin is an iron-sulfur protein that inhibits genome synthesis of tick-borne encephalitis virus via radical SAM domain activity. Cellular Microbiology, 2014, 16, 834-848.	2.1	94
46	The role of mitochondria in cytosolic-nuclear ironâ€“sulfur protein biogenesis and in cellular iron regulation. Current Opinion in Microbiology, 2014, 22, 111-119.	5.1	113
47	SnapShot: Eukaryotic Fe-S Protein Biogenesis. Cell Metabolism, 2014, 20, 384-384.e1.	16.2	13
48	Cytosolic ironâ€sulphur protein assembly is functionally conserved and essential in procyclic and bloodstream <scp><i>T</i></scp><i>rypanosoma brucei</i>. Molecular Microbiology, 2014, 93, 897-910.	2.5	23
49	Crystal Structures of Nucleotide-Free and Glutathione-Bound Mitochondrial ABC Transporter Atm1. Science, 2014, 343, 1137-1140.	12.6	195
50	Maturation of cytosolic and nuclear ironâ€“sulfur proteins. Trends in Cell Biology, 2014, 24, 303-312.	7.9	158
51	Mitochondrial ironâ€“sulfur protein biogenesis and human disease. Biochimie, 2014, 100, 61-77.	2.6	227
52	Human CIA2A-FAM96A and CIA2B-FAM96B Integrate Iron Homeostasis and Maturation of Different Subsets of Cytosolic-Nuclear Iron-Sulfur Proteins. Cell Metabolism, 2013, 18, 187-198.	16.2	144
53	The Role of Mitochondria in Cellular Iron-Sulfur Protein Biogenesis: Mechanisms, Connected Processes, and Diseases. Cold Spring Harbor Perspectives in Biology, 2013, 5, a011312-a011312.	5.5	157
54	The mitochondrial carrier Rim2 co-imports pyrimidine nucleotides and iron. Biochemical Journal, 2013, 455, 57-65.	3.7	31

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55	The mitochondrial Hsp70 chaperone Ssq1 facilitates Fe/S cluster transfer from Isu1 to Grx5 by complex formation. Molecular Biology of the Cell, 2013, 24, 1830-1841.	2.1	122
56	Mutation of the iron-sulfur cluster assembly gene IBA57 causes severe myopathy and encephalopathy. Human Molecular Genetics, 2013, 22, 2590-2602.	2.9	103
57	Crucial function of vertebrate glutaredoxin 3 (PICOT) in iron homeostasis and hemoglobin maturation. Molecular Biology of the Cell, 2013, 24, 1895-1903.	2.1	101
58	The human mitochondrial ISCA1, ISCA2, and IBA57 proteins are required for [4Fe-4S] protein maturation. Molecular Biology of the Cell, 2012, 23, 1157-1166.	2.1	185
59	Eukaryotic DNA polymerases require an iron-sulfur cluster for the formation of active complexes. Nature Chemical Biology, 2012, 8, 125-132.	8.0	342
60	MMS19 Assembles Iron-Sulfur Proteins Required for DNA Metabolism and Genomic Integrity. Science, 2012, 337, 195-199.	12.6	255
61	A Bridging [4Fe-4S] Cluster and Nucleotide Binding Are Essential for Function of the Cfd1-Nbp35 Complex as a Scaffold in Iron-Sulfur Protein Maturation. Journal of Biological Chemistry, 2012, 287, 12365-12378.	3.4	91
62	The role of mitochondria in cellular ironâ€"sulfur protein biogenesis and iron metabolism. Biochimica Et Biophysica Acta - Molecular Cell Research, 2012, 1823, 1491-1508.	4.1	404
63	The Multidomain Thioredoxin-Monothiol Glutaredoxins Represent a Distinct Functional Group. Antioxidants and Redox Signaling, 2011, 15, 19-30.	5.4	54
64	The oxidative stress response in yeast cells involves changes in the stability of Aft1 regulon mRNAs. Molecular Microbiology, 2011, 81, 232-248.	2.5	33
65	A Fatal Mitochondrial Disease Is Associated with Defective NFU1 Function in the Maturation of a Subset of Mitochondrial Fe-S Proteins. American Journal of Human Genetics, 2011, 89, 656-667.	6.2	262
66	Specialized Function of Yeast Isa1 and Isa2 Proteins in the Maturation of Mitochondrial [4Fe-4S] Proteins. Journal of Biological Chemistry, 2011, 286, 41205-41216.	3.4	143
67	Tah18 transfers electrons to Dre2 in cytosolic iron-sulfur protein biogenesis. Nature Chemical Biology, 2010, 6, 758-765.	8.0	176
68	Humans possess two mitochondrial ferredoxins, Fdx1 and Fdx2, with distinct roles in steroidogenesis, heme, and Fe/S cluster biosynthesis. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 11775-11780.	7.1	279
69	Iron Regulation through the Back Door: Iron-Dependent Metabolite Levels Contribute to Transcriptional Adaptation to Iron Deprivation in Saccharomyces cerevisiae. Eukaryotic Cell, 2010, 9, 460-471.	3.4	42
70	Cytosolic Monothiol Glutaredoxins Function in Intracellular Iron Sensing and Trafficking via Their Bound Iron-Sulfur Cluster. Cell Metabolism, 2010, 12, 373-385.	16.2	263
71	Human Ind1, an Iron-Sulfur Cluster Assembly Factor for Respiratory Complex I. Molecular and Cellular Biology, 2009, 29, 6059-6073.	2.3	184
72	Function and biogenesis of ironâ€"sulphur proteins. Nature, 2009, 460, 831-838.	27.8	989

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73	Analysis of ironâ€“sulfur protein maturation in eukaryotes. Nature Protocols, 2009, 4, 753-766.	12.0	87
74	Crucial Role of Conserved Cysteine Residues in the Assembly of Two Ironâ^'Sulfur Clusters on the CIA Protein Nar1. Biochemistry, 2009, 48, 4946-4958.	2.5	46
75	The power plant of the cell is also a smithy: The emerging role of mitochondria in cellular iron homeostasis. Annals of Medicine, 2009, 41, 82-99.	3.8	43
76	The ironâ€“sulphur protein Ind1 is required for effective complex I assembly. EMBO Journal, 2008, 27, 1736-1746.	7.8	158
77	Localization and functionality of microsporidian ironâ€“sulphur cluster assembly proteins. Nature, 2008, 452, 624-628.	27.8	210
78	Maturation of Iron-Sulfur Proteins in Eukaryotes: Mechanisms, Connected Processes, and Diseases. Annual Review of Biochemistry, 2008, 77, 669-700.	11.1	531
79	EPR and MÃ¶ssbauer Spectroscopy of Intact Mitochondria Isolated from Yah1p-Depleted <i>Saccharomyces cerevisiae</i>. Biochemistry, 2008, 47, 9888-9899.	2.5	64
80	Bacterial ApbC Can Bind and Effectively Transfer Ironâ^'Sulfur Clusters. Biochemistry, 2008, 47, 8195-8202.	2.5	52
81	Cellular and Mitochondrial Remodeling upon Defects in Iron-Sulfur Protein Biogenesis. Journal of Biological Chemistry, 2008, 283, 8318-8330.	3.4	103
82	Mitochondrial Iba57p Is Required for Fe/S Cluster Formation on Aconitase and Activation of Radical SAM Enzymes. Molecular and Cellular Biology, 2008, 28, 1851-1861.	2.3	161
83	The Essential Cytosolic Iron-Sulfur Protein Nbp35 Acts without Cfd1 Partner in the Green Lineage. Journal of Biological Chemistry, 2008, 283, 35797-35804.	3.4	68
84	Human Nbp35 Is Essential for both Cytosolic Iron-Sulfur Protein Assembly and Iron Homeostasis. Molecular and Cellular Biology, 2008, 28, 5517-5528.	2.3	98
85	Methods for Studying Iron Metabolism in Yeast Mitochondria. Methods in Cell Biology, 2007, 80, 261-280.	1.1	35
86	Thio Modification of Yeast Cytosolic tRNA Is an Iron-Sulfur Protein-Dependent Pathway. Molecular and Cellular Biology, 2007, 27, 2841-2847.	2.3	66
87	The Cfd1â€“Nbp35 complex acts as a scaffold for iron-sulfur protein assembly in the yeast cytosol. Nature Chemical Biology, 2007, 3, 278-286.	8.0	166
88	Structure of the Yeast WD40 Domain Protein Cia1, a Component Acting Late in Iron-Sulfur Protein Biogenesis. Structure, 2007, 15, 1246-1257.	3.3	74
89	Stimulation of the ATPase activity of the yeast mitochondrial ABC transporter Atm1p by thiol compounds. Molecular Membrane Biology, 2006, 23, 173-184.	2.0	70
90	Iron-Sulfur Protein Biogenesis in Eukaryotes: Components and Mechanisms. Annual Review of Cell and Developmental Biology, 2006, 22, 457-486.	9.4	327

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91	Essential role of Isd11 in mitochondrial ironâ€"sulfur cluster synthesis on Isu scaffold proteins. EMBO Journal, 2006, 25, 184-195.	7.8	204
92	The effects of mitochondrial iron homeostasis on cofactor specificity of superoxide dismutase 2. EMBO Journal, 2006, 25, 1775-1783.	7.8	131
93	Role of Human Mitochondrial Nfs1 in Cytosolic Iron-Sulfur Protein Biogenesis and Iron Regulation. Molecular and Cellular Biology, 2006, 26, 5675-5687.	2.3	156
94	Role of Glutaredoxin-3 and Glutaredoxin-4 in the Iron Regulation of the Aft1 Transcriptional Activator in Saccharomyces cerevisiae. Journal of Biological Chemistry, 2006, 281, 17661-17669.	3.4	220
95	Biogenesis of cytosolic ribosomes requires the essential ironâ€"sulphur protein Rli1p and mitochondria. EMBO Journal, 2005, 24, 589-598.	7.8	226
96	The Essential WD40 Protein Cia1 Is Involved in a Late Step of Cytosolic and Nuclear Iron-Sulfur Protein Assembly. Molecular and Cellular Biology, 2005, 25, 10833-10841.	2.3	118
97	The eukaryotic P loop NTPase Nbp35: An essential component of the cytosolic and nuclear iron-sulfur protein assembly machinery. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 3266-3271.	7.1	156
98	Activation of the Iron Regulon by the Yeast Aft1/Aft2 Transcription Factors Depends on Mitochondrial but Not Cytosolic Iron-Sulfur Protein Biogenesis. Journal of Biological Chemistry, 2005, 280, 10135-10140.	3.4	215
99	Ironâ€"sulfur protein maturation in human cells: evidence for a function of frataxin. Human Molecular Genetics, 2004, 13, 3007-3015.	2.9	183
100	Functional Characterization of the Eukaryotic Cysteine Desulfurase Nfs1p from Saccharomyces cerevisiae. Journal of Biological Chemistry, 2004, 279, 36906-36915.	3.4	119
101	The Yeast Scaffold Proteins Isu1p and Isu2p Are Required inside Mitochondria for Maturation of Cytosolic Fe/S Proteins. Molecular and Cellular Biology, 2004, 24, 4848-4857.	2.3	111
102	The hydrogenase-like Nar1p is essential for maturation of cytosolic and nuclear ironâ€"sulphur proteins. EMBO Journal, 2004, 23, 2105-2115.	7.8	196
103	Components involved in assembly and dislocation of iron-sulfur clusters on the scaffold protein Isu1p. EMBO Journal, 2003, 22, 4815-4825.	7.8	344
104	An interaction between frataxin and Isu1/Nfs1 that is crucial for Fe/S cluster synthesis on Isu1. EMBO Reports, 2003, 4, 906-911.	4.5	329
105	A Specific Role of the Yeast Mitochondrial Carriers Mrs3/4p in Mitochondrial Iron Acquisition under Iron-limiting Conditions. Journal of Biological Chemistry, 2003, 278, 40612-40620.	3.4	173
106	The yeast frataxin homolog Yfh1p plays a specific role in the maturation of cellular Fe/S proteins. Human Molecular Genetics, 2002, 11, 2025-2036.	2.9	291
107	Maturation of Cytosolic Iron-Sulfur Proteins Requires Glutathione. Journal of Biological Chemistry, 2002, 277, 26944-26949.	3.4	190
108	Chapter 2 Isolation and subfractionation of mitochondria from the yeast Saccharomyces cerevisiae. Methods in Cell Biology, 2001, 65, 37-51.	1.1	153

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109	An essential function of the mitochondrial sulfhydryl oxidase Erv1p/ALR in the maturation of cytosolic Fe/S proteins. EMBO Reports, 2001, 2, 715-720.	4.5	265
110	Yeast Erv2p Is the First Microsomal FAD-linked Sulfhydryl Oxidase of the Erv1p/Alrp Protein Family. Journal of Biological Chemistry, 2001, 276, 23486-23491.	3.4	92
111	A Mutation of the Mitochondrial ABC Transporter Sta1 Leads to Dwarfism and Chlorosis in the Arabidopsis Mutant starik. Plant Cell, 2001, 13, 89-100.	6.6	253
112	Maturation of cellular Feâ€"S proteins: an essential function of mitochondria. Trends in Biochemical Sciences, 2000, 25, 352-356.	7.5	346
113	Human ABC7 transporter: gene structure and mutation causing X-linked sideroblastic anemia with ataxia with disruption of cytosolic iron-sulfur protein maturation. Blood, 2000, 96, 3256-3264.	1.4	247
114	Isa1p Is a Component of the Mitochondrial Machinery for Maturation of Cellular Iron-Sulfur Proteins and Requires Conserved Cysteine Residues for Function. Journal of Biological Chemistry, 2000, 275, 15955-15961.	3.4	111
115	Biogenesis of ironâ€"sulfur proteins in eukaryotes: a novel task of mitochondria that is inherited from bacteria. Biochimica Et Biophysica Acta - Bioenergetics, 2000, 1459, 370-382.	1.0	179
116	Mitochondrial Isa2p plays a crucial role in the maturation of cellular iron-sulfur proteins. FEBS Letters, 2000, 476, 134-139.	2.8	73
117	Mechanism of Iron Transport to the Site of Heme Synthesis inside Yeast Mitochondria. Journal of Biological Chemistry, 1999, 274, 18989-18996.	3.4	151
118	The Essential Role of Mitochondria in the Biogenesis of Cellular Iron-Sulfur Proteins. Biological Chemistry, 1999, 380, 1157-66.	2.5	137
119	The mitochondrial proteins Atm1p and Nfs1p are essential for biogenesis of cytosolic Fe/S proteins. EMBO Journal, 1999, 18, 3981-3989.	7.8	669
120	Mmicular mechanisms of cytochromecbiogenesis: three distinct systems. Molecular Microbiology, 1998, 29, 383-396.	2.5	266
121	The ABC transporter Atm1p is required for mitochondrial iron homeostasis. FEBS Letters, 1997, 418, 346-350.	2.8	260
122	Mechanisms of protein import across the mitochondrial outer membrane. Trends in Cell Biology, 1996, 6, 56-61.	7.9	122
123	Heme Binding to a Conserved Cys-Pro-Val Motif Is Crucial for the Catalytic Function of Mitochondrial Heme Lyases. Journal of Biological Chemistry, 1996, 271, 32605-32611.	3.4	93
124	The ATPase activity of secA is regulated by acidic phospholipids, secY, and the leader and mature domains of precursor proteins. Cell, 1990, 60, 271-280.	28.9	576