

F Ulrich Hartl

List of Publications by Year in descending order

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127
papers

30,993
citations

10979

71
h-index

16164

124
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138
all docs

138
docs citations

138
times ranked

25621
citing authors

#	ARTICLE	IF	CITATIONS
1	Molecular chaperones in cellular protein folding. <i>Nature</i> , 1996, 381, 571-580.	13.7	3,443
2	Molecular chaperones in protein folding and proteostasis. <i>Nature</i> , 2011, 475, 324-332.	13.7	2,762
3	Molecular Chaperone Functions in Protein Folding and Proteostasis. <i>Annual Review of Biochemistry</i> , 2013, 82, 323-355.	5.0	1,218
4	In vivo aspects of protein folding and quality control. <i>Science</i> , 2016, 353, aac4354.	6.0	1,100
5	Successive action of DnaK, DnaJ and GroEL along the pathway of chaperone-mediated protein folding. <i>Nature</i> , 1992, 356, 683-689.	13.7	992
6	Converging concepts of protein folding in vitro and in vivo. <i>Nature Structural and Molecular Biology</i> , 2009, 16, 574-581.	3.6	979
7	The proteostasis network and its decline in ageing. <i>Nature Reviews Molecular Cell Biology</i> , 2019, 20, 421-435.	16.1	860
8	Hsp90. <i>Journal of Cell Biology</i> , 2001, 154, 267-274.	2.3	783
9	Molecular Chaperones Hsp90 and Hsp70 Deliver Preproteins to the Mitochondrial Import Receptor Tom70. <i>Cell</i> , 2003, 112, 41-50.	13.5	753
10	Folding of nascent polypeptide chains in a high molecular mass assembly with molecular chaperones. <i>Nature</i> , 1994, 370, 111-117.	13.7	653
11	Hsp70 and Hsp40 chaperones can inhibit self-assembly of polyglutamine proteins into amyloid-like fibrils. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2000, 97, 7841-7846.	3.3	609
12	Amyloid-like Aggregates Sequester Numerous Metastable Proteins with Essential Cellular Functions. <i>Cell</i> , 2011, 144, 67-78.	13.5	604
13	Proteome-wide Analysis of Chaperonin-Dependent Protein Folding in <i>Escherichia coli</i> . <i>Cell</i> , 2005, 122, 209-220.	13.5	590
14	Pathways of cellular proteostasis in aging and disease. <i>Journal of Cell Biology</i> , 2018, 217, 51-63.	2.3	585
15	Proteostasis impairment in protein-misfolding and -aggregation diseases. <i>Trends in Cell Biology</i> , 2014, 24, 506-514.	3.6	519
16	The ATP hydrolysis-dependent reaction cycle of the <i>Escherichia coli</i> Hsp70 system DnaK, DnaJ, and GrpE.. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 1994, 91, 10345-10349.	3.3	497
17	Widespread Proteome Remodeling and Aggregation in Aging <i>C.Ælegans</i> . <i>Cell</i> , 2015, 161, 919-932.	13.5	478
18	Polypeptide Flux through Bacterial Hsp70. <i>Cell</i> , 1999, 97, 755-765.	13.5	399

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19	Geldanamycin activates a heat shock response and inhibits huntingtin aggregation in a cell culture model of Huntington's disease. <i>Human Molecular Genetics</i> , 2001, 10, 1307-1315.	1.4	396
20	Cellular Toxicity of Polyglutamine Expansion Proteins. <i>Molecular Cell</i> , 2004, 15, 95-105.	4.5	395
21	Protein Misfolding Diseases. <i>Annual Review of Biochemistry</i> , 2017, 86, 21-26.	5.0	395
22	Recombination of protein domains facilitated by co-translational folding in eukaryotes. <i>Nature</i> , 1997, 388, 343-349.	13.7	385
23	Protein folding in the central cavity of the GroEL-GroES chaperonin complex. <i>Nature</i> , 1996, 379, 420-426.	13.7	370
24	The nucleolus functions as a phase-separated protein quality control compartment. <i>Science</i> , 2019, 365, 342-347.	6.0	348
25	In Vivo Observation of Polypeptide Flux through the Bacterial Chaperonin System. <i>Cell</i> , 1997, 90, 491-500.	13.5	338
26	Cytoplasmic protein aggregates interfere with nucleocytoplasmic transport of protein and RNA. <i>Science</i> , 2016, 351, 173-176.	6.0	336
27	The GroEL-GroES Chaperonin Machine: A Nano-Cage for Protein Folding. <i>Trends in Biochemical Sciences</i> , 2016, 41, 62-76.	3.7	325
28	In Situ Structure of Neuronal C9orf72 Poly-GA Aggregates Reveals Proteasome Recruitment. <i>Cell</i> , 2018, 172, 696-705.e12.	13.5	311
29	Molecular chaperones of the Hsp110 family act as nucleotide exchange factors of Hsp70s. <i>EMBO Journal</i> , 2006, 25, 2519-2528.	3.5	310
30	DnaK Functions as a Central Hub in the E.Âcoli Chaperone Network. <i>Cell Reports</i> , 2012, 1, 251-264.	2.9	308
31	PolyQ Proteins Interfere with Nuclear Degradation of Cytosolic Proteins by Sequestering the Sis1p Chaperone. <i>Cell</i> , 2013, 154, 134-145.	13.5	307
32	Protein Folding in the Cell: The Role of Molecular Chaperones Hsp70 and Hsp60. <i>Annual Review of Biophysics and Biomolecular Structure</i> , 1992, 21, 293-322.	18.3	305
33	Protein Synthesis upon Acute Nutrient Restriction Relies on Proteasome Function. <i>Science</i> , 2005, 310, 1960-1963.	6.0	292
34	Dual Function of Protein Confinement in Chaperonin-Assisted Protein Folding. <i>Cell</i> , 2001, 107, 223-233.	13.5	278
35	In Situ Architecture and Cellular Interactions of PolyQ Inclusions. <i>Cell</i> , 2017, 171, 179-187.e10.	13.5	271
36	Structural Features of the GroEL-GroES Nano-Cage Required for Rapid Folding of Encapsulated Protein. <i>Cell</i> , 2006, 125, 903-914.	13.5	262

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37	Chaperonin TRiC Promotes the Assembly of polyQ Expansion Proteins into Nontoxic Oligomers. <i>Molecular Cell</i> , 2006, 23, 887-897.	4.5	259
38	The Native 3D Organization of Bacterial Polysomes. <i>Cell</i> , 2009, 136, 261-271.	13.5	240
39	Structural Basis for the Cooperation of Hsp70 and Hsp110 Chaperones in Protein Folding. <i>Cell</i> , 2008, 133, 1068-1079.	13.5	235
40	Conformation of GroEL-bound β -lactalbumin probed by mass spectrometry. <i>Nature</i> , 1994, 372, 646-651.	13.7	221
41	Function of Trigger Factor and DnaK in Multidomain Protein Folding. <i>Cell</i> , 2004, 117, 199-209.	13.5	206
42	Real-time observation of trigger factor function on translating ribosomes. <i>Nature</i> , 2006, 444, 455-460.	13.7	202
43	Firefly luciferase mutants as sensors of proteome stress. <i>Nature Methods</i> , 2011, 8, 879-884.	9.0	190
44	Failure of RQC machinery causes protein aggregation and proteotoxic stress. <i>Nature</i> , 2016, 531, 191-195.	13.7	185
45	Rubisco condensate formation by CcmM in β -carboxysome biogenesis. <i>Nature</i> , 2019, 566, 131-135.	13.7	185
46	Soluble forms of polyQ-expanded huntingtin rather than large aggregates cause endoplasmic reticulum stress. <i>Nature Communications</i> , 2013, 4, 2753.	5.8	182
47	Soluble Oligomers of PolyQ-Expanded Huntingtin Target a Multiplicity of Key Cellular Factors. <i>Molecular Cell</i> , 2016, 63, 951-964.	4.5	181
48	Biogenesis and Metabolic Maintenance of Rubisco. <i>Annual Review of Plant Biology</i> , 2017, 68, 29-60.	8.6	176
49	Co-translational domain folding as the structural basis for the rapid de novo folding of firefly luciferase. <i>Nature Structural Biology</i> , 1999, 6, 697-705.	9.7	172
50	Plant RuBisCo assembly in <i>E. coli</i> with five chloroplast chaperones including BSD2. <i>Science</i> , 2017, 358, 1272-1278.	6.0	172
51	Coupled chaperone action in folding and assembly of hexadecameric Rubisco. <i>Nature</i> , 2010, 463, 197-202.	13.7	165
52	In vivo analysis of the overlapping functions of DnaK and trigger factor. <i>EMBO Reports</i> , 2004, 5, 195-200.	2.0	163
53	Monitoring Protein Conformation along the Pathway of Chaperonin-Assisted Folding. <i>Cell</i> , 2008, 133, 142-153.	13.5	158
54	Structure and function of the AAA+ protein CbbX, a red-type Rubisco activase. <i>Nature</i> , 2011, 479, 194-199.	13.7	141

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55	Cytosolic Protein Vms1 Links Ribosome Quality Control to Mitochondrial and Cellular Homeostasis. <i>Cell</i> , 2017, 171, 890-903.e18.	13.5	140
56	Structure and Function of RbcX, an Assembly Chaperone for Hexadecameric Rubisco. <i>Cell</i> , 2007, 129, 1189-1200.	13.5	137
57	Functional Modules of the Proteostasis Network. <i>Cold Spring Harbor Perspectives in Biology</i> , 2020, 12, a033951.	2.3	133
58	Interplay of Acetyltransferase EP300 and the Proteasome System in Regulating Heat Shock Transcription Factor 1. <i>Cell</i> , 2014, 156, 975-985.	13.5	130
59	Chaperonin-Catalyzed Rescue of Kinetically Trapped States in Protein Folding. <i>Cell</i> , 2010, 142, 112-122.	13.5	127
60	GroEL/ES Chaperonin Modulates the Mechanism and Accelerates the Rate of TIM-Barrel Domain Folding. <i>Cell</i> , 2014, 157, 922-934.	13.5	116
61	Proteome-wide observation of the phenomenon of life on the edge of solubility. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020, 117, 1015-1020.	3.3	115
62	Cellular Homeostasis and Aging. <i>Annual Review of Biochemistry</i> , 2016, 85, 1-4.	5.0	111
63	Recent advances in understanding catalysis of protein folding by molecular chaperones. <i>FEBS Letters</i> , 2020, 594, 2770-2781.	1.3	107
64	Identification of nucleotide-binding regions in the chaperonin proteins GroEL and GroES. <i>Nature</i> , 1993, 366, 279-282.	13.7	103
65	Bacterial Hsp70 resolves misfolded states and accelerates productive folding of a multi-domain protein. <i>Nature Communications</i> , 2020, 11, 365.	5.8	99
66	Structure of green-type Rubisco activase from tobacco. <i>Nature Structural and Molecular Biology</i> , 2011, 18, 1366-1370.	3.6	97
67	Quantitative Proteomics Reveals That Hsp90 Inhibition Preferentially Targets Kinases and the DNA Damage Response. <i>Molecular and Cellular Proteomics</i> , 2012, 11, M111.014654.	2.5	91
68	Role of auxiliary proteins in Rubisco biogenesis and function. <i>Nature Plants</i> , 2015, 1, 15065.	4.7	91
69	Structure of human heat-shock transcription factor 1 in complex with DNA. <i>Nature Structural and Molecular Biology</i> , 2016, 23, 140-146.	3.6	87
70	Opposing effects of folding and assembly chaperones on evolvability of Rubisco. <i>Nature Chemical Biology</i> , 2015, 11, 148-155.	3.9	86
71	ER Stress-Induced eIF2-alpha Phosphorylation Underlies Sensitivity of Striatal Neurons to Pathogenic Huntingtin. <i>PLoS ONE</i> , 2014, 9, e90803.	1.1	85
72	Proteotoxic stress and ageing triggers the loss of redox homeostasis across cellular compartments. <i>EMBO Journal</i> , 2015, 34, 2334-2349.	3.5	78

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73	Pathway of Actin Folding Directed by the Eukaryotic Chaperonin TRiC. <i>Cell</i> , 2018, 174, 1507-1521.e16.	13.5	75
74	Significant hydrogen exchange protection in GroEL-bound DHFR is maintained during iterative rounds of substrate cycling. <i>Protein Science</i> , 1996, 5, 2506-2513.	3.1	70
75	Molecular and structural architecture of polyQ aggregates in yeast. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018, 115, E3446-E3453.	3.3	68
76	In situ architecture of neuronal α -Synuclein inclusions. <i>Nature Communications</i> , 2021, 12, 2110.	5.8	66
77	Essential role of the chaperonin folding compartment in vivo. <i>EMBO Journal</i> , 2008, 27, 1458-68.	3.5	65
78	Structure and function of Vms1 and Arb1 in RQC and mitochondrial proteome homeostasis. <i>Nature</i> , 2019, 570, 538-542.	13.7	63
79	A protein quality control pathway regulated by linear ubiquitination. <i>EMBO Journal</i> , 2019, 38, .	3.5	63
80	Active Cage Mechanism of Chaperonin-Assisted Protein Folding Demonstrated at Single-Molecule Level. <i>Journal of Molecular Biology</i> , 2014, 426, 2739-2754.	2.0	61
81	Structure and mechanism of the Rubisco-assembly chaperone Raf1. <i>Nature Structural and Molecular Biology</i> , 2015, 22, 720-728.	3.6	61
82	Action of the Hsp70 chaperone system observed with single proteins. <i>Nature Communications</i> , 2015, 6, 6307.	5.8	58
83	Crystal structure of a chaperone-bound assembly intermediate of form I Rubisco. <i>Nature Structural and Molecular Biology</i> , 2011, 18, 875-880.	3.6	56
84	Identification of GroEL as a constituent of an mRNA-protection complex in <i>Escherichia coli</i> . <i>Molecular Microbiology</i> , 1995, 16, 1259-1268.	1.2	54
85	The formation, function and regulation of amyloids: insights from structural biology. <i>Journal of Internal Medicine</i> , 2016, 280, 164-176.	2.7	53
86	Overexpression of Q-rich prion-like proteins suppresses polyQ cytotoxicity and alters the polyQ interactome. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2014, 111, 18219-18224.	3.3	52
87	Rubisco Activases: AAA+ Chaperones Adapted to Enzyme Repair. <i>Frontiers in Molecular Biosciences</i> , 2017, 4, 20.	1.6	52
88	Cell-to-cell transmission of <i>C9orf72</i> poly(Gly-Ala) triggers key features of <i>ALS</i> / <i>FTD</i> . <i>EMBO Journal</i> , 2020, 39, e102811.	3.5	51
89	Chaperonin Cofactors, Cpn10 and Cpn20, of Green Algae and Plants Function as Hetero-oligomeric Ring Complexes. <i>Journal of Biological Chemistry</i> , 2012, 287, 20471-20481.	1.6	48
90	Mechanism of Enzyme Repair by the AAA+ Chaperone Rubisco Activase. <i>Molecular Cell</i> , 2017, 67, 744-756.e6.	4.5	47

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91	GroEL Ring Separation and Exchange in the Chaperonin Reaction. <i>Cell</i> , 2018, 172, 605-617.e11.	13.5	43
92	Chaperone Machineries of Rubisco – The Most Abundant Enzyme. <i>Trends in Biochemical Sciences</i> , 2020, 45, 748-763.	3.7	43
93	Chaperone-assisted protein folding: the path to discovery from a personal perspective. <i>Nature Medicine</i> , 2011, 17, 1206-1210.	15.2	41
94	Chaperonin-Assisted Protein Folding: Relative Population of Asymmetric and Symmetric GroEL:GroES Complexes. <i>Journal of Molecular Biology</i> , 2015, 427, 2244-2255.	2.0	40
95	Degradation of potent Rubisco inhibitor by selective sugar phosphatase. <i>Nature Plants</i> , 2015, 1, 14002.	4.7	38
96	The Hsp70 Chaperone System Stabilizes a Thermo-sensitive Subproteome in <i>E. coli</i> . <i>Cell Reports</i> , 2019, 28, 1335-1345.e6.	2.9	37
97	The Hsc70 disaggregation machinery removes monomer units directly from α -synuclein fibril ends. <i>Nature Communications</i> , 2021, 12, 5999.	5.8	37
98	Amplifiers co-translationally enhance CFTR biosynthesis via PCBP1-mediated regulation of CFTR mRNA. <i>Journal of Cystic Fibrosis</i> , 2020, 19, 733-741.	0.3	35
99	The extracellular chaperone Clusterin enhances Tau aggregate seeding in a cellular model. <i>Nature Communications</i> , 2021, 12, 4863.	5.8	35
100	Role of Small Subunit in Mediating Assembly of Red-type Form I Rubisco. <i>Journal of Biological Chemistry</i> , 2015, 290, 1066-1074.	1.6	32
101	Dual Functions of a Rubisco Activase in Metabolic Repair and Recruitment to Carboxysomes. <i>Cell</i> , 2020, 183, 457-473.e20.	13.5	30
102	High capacity of the endoplasmic reticulum to prevent secretion and aggregation of amyloidogenic proteins. <i>EMBO Journal</i> , 2018, 37, 337-350.	3.5	29
103	Improved recombinant expression and purification of functional plant Rubisco. <i>FEBS Letters</i> , 2019, 593, 611-621.	1.3	29
104	Sis1 potentiates the stress response to protein aggregation and elevated temperature. <i>Nature Communications</i> , 2020, 11, 6271.	5.8	28
105	Gel-like inclusions of C-terminal fragments of TDP43 sequester stalled proteasomes in neurons. <i>EMBO Reports</i> , 2022, 23, e53890.	2.0	28
106	Role for ribosome-associated quality control in sampling proteins for MHC class I-mediated antigen presentation. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020, 117, 4099-4108.	3.3	27
107	Scaffolding protein CcmM directs multiprotein phase separation in β -carboxysome biogenesis. <i>Nature Structural and Molecular Biology</i> , 2021, 28, 909-922.	3.6	24
108	Sugarcoating ER Stress. <i>Cell</i> , 2014, 156, 1125-1127.	13.5	22

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109	A comment on: "The aromatic amino acid content of the bacterial chaperone protein groEL (cpn60): Evidence for the presence of a single tryptophan"™, by N.C. Price, S.M. Kelly, S. Wood and A. auf der Mauer (1991) FEBS Lett. 292, 9-12. FEBS Letters, 1993, 320, 83-84.	1.3	19
110	Chaperone Function of Hgh1 in the Biogenesis of Eukaryotic Elongation Factor 2. Molecular Cell, 2019, 74, 88-100.e9.	4.5	18
111	An inventory of interactors of the human HSP60/HSP10 chaperonin in the mitochondrial matrix space. Cell Stress and Chaperones, 2020, 25, 407-416.	1.2	18
112	The chaperone Clusterin in neurodegeneration"friend or foe?. BioEssays, 2022, 44, e2100287.	1.2	18
113	Unfolding the chaperone story. Molecular Biology of the Cell, 2017, 28, 2919-2923.	0.9	17
114	Role of the ribosomal quality control machinery in nucleocytoplasmic translocation of polyQ-expanded huntingtin exon-1. Biochemical and Biophysical Research Communications, 2017, 493, 708-717.	1.0	17
115	Multiple pathways of toxicity induced by C9orf72 dipeptide repeat aggregates and G4C2 RNA in a cellular model. ELife, 2021, 10, .	2.8	17
116	Fluorescent GFP reporter mice reveal differential alterations of neuronal proteostasis in aging and disease. EMBO Journal, 2021, 40, e107260.	3.5	17
117	Efficient Catalysis of Protein Folding by GroEL/ES of the Obligate Chaperonin Substrate MetF. Journal of Molecular Biology, 2020, 432, 2304-2318.	2.0	16
118	Structural Analysis of the Rubisco-Assembly Chaperone RbcX-II from Chlamydomonas reinhardtii. PLoS ONE, 2015, 10, e0135448.	1.1	13
119	Bacterial RF3 senses chaperone function in co-translational folding. Molecular Cell, 2021, 81, 2914-2928.e7.	4.5	9
120	Structure and conformational cycle of a bacteriophage-encoded chaperonin. PLoS ONE, 2020, 15, e0230090.	1.1	8
121	The Thermosome of <i>Thermoplasma acidophilum</i> and Its Relationship to the Eukaryotic Chaperonin TRiC. FEBS Journal, 1995, 227, 848-856.	0.2	4
122	The first chaperonin. Nature Reviews Molecular Cell Biology, 2013, 14, 611-611.	16.1	3
123	Susan Lee Lindquist (1949"2016)"pioneer in the study of cellular protein folding and disease. EMBO Journal, 2016, 35, 2626-2627.	3.5	2
124	A new way of dealing with protein misfolding. Molecular Cell, 2021, 81, 4114-4115.	4.5	1
125	CHAPERONE-ASSISTED PROTEIN FOLDING IN THE CYTOSOL. FASEB Journal, 2007, 21, A153.	0.2	0
126	Chaperone-assisted protein folding in health and disease. FASEB Journal, 2009, 23, 195.1.	0.2	0

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127	Mitochondria and friends â€“ a special issue in honor of Walter Neupert (1939â€“2019). Biological Chemistry, 2020, 401, 643-644.	1.2	0