Anastassios Economou

List of Publications by Year
in descending order

116 papers	6,264 citations	66234 42 h-index	76769 74 g-index
125 all docs	125 docs citations	125 times ranked	4539 citing authors

#	Article	IF	Citations
1	SecA promotes preprotein translocation by undergoing ATP-driven cycles of membrane insertion and deinsertion. Cell, 1994, 78, 835-843.	13.5	550
2	Structural Basis for Signal-Sequence Recognition by the Translocase Motor SecA as Determined by NMR. Cell, 2007, 131, 756-769.	13.5	381
3	Protein export through the bacterial Sec pathway. Nature Reviews Microbiology, 2017, 15, 21-36.	13.6	332
4	SecA membrane cycling at SecYEG is driven by distinct ATP binding and hydrolysis events and is regulated by SecD and SecF. Cell, 1995, 83, 1171-1181.	13.5	305
5	Structural Basis for Protein Antiaggregation Activity of the Trigger Factor Chaperone. Science, 2014, 344, 1250494.	6.0	254
6	Bacterial protein secretion through the translocase nanomachine. Nature Reviews Microbiology, 2007, 5, 839-851.	13.6	210
7	Type III Secretion: Building and Operating a Remarkable Nanomachine. Trends in Biochemical Sciences, 2016, 41, 175-189.	3.7	146
8	Analysis of Quorum-Sensing-Dependent Control of Rhizosphere-Expressed (<i>rhi</i>) Genes in <i>Rhizobium leguminosarum</i> bv. viciae. Journal of Bacteriology, 1999, 181, 3816-3823.	1.0	134
9	Secretion by numbers: protein traffic in prokaryotes. Molecular Microbiology, 2006, 62, 308-319.	1.2	129
10	Structure of Dimeric SecA, the Escherichia coli Preprotein Translocase Motor. Journal of Molecular Biology, 2007, 366, 1545-1557.	2.0	127
11	SecYEG and SecA Are the Stoichiometric Components of Preprotein Translocase. Journal of Biological Chemistry, 1995, 270, 20106-20111.	1.6	126
12	Signal peptides are allosteric activators of the protein translocase. Nature, 2009, 462, 363-367.	13.7	125
13	A molecular switch in SecA protein couples ATP hydrolysis to protein translocation. Molecular Microbiology, 1999, 34, 1133-1145.	1.2	124
14	Following the leader: bacterial protein export through the Sec pathway. Trends in Microbiology, 1999, 7, 315-320.	3.5	119
15	Structure and function of SecA, the preprotein translocase nanomotor. Biochimica Et Biophysica Acta - Molecular Cell Research, 2004, 1694, 67-80.	1.9	105
16	Cross-talk between catalytic and regulatory elements in a DEAD motor domain is essential for SecA function. EMBO Journal, 2001, 20, 961-970.	3.5	104
17	Complete genome sequence of Streptomyces lividans TK24. Journal of Biotechnology, 2015, 199, 21-22.	1.9	96
18	Bacterial preprotein translocase: mechanism and conformational dynamics of a processive enzyme. Molecular Microbiology, 1998, 27, 511-518.	1.2	80

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19	The Escherichia coli Peripheral Inner Membrane Proteome. Molecular and Cellular Proteomics, 2013, 12, 599-610.	2.5	79
20	Identification of the Preprotein Binding Domain of SecA. Journal of Biological Chemistry, 2005, 280, 43209-43217.	1.6	76
21	SecA-mediated targeting and translocation of secretory proteins. Biochimica Et Biophysica Acta - Molecular Cell Research, 2014, 1843, 1466-1474.	1.9	76
22	Protein folding in the cell envelope of Escherichia coli. Nature Microbiology, 2016, 1, 16107.	5.9	75
23	Disorder-order folding transitions underlie catalysis in the helicase motor of SecA. Nature Structural and Molecular Biology, 2006, 13, 594-602.	3.6	73
24	Structures of chaperone-substrate complexes docked onto the export gate in a type III secretion system. Nature Communications, 2018, 9, 1773.	5.8	72
25	Proteome-wide Subcellular Topologies of E. coli Polypeptides Database (STEPdb). Molecular and Cellular Proteomics, 2014, 13, 3674-3687.	2.5	67
26	Preprotein mature domains contain translocase targeting signals that are essential for secretion. Journal of Cell Biology, 2017, 216, 1357-1369.	2.3	67
27	SecA: a tale of two protomers. Molecular Microbiology, 2010, 76, 1070-1081.	1.2	65
28	Breaking on through to the other side: protein export through the bacterial Sec system. Biochemical Journal, 2013, 449, 25-37.	1.7	64
29	Type III Protein Translocase. Journal of Biological Chemistry, 2003, 278, 25816-25824.	1.6	61
30	Secretion of the Rhizobium leguminosarum nodulation protein NodO by haemolysin-type systems. Molecular Microbiology, 1992, 6, 231-238.	1.2	60
31	Preprotein-controlled catalysis in the helicase motor of SecA. EMBO Journal, 2007, 26, 2904-2914.	3.5	56
32	Functional large-scale production of a novel Jonesia sp. xyloglucanase by heterologous secretion from Streptomyces lividans. Journal of Biotechnology, 2006, 121, 498-507.	1.9	54
33	Hierarchical protein targeting and secretion is controlled by an affinity switch in the type <scp>III</scp> secretion system of enteropathogenic <i>Escherichia coli</i>. EMBO Journal, 2017, 36, 3517-3531.	3.5	54
34	Protein Secretion in Gram-Positive Bacteria: From Multiple Pathways to Biotechnology. Current Topics in Microbiology and Immunology, 2016, 404, 267-308.	0.7	53
35	Separable ATPase and Membrane Insertion Domains of the SecA Subunit of Preprotein Translocase. Journal of Biological Chemistry, 1996, 271, 31580-31584.	1.6	51
36	Quaternary Dynamics of the SecA Motor Drive Translocase Catalysis. Molecular Cell, 2013, 52, 655-666.	4.5	51

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37	Allosteric Communication between Signal Peptides and the SecA Protein DEAD Motor ATPase Domain. Journal of Biological Chemistry, 2002, 277, 13724-13731.	1.6	49
38	Comparative proteomic analysis of hypertrophic chondrocytes in osteoarthritis. Clinical Proteomics, 2015, 12, 12.	1.1	49
39	Protein secretion biotechnology usingStreptomyces lividans: Large-scale production of functional trimeric tumor necrosis factor ?. Biotechnology and Bioengineering, 2001, 72, 611-619.	1.7	47
40	Global Co-ordination of Protein Translocation by the SecA IRA1 Switch. Journal of Biological Chemistry, 2004, 279, 22490-22497.	1.6	47
41	Escherichia coliSecA shape and dimensions. FEBS Letters, 1998, 436, 277-282.	1.3	46
42	Bacterial secretome: the assembly manual and operating instructions (Review). Molecular Membrane Biology, 2002, 19, 159-169.	2.0	46
43	Double hexameric ring assembly of the type III protein translocase ATPase HrcN. Molecular Microbiology, 2006, 61, 119-125.	1.2	45
44	Antibiotic targeting of the bacterial secretory pathway. Biochimica Et Biophysica Acta - Molecular Cell Research, 2014, 1843, 1762-1783.	1.9	44
45	Long-Lived Folding Intermediates Predominate the Targeting-Competent Secretome. Structure, 2018, 26, 695-707.e5.	1.6	44
46	Transcription of rhiA, a gene on a Rhizobium leguminosarum bv. viciae Sym plasmid, requires rhiR and is repressed by flavanoids that induce nod genes. Molecular Microbiology, 1989, 3, 87-93.	1.2	41
47	Bcl-xL acts as an inhibitor of IP3R channels, thereby antagonizing Ca2+-driven apoptosis. Cell Death and Differentiation, 2022, 29, 788-805.	5.0	41
48	The Câ€terminal domain of the Rhizobium leguminosarum chitin synthase NodC is important for function and determines the orientation of the Nâ€terminal region in the inner membrane. Molecular Microbiology, 1996, 19, 443-453.	1.2	40
49	Large-scale production of a thermostable Rhodothermus marinus cellulase by heterologous secretion from Streptomyces lividans. Microbial Cell Factories, 2017, 16, 232.	1.9	40
50	Escherichia coliSecA truncated at its termini is functional and dimeric. FEBS Letters, 2005, 579, 1267-1271.	1.3	39
51	Substrate-Activated Conformational Switch on Chaperones Encodes a Targeting Signal in Type III Secretion. Cell Reports, 2013, 3, 709-715.	2.9	39
52	Fast and reliable strain characterization of <i>Streptomyces lividans</i> through microâ€scale cultivation. Biotechnology and Bioengineering, 2017, 114, 2011-2022.	1.7	37
53	Bacterial protein translocase: a unique molecular machine with an army of substrates. FEBS Letters, 2000, 476, 18-21.	1.3	36
54	MatureP: prediction of secreted proteins with exclusive information from their mature regions. Scientific Reports, 2017, 7, 3263.	1.6	33

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55	Structural Instability Tuning as a Regulatory Mechanism in Protein-Protein Interactions. Molecular Cell, 2011, 44, 734-744.	4.5	31
56	Protein Transport Across the Bacterial Plasma Membrane by the Sec Pathway. Protein Journal, 2019, 38, 262-273.	0.7	30
57	Trigger factor is a <i>bona fide</i> secretory pathway chaperone that interacts with SecB and the translocase. EMBO Reports, 2020, 21, e49054.	2.0	30
58	Multi-Omics and Targeted Approaches to Determine the Role of Cellular Proteases in Streptomyces Protein Secretion. Frontiers in Microbiology, 2018, 9, 1174.	1.5	29
59	Preprotein Conformational Dynamics Drive Bivalent Translocase Docking and Secretion. Structure, 2017, 25, 1056-1067.e6.	1.6	28
60	The ATPase domain of SecA can form a tetramer in solution 1 1Edited by I. B. Holland. Journal of Molecular Biology, 2002, 315, 831-843.	2.0	27
61	Crossâ€linked peptide identification: A computational forest of algorithms. Mass Spectrometry Reviews, 2018, 37, 738-749.	2.8	27
62	Assembly of the translocase motor onto the preproteinâ€conducting channel. Molecular Microbiology, 2008, 70, 311-322.	1.2	26
63	Recognition and targeting mechanisms by chaperones in flagellum assembly and operation. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 9798-9803.	3.3	25
64	Xilmass: A New Approach toward the Identification of Cross-Linked Peptides. Analytical Chemistry, 2016, 88, 9949-9957.	3.2	25
65	Structural Basis of the Subcellular Topology Landscape of Escherichia coli. Frontiers in Microbiology, 2019, 10, 1670.	1.5	25
66	Helicase Motif III in SecA is essential for coupling preprotein binding to translocation ATPase. EMBO Reports, 2004, 5, 807-811.	2.0	24
67	Using nanoelectrospray ion mobility spectrometry (GEMMA) to determine the size and relative molecular mass of proteins and protein assemblies: a comparison with MALLS and QELS. Analytical and Bioanalytical Chemistry, 2011, 399, 2421-2433.	1.9	24
68	Rapid labelâ€free quantitative analysis of the <i>E. coli</i> BL21(DE3) inner membrane proteome. Proteomics, 2016, 16, 85-97.	1.3	24
69	Quantitative Proteomics of the E. coli Membranome. Methods in Enzymology, 2017, 586, 15-36.	0.4	24
70	Characterization of Sigma Factor Genes in Streptomyces lividans TK24 Using a Genomic Library-Based Approach for Multiple Gene Deletions. Frontiers in Microbiology, 2018, 9, 3033.	1.5	23
71	Indecisive M13 Procoat Protein Mutants Bind to SecA but Do Not Activate the Translocation ATPase. Journal of Biological Chemistry, 2001, 276, 37909-37915.	1.6	22
72	Development of a high-throughput screening assay for the discovery of small-molecule SecA inhibitors. Analytical Biochemistry, 2011, 413, 90-96.	1.1	22

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73	Streptomyces protein secretion and its application in biotechnology. FEMS Microbiology Letters, 2018, 365, .	0.7	22
74	In Vitro Assays to Analyze Translocation of the Model Secretory Preprotein Alkaline Phosphatase. Methods in Molecular Biology, 2010, 619, 157-172.	0.4	22
75	Dynamics and ligand-induced conformational changes in human prolyl oligopeptidase analyzed by hydrogen/deuterium exchange mass spectrometry. Scientific Reports, 2017, 7, 2456.	1.6	20
76	Comprehensive subcellular topologies of polypeptides in Streptomyces. Microbial Cell Factories, 2018, 17, 43.	1.9	19
77	Transcriptomic and fluxomic changes in Streptomyces lividans producing heterologous protein. Microbial Cell Factories, 2018, 17, 198.	1.9	18
78	Analysis of Translocation-Competent Secretory Proteins by HDX-MS. Methods in Enzymology, 2017, 586, 57-83.	0.4	17
79	A nexus of intrinsic dynamics underlies translocase priming. Structure, 2021, 29, 846-858.e7.	1.6	17
80	The structural basis for an onâ€“off switch controlling GÎ²Î³-mediated inhibition of TRPM3 channels. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 29090-29100.	3.3	17
81	A double point mutation at residues Ile14 and Val15 of Bclâ€2 uncovers a role for the BH4 domain in both protein stability and function. FEBS Journal, 2018, 285, 127-145.	2.2	16
82	Sequence of proteome profiles in preclinical and symptomatic Alzheimer's disease. Alzheimer's and Dementia, 2021, 17, 946-958.	0.4	16
83	Probing Universal Protein Dynamics Using Hydrogenâ€“Deuterium Exchange Mass Spectrometry-Derived Residue-Level Gibbs Free Energy. Analytical Chemistry, 2021, 93, 12840-12847.	3.2	16
84	BDA-366, a putative Bcl-2 BH4 domain antagonist, induces apoptosis independently of Bcl-2 in a variety of cancer cell models. Cell Death and Disease, 2020, 11, 769.	2.7	15
85	Identification of small-molecule inhibitors against SecA by structure-based virtual ligand screening. Journal of Antibiotics, 2015, 68, 666-673.	1.0	14
86	Inner Membrane Translocases and Insertases. Sub-Cellular Biochemistry, 2019, 92, 337-366.	1.0	14
87	Sec, drugs and rockâ€™nâ€™roll: antibiotic targeting of bacterial protein translocation. Expert Opinion on Therapeutic Targets, 2001, 5, 141-153.	1.0	12
88	The Preprotein Binding Domain of SecA Displays Intrinsic Rotational Dynamics. Structure, 2019, 27, 90-101.e6.	1.6	12
89	Secretome Dynamics in a Gram-Positive Bacterial Model. Molecular and Cellular Proteomics, 2019, 18, 423-436.	2.5	12
90	Structural Insights into the Binding of Natural Pyrimidine-Based Inhibitors of Class II Aminoacyl-tRNA Synthetases. ACS Chemical Biology, 2020, 15, 407-415.	1.6	12

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91	A polysulfobetaine hydrogel for immobilization of a glucose-binding protein. RSC Advances, 2016, 6, 83890-83900.	1.7	11
92	Monitoring Protein Secretion in Streptomyces Using Fluorescent Proteins. Frontiers in Microbiology, 2018, 9, 3019.	1.5	11
93	Cloning, purification and characterization of a functional anthracycline glycosyltransferase. Journal of Biotechnology, 2006, 125, 425-433.	1.9	10
94	Proteome Changes during Transition from Human Embryonic to Vascular Progenitor Cells. Journal of Proteome Research, 2016, 15, 1995-2007.	1.8	10
95	Clamour for a kiss. Nature, 2008, 455, 879-880.	13.7	9
96	Structural dynamics in the evolution of a bilobed protein scaffold. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	3.3	9
97	NS5A mutations predict biochemical but not virological response to interferon-alpha treatment of sporadic hepatitis C virus infection in European patients. Journal of Viral Hepatitis, 2001, 8, 243-248.	1.0	7
98	Structural Dynamics of the Functional Nonameric Type III Translocase Export Gate. Journal of Molecular Biology, 2021, 433, 167188.	2.0	7
99	Purification of a functional mature region from a SecA-dependent preprotein. Protein Expression and Purification, 2005, 40, 336-339.	0.6	6
100	Optimization of type 3 protein secretion in enteropathogenic Escherichia coli. FEMS Microbiology Letters, 2018, 365, .	0.7	5
101	Extensive Reannotation of the Genome of the Model Streptomycete Streptomyces lividans TK24 Based on Transcriptome and Proteome Information. Frontiers in Microbiology, 2021, 12, 604034.	1.5	5
102	Preproteins couple the intrinsic dynamics of SecA to its ATPase cycle to translocate via a catch and release mechanism. Cell Reports, 2022, 38, 110346.	2.9	5
103	The P. CÃ‰ZANNE Project: Innovative Approaches to Continuous Glucose Monitoring. Annual International Conference of the IEEE Engineering in Medicine and Biology Society, 2007, 2007, 6061-4.	0.5	4
104	Preface to special issue on protein trafficking and secretion in bacteria. Biochimica Et Biophysica Acta - Molecular Cell Research, 2014, 1843, 1427.	1.9	4
105	Quantitative analysis of energy transfer between fluorescent proteins in CFPâ€“GBPâ€“YFP and its response to Ca2+. Physical Chemistry Chemical Physics, 2011, 13, 17852.	1.3	3
106	A Reporter System for Fast Quantitative Monitoring of Type 3 Protein Secretion in Enteropathogenic E. coli. Microorganisms, 2020, 8, 1786.	1.6	3
107	Dynamics ante portas. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, e2110553118.	3.3	2
108	Moderated Test Statistics to Detect Differential Deuteration in Hydrogen/Deuterium Exchange Mass Spectrometry Experiments. Analytical Chemistry, 2021, , .	3.2	2

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109	Effective Small Molecule Antibacterials from a Novel Anti-Protein Secretion Screen. Microorganisms, 2021, 9, 592.	1.6	1
110	Chondrocyte protein co-synthesis network analysis links ECM mechanosensing to metabolic adaptation in osteoarthritis. Expert Review of Proteomics, 2021, 18, 623-635.	1.3	1
111	Allosteric cross-talk between the hydrophobic cleft and the BH4 domain of Bcl-2 in control of inositol 1,4,5-trisphosphate receptor activity. Exploration of Targeted Anti-tumor Therapy, 0, , 375-391.	0.5	1
112	Greek needs. Nature, 1996, 382, 294-294.	13.7	0
113	The E.coli Sec Pathway under a Single-Molecule Loupe. Biophysical Journal, 2016, 110, 45a-46a.	0.2	0
114	Breaching the wall. Nature Microbiology, 2018, 3, 1192-1193.	5.9	0
115	Editorial: Thematic issue on bacterial protein export: from fundamentals to applications. FEMS Microbiology Letters, 2018, 365, .	0.7	0
116	Allosteric <i>Cross-Talk</i> between the Hydrophobic Cleft and the BH4 Domain of Bcl-2 in Control of IP3R Activity. SSRN Electronic Journal, 0, , .	0.4	0