

Alan Saghatelian

List of Publications by Year in descending order

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127
papers

15,434
citations

20759

60
h-index

19136

118
g-index

138
all docs

138
docs citations

138
times ranked

22765
citing authors

#	ARTICLE	IF	CITATIONS
1	Discovery of a Class of Endogenous Mammalian Lipids with Anti-Diabetic and Anti-inflammatory Effects. <i>Cell</i> , 2014, 159, 318-332.	13.5	639
2	How many human proteoforms are there?. <i>Nature Chemical Biology</i> , 2018, 14, 206-214.	3.9	580
3	Peptidomic discovery of short open reading frame-encoded peptides in human cells. <i>Nature Chemical Biology</i> , 2013, 9, 59-64.	3.9	529
4	mTORC1 and muscle regeneration are regulated by the LINC00961-encoded SPAR polypeptide. <i>Nature</i> , 2017, 541, 228-232.	13.7	503
5	Toddler: An Embryonic Signal That Promotes Cell Movement via Apelin Receptors. <i>Science</i> , 2014, 343, 1248636.	6.0	498
6	The metabolite β -ketoglutarate extends lifespan by inhibiting ATP synthase and TOR. <i>Nature</i> , 2014, 510, 397-401.	13.7	485
7	Identification of protein pheromones that promote aggressive behaviour. <i>Nature</i> , 2007, 450, 899-902.	13.7	472
8	Activity-based probes for the proteomic profiling of metalloproteases. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2004, 101, 10000-10005.	3.3	430
9	Inhibition of acetyl-CoA carboxylase suppresses fatty acid synthesis and tumor growth of non-small-cell lung cancer in preclinical models. <i>Nature Medicine</i> , 2016, 22, 1108-1119.	15.2	357
10	Antibiotic-induced microbiome depletion alters metabolic homeostasis by affecting gut signaling and colonic metabolism. <i>Nature Communications</i> , 2018, 9, 2872.	5.8	343
11	A diurnal serum lipid integrates hepatic lipogenesis and peripheral fatty acid use. <i>Nature</i> , 2013, 502, 550-554.	13.7	310
12	Reversible Inhibitors of Fatty Acid Amide Hydrolase That Promote Analgesia: Evidence for an Unprecedented Combination of Potency and Selectivity. <i>Journal of Pharmacology and Experimental Therapeutics</i> , 2004, 311, 441-448.	1.3	308
13	Assignment of Endogenous Substrates to Enzymes by Global Metabolite Profiling. <i>Biochemistry</i> , 2004, 43, 14332-14339.	1.2	302
14	Gpr132 sensing of lactate mediates tumor-macrophage interplay to promote breast cancer metastasis. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2017, 114, 580-585.	3.3	296
15	A chiroselective peptide replicator. <i>Nature</i> , 2001, 409, 797-801.	13.7	292
16	Metformin Inhibits Hepatic mTORC1 Signaling via Dose-Dependent Mechanisms Involving AMPK and the TSC Complex. <i>Cell Metabolism</i> , 2017, 25, 463-471.	7.2	281
17	Pharmacological activation of REV-ERBs is lethal in cancer and oncogene-induced senescence. <i>Nature</i> , 2018, 553, 351-355.	13.7	273
18	SREBP1 Contributes to Resolution of Pro-inflammatory TLR4 Signaling by Reprogramming Fatty Acid Metabolism. <i>Cell Metabolism</i> , 2017, 25, 412-427.	7.2	263

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19	DNA-Based Photonic Logic Gates: AND, NAND, and INHIBIT. <i>Journal of the American Chemical Society</i> , 2003, 125, 346-347.	6.6	254
20	Defining the Metabolome: Size, Flux, and Regulation. <i>Molecular Cell</i> , 2015, 58, 699-706.	4.5	234
21	Discovery and characterization of smORF-encoded bioactive polypeptides. <i>Nature Chemical Biology</i> , 2015, 11, 909-916.	3.9	218
22	An alternative pluripotent state confers interspecies chimaeric competency. <i>Nature</i> , 2015, 521, 316-321.	13.7	215
23	A human microprotein that interacts with the mRNA decapping complex. <i>Nature Chemical Biology</i> , 2017, 13, 174-180.	3.9	212
24	Functional disassociation of the central and peripheral fatty acid amide signaling systems. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2004, 101, 10821-10826.	3.3	211
25	Target discovery in small-molecule cell-based screens by in situ proteome reactivity profiling. <i>Nature Biotechnology</i> , 2005, 23, 1303-1307.	9.4	210
26	Anti-diabetic activity of insulin-degrading enzyme inhibitors mediated by multiple hormones. <i>Nature</i> , 2014, 511, 94-98.	13.7	207
27	Genetic Liver-Specific AMPK Activation Protects against Diet-Induced Obesity and NAFLD. <i>Cell Reports</i> , 2019, 26, 192-208.e6.	2.9	202
28	Exploring Disease through Metabolomics. <i>ACS Chemical Biology</i> , 2010, 5, 91-103.	1.6	193
29	DNA Detection and Signal Amplification via an Engineered Allosteric Enzyme. <i>Journal of the American Chemical Society</i> , 2003, 125, 344-345.	6.6	192
30	Regulation of DNA repair pathway choice in S and G2 phases by the NHEJ inhibitor CYREN. <i>Nature</i> , 2017, 549, 548-552.	13.7	184
31	Identification of <i>Pseudomonas aeruginosa</i> Phenazines that Kill <i>Caenorhabditis elegans</i> . <i>PLoS Pathogens</i> , 2013, 9, e1003101.	2.1	178
32	Primate-Specific ORFO Contributes to Retrotransposon-Mediated Diversity. <i>Cell</i> , 2015, 163, 583-593.	13.5	177
33	An Enzyme that Regulates Ether Lipid Signaling Pathways in Cancer Annotated by Multidimensional Profiling. <i>Chemistry and Biology</i> , 2006, 13, 1041-1050.	6.2	170
34	Serine restriction alters sphingolipid diversity to constrain tumour growth. <i>Nature</i> , 2020, 586, 790-795.	13.7	166
35	Localization of Anionic Phospholipids in <i>Escherichia coli</i> Cells. <i>Journal of Bacteriology</i> , 2014, 196, 3386-3398.	1.0	151
36	Discovery of Human sORF-Encoded Polypeptides (SEPs) in Cell Lines and Tissue. <i>Journal of Proteome Research</i> , 2014, 13, 1757-1765.	1.8	149

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37	Revealing disease-associated pathways by network integration of untargeted metabolomics. <i>Nature Methods</i> , 2016, 13, 770-776.	9.0	145
38	Accurate annotation of human protein-coding small open reading frames. <i>Nature Chemical Biology</i> , 2020, 16, 458-468.	3.9	136
39	Assignment of protein function in the postgenomic era. <i>Nature Chemical Biology</i> , 2005, 1, 130-142.	3.9	133
40	A Human Short Open Reading Frame (sORF)-encoded Polypeptide That Stimulates DNA End Joining. <i>Journal of Biological Chemistry</i> , 2014, 289, 10950-10957.	1.6	128
41	Palmitic Acid Hydroxystearic Acids Activate GPR40, Which Is Involved in Their Beneficial Effects on Glucose Homeostasis. <i>Cell Metabolism</i> , 2018, 27, 419-427.e4.	7.2	127
42	Ligand Activation of ERR α by Cholesterol Mediates Statin and Bisphosphonate Effects. <i>Cell Metabolism</i> , 2016, 23, 479-491.	7.2	126
43	Improved Identification and Analysis of Small Open Reading Frame Encoded Polypeptides. <i>Analytical Chemistry</i> , 2016, 88, 3967-3975.	3.2	119
44	Regulation of the ER stress response by a mitochondrial microprotein. <i>Nature Communications</i> , 2019, 10, 4883.	5.8	115
45	Cooperative effects of aminopeptidase N (CD13) expressed by nonmalignant and cancer cells within the tumor microenvironment. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2012, 109, 1637-1642.	3.3	111
46	GLUT4 Expression in Adipocytes Regulates De Novo Lipogenesis and Levels of a Novel Class of Lipids With Antidiabetic and Anti-inflammatory Effects. <i>Diabetes</i> , 2016, 65, 1808-1815.	0.3	107
47	The 2.5Å Structure of CD1c in Complex with a Mycobacterial Lipid Reveals an Open Groove Ideally Suited for Diverse Antigen Presentation. <i>Immunity</i> , 2010, 33, 853-862.	6.6	103
48	Absence of Carbohydrate Response Element Binding Protein in Adipocytes Causes Systemic Insulin Resistance and Impairs Glucose Transport. <i>Cell Reports</i> , 2017, 21, 1021-1035.	2.9	103
49	Branched Fatty Acid Esters of Hydroxy Fatty Acids (FAHFAs) Protect against Colitis by Regulating Gut Innate and Adaptive Immune Responses. <i>Journal of Biological Chemistry</i> , 2016, 291, 22207-22217.	1.6	102
50	Maternal PPAR β protects nursing neonates by suppressing the production of inflammatory milk. <i>Genes and Development</i> , 2007, 21, 1895-1908.	2.7	97
51	A Streamlined Metabolic Pathway for the Biosynthesis of Moenomycin A. <i>Chemistry and Biology</i> , 2007, 14, 257-267.	6.2	96
52	Methods for the Elucidation of Protein-Small Molecule Interactions. <i>Chemistry and Biology</i> , 2013, 20, 667-673.	6.2	94
53	Standardized annotation of translated open reading frames. <i>Nature Biotechnology</i> , 2022, 40, 994-999.	9.4	86
54	The molecular basis for Mucosal-Associated Invariant T cell recognition of MR1 proteins. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2013, 110, E1771-8.	3.3	85

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55	A Potent Î±/Î²-Peptide Analogue of GLP-1 with Prolonged Action in Vivo. <i>Journal of the American Chemical Society</i> , 2014, 136, 12848-12851.	6.6	83
56	Global strategies to integrate the proteome and metabolome. <i>Current Opinion in Chemical Biology</i> , 2005, 9, 62-68.	2.8	81
57	Single DNA Rotaxanes of a Transmembrane Pore Protein. <i>Angewandte Chemie - International Edition</i> , 2004, 43, 3063-3067.	7.2	78
58	Linoleic acid esters of hydroxy linoleic acids are anti-inflammatory lipids found in plants and mammals. <i>Journal of Biological Chemistry</i> , 2019, 294, 10698-10707.	1.6	76
59	Sequence-Addressable DNA Logic. <i>Small</i> , 2008, 4, 427-431.	5.2	73
60	MIEF1 Microprotein Regulates Mitochondrial Translation. <i>Biochemistry</i> , 2018, 57, 5564-5575.	1.2	70
61	Directed remodeling of the mouse gut microbiome inhibits the development of atherosclerosis. <i>Nature Biotechnology</i> , 2020, 38, 1288-1297.	9.4	70
62	MAIT Recognition of a Stimulatory Bacterial Antigen Bound to MR1. <i>Journal of Immunology</i> , 2013, 191, 5268-5277.	0.4	69
63	Identification and characterization of sORF-encoded polypeptides. <i>Critical Reviews in Biochemistry and Molecular Biology</i> , 2015, 50, 134-141.	2.3	68
64	The lipid elongation enzyme ELOVL2 is a molecular regulator of aging in the retina. <i>Aging Cell</i> , 2020, 19, e13100.	3.0	66
65	AIG1 and ADTRP are atypical integral membrane hydrolases that degrade bioactive FAHFAs. <i>Nature Chemical Biology</i> , 2016, 12, 367-372.	3.9	62
66	PAHSAs enhance hepatic and systemic insulin sensitivity through direct and indirect mechanisms. <i>Journal of Clinical Investigation</i> , 2019, 129, 4138-4150.	3.9	62
67	Peptidase substrates via global peptide profiling. <i>Nature Chemical Biology</i> , 2009, 5, 23-25.	3.9	61
68	Expanding the Dipeptidyl Peptidase 4-Regulated Peptidome via an Optimized Peptidomics Platform. <i>Journal of the American Chemical Society</i> , 2010, 132, 3819-3830.	6.6	58
69	A LC-MS-based workflow for measurement of branched fatty acid esters of hydroxy fatty acids. <i>Nature Protocols</i> , 2016, 11, 747-763.	5.5	58
70	Discovery of FAHFA-Containing Triacylglycerols and Their Metabolic Regulation. <i>Journal of the American Chemical Society</i> , 2019, 141, 8798-8806.	6.6	57
71	ATGL is a biosynthetic enzyme for fatty acid esters of hydroxy fatty acids. <i>Nature</i> , 2022, 606, 968-975.	13.7	57
72	Blocking Zika virus vertical transmission. <i>Scientific Reports</i> , 2018, 8, 1218.	1.6	55

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73	PAHSAs attenuate immune responses and promote \hat{I}^2 cell survival in autoimmune diabetic mice. <i>Journal of Clinical Investigation</i> , 2019, 129, 3717-3731.	3.9	55
74	Discovery of a Proteinâ€“Metabolite Interaction between Unsaturated Fatty Acids and the Nuclear Receptor Nur77 Using a Metabolomics Approach. <i>Journal of the American Chemical Society</i> , 2011, 133, 17168-17171.	6.6	54
75	Branched Fatty Acid Esters of Hydroxy Fatty Acids Are Preferred Substrates of the MODY8 Protein Carboxyl Ester Lipase. <i>Biochemistry</i> , 2016, 55, 4636-4641.	1.2	54
76	Total Synthesis of the Calphostins:Â Application of Fischer Carbene Complexes and Thermodynamic Control of Atropisomers. <i>Journal of Organic Chemistry</i> , 2001, 66, 1297-1309.	1.7	53
77	Stereochemistry of Endogenous Palmitic Acid Ester of 9-Hydroxystearic Acid and Relevance of Absolute Configuration to Regulation. <i>Journal of the American Chemical Society</i> , 2017, 139, 4943-4947.	6.6	53
78	Carbene Complexes in the Synthesis of Complex Natural Products:Â Total Synthesis of the Calphostins. <i>Journal of the American Chemical Society</i> , 2000, 122, 3224-3225.	6.6	51
79	CDK12 phosphorylates 4E-BP1 to enable mTORC1-dependent translation and mitotic genome stability. <i>Genes and Development</i> , 2019, 33, 418-435.	2.7	50
80	Cytotoxicity of a Ti(IV) compound is independent of serum proteins. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2012, 109, 5016-5021.	3.3	46
81	Discovery metabolite profiling â€” forging functional connections between the proteome and metabolome. <i>Life Sciences</i> , 2005, 77, 1759-1766.	2.0	45
82	Maternal western diet causes inflammatory milk and TLR2/4-dependent neonatal toxicity. <i>Genes and Development</i> , 2012, 26, 1306-1311.	2.7	44
83	Identification of Microproteinâ€“Protein Interactions via APEX Tagging. <i>Biochemistry</i> , 2017, 56, 3299-3306.	1.2	44
84	Peptidomics of the Prolyl Peptidases. <i>AAPS Journal</i> , 2010, 12, 483-491.	2.2	43
85	Identification of an Overabundant Cholesterol Precursor in Hepatitis B Virus Replicating Cells by Untargeted Lipid Metabolite Profiling. <i>Journal of the American Chemical Society</i> , 2009, 131, 5030-5031.	6.6	42
86	A Global Metabolite Profiling Approach to Identify Proteinâ€”Metabolite Interactions. <i>Journal of the American Chemical Society</i> , 2008, 130, 14111-14113.	6.6	41
87	Methodological Issues in Studying PAHSA Biology: Masking PAHSA Effects. <i>Cell Metabolism</i> , 2018, 28, 543-546.	7.2	40
88	Faster Protocol for Endogenous Fatty Acid Esters of Hydroxy Fatty Acid (FAHFA) Measurements. <i>Analytical Chemistry</i> , 2018, 90, 5358-5365.	3.2	39
89	Assessing Enzyme Activities Using Stable Isotope Labeling and Mass Spectrometry. <i>Molecular and Cellular Proteomics</i> , 2007, 6, 1771-1777.	2.5	38
90	HtrA1 Proteolysis of ApoE In Vitro Is Allele Selective. <i>Journal of the American Chemical Society</i> , 2016, 138, 9473-9478.	6.6	37

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91	FIT2 is an acyl-coenzyme A diphosphatase crucial for endoplasmic reticulum homeostasis. <i>Journal of Cell Biology</i> , 2020, 219, .	2.3	37
92	Endothelial Lipase Is a Critical Determinant of High-Density Lipoprotein-Stimulated Sphingosine 1-Phosphate-Dependent Signaling in Vascular Endothelium. <i>Arteriosclerosis, Thrombosis, and Vascular Biology</i> , 2013, 33, 1788-1794.	1.1	36
93	FGF1 and insulin control lipolysis by convergent pathways. <i>Cell Metabolism</i> , 2022, 34, 171-183.e6.	7.2	36
94	Chemoproteomic Discovery of Cysteine-Containing Human Short Open Reading Frames. <i>Journal of the American Chemical Society</i> , 2013, 135, 16750-16753.	6.6	34
95	Peptidomics approach to elucidate the proteolytic regulation of bioactive peptides. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2012, 109, 8523-8527.	3.3	33
96	A short ORF-encoded transcriptional regulator. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2021, 118, .	3.3	33
97	Monoalkylglycerol Ether Lipids Promote Adipogenesis. <i>Journal of the American Chemical Society</i> , 2011, 133, 5178-5181.	6.6	31
98	Reprogramming pancreatic stellate cells via p53 activation: A putative target for pancreatic cancer therapy. <i>PLoS ONE</i> , 2017, 12, e0189051.	1.1	31
99	Distinct biological activities of isomers from several families of branched fatty acid esters of hydroxy fatty acids (FAHFAs). <i>Journal of Lipid Research</i> , 2021, 62, 100108.	2.0	31
100	Transition metal mediated surface modification of porous silicon. <i>Tetrahedron</i> , 2001, 57, 5131-5136.	1.0	30
101	Regulation of Alkyl-dihydrothiazole-carboxylates (ATCs) by Iron and the Pyochelin Gene Cluster in <i>Pseudomonas aeruginosa</i> . <i>ACS Chemical Biology</i> , 2009, 4, 617-623.	1.6	28
102	Inhibition of Circulating Dipeptidyl Peptidase 4 Activity in Patients with Metastatic Prostate Cancer. <i>Molecular and Cellular Proteomics</i> , 2014, 13, 3082-3096.	2.5	27
103	AIG1 and ADTRP are endogenous hydrolases of fatty acid esters of hydroxy fatty acids (FAHFAs) in mice. <i>Journal of Biological Chemistry</i> , 2020, 295, 5891-5905.	1.6	26
104	Overexpressing the novel autocrine/endocrine adipokine WISP2 induces hyperplasia of the heart, white and brown adipose tissues and prevents insulin resistance. <i>Scientific Reports</i> , 2017, 7, 43515.	1.6	25
105	Nano-scale resolution of native retinal rod disk membranes reveals differences in lipid composition. <i>Journal of Cell Biology</i> , 2021, 220, .	2.3	23
106	Antioxidant Effects of N-Acetylcysteine Prevent Programmed Metabolic Disease in Mice. <i>Diabetes</i> , 2020, 69, 1650-1661.	0.3	23
107	Regulation of mitochondrial ceramide distribution by members of the BCL-2 family. <i>Journal of Lipid Research</i> , 2015, 56, 1501-1510.	2.0	22
108	A metabolomics strategy for detecting protein-metabolite interactions to identify natural nuclear receptor ligands. <i>Molecular BioSystems</i> , 2011, 7, 1046.	2.9	21

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109	The serine protease HtrA1 contributes to the formation of an extracellular 25-kDa apolipoprotein E fragment that stimulates neurogenesis. <i>Journal of Biological Chemistry</i> , 2018, 293, 4071-4084.	1.6	19
110	The influence of transcript assembly on the proteogenomics discovery of microproteins. <i>PLoS ONE</i> , 2018, 13, e0194518.	1.1	19
111	Deletion of Prepl Causes Growth Impairment and Hypotonia in Mice. <i>PLoS ONE</i> , 2014, 9, e89160.	1.1	18
112	Lipid Osteoclastokines Regulate Breast Cancer Bone Metastasis. <i>Endocrinology</i> , 2017, 158, 477-489.	1.4	16
113	Small, but mighty? Searching for human microproteins and their potential for understanding health and disease. <i>Expert Review of Proteomics</i> , 2018, 15, 963-965.	1.3	13
114	Stable isotopic labeling-based quantitative targeted glycomics (iQTaG). <i>Biotechnology Progress</i> , 2015, 31, 840-848.	1.3	12
115	Inhibition of ceramide accumulation in AdipoR1 ^{-/-} mice increases photoreceptor survival and improves vision. <i>JCI Insight</i> , 2022, 7, .	2.3	12
116	Synthesis of chemically edited derivatives of the endogenous regulator of inflammation 9-PAHSA. <i>Journal of Antibiotics</i> , 2019, 72, 498-506.	1.0	10
117	Stereochemistry of Linoleic Acid Esters of Hydroxy Linoleic Acids. <i>Organic Letters</i> , 2019, 21, 8080-8084.	2.4	7
118	Elovl2 Is Required for Robust Visual Function in Zebrafish. <i>Cells</i> , 2020, 9, 2583.	1.8	7
119	A Nonapoptotic Role for BAX and BAK in Eicosanoid Metabolism. <i>ACS Chemical Biology</i> , 2015, 10, 1398-1403.	1.6	4
120	Glucagon and Thyroid Hormone: A Championship Team. <i>Cell</i> , 2016, 167, 604-605.	13.5	3
121	ProteinS ² a proteogenomics pipeline for finding novel bacterial microproteins encoded by small ORFs. <i>Bioinformatics</i> , 2022, 38, 2612-2614.	1.8	3
122	Novel Biology and Druggable Targets via Chemoproteomics. <i>Biochemistry</i> , 2017, 56, 6515-6516.	1.2	2
123	Substrate-Selective Enzyme Inhibitors. <i>Trends in Pharmacological Sciences</i> , 2019, 40, 716-718.	4.0	2
124	A Hidden ORF Reveals an Immune Protector. <i>Biochemistry</i> , 2019, 58, 1022-1023.	1.2	1
125	Networking in Circulation: Lipoproteins, PM20D1, and N-acyl Amino Acid Bioactivity. <i>Cell Chemical Biology</i> , 2020, 27, 1112-1113.	2.5	1
126	Insights into GLP-1 Receptor Activation with a Nonpeptide Agonist. <i>Biochemistry</i> , 2020, 59, 1549-1550.	1.2	1

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127	Elucidating the Proteolytic Regulation of Bioactive Peptides. FASEB Journal, 2012, 26, .	0.2	0