Patrick Gunning

List of Publications by Year
in descending order

124 papers	4,386 citations	94269 37 h-index	123241 61 g-index
132 all docs	132 docs citations	132 times ranked	6283 citing authors

#	Article	IF	Citations
1	Orally bioavailable small-molecule inhibitor of transcription factor Stat3 regresses human breast and lung cancer xenografts. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 9623-9628.	3.3	301
2	Implications of STAT3 and STAT5 signaling on gene regulation and chromatin remodeling in hematopoietic cancer. Leukemia, 2018, 32, 1713-1726.	3.3	166
3	An Oxazole-Based Small-Molecule Stat3 Inhibitor Modulates Stat3 Stability and Processing and Induces Antitumor Cell Effects. ACS Chemical Biology, 2007, 2, 787-798.	1.6	165
4	Advances in covalent kinase inhibitors. Chemical Society Reviews, 2020, 49, 2617-2687.	18.7	160
5	A novel small-molecule disrupts Stat3 SH2 domainâ€“phosphotyrosine interactions and Stat3-dependent tumor processes. Biochemical Pharmacology, 2010, 79, 1398-1409.	2.0	159
6	Recent advances in biosensory and medicinal therapeutic applications of zinc(II) and copper(II) coordination complexes. Coordination Chemistry Reviews, 2011, 255, 459-472.	9.5	130
7	STAT5 Is a Key Regulator in NK Cells and Acts as a Molecular Switch from Tumor Surveillance to Tumor Promotion. Cancer Discovery, 2016, 6, 414-429.	7.7	124
8	Pharmacologic inhibition of STAT5 in acute myeloid leukemia. Leukemia, 2018, 32, 1135-1146.	3.3	112
9	Combined STAT3 and BCR-ABL1 inhibition induces synthetic lethality in therapy-resistant chronic myeloid leukemia. Leukemia, 2015, 29, 586-597.	3.3	111
10	Potent Targeting of the STAT3 Protein in Brain Cancer Stem Cells: A Promising Route for Treating Glioblastoma. ACS Medicinal Chemistry Letters, 2013, 4, 1102-1107.	1.3	101
11	Signal transducer and activator of transcription 3 inhibitors: a patent review. Expert Opinion on Therapeutic Patents, 2011, 21, 65-83.	2.4	96
12	Progress towards the development of SH2 domain inhibitors. Chemical Society Reviews, 2013, 42, 3337.	18.7	96
13	Molecular Approaches towards the Inhibition of the Signal Transducer and Activator of Transcription 3 (Stat3) Protein. ChemMedChem, 2008, 3, 1159-1168.	1.6	91
14	Small Molecule STAT5-SH2 Domain Inhibitors Exhibit Potent Antileukemia Activity. Journal of Medicinal Chemistry, 2012, 55, 1047-1055.	2.9	90
15	Molecular disruption of oncogenic signal transducer and activator of transcription 3 (STAT3) protein. Biochemistry and Cell Biology, 2009, 87, 825-833.	0.9	83
16	Disruption of Transcriptionally Active Stat3 Dimers with Nonâ€phosphorylated, Salicylic Acidâ€Based Small Molecules: Potent in vitro and Tumor Cell Activities. ChemBioChem, 2009, 10, 1959-1964.	1.3	80
17	Direct Targeting Options for STAT3 and STAT5 in Cancer. Cancers, 2019, 11, 1930.	1.7	65
18	Inhibiting aberrant Stat3 function with molecular therapeutics. Anti-Cancer Drugs, 2011, 22, 115-127.	0.7	60

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19	An Excimer-Based, Turn-On Fluorescent Sensor for the Selective Detection of Diphosphorylated Proteins in Aqueous Solution and Polyacrylamide Gels. Journal of the American Chemical Society, 2014, 136, 1234-1237.	6.6	60
20	Identification of a non-phosphorylated, cell permeable, small molecule ligand for the Stat3 SH2 domain. Bioorganic and Medicinal Chemistry Letters, 2011, 21, 5605-5609.	1.0	57
21	Nanomolar-Potency Small Molecule Inhibitor of STAT5 Protein. ACS Medicinal Chemistry Letters, 2014, 5, 1202-1206.	1.3	57
22	Isoform selective inhibition of STAT1 or STAT3 homo-dimerization via peptidomimetic probes: Structural recognition of STAT SH2 domains. Bioorganic and Medicinal Chemistry Letters, 2007, 17, 1875-1878.	1.0	56
23	An activatable multimodal/multifunctional nanoprobe for direct imaging of intracellular drug delivery. Biomaterials, 2012, 33, 1500-1508.	5.7	55
24	STAT3 pathway regulates lung-derived brain metastasis initiating cell capacity through miR-21 activation. Oncotarget, 2015, 6, 27461-27477.	0.8	55
25	Antagonism of the Stat3â€“Stat3 Protein Dimer with Salicylic Acid Based Small Molecules. ChemMedChem, 2011, 6, 1459-1470.	1.6	50
26	Structural and functional consequences of the STAT5BN642H driver mutation. Nature Communications, 2019, 10, 2517.	5.8	50
27	Concise access to N9-mono-, N2-mono- and N2,N9-di-substituted guanines via efficient Mitsunobu reactions. Tetrahedron, 2010, 66, 4621-4632.	1.0	49
28	CD133+ brain tumor-initiating cells are dependent on STAT3 signaling to drive medulloblastoma recurrence. Oncogene, 2017, 36, 606-617.	2.6	49
29	Mild, efficient and rapid O-debenzylation of ortho-substituted phenols with trifluoroacetic acid. Tetrahedron Letters, 2008, 49, 4817-4819.	0.7	47
30	A STAT inhibitor patent review: progress since 2011. Expert Opinion on Therapeutic Patents, 2015, 25, 1397-1421.	2.4	47
31	Structural Implications of STAT3 and STAT5 SH2 Domain Mutations. Cancers, 2019, 11, 1757.	1.7	45
32	Synthesis and Binding Properties of Hybrid Cyclophaneâ^'Azamacrocyclic Receptors. Journal of Organic Chemistry, 2005, 70, 115-123.	1.7	44
33	STAT3 activity is necessary and sufficient for the development of immuneâ€mediated myocarditis in mice and promotes progression to dilated cardiomyopathy. EMBO Molecular Medicine, 2013, 5, 572-590.	3.3	44
34	Targeting Proteinâ€“Protein Interactions: Suppression of Stat3 Dimerization with Rationally Designed Smallâ€Molecule, Nonpeptidic SH2 Domain Binders. ChemBioChem, 2008, 9, 2800-2803.	1.3	43
35	The ERBB-STAT3 Axis Drives Tasmanian Devil Facial Tumor Disease. Cancer Cell, 2019, 35, 125-139.e9.	7.7	43
36	Automated Parametrization of AMBER Force Field Terms from Vibrational Analysis with a Focus on Functionalizing Dinuclear Zinc(II) Scaffolds. Journal of Chemical Theory and Computation, 2012, 8, 554-562.	2.3	42

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37	Signal transducer and activator of transcription 3 (STAT3) inhibitor, S3I-201, acts as a potent and non-selective alkylating agent. Oncotarget, 2016, 7, 20669-20679.	0.8	42
38	Dynamic Reprogramming of Signaling Upon Met Inhibition Reveals a Mechanism of Drug Resistance in Gastric Cancer. Science Signaling, 2014, 7, ra38.	1.6	40
39	Signal transducer and activator of transcription 3 and 5 regulate system Xc- and redox balance in human breast cancer cells. Molecular and Cellular Biochemistry, 2015, 405, 205-221.	1.4	39
40	Identification of Purine-Scaffold Small-Molecule Inhibitors of Stat3 Activation by QSAR Studies. ACS Medicinal Chemistry Letters, 2011, 2, 79-84.	1.3	37
41	Identification of NAE Inhibitors Exhibiting Potent Activity in Leukemia Cells: Exploring the Structural Determinants of NAE Specificity. ACS Medicinal Chemistry Letters, 2011, 2, 577-582.	1.3	36
42	Changes in Signal Transducer and Activator of Transcription 3 (STAT3) Dynamics Induced by Complexation with Pharmacological Inhibitors of Src Homology 2 (SH2) Domain Dimerization. Journal of Biological Chemistry, 2014, 289, 32538-32547.	1.6	36
43	Combined targeting of STAT3 and STAT5: a novel approach to overcome drug resistance in chronic myeloid leukemia. Haematologica, 2017, 102, 1519-1529.	1.7	36
44	Applying Small Molecule Signal Transducer and Activator of Transcription-3 (STAT3) Protein Inhibitors as Pancreatic Cancer Therapeutics. Molecular Cancer Therapeutics, 2016, 15, 794-805.	1.9	35
45	Novel asymmetrically functionalized bis-dipicolylamine metal complexes: peripheral decoration of a potent anion recognition scaffold. Organic and Biomolecular Chemistry, 2009, 7, 5074.	1.5	34
46	Coordination complex SH2 domain proteomimetics: an alternative approach to disrupting oncogenic proteinâ€“protein interactions. Chemical Communications, 2010, 46, 892-894.	2.2	34
47	Inhibiting Aberrant Signal Transducer and Activator of Transcription Protein Activation with Tetrapodal, Small Molecule Src Homology 2 Domain Binders: Promising Agents against Multiple Myeloma. Journal of Medicinal Chemistry, 2013, 56, 7190-7200.	2.9	33
48	Design, synthesis, and in vitro characterization of novel hybrid peptidomimetic inhibitors of STAT3 protein. Bioorganic and Medicinal Chemistry, 2011, 19, 1823-1838.	1.4	32
49	JAKâ€STAT core cancer pathway: An integrative cancer interactome analysis. Journal of Cellular and Molecular Medicine, 2022, 26, 2049-2062.	1.6	32
50	A Photostable, pH-Invariant Fluorescein Derivative for Single-Molecule Microscopy. Journal of Fluorescence, 2009, 19, 915-920.	1.3	31
51	Mutations in UBA3 Confer Resistance to the NEDD8-Activating Enzyme Inhibitor MLN4924 in Human Leukemic Cells. PLoS ONE, 2014, 9, e93530.	1.1	31
52	Facile and efficient access to 2,6,9-tri-substituted purines through sequential N9, N2 Mitsunobu reactions. Tetrahedron Letters, 2009, 50, 4258-4261.	0.7	29
53	Identification and Characterization of AES-135, a Hydroxamic Acid-Based HDAC Inhibitor That Prolongs Survival in an Orthotopic Mouse Model of Pancreatic Cancer. Journal of Medicinal Chemistry, 2019, 62, 2651-2665.	2.9	28
54	Development of HDAC Inhibitors Exhibiting Therapeutic Potential in T-Cell Prolymphocytic Leukemia. Journal of Medicinal Chemistry, 2021, 64, 8486-8509.	2.9	28

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55	Exploring a New Frontier in Cancer Treatment: Targeting the Ubiquitin and Ubiquitin-like Activating Enzymes. Journal of Medicinal Chemistry, 2013, 56, 2165-2177.	2.9	27
56	High activation of STAT5A drives peripheral T-cell lymphoma and leukemia. Haematologica, 2020, 105, 435-447.	1.7	27
57	PTG-0861: A novel HDAC6-selective inhibitor as a therapeutic strategy in acute myeloid leukaemia. European Journal of Medicinal Chemistry, 2020, 201, 112411.	2.6	27
58	Disarming an Electrophilic Warhead: Retaining Potency in Tyrosine Kinase Inhibitor (TKI)â€Resistant CML Lines While Circumventing Pharmacokinetic Liabilities. ChemMedChem, 2016, 11, 850-861.	1.6	23
59	Targeting the Ubiquitin E1 as a Novel Anti-Cancer Strategy. Current Pharmaceutical Design, 2013, 19, 3201-3209.	0.9	22
60	Positive ion pair cooperativity exhibited for the binding of phosphate under physiological conditions. Organic and Biomolecular Chemistry, 2005, 3, 3877.	1.5	21
61	Extolling the benefits of molecular therapeutic lipidation. Molecular BioSystems, 2013, 9, 2179.	2.9	21
62	Characterization of Conformationally Constrained Benzanilide Scaffolds for Potent and Selective HDAC8 Targeting. Journal of Medicinal Chemistry, 2020, 63, 8634-8648.	2.9	21
63	Carcinoembryonic Antigen Cell Adhesion Molecule 1 long isoform modulates malignancy of poorly differentiated colon cancer cells. Gut, 2016, 65, 821-829.	6.1	20
64	Emerging therapeutic targets in myeloproliferative neoplasms and peripheral T-cell leukemia and lymphomas. Expert Opinion on Therapeutic Targets, 2018, 22, 45-57.	1.5	19
65	Artificially Induced Proteinâ€“Membrane Anchorage with Cholesterolâ€Based Recognition Agents as a New Therapeutic Concept. Angewandte Chemie - International Edition, 2011, 50, 6248-6253.	7.2	17
66	STAT3 as a mediator of BCR-ABL1-independent resistance in chronic myeloid leukemia. Leukemia Supplements, 2014, 3, S5-S6.	0.1	17
67	A selective inhibitor of the UFM1-activating enzyme, UBA5. Bioorganic and Medicinal Chemistry Letters, 2016, 26, 4542-4547.	1.0	17
68	Inhibitors of Stat5 protein signalling. MedChemComm, 2012, 3, 22-27.	3.5	16
69	Chronic Inhibition of STAT3/STAT5 in Treatment-Resistant Human Breast Cancer Cell Subtypes: Convergence on the ROS/SUMO Pathway and Its Effects on xCT Expression and System xc- Activity. PLoS ONE, 2016, 11, e0161202.	1.1	16
70	STAT3 inhibitor has potent antitumor activity in B-lineage acute lymphoblastic leukemia cells overexpressing the high mobility group A1 (HMGA1)â€“STAT3 pathway. Leukemia and Lymphoma, 2016, 57, 2681-2684.	0.6	16
71	Sensitive Detection of Broad-Spectrum Bacteria with Small-Molecule Fluorescent Excimer Chemosensors. ACS Sensors, 2020, 5, 2753-2762.	4.0	16
72	Discovery of HDAC6-Selective Inhibitor NN-390 with in Vitro Efficacy in Group 3 Medulloblastoma. Journal of Medicinal Chemistry, 2022, 65, 3193-3217.	2.9	16

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73	Identification of Bidentate Salicylic Acid Inhibitors of PTP1B. ACS Medicinal Chemistry Letters, 2015, 6, 982-986.	1.3	15
74	High-throughput thermofluor-based assays for inhibitor screening of STAT SH2 domains. Journal of Pharmaceutical and Biomedical Analysis, 2017, 143, 159-167.	1.4	15
75	Reciprocal regulation of the Cadherin-11/Stat3 axis by caveolin-1 in mouse fibroblasts and lung carcinoma cells. Biochimica Et Biophysica Acta - Molecular Cell Research, 2018, 1865, 794-802.	1.9	15
76	Class I/IIb-Selective HDAC Inhibitor Exhibits Oral Bioavailability and Therapeutic Efficacy in Acute Myeloid Leukemia. ACS Medicinal Chemistry Letters, 2020, 11, 56-64.	1.3	15
77	Anion control of isomerism, crystal packing and binding properties in a mononuclear zinc complex. Polyhedron, 2006, 25, 3474-3480.	1.0	14
78	MicroRNAâ€37â€3p controls hepatobiliary gene expression and transcriptional dynamics during hepatic cell differentiation. Hepatology, 2018, 67, 313-327.	3.6	13
79	STAT5 is Expressed in CD34+/CD38â" Stem Cells and Serves as a Potential Molecular Target in Ph-Negative Myeloproliferative Neoplasms. Cancers, 2020, 12, 1021.	1.7	12
80	Unique Molecular Interaction with the Histone Deacetylase 6 Catalytic Tunnel: Crystallographic and Biological Characterization of a Model Chemotype. Journal of Medicinal Chemistry, 2021, 64, 2691-2704.	2.9	11
81	Phosphopeptide Selective Coordination Complexes as Promising Src Homology 2 Domain Mimetics. Inorganic Chemistry, 2012, 51, 8284-8291.	1.9	10
82	ProxyPhos sensors for the detection of negatively charged membranes. Analyst, The, 2017, 142, 4511-4521.	1.7	10
83	A functional in vitro assay for screening inhibitors of STAT5B phosphorylation. Journal of Pharmaceutical and Biomedical Analysis, 2019, 162, 60-65.	1.4	10
84	Src homology 2 domain proteomimetics: developing phosphopeptide selective receptors. MedChemComm, 2012, 3, 763.	3.5	9
85	Structureâ€"activity relationship study of ProxyPhos chemosensors for the detection of proximal phosphorylation and other phosphate species. Analyst, The, 2017, 142, 3922-3933.	1.7	9
86	Strategies for over-expression and purification of recombinant full length STAT5B in Escherichia coli. Protein Expression and Purification, 2017, 129, 1-8.	0.6	9
87	Regulating the Master Regulator: Controlling Ubiquitination by Thinking Outside the Active Site. Journal of Medicinal Chemistry, 2018, 61, 405-421.	2.9	9
88	Optical chemosensors for the detection of proximally phosphorylated peptides and proteins. RSC Chemical Biology, 2021, 2, 815-829.	2.0	9
89	Characterization and application studies of ProxyPhos, a chemosensor for the detection of proximally phosphorylated peptides and proteins in aqueous solutions. Analyst, The, 2017, 142, 2451-2459.	1.7	9
90	A 2,6,9-hetero-trisubstituted purine inhibitor exhibits potent biological effects against multiple myeloma cells. Bioorganic and Medicinal Chemistry, 2013, 21, 5618-5628.	1.4	8

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91	Identification of a potent salicylic acid-based inhibitor of tyrosine phosphatase PTP1B. MedChemComm, 2013, 4, 987-992.	3.5	8
92	Selective detection of tyrosine-containing proximally phosphorylated motifs using an antenna-free Tb³⁺ luminescent sensor. Chemical Communications, 2015, 51, 6675-6677.	2.2	8
93	Targeting prenylation inhibition through the mevalonate pathway. RSC Medicinal Chemistry, 2020, 11, 51-71.	1.7	8
94	Inhibiting STAT3 in a murine model of human breast cancer-induced bone pain delays the onset of nociception. Molecular Pain, 2019, 15, 174480691882347.	1.0	7
95	Targeting STAT3 and STAT5 in Cancer. Cancers, 2020, 12, 2002.	1.7	7
96	Progress towards direct inhibitors of Stat5 protein. Hormone Molecular Biology and Clinical Investigation, 2012, 10, 281-6.	0.3	6
97	Exploring the structural determinants of selective phosphopeptide recognition using bivalent metal-coordination complexes. MedChemComm, 2013, 4, 289-292.	3.5	6
98	Electrochemical detection of the Fc-STAT3 phosphorylation and STAT3â€“Fc-STAT3 dimerization and inhibition. Molecular BioSystems, 2014, 10, 576.	2.9	5
99	A tool for the selective sequestration of ATP and PP_i to aid in-solution phosphopeptide detection assays. Analyst, The, 2016, 141, 820-822.	1.7	5
100	Regulation of HC11 mouse breast epithelial cell differentiation by the E-cadherin/Rac axis. Experimental Cell Research, 2017, 361, 112-125.	1.2	5
101	Optimization of a high-throughput fluorescence polarization assay for STAT5B DNA binding domain-targeting inhibitors. Journal of Pharmaceutical and Biomedical Analysis, 2020, 184, 113182.	1.4	5
102	Modulation of Akt vs Stat3 activity by the focal adhesion kinase in non-neoplastic mouse fibroblasts. Experimental Cell Research, 2021, 404, 112601.	1.2	5
103	Oncogenic Kinase Cascades Induce Molecular Mechanisms That Protect Leukemic Cell Models from Lethal Effects of De Novo dNTP Synthesis Inhibition. Cancers, 2021, 13, 3464.	1.7	5
104	Understanding Proteinâ€“Protein Interactions: Essential Players in (Patho)physiology (Partâ€...1). ChemBioChem, 2016, 17, 644-645.	1.3	4
105	Understanding Proteinâ€“Protein Interactions: Essential Players in (Patho)physiology (Partâ€...2). ChemMedChem, 2016, 11, 732-733.	1.6	4
106	Magnetic bead-based electrochemical detection of interaction between epigallocatechin-3-gallate and STAT proteins. Analytical Methods, 2015, 7, 3566-3569.	1.3	3
107	Structural and utational nalysis of ember-pecific STAT unctions. Biochimica Et Biophysica Acta - General Subjects, 2022, 1866, 130058.	1.1	3
108	Effect of caveolin-1 on Stat3-ptyr705 levels in breast and lung carcinoma cells. Biochemistry and Cell Biology, 2019, 97, 638-646.	0.9	2

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109	PI3k and Stat3: Oncogenes that are Required for Gap Junctional, Intercellular Communication. Cancers, 2019, 11, 167.	1.7	2
110	Differentiation of Mouse Breast Epithelial HC11 and EpH4 Cells. Journal of Visualized Experiments, 2020, , .	0.2	2
111	STAT3 Inhibition Synergizes with BCR-ABL1 Inhibition to Overcome Kinase-Independent TKI Resistance in Chronic Myeloid Leukemia (CML). Blood, 2012, 120, 31-31.	0.6	2
112	Inside Cover: Disruption of Transcriptionally Active Stat3 Dimers with Non-phosphorylated, Salicylic Acid-Based Small Molecules: Potent in vitro and Tumor Cell Activities (ChemBioChem 12/2009). ChemBioChem, 2009, 10, 1906-1906.	1.3	1
113	Regulation of Differentiation of HC11 Mouse Breast Epithelial Cells by the Signal Transducer and Activator of Transcription-3. Anticancer Research, 2019, 39, 2749-2756.	0.5	1
114	Abstract C246: SH-4-54, a novel small-molecule inhibitor of STAT3, demonstrates significant anti-tumor activity against multiple myeloma.. , 2013, , .		1
115	Combined Targeting of STAT3 and STAT5: A Novel Approach to Overcome Drug Resistance in Ph+ Cml. Blood, 2016, 128, 4241-4241.	0.6	1
116	The Potent STAT3/5 Inhibitor, BP-1-102 Demonstrates Significant Anti-Tumor Activity Against Waldenstrol̂m Macroglobulinemia. Blood, 2011, 118, 5101-5101.	0.6	1
117	Cancer Activating Mutations in STAT5B: Elucidating the Impact on Protein Structure and Dynamics using Atomistic Molecular Simulations. Biophysical Journal, 2020, 118, 504a.	0.2	0
118	Studies of BP-1-102, a Novel Direct Small-Molecule Inhibitor of Stat3 Demonstrates Substantial Anti-Myeloma Pre-Clinical Activity. Blood, 2010, 116, 138-138.	0.6	0
119	Next-Generation STAT3 Inhibitors As Targeted Therapeutics in Chronic Myeloid Leukemia.. Blood, 2012, 120, 2445-2445.	0.6	0
120	BP-2-047, a Novel Small-Molecule Inhibitor of Stat3 Is Active in Myeloma Pre-Clinical Models: Rationale for Treatment of Stat3-Dependent Multiple Myeloma. Blood, 2012, 120, 576-576.	0.6	0
121	A Novel Small Molecule STAT Inhibitor, BP-4-018, Demonstrates Significant Anti-Tumour Activity and Synergism With Bortezomib In Pre-Clinical In Vivo Models Of Multiple Myeloma. Blood, 2013, 122, 4441-4441.	0.6	0
122	BP5-087, a Novel STAT3 Inhibitor, Combines With BCR-ABL1 Inhibition To Overcome Kinase-Independent Resistance In Chronic Myeloid Leukemia. Blood, 2013, 122, 854-854.	0.6	0
123	Mutations In UBA3 Confer Resistance To The NEDD8-Activating Enzyme Inhibitor MLN4924 In Human Leukemic Cells. Blood, 2013, 122, 2527-2527.	0.6	0
124	Design, Optimization, and Pre-Clinical Evaluation of Direct, Mechanism-Based STAT3 Inhibitors for Treating Myeloid Disorders. Blood, 2014, 124, 4816-4816.	0.6	0