Sudarshan Rajagopal

List of Publications by Year
in descending order

113 papers	7,722 citations	94433 37 h-index	54911 84 g-index
125 all docs	125 docs citations	125 times ranked	9410 citing authors

#	Article	IF	Citations
1	The Pathobiology of Pulmonary Arterial Hypertension. Cardiology Clinics, 2022, 40, 1-12.	2.2	14
2	Community guidelines for GPCR ligand bias: IUPHAR review 32. British Journal of Pharmacology, 2022, 179, 3651-3674.	5.4	84
3	GPCR systems pharmacology: a different perspective on the development of biased therapeutics. American Journal of Physiology - Cell Physiology, 2022, 322, C887-C895.	4.6	20
4	Biased agonists of the chemokine receptor CXCR3 differentially signal through GÎ± _i :Î²-arrestin complexes. Science Signaling, 2022, 15, eabg5203.	3.6	13
5	Hemodynamics of the right ventricle and the pulmonary circulation. Applications in Engineering Science, 2022, 10, 100102.	0.8	1
6	Noninvasive diagnosis of pulmonary hypertension with hyperpolarised ¹²⁹Xe magnetic resonance imaging and spectroscopy. ERJ Open Research, 2022, 8, 00035-2022.	2.6	4
7	Determining the Requirements for GÎ±i:Î²â€arrestin Complex Formation at G Proteinâ€Coupled Receptors. FASEB Journal, 2022, 36, .	0.5	0
8	Novel Approaches to Imaging the Pulmonary Vasculature and Right Heart. Circulation Research, 2022, 130, 1445-1465.	4.5	10
9	Biased agonism at chemokine receptors. Cellular Signalling, 2021, 78, 109862.	3.6	28
10	The role of chemokines and chemokine receptors in pulmonary arterial hypertension. British Journal of Pharmacology, 2021, 178, 72-89.	5.4	40
11	Mass Spectrometry-Based for Analysis of. Methods in Molecular Biology, 2021, 2259, 247-257.	0.9	0
12	Noncanonical scaffolding of G _{Î±i} and Î²-arrestin by G proteinâ€“coupled receptors. Science, 2021, 371, .	12.6	64
13	The right atrium, more than a storehouse. International Journal of Cardiology, 2021, 331, 329-330.	1.7	6
14	Receptor Endocytosis as a Mechanism of Biased Agonism at CXCR3. FASEB Journal, 2021, 35, .	0.5	0
15	Î²â€arrestinâ€biased ACKR3 Promotes GÎ±i:Î²â€arrestin Complex Formation. FASEB Journal, 2021, 35, .	0.5	0
16	G protein- and Î²-arrestin Signaling Profiles of Endothelin Derivatives at the Type A Endothelin Receptor. Kidney360, 2021, 2, 1124-1131.	2.1	1
17	Using hyperpolarized ¹²⁹Xe gas-exchange MRI to model the regional airspace, membrane, and capillary contributions to diffusing capacity. Journal of Applied Physiology, 2021, 130, 1398-1409.	2.5	23
18	Sympathetic and Parasympathetic Regulation of NFâ€ÎºB by GPCRs through the modulation of interactions between p65/RelA and the Î²â€arrestins. FASEB Journal, 2021, 35, .	0.5	0

#	Article	IF	Citations
19	NEDD9 Is a Novel and Modifiable Mediator of Plateletâ€"Endothelial Adhesion in the Pulmonary Circulation. American Journal of Respiratory and Critical Care Medicine, 2021, 203, 1533-1545.	5.6	14
20	Inhaled treprostinil and forced vital capacity in patients with interstitial lung disease and associated pulmonary hypertension: a post-hoc analysis of the INCREASE study. Lancet Respiratory Medicine,the, 2021, 9, 1266-1274.	10.7	62
21	A multiscale model of vascular function in chronic thromboembolic pulmonary hypertension. American Journal of Physiology - Heart and Circulatory Physiology, 2021, 321, H318-H338.	3.2	18
22	Chronic Thromboembolic Pulmonary Hypertension: the Bench. Current Cardiology Reports, 2021, 23, 141.	2.9	4
23	Chronic Thromboembolic Pulmonary Hypertension: the Bedside. Current Cardiology Reports, 2021, 23, 147.	2.9	6
24	IL-27 Derived From Macrophages Facilitates IL-15 Production and T Cell Maintenance Following Allergic Hypersensitivity Responses. Frontiers in Immunology, 2021, 12, 713304.	4.8	7
25	Noninvasive Risk Score to Screen for Pulmonary Hypertension With Elevated Pulmonary Vascular Resistance in Diseases of Chronic Volume Overload. American Journal of Cardiology, 2021, 159, 113-120.	1.6	0
26	Beta-Arrestins and Receptor Signaling in the Vascular Endothelium. Biomolecules, 2021, 11, 9.	4.0	9
27	OUTCOMES OF PATIENTS ACROSS THE SPECTRUM OF PULMONARY HYPERTENSION GROUPS PRESCRIBED INHALED TREPROSTINIL. Chest, 2021, 160, A2250-A2251.	0.8	0
28	Î²-Arrestinâ€"Mediated Angiotensin II TypeÂ1ÂReceptor Activation Promotes Pulmonary Vascular Remodeling in Pulmonary Hypertension. JACC Basic To Translational Science, 2021, 6, 854-869.	4.1	8
29	Visualizing Pulmonary Vascular Disease With CT Scanning. Chest, 2021, 160, 1998-1999.	0.8	1
30	Pulmonary Hypertension Subtypes and Mortality in CKD. American Journal of Kidney Diseases, 2020, 75, 713-724.	1.9	32
31	Arrestin-mediated signaling at GPCRs. , 2020, , 243-255.		0
32	Identification of potent pyrazole based APELIN receptor (APJ) agonists. Bioorganic and Medicinal Chemistry, 2020, 28, 115237.	3.0	13
33	Assessing right atrial function in pulmonary hypertension: window to the soul of the right heart?. American Journal of Physiology - Heart and Circulatory Physiology, 2020, 318, H154-H155.	3.2	7
34	Experience in Transitioning From Parenteral Prostacyclins to Selexipag in Pulmonary Arterial Hypertension. Journal of Cardiovascular Pharmacology, 2020, 75, 299-304.	1.9	8
35	EXTRA VOLUME: PULMONARY HYPERTENSION CAUSED BY EXTRA-CARDIAC AND INTRA-CARDIAC SHUNTING. Journal of the American College of Cardiology, 2020, 75, 2804.	2.8	2
36	Echocardiography to Screen for Pulmonary Hypertension in CKD. Kidney International Reports, 2020, 5, 2275-2283.	0.8	4

#	Article	IF	Citations
37	Quantitative 129Xe MRI detects early impairment of gas-exchange in a rat model of pulmonary hypertension. Scientific Reports, 2020, 10, 7385.	3.3	10
38	Nonclassical Monocytes Sense Hypoxia, Regulate Pulmonary Vascular Remodeling, and Promote Pulmonary Hypertension. Journal of Immunology, 2020, 204, 1474-1485.	0.8	38
39	Biased agonists of the chemokine receptor CXCR3 differentially drive formation of GÎ±i and Î²â€arrestin complexes. FASEB Journal, 2020, 34, 1-1.	0.5	0
40	ACKR3 Regulates Endothelial Cell Function with Nonâ€canonical Integration of GÎ±i and Î²â€arrestin. FASEB Journal, 2020, 34, 1-1.	0.5	0
41	Biased Agonism at CXCR3 Drives Differential Phosphoproteomic and Transcriptomic Profiles and Cellular Outputs. FASEB Journal, 2020, 34, 1-1.	0.5	0
42	Isoforms of GPCR proteins combine for diverse signalling. Nature, 2020, 587, 553-554.	27.8	1
43	Abstract 15386: Integrated Phosphoproteome and Transcriptome Analysis of Biased Agonists at CXCR3 Reveals Differential Cellular Outputs of Inflammation. Circulation, 2020, 142, .	1.6	0
44	Tandem Mass Tag Labeling Facilitates Reversed-Phase Liquid Chromatography-Mass Spectrometry Analysis of Hydrophilic Phosphopeptides. Analytical Chemistry, 2019, 91, 11606-11613.	6.5	22
45	Monitoring Pulmonary Arterial Hypertension Using an Implantable Hemodynamic Sensor. Chest, 2019, 156, 1176-1186.	0.8	32
46	Echocardiographic Assessment of Right Ventricular Function and Response to Therapy in Pulmonary Arterial Hypertension. American Journal of Cardiology, 2019, 124, 1298-1304.	1.6	13
47	129Xenon MR Imaging and Spectroscopic Signatures to Differentiate Pulmonary Arterial Hypertension from Other Heart and Lung Disease. , 2019, , .		0
48	Diverse cardiopulmonary diseases are associated with distinct xenon magnetic resonance imaging signatures. European Respiratory Journal, 2019, 54, 1900831.	6.7	47
49	Pathogen Evasion of Chemokine Response Through Suppression of CXCL10. Frontiers in Cellular and Infection Microbiology, 2019, 9, 280.	3.9	33
50	MEF2 and the Right Ventricle: From Development to Disease. Frontiers in Cardiovascular Medicine, 2019, 6, 29.	2.4	17
51	Clinical Features and Outcomes of Patients with Sarcoidosis-associated Pulmonary Hypertension. Scientific Reports, 2019, 9, 4061.	3.3	36
52	How do chemokines navigate neutrophils to the target site: Dissecting the structural mechanisms and signaling pathways. Cellular Signalling, 2019, 54, 69-80.	3.6	152
53	A protocol for quantifying cardiogenic oscillations in dynamic ¹²⁹Xe gas exchange spectroscopy: The effects of idiopathic pulmonary fibrosis. NMR in Biomedicine, 2019, 32, e4029.	2.8	32
54	Nasally Inhaled Nitric Oxide for Sudden Right-Sided Heart Failure in the Intensive Care Unit: NO Time Like the Present. Journal of Cardiothoracic and Vascular Anesthesia, 2019, 33, 648-650.	1.3	2

#	Article	IF	Citations
55	Vascular Endothelial Growth Factor Receptor 3 Regulates Endothelial Function Through Î²-Arrestin 1. Circulation, 2019, 139, 1629-1642.	1.6	33
56	Identification of Potent Pyrazoleâ€Based Biased Small Molecule APJ Receptor Agonists. FASEB Journal, 2019, 33, 670.13.	0.5	0
57	Biased signalling: from simple switches to allosteric microprocessors. Nature Reviews Drug Discovery, 2018, 17, 243-260.	46.4	524
58	Right Ventricular Longitudinal Strain Reproducibility Using Vendor-Dependent and Vendor-Independent Software. Journal of the American Society of Echocardiography, 2018, 31, 721-732.e5.	2.8	37
59	GPCR desensitization: Acute and prolonged phases. Cellular Signalling, 2018, 41, 9-16.	3.6	221
60	Clinical Utility and Prognostic Value of Right Atrial Function in Pulmonary Hypertension. Circulation: Cardiovascular Imaging, 2018, 11, e006984.	2.6	59
61	Biased agonists of the chemokine receptor CXCR3 differentially control chemotaxis and inflammation. Science Signaling, 2018, 11, .	3.6	40
62	The Role of G Protein-Coupled Receptors in the Right Ventricle in Pulmonary Hypertension. Frontiers in Cardiovascular Medicine, 2018, 5, 179.	2.4	12
63	Manifold roles of Î²-arrestins in GPCR signaling elucidated with siRNA and CRISPR/Cas9. Science Signaling, 2018, 11, .	3.6	169
64	Chemokine Signaling in Allergic Contact Dermatitis: Toward Targeted Therapies. Dermatitis, 2018, 29, 179-186.	1.6	19
65	Hyperpolarized ¹²⁹Xe gas transfer MRI: the transition from 1.5T to 3T. Magnetic Resonance in Medicine, 2018, 80, 2374-2383.	3.0	27
66	Surgical pulmonary embolectomy and catheter-based therapies for acute pulmonary embolism: A contemporary systematic review. Journal of Thoracic and Cardiovascular Surgery, 2018, 156, 2155-2167.	0.8	35
67	Clinical and Echocardiographic Predictors of Outcomes in Patients With Pulmonary Hypertension. American Journal of Cardiology, 2018, 122, 872-878.	1.6	20
68	Echocardiography in the Risk Assessment of Acute Pulmonary Embolism. Seminars in Respiratory and Critical Care Medicine, 2017, 38, 018-028.	2.1	9
69	Novel approach to classifying patients with pulmonary arterial hypertension using cluster analysis. Pulmonary Circulation, 2017, 7, 486-493.	1.7	12
70	Improving on the diagnostic characteristics of echocardiography for pulmonary hypertension. International Journal of Cardiovascular Imaging, 2017, 33, 1341-1349.	1.5	11
71	Quantitative analysis of hyperpolarized¹²⁹Xe gas transfer MRI. Medical Physics, 2017, 44, 2415-2428.	3.0	65
72	Systematic errors in detecting biased agonism: Analysis of current methods and development of a new model-free approach. Scientific Reports, 2017, 7, 44247.	3.3	62

#	Article	IF	Citations
73	678 Biased CXCR3 ligands differentially alter allergic contact hypersensitivity and chemotaxis. Journal of Investigative Dermatology, 2017, 137, S117.	0.7	0
74	Plasma acylcarnitines are associated with pulmonary hypertension. Pulmonary Circulation, 2017, 7, 211-218.	1.7	21
75	C-X-C Motif Chemokine Receptor 3 Splice Variants Differentially Activate Beta-Arrestins to Regulate Downstream Signaling Pathways. Molecular Pharmacology, 2017, 92, 136-150.	2.3	50
76	A Practical Guide to Approaching Biased Agonism at G Protein Coupled Receptors. Frontiers in Neuroscience, 2017, 11, 17.	2.8	41
77	Safety and Tolerability of High-dose Inhaled Treprostinil in Pulmonary Hypertension. Journal of Cardiovascular Pharmacology, 2016, 67, 322-325.	1.9	12
78	Abnormalities in Hyperpolarized ¹²⁹Xe Magnetic Resonance Imaging and Spectroscopy in two Patients with Pulmonary Vascular Disease. Pulmonary Circulation, 2016, 6, 126-131.	1.7	21
79	Clinical and echocardiographic predictors of mortality in acute pulmonary embolism. Cardiovascular Ultrasound, 2016, 14, 44.	1.6	47
80	Hemodynamic Characterization of Rodent Models of Pulmonary Arterial Hypertension. Journal of Visualized Experiments, 2016, , .	0.3	19
81	The Î2-Arrestins: Multifunctional Regulators of G Protein-coupled Receptors. Journal of Biological Chemistry, 2016, 291, 8969-8977.	3.4	246
82	Use of outcome measures in pulmonary hypertension clinical trials. American Heart Journal, 2015, 170, 419-429.e3.	2.7	17
83	The Influence of Angle of Insonation and Target Depth on Speckle-Tracking Strain. Journal of the American Society of Echocardiography, 2015, 28, 580-586.	2.8	39
84	PH Grand Rounds: Confronting the Challenge of Sarcoidosis-Associated Pulmonary Hypertension. Advances in Pulmonary Hypertension, 2015, 14, 166-169.	0.1	0
85	What is biased efficacy? Defining the relationship between intrinsic efficacy and free energy coupling. Trends in Pharmacological Sciences, 2014, 35, 639-647.	8.7	37
86	Right Ventricular Mechanics Using a Novel Comprehensive Three-View Echocardiographic Strain Analysis in a Normal Population. Journal of the American Society of Echocardiography, 2014, 27, 413-422.	2.8	49
87	Comprehensive Assessment of Right Ventricular Function in Patients with Pulmonary Hypertension with Global Longitudinal Peak Systolic Strain Derived from Multiple Right Ventricular Views. Journal of the American Society of Echocardiography, 2014, 27, 657-665.e3.	2.8	76
88	Hemodynamic Response to Continuous Outpatient Milrinone Infusion in Advanced Heart Failure Patients with Mixed Pulmonary Hypertension. Journal of Cardiac Failure, 2014, 20, S41.	1.7	1
89	Monitoring protein conformational changes and dynamics using stable-isotope labeling and mass spectrometry. Nature Protocols, 2014, 9, 1301-1319.	12.0	49
90	Understanding the mechanism of biased agonism at chemokine receptors (1066.17). FASEB Journal, 2014, 28, 1066.17.	0.5	0

#	Article	IF	Citations
91	Quantifying biased agonism: understanding the links between affinity and efficacy. Nature Reviews Drug Discovery, 2013, 12, 483-483.	46.4	25
92	Biased Agonism as a Mechanism for Differential Signaling by Chemokine Receptors. Journal of Biological Chemistry, 2013, 288, 35039-35048.	3.4	111
93	Quantifying Ligand Bias at Seven-Transmembrane Receptors. Molecular Pharmacology, 2011, 80, 367-377.	2.3	341
94	A stress response pathway regulates DNA damage through Î²2-adrenoreceptors and Î²-arrestin-1. Nature, 2011, 477, 349-353.	27.8	360
95	Therapeutic potential of Î²-arrestin- and G protein-biased agonists. Trends in Molecular Medicine, 2011, 17, 126-139.	6.7	469
96	Distinct Phosphorylation Sites on the Î² ₂ -Adrenergic Receptor Establish a Barcode That Encodes Differential Functions of Î²-Arrestin. Science Signaling, 2011, 4, ra51.	3.6	535
97	Multiple ligand-specific conformations of the Î²2-adrenergic receptor. Nature Chemical Biology, 2011, 7, 692-700.	8.0	229
98	Teaching old receptors new tricks: biasing seven-transmembrane receptors. Nature Reviews Drug Discovery, 2010, 9, 373-386.	46.4	724
99	Global phosphorylation analysis of Î²-arrestinâ€“mediated signaling downstream of a seven transmembrane receptor (7TMR). Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 15299-15304.	7.1	182
100	Î²-arrestin- but not G protein-mediated signaling by the â€œdecoyâ€•receptor CXCR7. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 628-632.	7.1	499
101	Total chemical synthesis and biophysical characterization of the minimal isoform of the KChIP2 potassium channel regulatory subunit. Protein Science, 2007, 16, 2056-2064.	7.6	10
102	A Structural Pathway for Signaling in the E46Q Mutant of Photoactive Yellow Protein. Structure, 2005, 13, 55-63.	3.3	73
103	From The Cover: Visualizing reaction pathways in photoactive yellow protein from nanoseconds to seconds. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 7145-7150.	7.1	256
104	Purification and Initial Characterization of a Putative Blue Lightâ€“regulated Phosphodiesterase from Escherichia coliÂ¶. Photochemistry and Photobiology, 2004, 80, 542.	2.5	56
105	Chromophore Conformation and the Evolution of Tertiary Structural Changes in Photoactive Yellow Protein. Structure, 2004, 12, 1039-1045.	3.3	65
106	Analysis of experimental time-resolved crystallographic data by singular value decomposition. Acta Crystallographica Section D: Biological Crystallography, 2004, 60, 860-871.	2.5	50
107	Protein kinetics: Structures of intermediates and reaction mechanism from time-resolved x-ray data. Proceedings of the National Academy of Sciences of the United States of America, 2004, 101, 4799-4804.	7.1	88
108	Analytical trapping: extraction of time-independent structures from time-dependent crystallographic data. Journal of Structural Biology, 2004, 147, 211-222.	2.8	20

#	Article	IF	Citations
109	Purification and Initial Characterization of a Putative Blue Lightâ€regulated Phosphodiesterase from <i>Escherichia coli</i>^{Â¶}. Photochemistry and Photobiology, 2004, 80, 542-547.	2.5	5
110	Purification and Initial Characterization of a Putative Blue Light Regulated Phosphodiesterase from Escherichia coli. Photochemistry and Photobiology, 2004, 80, 542-7.	2.5	23
111	The LOV Domain Family:â€‰ Photoresponsive Signaling Modules Coupled to Diverse Output Domains. Biochemistry, 2003, 42, 2-10.	2.5	387
112	Application of Singular Value Decomposition to the Analysis of Time-Resolved Macromolecular X-Ray Data. Biophysical Journal, 2003, 84, 2112-2129.	0.5	146
113	Crystal structure of a photoactive yellow protein from a sensor histidine kinase: Conformational variability and signal transduction. Proceedings of the National Academy of Sciences of the United States of America, 2003, 100, 1649-1654.	7.1	39