

# Avril A B Robertson

## List of Publications by Year in descending order

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87  
papers

11,493  
citations

87723

38  
h-index

53109

85  
g-index

92  
all docs

92  
docs citations

92  
times ranked

16443  
citing authors

#	ARTICLE	IF	CITATIONS
1	A small-molecule inhibitor of the NLRP3 inflammasome for the treatment of inflammatory diseases. <i>Nature Medicine</i> , 2015, 21, 248-255.	15.2	1,967
2	Clonal hematopoiesis associated with TET2 deficiency accelerates atherosclerosis development in mice. <i>Science</i> , 2017, 355, 842-847.	6.0	999
3	NLRP3 inflammasome blockade reduces liver inflammation and fibrosis in experimental NASH in mice. <i>Journal of Hepatology</i> , 2017, 66, 1037-1046.	1.8	738
4	Human Monocytes Engage an Alternative Inflammasome Pathway. <i>Immunity</i> , 2016, 44, 833-846.	6.6	619
5	MCC950 directly targets the NLRP3 ATP-hydrolysis motif for inflammasome inhibition. <i>Nature Chemical Biology</i> , 2019, 15, 556-559.	3.9	561
6	Inflammasome inhibition prevents $\alpha$ -synuclein pathology and dopaminergic neurodegeneration in mice. <i>Science Translational Medicine</i> , 2018, 10, .	5.8	493
7	Natural product and natural product derived drugs in clinical trials. <i>Natural Product Reports</i> , 2014, 31, 1612-1661.	5.2	471
8	T helper 1 immunity requires complement-driven NLRP3 inflammasome activity in CD4 <sup>+</sup> T cells. <i>Science</i> , 2016, 352, aad1210.	6.0	395
9	Inhibiting the NLRP3 inflammasome with MCC950 promotes non-phlogistic clearance of amyloid- $\beta$ and cognitive function in APP/PS1 mice. <i>Brain, Behavior, and Immunity</i> , 2017, 61, 306-316.	2.0	371
10	K <sup>+</sup> Efflux-Independent NLRP3 Inflammasome Activation by Small Molecules Targeting Mitochondria. <i>Immunity</i> , 2016, 45, 761-773.	6.6	364
11	Role for NLRP3 Inflammasome-mediated, IL-1 $\beta$ -Dependent Responses in Severe, Steroid-Resistant Asthma. <i>American Journal of Respiratory and Critical Care Medicine</i> , 2017, 196, 283-297.	2.5	304
12	Myeloid-derived miR-223 regulates intestinal inflammation via repression of the NLRP3 inflammasome. <i>Journal of Experimental Medicine</i> , 2017, 214, 1737-1752.	4.2	289
13	NLRP3 inflammasome activation downstream of cytoplasmic LPS recognition by both caspase-4 and caspase-5. <i>European Journal of Immunology</i> , 2015, 45, 2918-2926.	1.6	283
14	The NLRP3 inflammasome functions as a driver of the myelodysplastic syndrome phenotype. <i>Blood</i> , 2016, 128, 2960-2975.	0.6	271
15	The selective NLRP3-inflammasome inhibitor MCC950 reduces infarct size and preserves cardiac function in a pig model of myocardial infarction. <i>European Heart Journal</i> , 2017, 38, ehw247.	1.0	222
16	MCC950, a specific small molecule inhibitor of NLRP3 inflammasome attenuates colonic inflammation in spontaneous colitis mice. <i>Scientific Reports</i> , 2018, 8, 8618.	1.6	208
17	Pharmacological inhibition of the NLRP3 inflammasome reduces blood pressure, renal damage, and dysfunction in salt-sensitive hypertension. <i>Cardiovascular Research</i> , 2019, 115, 776-787.	1.8	165
18	Reassessing the role of the NLRP3 inflammasome during pathogenic influenza A virus infection via temporal inhibition. <i>Scientific Reports</i> , 2016, 6, 27912.	1.6	150

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19	Inflammasome activity is essential for one kidney/deoxycorticosterone acetate/salt-induced hypertension in mice. <i>British Journal of Pharmacology</i> , 2016, 173, 752-765.	2.7	143
20	High-performance liquid chromatographic separation of natural and synthetic desulphoglucosinolates and their chemical validation by UV, NMR and chemical ionisation-MS methods. <i>Phytochemical Analysis</i> , 2001, 12, 226-242.	1.2	142
21	The microglial NLRP3 inflammasome is activated by amyotrophic lateral sclerosis proteins. <i>Glia</i> , 2020, 68, 407-421.	2.5	133
22	Inflammasomes in the lung. <i>Molecular Immunology</i> , 2017, 86, 44-55.	1.0	126
23	The Cytokine Release Inhibitory Drug CRID3 Targets ASC Oligomerisation in the NLRP3 and AIM2 Inflammasomes. <i>PLoS ONE</i> , 2011, 6, e29539.	1.1	117
24	IL-1 $\beta$ is an innate immune sensor of microbial proteolysis. <i>Science Immunology</i> , 2016, 1, .	5.6	115
25	Fishing for Drug Targets: A Focus on Diazirine Photoaffinity Probe Synthesis. <i>Journal of Medicinal Chemistry</i> , 2018, 61, 6945-6963.	2.9	113
26	NLRP3 inflammasome as prognostic factor and therapeutic target in primary progressive multiple sclerosis patients. <i>Brain</i> , 2020, 143, 1414-1430.	3.7	92
27	Interleukin-10 regulates the inflammasome-driven augmentation of inflammatory arthritis and joint destruction. <i>Arthritis Research and Therapy</i> , 2014, 16, 419.	1.6	86
28	A multicomponent toxin from <i>Bacillus cereus</i> incites inflammation and shapes host outcome via the NLRP3 inflammasome. <i>Nature Microbiology</i> , 2019, 4, 362-374.	5.9	78
29	Specific inhibition of NLRP3 in chikungunya disease reveals a role for inflammasomes in alphavirus-induced inflammation. <i>Nature Microbiology</i> , 2017, 2, 1435-1445.	5.9	77
30	Strain- and host species-specific inflammasome activation, IL-1 $\beta$ release, and cell death in macrophages infected with uropathogenic <i>Escherichia coli</i> . <i>Mucosal Immunology</i> , 2016, 9, 124-136.	2.7	74
31	PB1-F2 Peptide Derived from Avian Influenza A Virus H7N9 Induces Inflammation via Activation of the NLRP3 Inflammasome. <i>Journal of Biological Chemistry</i> , 2017, 292, 826-836.	1.6	70
32	Targeting the NLRP3 Inflammasome With Inhibitor MCC950 Prevents Aortic Aneurysms and Dissections in Mice. <i>Journal of the American Heart Association</i> , 2020, 9, e014044.	1.6	64
33	NLRP3-inflammasome inhibition prevents high fat and high sugar diets-induced heart damage through autophagy induction. <i>Oncotarget</i> , 2017, 8, 99740-99756.	0.8	53
34	<i>Bacillus cereus</i> non-haemolytic enterotoxin activates the NLRP3 inflammasome. <i>Nature Communications</i> , 2020, 11, 760.	5.8	51
35	Pharmacological targeting of the transcription factor SOX18 delays breast cancer in mice. <i>ELife</i> , 2017, 6, .	2.8	50
36	Pressor response to angiotensin II is enhanced in aged mice and associated with inflammation, vasoconstriction and oxidative stress. <i>Aging</i> , 2017, 9, 1595-1606.	1.4	49

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37	The NLRP3 Inflammasome Suppresses Protective Immunity to Gastrointestinal Helminth Infection. <i>Cell Reports</i> , 2018, 23, 1085-1098.	2.9	48
38	Pharmacological characterisation of small molecule C5aR1 inhibitors in human cells reveals biased activities for signalling and function. <i>Biochemical Pharmacology</i> , 2020, 180, 114156.	2.0	47
39	Interleukin-1 $\beta$ suppression dampens inflammatory leucocyte production and uptake in atherosclerosis. <i>Cardiovascular Research</i> , 2022, 118, 2778-2791.	1.8	47
40	Small-Molecule Inhibitors of the SOX18 Transcription Factor. <i>Cell Chemical Biology</i> , 2017, 24, 346-359.	2.5	42
41	Sulfonylureas as Concomitant Insulin Secretagogues and NLRP3 Inflammasome Inhibitors. <i>ChemMedChem</i> , 2017, 12, 1449-1457.	1.6	42
42	The Endoplasmic Reticulum-Mitochondrion Tether ERMES Orchestrates Fungal Immune Evasion, Illuminating Inflammasome Responses to Hyphal Signals. <i>MSphere</i> , 2016, 1, .	1.3	39
43	The Bohlmann-Raetz route to functionalised pyridine scaffolds and their use in library synthesis. <i>Tetrahedron Letters</i> , 2003, 44, 1627-1629.	0.7	35
44	NLRP3 Inflammasome Inhibition by MCC950 in Aged Mice Improves Health via Enhanced Autophagy and PPAR $\alpha$ Activity. <i>Journals of Gerontology - Series A Biological Sciences and Medical Sciences</i> , 2020, 75, 1457-1464.	1.7	33
45	Tissue-resident macrophages actively suppress IL-1 $\beta$ release via a reactive prostanoid/IL-10 pathway. <i>EMBO Journal</i> , 2020, 39, e103454.	3.5	33
46	Evaluation of liquid chromatography-atmospheric pressure chemical ionisation-mass spectrometry for the identification and quantification of desulphoglucosinolates. <i>Phytochemical Analysis</i> , 2000, 11, 216-225.	1.2	32
47	Paclitaxel and CYC3, an aurora kinase A inhibitor, synergise in pancreatic cancer cells but not bone marrow precursor cells. <i>British Journal of Cancer</i> , 2012, 107, 1692-1701.	2.9	32
48	Identification, Synthesis, and Biological Evaluation of the Major Human Metabolite of NLRP3 Inflammasome Inhibitor MCC950. <i>ACS Medicinal Chemistry Letters</i> , 2016, 7, 1034-1038.	1.3	32
49	Evidence against a role for NLRP3-driven islet inflammation in db/db mice. <i>Molecular Metabolism</i> , 2018, 10, 66-73.	3.0	32
50	Metabolic competition between host and pathogen dictates inflammasome responses to fungal infection. <i>PLoS Pathogens</i> , 2020, 16, e1008695.	2.1	28
51	Caspase-1-dependent inflammasomes mediate photoreceptor cell death in photo-oxidative damage-induced retinal degeneration. <i>Scientific Reports</i> , 2020, 10, 2263.	1.6	28
52	Prevention of the foreign body response to implantable medical devices by inflammasome inhibition. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2022, 119, e2115857119.	3.3	27
53	Non-canonical Caspase-1 Signaling Drives RIP2-Dependent and TNF $\alpha$ -Mediated Inflammation In Vivo. <i>Cell Reports</i> , 2020, 30, 2501-2511.e5.	2.9	24
54	Efficient synthesis of anacardic acid analogues and their antibacterial activities. <i>Bioorganic and Medicinal Chemistry Letters</i> , 2013, 23, 1667-1670.	1.0	23

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55	Double-Stranded RNA Is a Novel Molecular Target in Osteomyelitis Pathogenesis. American Journal of Pathology, 2019, 189, 2077-2089.	1.9	23
56	Synthesis of deuterium labelled desulfoglucosinolates as internal standards for LC-MS analysis. Tetrahedron, 1999, 55, 13269-13284.	1.0	21
57	Relationship between type 2 cytokine and inflammasome responses in obesity-associated asthma. Journal of Allergy and Clinical Immunology, 2022, 149, 1270-1280.	1.5	21
58	Lipocalin-2 induces NLRP3 inflammasome activation via HMGB1 induced TLR4 signaling in heart tissue of mice under pressure overload challenge. American Journal of Translational Research (discontinued), 2017, 9, 2723-2735.	0.0	21
59	Inflammasome-Independent Role for NLRP3 in Controlling Innate Antihelminth Immunity and Tissue Repair in the Lung. Journal of Immunology, 2019, 203, 2724-2734.	0.4	20
60	GMP Synthase Is Required for Virulence Factor Production and Infection by Cryptococcus neoformans. Journal of Biological Chemistry, 2017, 292, 3049-3059.	1.6	19
61	NLRP3 inflammasome inhibition with MCC950 improves insulin sensitivity and inflammation in a mouse model of frontotemporal dementia. Neuropharmacology, 2020, 180, 108305.	2.0	19
62	Targeting NLRP3 and Staphylococcal pore-forming toxin receptors in human-induced pluripotent stem cell-derived macrophages. Journal of Leukocyte Biology, 2020, 108, 967-981.	1.5	19
63	Disruption of de Novo Adenosine Triphosphate (ATP) Biosynthesis Abolishes Virulence in <i>Cryptococcus neoformans</i> . ACS Infectious Diseases, 2016, 2, 651-663.	1.8	16
64	Cryptococcus neoformans ADS lyase is an enzyme essential for virulence whose crystal structure reveals features exploitable in antifungal drug design. Journal of Biological Chemistry, 2017, 292, 11829-11839.	1.6	15
65	Antifungal benzo[b]thiophene 1,1-dioxide IMPDH inhibitors exhibit pan-assay interference (PAINS) profiles. Bioorganic and Medicinal Chemistry, 2018, 26, 5408-5419.	1.4	15
66	Lack of protein prenylation promotes NLRP3 inflammasome assembly in human monocytes. Journal of Allergy and Clinical Immunology, 2019, 143, 2315-2317.e3.	1.5	15
67	Multiple inflammasomes may regulate the interleukin-1-driven inflammation in protracted bacterial bronchitis. ERJ Open Research, 2018, 4, 00130-2017.	1.1	14
68	Synthesis and evaluation of NLRP3-inhibitory sulfonylurea [11C]MCC950 in healthy animals. Bioorganic and Medicinal Chemistry Letters, 2020, 30, 127186.	1.0	14
69	An optimized whole blood assay measuring expression and activity of NLRP3, NLRC4 and AIM2 inflammasomes. Clinical Immunology, 2018, 191, 100-109.	1.4	13
70	<i>Clostridium septicum</i> Î±-toxin activates the NLRP3 inflammasome by engaging GPI-anchored proteins. Science Immunology, 2022, 7, .	5.6	12
71	Chick Embryo: A Preclinical Model for Understanding Ischemia-Reperfusion Mechanism. Frontiers in Pharmacology, 2018, 9, 1034.	1.6	11
72	The synthesis of glucosinolates deuterium labelled in the glucose fragment. Journal of Labelled Compounds and Radiopharmaceuticals, 2006, 49, 1201-1211.	0.5	9

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73	The Small Molecule NLRP3 Inflammasome Inhibitor MCC950 Does Not Alter Wound Healing in Obese Mice. <i>International Journal of Molecular Sciences</i> , 2018, 19, 3289.	1.8	8
74	Compromised <scp>NLRP</scp>3 and <scp>AIM</scp>2 inflammasome function in autoimmune <scp>NZB</scp>/W F1 mouse macrophages. <i>Immunology and Cell Biology</i> , 2019, 97, 17-28.	1.0	8
75	Synthesis of deuterium-labelled analogues of NLRP3 inflammasome inhibitor MCC950. <i>Bioorganic and Medicinal Chemistry Letters</i> , 2018, 28, 793-795.	1.0	7
76	Design, synthesis and evaluation of an NLRP3 inhibitor diazirine photoaffinity probe. <i>Tetrahedron Letters</i> , 2020, 61, 151849.	0.7	7
77	Aim2 suppresses cigarette smoke-induced neutrophil recruitment, neutrophil caspase-1 activation and anti-IL6-mediated neutrophil depletion. <i>Immunology and Cell Biology</i> , 2022, 100, 235-249.	1.0	7
78	The synthesis of isotopically labelled glucosinolates for analysis and metabolic studies. <i>Journal of Labelled Compounds and Radiopharmaceuticals</i> , 2007, 50, 260-263.	0.5	6
79	Characterisation of small molecule ligands 4CMTB and 2CTAP as modulators of human FFA2 receptor signalling. <i>Scientific Reports</i> , 2018, 8, 17819.	1.6	6
80	Quantitation of Purines from Pigeon Guano and Implications for <i>Cryptococcus neoformans</i> Survival During Infection. <i>Mycopathologia</i> , 2019, 184, 273-281.	1.3	6
81	Antimicrobial Octapeptin C4 Analogues Active against <i>Cryptococcus</i> Species. <i>Antimicrobial Agents and Chemotherapy</i> , 2018, 62, .	1.4	5
82	THU0027...The Effect of Novel Compound Mcc950 on the Nlrp3 Inflammasome in the RA Joint. <i>Annals of the Rheumatic Diseases</i> , 2015, 74, 202.2-202.	0.5	2
83	Inhibiting Inflammasomes with Small Molecules. <i>Experientia Supplementum (2012)</i> , 2018, 108, 343-400.	0.5	2
84	Modulating Neuroplasticity: Lessons Learned from Antidepressants and Emerging Novel Therapeutics. <i>Current Treatment Options in Psychiatry</i> , 2021, 8, 229-257.	0.7	1
85	Cytokine release inhibitor drug, CRID3, inhibits the NLRP3 inflammasome in glia. <i>Journal of Neuroimmunology</i> , 2014, 275, 147.	1.1	0
86	An optimized whole blood assay measuring expression and activity of NLRP3-, NLRC4 and AIM2-inflammasomes. <i>Pediatric Rheumatology</i> , 2015, 13, .	0.9	0
87	A6.18...Novel compound cytokine release inhibitory drug 3 (CRID3) inhibits the NLRP3 inflammasome in rheumatoid arthritis. <i>Annals of the Rheumatic Diseases</i> , 2015, 74, A62.2-A63.	0.5	0