Luke A J O'neill

List of Publications by Year
in descending order

138 papers	28,832 citations	25034 57 h-index	14208 128 g-index
143 all docs	143 docs citations	143 times ranked	39025 citing authors

#	Article	IF	Citations
1	The family of five: TIR-domain-containing adaptors in Toll-like receptor signalling. Nature Reviews Immunology, 2007, 7, 353-364.	22.7	2,285
2	A guide to immunometabolism for immunologists. Nature Reviews Immunology, 2016, 16, 553-565.	22.7	2,100
3	A small-molecule inhibitor of the NLRP3 inflammasome for the treatment of inflammatory diseases. Nature Medicine, 2015, 21, 248-255.	30.7	1,967
4	mTOR- and HIF-1Î±â€“mediated aerobic glycolysis as metabolic basis for trained immunity. Science, 2014, 345, 1250684.	12.6	1,517
5	Succinate Dehydrogenase Supports Metabolic Repurposing of Mitochondria to Drive Inflammatory Macrophages. Cell, 2016, 167, 457-470.e13.	28.9	1,396
6	The history of Toll-like receptors â€” redefining innate immunity. Nature Reviews Immunology, 2013, 13, 453-460.	22.7	1,338
7	Immunometabolism governs dendritic cell and macrophage function. Journal of Experimental Medicine, 2016, 213, 15-23.	8.5	1,206
8	Itaconate is an anti-inflammatory metabolite that activates Nrf2 via alkylation of KEAP1. Nature, 2018, 556, 113-117.	27.8	1,115
9	Metabolism of inflammation limited by AMPK and pseudo-starvation. Nature, 2013, 493, 346-355.	27.8	946
10	A Long Noncoding RNA Mediates Both Activation and Repression of Immune Response Genes. Science, 2013, 341, 789-792.	12.6	925
11	Pyruvate Kinase M2 Regulates Hif-1Î± Activity and IL-1Î² Induction and Is a Critical Determinant of the Warburg Effect in LPS-Activated Macrophages. Cell Metabolism, 2015, 21, 65-80.	16.2	887
12	Mitochondria are the powerhouses of immunity. Nature Immunology, 2017, 18, 488-498.	14.5	704
13	Metabolic Reprograming in Macrophage Polarization. Frontiers in Immunology, 2014, 5, 420.	4.8	649
14	How Toll-like receptors signal: what we know and what we donâ€™t know. Current Opinion in Immunology, 2006, 18, 3-9.	5.5	572
15	The interleukinâ€1 receptor/Tollâ€like receptor superfamily: 10 years of progress. Immunological Reviews, 2008, 226, 10-18.	6.0	565
16	Succinate: a metabolic signal in inflammation. Trends in Cell Biology, 2014, 24, 313-320.	7.9	507
17	Circadian Clock Proteins and Immunity. Immunity, 2014, 40, 178-186.	14.3	451
18	T helper 1 immunity requires complement-driven NLRP3 inflammasome activity in CD4 ⁺ T cells. Science, 2016, 352, aad1210.	12.6	395

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19	Therapeutic Targeting of Toll-Like Receptors for Infectious and Inflammatory Diseases and Cancer. Pharmacological Reviews, 2009, 61, 177-197.	16.0	387
20	BCG-induced trained immunity: can it offer protection against COVID-19?. Nature Reviews Immunology, 2020, 20, 335-337.	22.7	384
21	Itaconate: the poster child of metabolic reprogramming in macrophage function. Nature Reviews Immunology, 2019, 19, 273-281.	22.7	359
22	Myocardial Ischemia/Reperfusion Injury Is Mediated by Leukocytic Toll-Like Receptor-2 and Reduced by Systemic Administration of a Novel Antiâ€“Toll-Like Receptor-2 Antibody. Circulation, 2010, 121, 80-90.	1.6	319
23	Role for NLRP3 Inflammasomeâ€“mediated, IL-1Î²â€“Dependent Responses in Severe, Steroid-Resistant Asthma. American Journal of Respiratory and Critical Care Medicine, 2017, 196, 283-297.	5.6	304
24	The Role of HIF in Immunity and Inflammation. Cell Metabolism, 2020, 32, 524-536.	16.2	304
25	Myeloid-derived miR-223 regulates intestinal inflammation via repression of the NLRP3 inflammasome. Journal of Experimental Medicine, 2017, 214, 1737-1752.	8.5	289
26	Targeting immunometabolism as an anti-inflammatory strategy. Cell Research, 2020, 30, 300-314.	12.0	285
27	The Immunomodulatory Metabolite Itaconate Modifies NLRP3 and Inhibits Inflammasome Activation. Cell Metabolism, 2020, 32, 468-478.e7.	16.2	283
28	Trained immunity, tolerance, priming and differentiation: distinct immunological processes. Nature Immunology, 2021, 22, 2-6.	14.5	274
29	The NLRP3 inflammasome functions as a driver of the myelodysplastic syndrome phenotype. Blood, 2016, 128, 2960-2975.	1.4	271
30	Coupling Krebs cycle metabolites to signalling in immunity and cancer. Nature Metabolism, 2019, 1, 16-33.	11.9	260
31	Metformin Inhibits the Production of Reactive Oxygen Species from NADH:Ubiquinone Oxidoreductase to Limit Induction of Interleukin-1Î² (IL-1Î²) and Boosts Interleukin-10 (IL-10) in Lipopolysaccharide (LPS)-activated Macrophages. Journal of Biological Chemistry, 2015, 290, 20348-20359.	3.4	252
32	Circadian control of innate immunity in macrophages by miR-155 targeting Bmal1. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 7231-7236.	7.1	244
33	Krebs Cycle Reborn in Macrophage Immunometabolism. Annual Review of Immunology, 2020, 38, 289-313.	21.8	244
34	Krebs Cycle Reimagined: The Emerging Roles of Succinate and Itaconate as Signal Transducers. Cell, 2018, 174, 780-784.	28.9	237
35	Metabolic regulation of <scp>NLRP</scp>3. Immunological Reviews, 2018, 281, 88-98.	6.0	231
36	Circadian clock protein BMAL1 regulates IL-1Î² in macrophages via NRF2. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, E8460-E8468.	7.1	230

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37	New insights into the regulation of TLR signaling. Journal of Leukocyte Biology, 2006, 80, 220-226.	3.3	229
38	A Broken Krebs Cycle in Macrophages. Immunity, 2015, 42, 393-394.	14.3	169
39	The Cellular and Molecular Basis of Translational Immunometabolism. Immunity, 2015, 43, 421-434.	14.3	161
40	Inflammasomes in inflammatory disorders: the role of TLRs and their interactions with NLRs. Seminars in Immunopathology, 2007, 29, 239-248.	6.1	153
41	Toll-like receptors and chronic inflammation in rheumatic diseases: new developments. Nature Reviews Rheumatology, 2016, 12, 344-357.	8.0	150
42	Therapeutic targeting of Toll-like receptors for inflammatory and infectious diseases. Current Opinion in Pharmacology, 2003, 3, 396-403.	3.5	147
43	The Immunomodulatory Potential of the Metabolite Itaconate. Trends in Immunology, 2019, 40, 687-698.	6.8	138
44	The Inflammasome in Atherosclerosis and Type 2 Diabetes. Science Translational Medicine, 2011, 3, 81ps17.	12.4	134
45	Inflammasomes in the lung. Molecular Immunology, 2017, 86, 44-55.	2.2	126
46	The intracellular chloride channel proteins CLIC1 and CLIC4 induce IL-1Î² transcription and activate the NLRP3 inflammasome. Journal of Biological Chemistry, 2017, 292, 12077-12087.	3.4	122
47	Cytokine-like Roles for Metabolites in Immunity. Molecular Cell, 2020, 78, 814-823.	9.7	119
48	Biochemical regulation of the inflammasome. Critical Reviews in Biochemistry and Molecular Biology, 2012, 47, 424-443.	5.2	114
49	Endosomal NOX2 oxidase exacerbates virus pathogenicity and is a target for antiviral therapy. Nature Communications, 2017, 8, 69.	12.8	111
50	Itaconate and itaconate derivatives target JAK1 to suppress alternative activation of macrophages. Cell Metabolism, 2022, 34, 487-501.e8.	16.2	107
51	The Role of Ets2 Transcription Factor in the Induction of MicroRNA-155 (miR-155) by Lipopolysaccharide and Its Targeting by Interleukin-10. Journal of Biological Chemistry, 2014, 289, 4316-4325.	3.4	98
52	Treatment With OPN-305, a Humanized Antiâ€“Toll-Like Receptor-2 Antibody, Reduces Myocardial Ischemia/Reperfusion Injury in Pigs. Circulation: Cardiovascular Interventions, 2012, 5, 279-287.	3.9	95
53	A critical role for citrate metabolism in LPS signalling. Biochemical Journal, 2011, 438, e5-e6.	3.7	92
54	Loss of the molecular clock in myeloid cells exacerbates T cell-mediated CNS autoimmune disease. Nature Communications, 2017, 8, 1923.	12.8	90

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55	The Induction of Proâ€“IL-1Î² by Lipopolysaccharide Requires Endogenous Prostaglandin E2 Production. Journal of Immunology, 2017, 198, 3558-3564.	0.8	85
56	Glutathione transferase Omega 1 is required for the lipopolysaccharide-stimulated induction of NADPH oxidase 1 and the production of reactive oxygen species in macrophages. Free Radical Biology and Medicine, 2014, 73, 318-327.	2.9	62
57	The emerging role of metabolic regulation in the functioning of Tollâ€like receptors and the NODâ€like receptor Nlrp3. FEBS Letters, 2011, 585, 1568-1572.	2.8	61
58	Glutathione Transferase Omega-1 Regulates NLRP3 Inflammasome Activation through NEK7 Deglutathionylation. Cell Reports, 2019, 29, 151-161.e5.	6.4	58
59	The GOLD domain-containing protein TMED7 inhibits TLR4 signalling from the endosome upon LPS stimulation. Nature Communications, 2012, 3, 707.	12.8	56
60	GSTO1-1 modulates metabolism in macrophages activated through the LPS and TLR4 pathway. Journal of Cell Science, 2015, 128, 1982-1990.	2.0	55
61	The RNA-binding protein Tristetraprolin (TTP) is a critical negative regulator of the NLRP3 inflammasome. Journal of Biological Chemistry, 2017, 292, 6869-6881.	3.4	53
62	Caspase-11 promotes allergic airway inflammation. Nature Communications, 2020, 11, 1055.	12.8	52
63	Spontaneous atopic dermatitis in mice with a defective skin barrier is independent of ILC2 and mediated by ILâ€1Î². Allergy: European Journal of Allergy and Clinical Immunology, 2019, 74, 1920-1933.	5.7	51
64	Nrf2 activation reprograms macrophage intermediary metabolism and suppresses the type I interferon response. IScience, 2022, 25, 103827.	4.1	51
65	Trypanosoma bruceimetabolite indolepyruvate decreases HIF-1Î± and glycolysis in macrophages as a mechanism of innate immune evasion. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, E7778-E7787.	7.1	50
66	The circadian protein BMAL1 in myeloid cells is a negative regulator of allergic asthma. American Journal of Physiology - Lung Cellular and Molecular Physiology, 2017, 312, L855-L860.	2.9	50
67	Brutonâ€™s Tyrosine Kinase Mediates the Synergistic Signalling between TLR9 and the B Cell Receptor by Regulating Calcium and Calmodulin. PLoS ONE, 2013, 8, e74103.	2.5	49
68	The role of the electron transport chain in immunity. FASEB Journal, 2021, 35, e21974.	0.5	49
69	Loss of MicroRNA-21 Influences the Gut Microbiota, Causing Reduced Susceptibility in a Murine Model of Colitis. Journal of Crohn's and Colitis, 2018, 12, 835-848.	1.3	48
70	Immunity's Early-Warning System. Scientific American, 2005, 292, 38-45.	1.0	47
71	GSTO1-1 plays a pro-inflammatory role in models of inflammation, colitis and obesity. Scientific Reports, 2017, 7, 17832.	3.3	47
72	A Potent Anti-Inflammatory Response in Bat Macrophages May Be Linked to Extended Longevity and Viral Tolerance. Acta Chiropterologica, 2017, 19, 219-228.	0.6	46

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73	Glycolytic reprogramming by TLRs in dendritic cells. Nature Immunology, 2014, 15, 314-315.	14.5	39
74	A vaccine for colorectral cancer. Trends in Immunology, 2001, 22, 354.	6.8	38
75	Mal and MyD88: adapter proteins involved in signal transduction by Toll-like receptors. Journal of Endotoxin Research, 2003, 9, 55-59.	2.5	36
76	The MyD88+ Phenotype Is an Adverse Prognostic Factor in Epithelial Ovarian Cancer. PLoS ONE, 2014, 9, e100816.	2.5	36
77	Influenza A virus causes maternal and fetal pathology via innate and adaptive vascular inflammation in mice. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 24964-24973.	7.1	34
78	Distinct Mechanisms for Induction and Tolerance Regulate the Immediate Early Genes Encoding Interleukin 1Î² and Tumor Necrosis Factor Î±. PLoS ONE, 2013, 8, e70622.	2.5	33
79	A Metabolic Roadblock in Inflammatory Macrophages. Cell Reports, 2016, 17, 625-626.	6.4	33
80	Solution structure of the TLR adaptor MAL/TIRAP reveals an intact BB loop and supports MAL Cys91 glutathionylation for signaling. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, E6480-E6489.	7.1	33
81	Camelpox virus encodes a schlafen-like protein that affects orthopoxvirus virulence. Journal of General Virology, 2007, 88, 1667-1676.	2.9	31
82	A Common Variant in the Adaptor Mal Regulates Interferon Gamma Signaling. Immunity, 2016, 44, 368-379.	14.3	30
83	Targeting immunometabolism to treat COVID-19. Immunotherapy Advances, 2021, 1, ltab013.	3.0	29
84	Cardiolipin and the Nlrp3 Inflammasome. Cell Metabolism, 2013, 18, 610-612.	16.2	25
85	Metabolic regulation of RA macrophages is distinct from RA fibroblasts and blockade of glycolysis alleviates inflammatory phenotype in both cell types. Cellular and Molecular Life Sciences, 2021, 78, 7693-7707.	5.4	25
86	ACLY Nuclear Translocation in Human Macrophages Drives Proinflammatory Gene Expression by NF-Î¹B Acetylation. Cells, 2021, 10, 2962.	4.1	24
87	How Low Cholesterol Is Good for Anti-viral Immunity. Cell, 2015, 163, 1572-1574.	28.9	23
88	The Powerstroke and Camshaft of the RIG-I Antiviral RNA Detection Machine. Cell, 2011, 147, 259-261.	28.9	22
89	Glutathione and Glutathione Transferase Omega 1 as Key Posttranslational Regulators in Macrophages. Microbiology Spectrum, 2017, 5, .	3.0	22
90	Dimethyl fumarate: targeting glycolysis to treat MS. Cell Research, 2018, 28, 613-615.	12.0	22

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91	Relationship between type 2 cytokine and inflammasome responses in obesity-associated asthma. Journal of Allergy and Clinical Immunology, 2022, 149, 1270-1280.	2.9	21
92	Specificity in the innate response: pathogen recognition by Toll-like receptor combinations. Trends in Immunology, 2001, 22, 70.	6.8	16
93	GOTcha: lncRNA-ACOD1 targets metabolism during viral infection. Cell Research, 2018, 28, 137-138.	12.0	15
94	SARS-CoV-2 targets MAVS for immune evasion. Nature Cell Biology, 2021, 23, 682-683.	10.3	15
95	Immune-mediated inflammation across disease boundaries: breaking down research silos. Nature Immunology, 2021, 22, 1344-1348.	14.5	15
96	Succinate strikes. Nature, 2014, 515, 350-351.	27.8	14
97	4-Octyl-Itaconate and Dimethyl Fumarate Inhibit COX2 Expression and Prostaglandin Production in Macrophages. Journal of Immunology, 2021, 207, 2561-2569.	0.8	14
98	How should we talk about metabolism?. Nature Immunology, 2020, 21, 713-715.	14.5	13
99	â€œTransflammationâ€• When Innate Immunity Meets Induced Pluripotency. Cell, 2012, 151, 471-473.	28.9	12
100	Role for Retinoic Acid-Related Orphan Receptor Alpha (RORÎ±) Expressing Macrophages in Diet-Induced Obesity. Frontiers in Immunology, 2020, 11, 1966.	4.8	12
101	Innate immune signaling and immunothrombosis: New insights and therapeutic opportunities. European Journal of Immunology, 2022, 52, 1024-1034.	2.9	12
102	VITAMIN C INHIBITS NFÎºB ACTIVATION IN ENDOTHELIAL CELLS. Biochemical Society Transactions, 1997, 25, 131S-131S.	3.4	11
103	Staurosporine, but not Ro 31-8220, induces interleukin 2 production and synergizes with interleukin 1Î± in EL4 thymoma cells: Activation of nuclear factor ÎºB as a common signal for staurosporine and interleukin 1Î±. Biochemical Journal, 1997, 325, 39-45.	3.7	10
104	Immunometabolism and the land of milk and honey. Nature Reviews Immunology, 2017, 17, 217-217.	22.7	9
105	Immunothrombosis and the molecular control of tissue factor by pyroptosis: prospects for new anticoagulants. Biochemical Journal, 2022, 479, 731-750.	3.7	9
106	Mechanism of NFÎºB activation by interleukin-1 and tumour necrosis factor in endothelial cells. Biochemical Society Transactions, 1996, 24, 2S-2S.	3.4	8
107	Macrophages Remember Cheeseburgers and Promote Inflammation via NLRP3. Trends in Molecular Medicine, 2018, 24, 335-337.	6.7	7
108	Innate Immunity in Plants Goes to the PUB. Science, 2011, 332, 1386-1387.	12.6	6

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109	Autocrine regulation of the transcription factor NFÎºB by TNFÎ± in the human T cell lymphoma line Hut 78. Biochemical Society Transactions, 1995, 23, 113S-113S.	3.4	5
110	MyD88 is an essential component of retinoic acid-induced differentiation in human pluripotent embryonal carcinoma cells. Cell Death and Differentiation, 2017, 24, 1975-1986.	11.2	5
111	Targeting mitochondria to beat HIV-1. Nature Immunology, 2021, 22, 398-399.	14.5	5
112	Gob genes, mucus and asthma. Trends in Immunology, 2001, 22, 353.	6.8	4
113	Glutathione transferase Omega 1 confers protection against azoxymethane-induced colorectal tumour formation. Carcinogenesis, 2021, 42, 853-863.	2.8	4
114	The itaconate family of immunomodulators grows. Nature Metabolism, 2022, 4, 499-500.	11.9	4
115	What is Life? The next fifty years. An introduction. , 1995, , 1-4.		3
116	STUDIES INTO THE MECHANISM OF NFÎºB ACTIVATION BY IL1, TNF AND H2O2 IN PRIMARY AND TRANSFORMED ENDOTHELIAL CELLS. Biochemical Society Transactions, 1997, 25, 125S-125S.	3.4	3
117	Counter-regulation in the IKK family. Biochemical Journal, 2011, 434, e1-e2.	3.7	3
118	The Hunger Games: Salmonella , Anorexia, and NLRP3. Cell Metabolism, 2017, 25, 225-226.	16.2	3
119	Targeting macrophage immunometabolism to prevent atherosclerosis. Nature Metabolism, 2019, 1, 1173-1174.	11.9	3
120	Bridging the gap â€“ a new role for STAT3 in TLR4â€mediated metabolic reprogramming. Immunology and Cell Biology, 2021, 99, 122-125.	2.3	3
121	Dioxins damage dendritic cells. Trends in Immunology, 2001, 22, 296.	6.8	2
122	A role for leptin in autoimmunity?. Trends in Immunology, 2001, 22, 352.	6.8	2
123	Pseudomonas Persists by Feeding off Itaconate. Cell Metabolism, 2020, 31, 1045-1047.	16.2	2
124	SUSTAINED ACTIVATION OF NFÎºB AND TRANSIENT IÎºBÎ± DEGRADATION INDUCED BY TUMOUR NECROSIS FACTOR IN 1321N1 HUMAN ASTROCYTOMA. Biochemical Society Transactions, 1995, 23, 597S-597S.	3.4	1
125	A roll-call of monocytic gene induction. Trends in Immunology, 2001, 22, 182.	6.8	1
126	Irish say no to Nice but yes to immunology. Trends in Immunology, 2001, 22, 421.	6.8	1

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127	Ironing Out Vaccine Efficacy. Med, 2021, 2, 113-114.	4.4	1
128	Glutathione and Glutathione Transferase Omega 1 as Key Posttranslational Regulators in Macrophages. , 0, , 787-801.		1
129	A Vision for Cytokine Biology with 20/20 Clarity. Function, 2020, 2, zqaa042.	2.3	1
130	IL1 and TLR Signal Transduction-Ancient Signalling Pathways Involved In Host Defence. Biochemical Society Transactions, 2000, 28, A489-A489.	3.4	0
131	A gene for Crohn's disease is given the nod. Trends in Pharmacological Sciences, 2001, 22, 398-399.	8.7	0
132	Who needs adaptive immunity?. Trends in Immunology, 2001, 22, 125.	6.8	0
133	Fixing a broken heart with bone. Trends in Immunology, 2001, 22, 298.	6.8	0
134	Vaccine safety concerns. Trends in Immunology, 2001, 22, 420-421.	6.8	0
135	Passive smoking increases allergy. Trends in Immunology, 2001, 22, 660.	6.8	0
136	Rocking the world of innate immunity: an interview with Luke O'Neill. DMM Disease Models and Mechanisms, 2018, 11, .	2.4	0
137	Tollâ€like Receptors. , 2008, , 1207-1212.		0
138	Creating ATP via creatine kinase B for NLRP3 activation. Nature Immunology, 2022, 23, 653-655.	14.5	0