Luke A J O'neill

List of Publications by Year
in descending order

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Version: 2025-02-01

123 papers	23,912 citations	20432 56 h-index	11793 126 g-index
146 all docs	146 docs citations	146 times ranked	37478 citing authors

#	Article	IF	Citations
1	Mitochondrial respiratory complex III sustains IL-10 production in activated macrophages and promotes tumor-mediated immune evasion. Science Advances, 2025, 11, .	11.3	0
2	A break in mitochondrial endosymbiosis as a basis for inflammatory diseases. Nature, 2024, 626, 271-279.	40.1	32
3	Metabolic regulation of type I interferon production. Immunological Reviews, 2024, 323, 276-287.	6.8	7
4	Metabolic Messengers: itaconate. Nature Metabolism, 2024, 6, 1661-1667.	11.9	5
5	Itaconate drives mtRNA-mediated type I interferon production through inhibition of succinate dehydrogenase. Nature Metabolism, 2024, 6, 2060-2069.	11.9	2
6	Macrophage fumarate hydratase restrains mtRNA-mediated interferon production. Nature, 2023, 615, 490-498.	40.1	103
7	Dimethyl fumarate and 4-octyl itaconate are anticoagulants that suppress Tissue Factor in macrophages via inhibition of Type I Interferon. Nature Communications, 2023, 14, .	14.1	27
8	The metabolic function of pyruvate kinase M2 regulates reactive oxygen species production and microbial killing by neutrophils. Nature Communications, 2023, 14, .	14.1	13
9	Relationship between type 2 cytokine and inflammasome responses in obesity-associated asthma. Journal of Allergy and Clinical Immunology, 2022, 149, 1270-1280.	2.8	35
10	Nrf2 activation reprograms macrophage intermediary metabolism and suppresses the type I interferon response. IScience, 2022, 25, 103827.	3.8	68
11	Itaconate and itaconate derivatives target JAK1 to suppress alternative activation of macrophages. Cell Metabolism, 2022, 34, 487-501.e8.	26.3	157
12	Immunothrombosis and the molecular control of tissue factor by pyroptosis: prospects for new anticoagulants. Biochemical Journal, 2022, 479, 731-750.	3.9	18
13	Creating ATP via creatine kinase B for NLRP3 activation. Nature Immunology, 2022, 23, 653-655.	13.1	1
14	Innate immune signaling and immunothrombosis: New insights and therapeutic opportunities. European Journal of Immunology, 2022, 52, 1024-1034.	3.5	20
15	The itaconate family of immunomodulators grows. Nature Metabolism, 2022, 4, 499-500.	11.9	8
16	Bridging the gap â€“ a new role for STAT3 in TLR4â€mediated metabolic reprogramming. Immunology and Cell Biology, 2021, 99, 122-125.	2.8	3
17	Ironing Out Vaccine Efficacy. Med, 2021, 2, 113-114.	7.1	1
18	Glutathione transferase Omega 1 confers protection against azoxymethane-induced colorectal tumour formation. Carcinogenesis, 2021, 42, 853-863.	2.9	6

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19	Targeting mitochondria to beat HIV-1. Nature Immunology, 2021, 22, 398-399.	13.1	5
20	SARS-CoV-2 targets MAVS for immune evasion. Nature Cell Biology, 2021, 23, 682-683.	10.5	16
21	Targeting immunometabolism to treat COVID-19. Immunotherapy Advances, 2021, 1, .	4.1	29
22	Immune-mediated inflammation across disease boundaries: breaking down research silos. Nature Immunology, 2021, 22, 1344-1348.	13.1	19
23	4-Octyl-Itaconate and Dimethyl Fumarate Inhibit COX2 Expression and Prostaglandin Production in Macrophages. Journal of Immunology, 2021, 207, 2561-2569.	0.6	20
24	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.	5.6	33
25	ACLY Nuclear Translocation in Human Macrophages Drives Proinflammatory Gene Expression by NF-ÎºB Acetylation. Cells, 2021, 10, 2962.	4.8	36
26	The role of the electron transport chain in immunity. FASEB Journal, 2021, 35, .	0.7	61
27	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.	7.7	51
28	Role for Retinoic Acid-Related Orphan Receptor Alpha (RORÎ±) Expressing Macrophages in Diet-Induced Obesity. Frontiers in Immunology, 2020, 11, .	5.0	12
29	The Immunomodulatory Metabolite Itaconate Modifies NLRP3 and Inhibits Inflammasome Activation. Cell Metabolism, 2020, 32, 468-478.e7.	26.3	354
30	The Role of HIF in Immunity and Inflammation. Cell Metabolism, 2020, 32, 524-536.	26.3	387
31	BCG-induced trained immunity: can it offer protection against COVID-19?. Nature Reviews Immunology, 2020, 20, 335-337.	17.9	361
32	How should we talk about metabolism?. Nature Immunology, 2020, 21, 713-715.	13.1	14
33	Targeting immunometabolism as an anti-inflammatory strategy. Cell Research, 2020, 30, 300-314.	8.2	319
34	Caspase-11 promotes allergic airway inflammation. Nature Communications, 2020, 11, .	14.1	60
35	Krebs Cycle Reborn in Macrophage Immunometabolism. Annual Review of Immunology, 2020, 38, 289-313.	30.9	278
36	Cytokine-like Roles for Metabolites in Immunity. Molecular Cell, 2020, 78, 814-823.	14.2	132

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37	Trained immunity, tolerance, priming and differentiation: distinct immunological processes. Nature Immunology, 2020, 22, 2-6.	13.1	321
38	A Vision for Cytokine Biology with 20/20 Clarity. Function, 2020, 2, .	1.5	0
39	Glutathione Transferase Omega-1 Regulates NLRP3 Inflammasome Activation through NEK7 Deglutathionylation. Cell Reports, 2019, 29, 151-161.e5.	6.4	63
40	Itaconate: the poster child of metabolic reprogramming in macrophage function. Nature Reviews Immunology, 2019, 19, 273-281.	17.9	394
41	The Immunomodulatory Potential of the Metabolite Itaconate. Trends in Immunology, 2019, 40, 687-698.	15.9	151
42	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.	7.6	57
43	Targeting macrophage immunometabolism to prevent atherosclerosis. Nature Metabolism, 2019, 1, 1173-1174.	11.9	1
44	Metabolic regulation of <scp>NLRP</scp>3. Immunological Reviews, 2018, 281, 88-98.	6.8	241
45	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	56
46	Rocking the world of innate immunity: an interview with Luke O'Neill. DMM Disease Models and Mechanisms, 2018, 11, .	2.7	0
47	Krebs Cycle Reimagined: The Emerging Roles of Succinate and Itaconate as Signal Transducers. Cell, 2018, 174, 780-784.	35.1	260
48	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, .	7.7	251
49	Glutathione and Glutathione Transferase Omega 1 as Key Posttranslational Regulators in Macrophages. Microbiology Spectrum, 2017, 5, .	3.6	21
50	Inflammasomes in the lung. Molecular Immunology, 2017, 86, 44-55.	2.1	131
51	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.	9.7	336
52	Mitochondria are the powerhouses of immunity. Nature Immunology, 2017, 18, 488-498.	13.1	751
53	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.	2.3	127
54	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.	3.3	52

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55	Immunometabolism and the land of milk and honey. Nature Reviews Immunology, 2017, 17, 217-217.	17.9	8
56	The Induction of Proâ€“IL-1Î² by Lipopolysaccharide Requires Endogenous Prostaglandin E2 Production. Journal of Immunology, 2017, 198, 3558-3564.	0.6	81
57	The RNA-binding protein Tristetraprolin (TTP) is a critical negative regulator of the NLRP3 inflammasome. Journal of Biological Chemistry, 2017, 292, 6869-6881.	2.3	46
58	MyD88 is an essential component of retinoic acid-induced differentiation in human pluripotent embryonal carcinoma cells. Cell Death and Differentiation, 2017, 24, 1975-1986.	13.7	5
59	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, .	7.7	32
60	Loss of the molecular clock in myeloid cells exacerbates T cell-mediated CNS autoimmune disease. Nature Communications, 2017, 8, .	14.1	94
61	Endosomal NOX2 oxidase exacerbates virus pathogenicity and is a target for antiviral therapy. Nature Communications, 2017, 8, .	14.1	120
62	A Potent Anti-Inflammatory Response in Bat Macrophages May Be Linked to Extended Longevity and Viral Tolerance. Acta Chiropterologica, 2017, 19, 219-228.	0.5	49
63	GSTO1-1 plays a pro-inflammatory role in models of inflammation, colitis and obesity. Scientific Reports, 2017, 7, .	3.7	48
64	GOTcha: lncRNA-ACOD1 targets metabolism during viral infection. Cell Research, 2017, 28, 137-138.	8.2	14
65	A guide to immunometabolism for immunologists. Nature Reviews Immunology, 2016, 16, 553-565.	17.9	2,067
66	Toll-like receptors and chronic inflammation in rheumatic diseases: new developments. Nature Reviews Rheumatology, 2016, 12, 344-357.	8.2	153
67	<i>Trypanosoma brucei</i>metabolite 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, .	7.7	51
68	A Common Variant in the Adaptor Mal Regulates Interferon Gamma Signaling. Immunity, 2016, 44, 368-379.	22.7	27
69	Immunometabolism governs dendritic cell and macrophage function. Journal of Experimental Medicine, 2016, 213, 15-23.	8.1	1,168
70	Circadian control of innate immunity in macrophages by miR-155 targeting <i>Bmal1</i>. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 7231-7236.	7.7	239
71	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.	26.3	956
72	A small-molecule inhibitor of the NLRP3 inflammasome for the treatment of inflammatory diseases. Nature Medicine, 2015, 21, 248-255.	25.6	2,039

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73	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.	2.3	256
74	GSTO1-1 modulates metabolism in macrophages activated through the LPS and TLR4 pathway. Journal of Cell Science, 2015, 128, 1982-1990.	3.2	55
75	The Cellular and Molecular Basis of Translational Immunometabolism. Immunity, 2015, 43, 421-434.	22.7	159
76	The MyD88+ Phenotype Is an Adverse Prognostic Factor in Epithelial Ovarian Cancer. PLoS ONE, 2014, 9, e100816.	2.5	36
77	Metabolic Reprograming in Macrophage Polarization. Frontiers in Immunology, 2014, 5, .	5.0	609
78	Glycolytic reprogramming by TLRs in dendritic cells. Nature Immunology, 2014, 15, 314-315.	13.1	42
79	Circadian Clock Proteins and Immunity. Immunity, 2014, 40, 178-186.	22.7	448
80	Succinate: a metabolic signal in inflammation. Trends in Cell Biology, 2014, 24, 313-320.	15.3	517
81	Succinate strikes. Nature, 2014, 515, 350-351.	40.1	14
82	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.	2.3	84
83	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.	3.0	59
84	Metabolism of inflammation limited by AMPK and pseudo-starvation. Nature, 2013, 493, 346-355.	40.1	929
85	The history of Toll-like receptors â€" redefining innate immunity. Nature Reviews Immunology, 2013, 13, 453-460.	17.9	1,297
86	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	50
87	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.	5.2	92
88	The GOLD domain-containing protein TMED7 inhibits TLR4 signalling from the endosome upon LPS stimulation. Nature Communications, 2012, 3, .	14.1	47
89	Biochemical regulation of the inflammasome. Critical Reviews in Biochemistry and Molecular Biology, 2012, 47, 424-443.	7.0	115
90	Counter-regulation in the IKK family. Biochemical Journal, 2011, 434, e1-e2.	3.9	3

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91	A critical role for citrate metabolism in LPS signalling. Biochemical Journal, 2011, 438, e5-e6.	3.9	86
92	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	63
93	The Inflammasome in Atherosclerosis and Type 2 Diabetes. Science Translational Medicine, 2011, 3, .	13.1	128
94	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.	19.4	296
95	The immune system as an invisible, silent Grand Fugue. Nature Immunology, 2009, 10, 1043-1045.	13.1	0
96	Therapeutic Targeting of Toll-Like Receptors for Infectious and Inflammatory Diseases and Cancer. Pharmacological Reviews, 2009, 61, 177-197.	16.4	365
97	The interleukinâ€1 receptor/Tollâ€like receptor superfamily: 10 years of progress. Immunological Reviews, 2008, 226, 10-18.	6.8	532
98	Tollâ€like Receptors. , 2008, , 1207-1212.		0
99	The family of five: TIR-domain-containing adaptors in Toll-like receptor signalling. Nature Reviews Immunology, 2007, 7, 353-364.	17.9	2,178
100	Inflammasomes in inflammatory disorders: the role of TLRs and their interactions with NLRs. Seminars in Immunopathology, 2007, 29, 239-248.	8.5	148
101	Camelpox virus encodes a schlafen-like protein that affects orthopoxvirus virulence. Journal of General Virology, 2007, 88, 1667-1676.	3.5	32
102	How Toll-like receptors signal: what we know and what we donâ€™t know. Current Opinion in Immunology, 2006, 18, 3-9.	5.6	525
103	New insights into the regulation of TLR signaling. Journal of Leukocyte Biology, 2006, 80, 220-226.	3.0	217
104	Immunity's Early-Warning System. Scientific American, 2005, 292, 38-45.	0.1	42
105	Therapeutic targeting of Toll-like receptors for inflammatory and infectious diseases. Current Opinion in Pharmacology, 2003, 3, 396-403.	4.1	136
106	A gene for Crohn's disease is given the nod. Trends in Pharmacological Sciences, 2001, 22, 398-399.	14.8	0
107	Specificity in the innate response: pathogen recognition by Toll-like receptor combinations. Trends in Immunology, 2001, 22, 70.	15.9	11
108	Who needs adaptive immunity?. Trends in Immunology, 2001, 22, 125.	15.9	0

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109	A roll-call of monocytic gene induction. Trends in Immunology, 2001, 22, 182.	15.9	1
110	Dioxins damage dendritic cells. Trends in Immunology, 2001, 22, 296.	15.9	2
111	Fixing a broken heart with bone. Trends in Immunology, 2001, 22, 298.	15.9	0
112	A role for leptin in autoimmunity?. Trends in Immunology, 2001, 22, 352.	15.9	2
113	Gob genes, mucus and asthma. Trends in Immunology, 2001, 22, 353.	15.9	4
114	A vaccine for colorectral cancer. Trends in Immunology, 2001, 22, 354.	15.9	33
115	Vaccine safety concerns. Trends in Immunology, 2001, 22, 420-421.	15.9	0
116	Irish say no to Nice but yes to immunology. Trends in Immunology, 2001, 22, 421.	15.9	1
117	Passive smoking increases allergy. Trends in Immunology, 2001, 22, 660.	15.9	0
118	Staurosporine, but not Ro 31-8220, induces interleukin 2 production and synergizes with interleukin 1Î± in EL4 thymoma cells: Activation of nuclear factor Î⁰B as a common signal for staurosporine and interleukin 1Î±. Biochemical Journal, 1997, 325, 39-45.	3.9	10
119	Mechanism of NFÎ⁰B activation by interleukin-1 and tumour necrosis factor in endothelial cells. Biochemical Society Transactions, 1996, 24, 2S-2S.	4.2	8
120	Autocrine regulation of the transcription factor NFÎ⁰B by TNFÎ± in the human T cell lymphoma line Hut 78. Biochemical Society Transactions, 1995, 23, 113S-113S.	4.2	4
121	SUSTAINED ACTIVATION OF NFÎ⁰B AND TRANSIENT IÎ⁰BÎ± DEGRADATION INDUCED BY TUMOUR NECROSIS FACTOR IN 1321N1 HUMAN ASTROCYTOMA. Biochemical Society Transactions, 1995, 23, 597S-597S.	4.2	1
122	What is Life? The next fifty years. An introduction. , 1995, , 1-4.		3
123	Glutathione and Glutathione Transferase Omega 1 as Key Posttranslational Regulators in Macrophages. , 0, , 787-801.		1