

Ruth R Montgomery

List of Publications by Year in descending order

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126
papers

11,474
citations

28190

55
h-index

30848

102
g-index

133
all docs

133
docs citations

133
times ranked

16042
citing authors

#	ARTICLE	IF	CITATIONS
1	Age-dependent dysregulation of innate immunity. <i>Nature Reviews Immunology</i> , 2013, 13, 875-887.	10.6	847
2	Innate Immune Function by Toll-like Receptors: Distinct Responses in Newborns and the Elderly. <i>Immunity</i> , 2012, 37, 771-783.	6.6	478
3	Age-Associated Decrease in TLR Function in Primary Human Dendritic Cells Predicts Influenza Vaccine Response. <i>Journal of Immunology</i> , 2010, 184, 2518-2527.	0.4	472
4	RNA interference screen for human genes associated with West Nile virus infection. <i>Nature</i> , 2008, 455, 242-245.	13.7	471
5	Human innate immunosenescence: causes and consequences for immunity in old age. <i>Trends in Immunology</i> , 2009, 30, 325-333.	2.9	413
6	Regulation of mouse oocyte meiotic maturation: Implication of a decrease in oocyte cAMP and protein dephosphorylation in commitment to resume meiosis. <i>Developmental Biology</i> , 1983, 97, 264-273.	0.9	398
7	TROSPA, an <i>Ixodes scapularis</i> Receptor for <i>Borrelia burgdorferi</i> . <i>Cell</i> , 2004, 119, 457-468.	13.5	348
8	Age-Associated Defect in Human TLR-1/2 Function. <i>Journal of Immunology</i> , 2007, 178, 970-975.	0.4	313
9	West Nile Virus: Biology, Transmission, and Human Infection. <i>Clinical Microbiology Reviews</i> , 2012, 25, 635-648.	5.7	275
10	Exploring single-cell data with deep multitasking neural networks. <i>Nature Methods</i> , 2019, 16, 1139-1145.	9.0	222
11	Attachment of <i>Borrelia burgdorferi</i> within <i>Ixodes scapularis</i> mediated by outer surface protein A. <i>Journal of Clinical Investigation</i> , 2000, 106, 561-569.	3.9	215
12	Circulating monocytes from systemic sclerosis patients with interstitial lung disease show an enhanced profibrotic phenotype. <i>Laboratory Investigation</i> , 2010, 90, 812-823.	1.7	212
13	Mx1 reveals innate pathways to antiviral resistance and lethal influenza disease. <i>Science</i> , 2016, 352, 463-466.	6.0	210
14	Direct demonstration of antigenic substitution of <i>Borrelia burgdorferi</i> ex vivo: exploration of the paradox of the early immune response to outer surface proteins A and C in Lyme disease.. <i>Journal of Experimental Medicine</i> , 1996, 183, 261-269.	4.2	205
15	Dysregulation of human Toll-like receptor function in aging. <i>Ageing Research Reviews</i> , 2011, 10, 346-353.	5.0	183
16	Evidence for reactive nitrogen intermediates in killing of staphylococci by human neutrophil cytoplasts. A new microbicidal pathway for polymorphonuclear leukocytes.. <i>Journal of Clinical Investigation</i> , 1992, 90, 631-636.	3.9	183
17	Toll-like Receptor 7 Mitigates Lethal West Nile Encephalitis via Interleukin 23-Dependent Immune Cell Infiltration and Homing. <i>Immunity</i> , 2009, 30, 242-253.	6.6	180
18	Single-cell longitudinal analysis of SARS-CoV-2 infection in human airway epithelium identifies target cells, alterations in gene expression, and cell state changes. <i>PLoS Biology</i> , 2021, 19, e3001143.	2.6	180

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19	Human NK cell repertoire diversity reflects immune experience and correlates with viral susceptibility. <i>Science Translational Medicine</i> , 2015, 7, 297ra115.	5.8	177
20	Regulation of oocyte maturation in the mouse: Possible roles of intercellular communication, cAMP, and testosterone. <i>Developmental Biology</i> , 1983, 95, 294-304.	0.9	167
21	Chitinase 3- α -Like 1 Suppresses Injury and Promotes Fibroproliferative Responses in Mammalian Lung Fibrosis. <i>Science Translational Medicine</i> , 2014, 6, 240ra76.	5.8	162
22	Dysregulation of TLR3 Impairs the Innate Immune Response to West Nile Virus in the Elderly. <i>Journal of Virology</i> , 2008, 82, 7613-7623.	1.5	161
23	A Paradoxical Role for Neutrophils in the Pathogenesis of West Nile Virus. <i>Journal of Infectious Diseases</i> , 2010, 202, 1804-1812.	1.9	156
24	Matrix Metalloproteinase 9 Facilitates West Nile Virus Entry into the Brain. <i>Journal of Virology</i> , 2008, 82, 8978-8985.	1.5	151
25	Impaired Interferon Signaling in Dendritic Cells From Older Donors Infected In Vitro With West Nile Virus. <i>Journal of Infectious Diseases</i> , 2011, 203, 1415-1424.	1.9	143
26	Myeloid Differentiation Antigen 88 Deficiency Impairs Pathogen Clearance but Does Not Alter Inflammation in <i>Borrelia burgdorferi</i> -Infected Mice. <i>Infection and Immunity</i> , 2004, 72, 3195-3203.	1.0	138
27	Humanized mouse model supports development, function, and tissue residency of human natural killer cells. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2017, 114, E9626-E9634.	3.3	138
28	Abrogation of macrophage migration inhibitory factor decreases West Nile virus lethality by limiting viral neuroinvasion. <i>Journal of Clinical Investigation</i> , 2007, 117, 3059-3066.	3.9	135
29	Paradoxical changes in innate immunity in aging: recent progress and new directions. <i>Journal of Leukocyte Biology</i> , 2015, 98, 937-943.	1.5	127
30	Age-associated elevation in TLR5 leads to increased inflammatory responses in the elderly. <i>Aging Cell</i> , 2012, 11, 104-110.	3.0	125
31	Multicohort analysis reveals baseline transcriptional predictors of influenza vaccination responses. <i>Science Immunology</i> , 2017, 2, .	5.6	122
32	Removal of batch effects using distribution-matching residual networks. <i>Bioinformatics</i> , 2017, 33, 2539-2546.	1.8	120
33	Disruption of <i>Ixodes scapularis</i> anticoagulation by using RNA interference. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2004, 101, 1141-1146.	3.3	119
34	Smooth Muscle Cell Reprogramming in Aortic Aneurysms. <i>Cell Stem Cell</i> , 2020, 26, 542-557.e11.	5.2	114
35	Aging impairs both primary and secondary RIG-I signaling for interferon induction in human monocytes. <i>Science Signaling</i> , 2017, 10, .	1.6	113
36	Dual effect of the macrophage migration inhibitory factor gene on the development and severity of human systemic lupus erythematosus. <i>Arthritis and Rheumatism</i> , 2011, 63, 3942-3951.	6.7	106

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37	Semaphorin 7a ⁺ Regulatory T Cells Are Associated with Progressive Idiopathic Pulmonary Fibrosis and Are Implicated in Transforming Growth Factor- β -induced Pulmonary Fibrosis. <i>American Journal of Respiratory and Critical Care Medicine</i> , 2013, 187, 180-188.	2.5	106
38	CyTOF supports efficient detection of immune cell subsets from small samples. <i>Journal of Immunological Methods</i> , 2014, 415, 1-5.	0.6	106
39	Temporal pattern of <i>Borrelia burgdorferi</i> p21 expression in ticks and the mammalian host.. <i>Journal of Clinical Investigation</i> , 1997, 99, 987-995.	3.9	102
40	Single-cell multi-omics reveals dyssynchrony of the innate and adaptive immune system in progressive COVID-19. <i>Nature Communications</i> , 2022, 13, 440.	5.8	100
41	Inhibition of Neutrophil Function by Two Tick Salivary Proteins. <i>Infection and Immunity</i> , 2009, 77, 2320-2329.	1.0	99
42	<i>Anaplasma phagocytophilum</i> induces actin phosphorylation to selectively regulate gene transcription in <i>Ixodes scapularis</i> ticks. <i>Journal of Experimental Medicine</i> , 2010, 207, 1727-1743.	4.2	99
43	ELF4 is critical for induction of type I interferon and the host antiviral response. <i>Nature Immunology</i> , 2013, 14, 1237-1246.	7.0	89
44	Gating mass cytometry data by deep learning. <i>Bioinformatics</i> , 2017, 33, 3423-3430.	1.8	84
45	Calprotectin, an Abundant Cytosolic Protein from Human Polymorphonuclear Leukocytes, Inhibits the Growth of <i>Borrelia burgdorferi</i> . <i>Infection and Immunity</i> , 2003, 71, 4711-4716.	1.0	83
46	Neutralizing antibodies against West Nile virus identified directly from human B cells by single-cell analysis and next generation sequencing. <i>Integrative Biology (United Kingdom)</i> , 2015, 7, 1587-1597.	0.6	80
47	IL-10 Signaling Blockade Controls Murine West Nile Virus Infection. <i>PLoS Pathogens</i> , 2009, 5, e1000610.	2.1	79
48	ASC/PYCARD and Caspase-1 Regulate the IL-18/IFN- γ Axis during <i>Anaplasma phagocytophilum</i> Infection. <i>Journal of Immunology</i> , 2007, 179, 4783-4791.	0.4	75
49	Inhibition of <i>Borrelia burgdorferi</i> -Tick Interactions In Vivo by Outer Surface Protein A Antibody. <i>Journal of Immunology</i> , 2001, 166, 7398-7403.	0.4	74
50	Tick Saliva Reduces Adherence and Area of Human Neutrophils. <i>Infection and Immunity</i> , 2004, 72, 2989-2994.	1.0	72
51	A genome-scale gain-of-function CRISPR screen in CD8 T cells identifies proline metabolism as a means to enhance CAR-T therapy. <i>Cell Metabolism</i> , 2022, 34, 595-614.e14.	7.2	70
52	Cytokine Response Signatures in Disease Progression and Development of Severe Clinical Outcomes for Leptospirosis. <i>PLoS Neglected Tropical Diseases</i> , 2013, 7, e2457.	1.3	67
53	IL-22 Signaling Contributes to West Nile Encephalitis Pathogenesis. <i>PLoS ONE</i> , 2012, 7, e44153.	1.1	65
54	Fusion Loop Peptide of the West Nile Virus Envelope Protein Is Essential for Pathogenesis and Is Recognized by a Therapeutic Cross-Reactive Human Monoclonal Antibody. <i>Journal of Immunology</i> , 2009, 183, 650-660.	0.4	60

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55	Recruitment of Macrophages and Polymorphonuclear Leukocytes in Lyme Carditis. <i>Infection and Immunity</i> , 2007, 75, 613-620.	1.0	59
56	Human Phagocytic Cells in the Early Innate Immune Response to <i>Borrelia burgdorferi</i> . <i>Journal of Infectious Diseases</i> , 2002, 185, 1773-1779.	1.9	57
57	Single-Cell Transcriptional Archetypes of Airway Inflammation in Cystic Fibrosis. <i>American Journal of Respiratory and Critical Care Medicine</i> , 2020, 202, 1419-1429.	2.5	56
58	<i>Borrelia burgdorferi</i> Are Susceptible to Killing by a Variety of Human Polymorphonuclear Leukocyte Components. <i>Journal of Infectious Diseases</i> , 2002, 185, 797-804.	1.9	55
59	Semaphorin 7A Contributes to West Nile Virus Pathogenesis through TGF- β 1/Smad6 Signaling. <i>Journal of Immunology</i> , 2012, 189, 3150-3158.	0.4	52
60	DNA aptamer-based non-faradaic impedance biosensor for detecting <i>E. Coli</i> . <i>Analytica Chimica Acta</i> , 2020, 1107, 135-144.	2.6	50
61	Reduced bioenergetics and toll-like receptor 1 function in human polymorphonuclear leukocytes in aging. <i>Aging</i> , 2014, 6, 131-139.	1.4	48
62	Risk factors for West Nile virus infection and disease in populations and individuals. <i>Expert Review of Anti-Infective Therapy</i> , 2015, 13, 317-325.	2.0	46
63	Fc- And Non-Fc-Mediated Phagocytosis Of <i>Borrelia Burgdorferi</i> By Macrophages. <i>Journal of Infectious Diseases</i> , 1994, 170, 890-893.	1.9	45
64	Age-related alterations in immune responses to West Nile virus infection. <i>Clinical and Experimental Immunology</i> , 2016, 187, 26-34.	1.1	44
65	<i>Aedes aegypti</i> AgBR1 antibodies modulate early Zika virus infection of mice. <i>Nature Microbiology</i> , 2019, 4, 948-955.	5.9	43
66	Development of a 2-dimensional atlas of the human kidney with imaging mass cytometry. <i>JCI Insight</i> , 2019, 4, .	2.3	43
67	Innate immune control of West Nile virus infection. <i>Cellular Microbiology</i> , 2011, 13, 1648-1658.	1.1	42
68	Reduced dynamic range of antiviral innate immune responses in aging. <i>Experimental Gerontology</i> , 2018, 107, 130-135.	1.2	42
69	Multiplexed (18-Plex) Measurement of Signaling Targets and Cytotoxic T Cells in Trastuzumab-Treated Patients using Imaging Mass Cytometry. <i>Clinical Cancer Research</i> , 2019, 25, 3054-3062.	3.2	42
70	Multi-site reproducibility of a human immunophenotyping assay in whole blood and peripheral blood mononuclear cells preparations using CyTOF technology coupled with Maxpar Pathsetter, an automated data analysis system. <i>Cytometry Part B - Clinical Cytometry</i> , 2020, 98, 146-160.	0.7	41
71	IL-6 Receptor β Defines Effector Memory CD8 ⁺ T Cells Producing Th2 Cytokines and Expanding in Asthma. <i>American Journal of Respiratory and Critical Care Medicine</i> , 2014, 190, 1383-1394.	2.5	38
72	Systems Immunology Reveals Markers of Susceptibility to West Nile Virus Infection. <i>Vaccine Journal</i> , 2015, 22, 6-16.	3.2	35

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73	Effect of aging on microRNAs and regulation of pathogen recognition receptors. <i>Current Opinion in Immunology</i> , 2014, 29, 29-37.	2.4	34
74	Effects of reagent and cell-generated hydrogen peroxide on the properties of low density lipoprotein.. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 1986, 83, 6631-6635.	3.3	32
75	DNA Methylation Regulates the Differential Expression of CX3CR1 on Human IL-7R ^{low} and IL-7R ^{high} Effector Memory CD8 ⁺ T Cells with Distinct Migratory Capacities to the Fractalkine. <i>Journal of Immunology</i> , 2015, 195, 2861-2869.	0.4	32
76	Immune Markers Associated with Host Susceptibility to Infection with West Nile Virus. <i>Viral Immunology</i> , 2014, 27, 39-47.	0.6	31
77	Identification of genetic variants associated with dengue or West Nile virus disease: a systematic review and meta-analysis. <i>BMC Infectious Diseases</i> , 2018, 18, 282.	1.3	30
78	SIRT6 Acts as a Negative Regulator in Dengue Virus-Induced Inflammatory Response by Targeting the DNA Binding Domain of NF- κ B p65. <i>Frontiers in Cellular and Infection Microbiology</i> , 2018, 8, 113.	1.8	29
79	Leukocyte-specific protein 1 regulates T-cell migration in rheumatoid arthritis. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2015, 112, E6535-43.	3.3	28
80	Endocytic and Secretory Repertoire of the Lipid-Loaded Macrophage. <i>Journal of Leukocyte Biology</i> , 1989, 45, 129-138.	1.5	26
81	The natural killer cell response to West Nile virus in young and old individuals with or without a prior history of infection. <i>PLoS ONE</i> , 2017, 12, e0172625.	1.1	26
82	West Nile Virus Attenuates Activation of Primary Human Macrophages. <i>Viral Immunology</i> , 2008, 21, 78-82.	0.6	25
83	Identification of Genes Critical for Resistance to Infection by West Nile Virus Using RNA-Seq Analysis. <i>Viruses</i> , 2013, 5, 1664-1681.	1.5	25
84	Differential expression analysis for paired RNA-seq data. <i>BMC Bioinformatics</i> , 2013, 14, 110.	1.2	22
85	Impaired Toll-Like Receptor 3-Mediated Immune Responses from Macrophages of Patients Chronically Infected with Hepatitis C Virus. <i>Vaccine Journal</i> , 2013, 20, 146-155.	3.2	22
86	Functional Polymorphisms in the Gene Encoding Macrophage Migration Inhibitory Factor Are Associated With Gram-Negative Bacteremia in Older Adults. <i>Journal of Infectious Diseases</i> , 2014, 209, 764-768.	1.9	22
87	Cathelicidin Insufficiency in Patients with Fatal Leptospirosis. <i>PLoS Pathogens</i> , 2016, 12, e1005943.	2.1	22
88	Transcriptomic analysis of human IL-7 receptor alpha ^{low} and ^{high} effector memory CD8 ⁺ T cells reveals an age-associated signature linked to influenza vaccine response in older adults. <i>Aging Cell</i> , 2019, 18, e12960.	3.0	20
89	Single cell immune profiling of dengue virus patients reveals intact immune responses to Zika virus with enrichment of innate immune signatures. <i>PLoS Neglected Tropical Diseases</i> , 2020, 14, e0008112.	1.3	20
90	How Inflammation Blunts Innate Immunity in Aging. <i>Interdisciplinary Topics in Gerontology and Geriatrics</i> , 2020, 43, 1-17.	2.6	20

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91	Multiparameter Single Cell Profiling of Airway Inflammatory Cells. <i>Cytometry Part B - Clinical Cytometry</i> , 2017, 92, 12-20.	0.7	19
92	Molecular MRI of the Immuno-Metabolic Interplay in a Rabbit Liver Tumor Model: A Biomarker for Resistance Mechanisms in Tumor-targeted Therapy?. <i>Radiology</i> , 2020, 296, 575-583.	3.6	19
93	Dissecting alterations in human CD8+ T cells with aging by high-dimensional single cell mass cytometry. <i>Clinical Immunology</i> , 2019, 200, 24-30.	1.4	18
94	HIPK2 is necessary for type I interferon-mediated antiviral immunity. <i>Science Signaling</i> , 2019, 12, .	1.6	16
95	Human monocytes have increased IFN- γ -mediated IL-15 production with age alongside altered IFN- γ receptor signaling. <i>Clinical Immunology</i> , 2014, 152, 101-110.	1.4	15
96	A Modified Injector and Sample Acquisition Protocol Can Improve Data Quality and Reduce Inter-instrument Variability of the Helios Mass Cytometer. <i>Cytometry Part A: the Journal of the International Society for Analytical Cytology</i> , 2019, 95, 1019-1030.	1.1	15
97	Impaired ATM activation in B cells is associated with bone resorption in rheumatoid arthritis. <i>Science Translational Medicine</i> , 2019, 11, .	5.8	15
98	Role of Immune Aging in Susceptibility to West Nile Virus. <i>Methods in Molecular Biology</i> , 2016, 1435, 235-247.	0.4	14
99	Association between high expression macrophage migration inhibitory factor (MIF) alleles and West Nile virus encephalitis. <i>Cytokine</i> , 2016, 78, 51-54.	1.4	14
100	Murine Lyme Disease: No Evidence for Active Immune Down-regulation in Resolving or Subclinical Infection. <i>Journal of Infectious Diseases</i> , 2001, 183, 1631-1637.	1.9	12
101	Human Neutrophil Calprotectin Reduces the Susceptibility of <i>Borrelia burgdorferi</i> to Penicillin. <i>Infection and Immunity</i> , 2006, 74, 2468-2472.	1.0	12
102	Non-invasive Point-of-Care Device To Diagnose Acute Mesenteric Ischemia. <i>ACS Sensors</i> , 2018, 3, 2296-2302.	4.0	12
103	Microbial killing by human neutrophil cytokineplasts: similar suppressive effects of reversible and irreversible inhibitors of nitric oxide synthase. <i>Journal of Leukocyte Biology</i> , 1996, 60, 753-757.	1.5	11
104	Quantitative Imaging of Lineage-specific Toll-like Receptor-mediated Signaling in Monocytes and Dendritic Cells from Small Samples of Human Blood. <i>Journal of Visualized Experiments</i> , 2012, , .	0.2	11
105	Profiling cellular heterogeneity in asthma with single cell multiparameter CyTOF. <i>Journal of Leukocyte Biology</i> , 2020, 108, 1555-1564.	1.5	11
106	Single-cell immunophenotyping of the skin lesion erythema migrans identifies IgM memory B cells. <i>JCI Insight</i> , 2021, 6, .	2.3	10
107	An altered relationship of influenza vaccine-specific IgG responses with T cell immunity occurs with aging in humans. <i>Clinical Immunology</i> , 2013, 147, 79-88.	1.4	9
108	Editorial overview: Immune senescence: Known knowns and unknown unknowns. <i>Current Opinion in Immunology</i> , 2014, 29, vii-ix.	2.4	8

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109	Increased TLR4 Expression and Downstream Cytokine Production in Immunosuppressed Adults Compared to Non-Immunosuppressed Adults. PLoS ONE, 2010, 5, e11343.	1.1	8
110	Coordinated expression of Tryo3, Axl, and Mer receptors in macrophage ontogeny. Macrophage, 2016, 3, .	1.0	8
111	Age-related changes in expression and signaling of TAM receptor inflammatory regulators in monocytes. Oncotarget, 2018, 9, 9572-9580.	0.8	7
112	Functional Competence of Peritoneal Macrophages in Murine Lyme Borreliosis. Inflammation, 2000, 24, 277-288.	1.7	5
113	West Nile Virus Seroprevalence, Connecticut, USA, 2000â€“2014. Emerging Infectious Diseases, 2017, 23, 708-710.	2.0	5
114	Elevated Activation of Neutrophil Toll-Like Receptors in Patients with Acute Severe Leptospirosis: An Observational Study. American Journal of Tropical Medicine and Hygiene, 2019, 101, 585-589.	0.6	5
115	Innate Immune Responses in the Neutrophils of Community Dwelling and Nursing Home Elders. Journal of Aging Science, 2014, 02, .	0.5	5
116	Imaging Immunosenescence. Methods in Molecular Biology, 2015, 1343, 97-106.	0.4	4
117	ImmuneRegulation: a web-based tool for identifying human immune regulatory elements. Nucleic Acids Research, 2019, 47, W142-W150.	6.5	4
118	Design and implementation of a prospective cohort study of persons living with and without HIV infection who are initiating medication treatment for opioid use disorder. Contemporary Clinical Trials Communications, 2021, 21, 100704.	0.5	4
119	High standards for high dimensional investigations. Cytometry Part A: the Journal of the International Society for Analytical Cytology, 2016, 89, 886-888.	1.1	3
120	In-Depth Analysis of Genetic Variation Associated with Severe West Nile Viral Disease. Vaccines, 2020, 8, 744.	2.1	3
121	Using â€˜big dataâ€™™ to disentangle aging and COVID-19. Nature Aging, 2021, 1, 496-497.	5.3	2
122	<i>Anaplasma phagocytophilum</i> induces actin phosphorylation to selectively regulate gene transcription in <i>Ixodes scapularis</i> ticks. Journal of Experimental Medicine, 2011, 208, 1737-1737.	4.2	1
123	First Responders: Laboratory Methods to Assess Human Neutrophils. , 2016, , 89-101.		0
124	<i>Anaplasma phagocytophilum</i> induces actin phosphorylation to selectively regulate gene transcription in <i>Ixodes scapularis</i> ticks. Journal of Cell Biology, 2010, 190, i8-i8.	2.3	0
125	Age-Related Changes in Immune Regulation by Noncoding RNAs. , 2018, , 1-18.		0
126	Age-Related Changes in Immune Regulation by Noncoding RNAs. , 2019, , 1241-1258.		0