Mathematical models of the acute inflammatory respon

Current Opinion in Critical Care 10, 383-390 DOI: 10.1097/01.ccx.0000139360.30327.69

Citation Report

#	Article	IF	CITATIONS
1	Transforming growth factor- \hat{l}^2 in critical illness. Critical Care Medicine, 2005, 33, S478-S481.	0.4	6
2	THE ACUTE INFLAMMATORY RESPONSE IN DIVERSE SHOCK STATES. Shock, 2005, 24, 74-84.	1.0	187
3	The immuno-inflammatory response to trauma. Trauma, 2005, 7, 171-183.	0.2	1
4	Mathematical Model of the Acute Inflammatory Response to Escherichia coli in Intramammary Challenge. Journal of Dairy Science, 2006, 89, 3455-3465.	1.4	13
5	In Silico and In Vivo Approach to Elucidate the Inflammatory Complexity of CD14-deficient Mice. Molecular Medicine, 2006, 12, 88-96.	1.9	82
6	THE ROLE OF INITIAL TRAUMA IN THE HOST'S RESPONSE TO INJURY AND HEMORRHAGE. Shock, 2006, 26, 592-600.	1.0	81
7	Phenomenological issues related to the measurement, mechanisms and manipulation of complex biological systems*. Critical Care Medicine, 2006, 34, 245-246.	0.4	23
8	IN SILICO MODELS OF ACUTE INFLAMMATION IN ANIMALS. Shock, 2006, 26, 235-244.	1.0	98
9	Sepsis progression and outcome: a dynamical model. Theoretical Biology and Medical Modelling, 2006, 3, 8.	2.1	20
10	Deciphering the Complexity of Acute Inflammation Using Mathematical Models. Immunologic Research, 2006, 36, 237-246.	1.3	41
11	Concepts for developing a collaborative in silico model of the acute inflammatory response using agent-based modeling. Journal of Critical Care, 2006, 21, 105-110.	1.0	58
12	How do we get from here to there? A pathway for trial design in complex systems analysis*. Critical Care Medicine, 2007, 35, 656-658.	0.4	4
13	Severe acute pancreatitis between systematic inflammatory response syndrome and sepsis: insights from a mathematical model of endotoxin tolerance. American Journal of Surgery, 2007, 194, S33-S38.	0.9	7
14	Mathematical modeling in necrotizing enterocolitis—a new look at an ongoing problem. Journal of Pediatric Surgery, 2007, 42, 445-453.	0.8	28
15	Phagocyte Transmigration Modeling Using System Dynamic Controls. , 2007, , .		2
16	An Anatomy of an Infection: Overview of the Infectious Process. Critical Care Nursing Clinics of North America, 2007, 19, 9-15.	0.4	0
17	Mining data from intensive care patients. Advanced Engineering Informatics, 2007, 21, 243-256.	4.0	70
18	Agentâ \in based model of inflammation and wound healing: insights into diabetic foot ulcer pathology and the role of transforming growth factorâ \in 1. Wound Repair and Regeneration, 2007, 15, 671-682	1.5	138

ATION REDO

#	Article	IF	CITATIONS
19	Evidence-based modeling of critical illness: an initial consensus from the Society for Complexity in Acute Illness. Journal of Critical Care, 2007, 22, 77-84.	1.0	54
20	Immunology, Microbiology, and Virology Following Placement of NobelPerfectâ,,¢ Scalloped Dental Implants: Analysis of a Case Series. Clinical Implant Dentistry and Related Research, 2008, 10, 157-165.	1.6	18
21	Characterizing emergent properties of immunological systems with multi-cellular rule-based computational modeling. Trends in Immunology, 2008, 29, 589-599.	2.9	94
22	A hybrid computational model for phagocyte transmigration. , 2008, 2008, .		2
23	Translational Systems Biology of Inflammation. PLoS Computational Biology, 2008, 4, e1000014.	1.5	214
24	Challenges for modeling and interpreting the complex biology of severe injury and inflammation. Journal of Leukocyte Biology, 2008, 83, 553-557.	1.5	29
25	BLOODFEEDING AS AN INTERFACE OF MAMMALIAN AND ARTHROPOD IMMUNITY. , 2008, , 151-179.		1
26	Novel trial designs for pediatric traumatic brain injury*. Pediatric Critical Care Medicine, 2008, 9, 114-116.	0.2	1
27	Translational Systems Biology: Introduction of an Engineering Approach to the Pathophysiology of the Burn Patient. Journal of Burn Care and Research, 2008, 29, 277-285.	0.2	65
28	The Acute Inflammatory Response in Trauma /Hemorrhage and Traumatic Brain Injury: Current State and Emerging Prospects. Libyan Journal of Medicine, 2008, 4, 97-103.	0.8	36
29	The Acute Inflammatory Response in Trauma / Hemorrhage and Traumatic Brain Injury: Current State and Emerging Prospects. Libyan Journal of Medicine, 2009, 4, 136-148.	0.8	67
30	Translational Potential of Systemsâ€Based Models of Inflammation. Clinical and Translational Science, 2009, 2, 85-89.	1.5	42
31	A Simple Mathematical Model of Cytokine Capture Using a Hemoadsorption Device. Annals of Biomedical Engineering, 2009, 37, 222-229.	1.3	27
32	Mechanistic simulations of inflammation: Current state and future prospects. Mathematical Biosciences, 2009, 217, 1-10.	0.9	124
33	Detailed qualitative dynamic knowledge representation using a BioNetGen model of TLR-4 signaling and preconditioning. Mathematical Biosciences, 2009, 217, 53-63.	0.9	51
34	MATHEMATICAL MODELING OF POSTHEMORRHAGE INFLAMMATION IN MICE. Shock, 2009, 32, 172-178.	1.0	49
35	Modeling the influence of circadian rhythms on the acute inflammatory response. Journal of Theoretical Biology, 2010, 264, 1068-1076.	0.8	105
36	Mathematical Modeling in Wound Healing, Bone Regeneration and Tissue Engineering. Acta Biotheoretica, 2010, 58, 355-367.	0.7	31

#	Article	IF	Citations
37	General Model of Inflammation. Bulletin of Mathematical Biology, 2010, 72, 765-779.	0.9	19
38	Agent-Based Modeling of Endotoxin-Induced Acute Inflammatory Response in Human Blood Leukocytes. PLoS ONE, 2010, 5, e9249.	1.1	82
39	Translational systems biology of inflammation: potential applications to personalized medicine. Personalized Medicine, 2010, 7, 549-559.	0.8	61
40	A Systems Model for Immune Cell Interactions Unravels the Mechanism of Inflammation in Human Skin. PLoS Computational Biology, 2010, 6, e1001024.	1.5	51
41	Translational Systems Approaches to the Biology of Inflammation and Healing. Immunopharmacology and Immunotoxicology, 2010, 32, 181-195.	1.1	78
42	Modeling Circadian Rhythms in Inflammation. , 2010, , .		0
43	An agent-based model of inflammation and fibrosis following particulate exposure in the lung. Mathematical Biosciences, 2011, 231, 186-196.	0.9	57
44	Modeling autonomic regulation of cardiac function and heart rate variability in human endotoxemia. Physiological Genomics, 2011, 43, 951-964.	1.0	49
45	Agent-based dynamic knowledge representation of Pseudomonas aeruginosa virulence activation in the stressed gut: Towards characterizing host-pathogen interactions in gut-derived sepsis. Theoretical Biology and Medical Modelling, 2011, 8, 33.	2.1	34
46	In silico augmentation of the drug development pipeline: examples from the study of acute inflammation. Drug Development Research, 2011, 72, 187-200.	1.4	52
47	Immature Oxidative Stress Management as a Unifying Principle in the Pathogenesis of Necrotizing Enterocolitis: Insights from an Agent-Based Model. Surgical Infections, 2012, 13, 18-32.	0.7	44
48	Relaxation Estimation of RMSD in Molecular Dynamics Immunosimulations. Computational and Mathematical Methods in Medicine, 2012, 2012, 1-9.	0.7	70
49	A two-compartment mathematical model of endotoxin-induced inflammatory and physiologic alterations in swine*. Critical Care Medicine, 2012, 40, 1052-1063.	0.4	72
50	Pattern Formation in a Model of Acute Inflammation. SIAM Journal on Applied Dynamical Systems, 2012, 11, 629-660.	0.7	23
51	Systems modeling and simulation applications for critical care medicine. Annals of Intensive Care, 2012, 2, 18.	2.2	32
52	Toward Computational Identification of Multiscale "Tipping Points―in Acute Inflammation and Multiple Organ Failure. Annals of Biomedical Engineering, 2012, 40, 2414-2424.	1.3	49
53	Experimental human sepsis models. Drug Discovery Today: Disease Models, 2012, 9, e3-e9.	1.2	5
54	Mathematical modeling and stability analysis of macrophage activation in left ventricular remodeling post-myocardial infarction. BMC Genomics, 2012, 13, S21.	1.2	62

#	Article	IF	CITATIONS
55	Linking Inflammation, Cardiorespiratory Variability, and Neural Control in Acute Inflammation via Computational Modeling. Frontiers in Physiology, 2012, 3, 222.	1.3	39
56	Pharmacokinetic/Pharmacodynamic Modeling in Inflammation. Critical Reviews in Biomedical Engineering, 2012, 40, 295-312.	0.5	25
57	Sepsis: From Pattern to Mechanism and Back. Critical Reviews in Biomedical Engineering, 2012, 40, 341-351.	0.5	28
58	Modeling Physiologic Variability in Human Endotoxemia. Critical Reviews in Biomedical Engineering, 2012, 40, 313-322.	0.5	19
59	Use of models in identification and prediction of physiology in critically ill surgical patients. British Journal of Surgery, 2012, 99, 487-493.	0.1	13
60	Sepsis: Something old, something new, and a systems view. Journal of Critical Care, 2012, 27, 314.e1-314.e11.	1.0	95
61	A multiscale modeling approach to inflammation: A case study in human endotoxemia. Journal of Computational Physics, 2013, 244, 279-289.	1.9	9
62	A three-dimensional mathematical and computational model of necrotizing enterocolitis. Journal of Theoretical Biology, 2013, 322, 17-32.	0.8	19
63	A model of neutrophil dynamics in response to inflammatory and cancer chemotherapy challenges. Computers and Chemical Engineering, 2013, 51, 187-196.	2.0	12
64	In Silico Modeling. Critical Care Medicine, 2013, 41, 2008-2014.	0.4	60
65	Hybrid Equation/Agent-Based Model of Ischemia-Induced Hyperemia and Pressure Ulcer Formation Predicts Greater Propensity to Ulcerate in Subjects with Spinal Cord Injury. PLoS Computational Biology, 2013, 9, e1003070.	1.5	32
66	Skin Stem Cell Hypotheses and Long Term Clone Survival – Explored Using Agent-based Modelling. Scientific Reports, 2013, 3, 1904.	1.6	42
67	Computational Modeling of Inflammation and Wound Healing. Advances in Wound Care, 2013, 2, 527-537.	2.6	32
68	An Agent-Based Modeling Template for a Cohort of Veterans with Diabetic Retinopathy. PLoS ONE, 2013, 8, e66812.	1.1	17
69	Combined In Silico, In Vivo, and In Vitro Studies Shed Insights into the Acute Inflammatory Response in Middle-Aged Mice. PLoS ONE, 2013, 8, e67419.	1.1	18
70	On the Coupling of Two Models of the Human Immune Response to an Antigen. BioMed Research International, 2014, 2014, 1-19.	0.9	14
71	Complex pattern of interleukin-11-induced inflammation revealed by mathematically modeling the dynamics of C-reactive protein. Journal of Pharmacokinetics and Pharmacodynamics, 2014, 41, 479-491.	0.8	1
72	Global sensitivity analysis of a mathematical model of acute inflammation identifies nonlinear dependence of cumulative tissue damage on host interleukin-6 responses. Journal of Theoretical Biology, 2014, 358, 132-148.	0.8	23

ARTICLE IF CITATIONS Data-Driven and Statistical Models., 2015, , 89-98. 0 74 Computational Studies of the Intestinal Host-Microbiota Interactome. Computation, 2015, 3, 2-28. 1.0 Insights into the Role of Chemokines, Damage-Associated Molecular Patterns, and Lymphocyte-Derived 76 Mediators from Computational Models of Trauma-Induced Inflammation. Antioxidants and Redox 2.582 Signaling, 2015, 23, 1370-1387. A Roadmap for a Rational Future., 2015,, 69-78. Dynamics of the HPA axis and inflammatory cytokines: Insights from mathematical modeling. 78 3.9 40 Computers in Biology and Medicine, 2015, 67, 1-12. Augmenting Surgery via Multi-scale Modeling and Translational Systems Biology in the Era of 79 Precision Medicine: A Multidisciplinary Perspective. Annals of Biomedical Engineering, 2016, 44, 1.3 2611-2625. Knowledge gaps to understanding cardiac macrophage polarization following myocardial infarction. 80 1.8 39 Biochimica Et Biophysica Acta - Molecular Basis of Disease, 2016, 1862, 2288-2292. Multiscale modelling in immunology: a review. Briefings in Bioinformatics, 2016, 17, 408-418. 3.2 46 A review of computational and mathematical modeling contributions to our understanding of 82 Mycobacterium tuberculosis within-host infection and treatment. Current Opinion in Systems 1.3 61 Biology, 2017, 3, 170-185. A strategy to estimate the rate of recruitment of inflammatory cells during bovine intramammary infection under field management. BMC Veterinary Research, 2017, 13, 167. «Normalización» de la perfusión tisular en el choque séptico: Rivers, Jones y el enfoque multimodal. 0.1 0 84 Acta Colombiana De Cuidado Intensivo, 2018, 18, 108-118. Cardiac macrophage biology in the steady-state heart, the aging heart, and following myocardial 2.2 infarction. Translational Research, 2018, 191, 15-28. Modeling the Dynamics of Human Liver Failure Post Liver Resection. Processes, 2018, 6, 115. 86 1.3 9 Cell studio: A platform for interactive, 3D graphical simulation of immunological processes. APL 87 3.3 Bioengineering, 2018, 2, 026107. Model-based virtual patient analysis of human liver regeneration predicts critical perioperative 88 3.0 10 factors controlling the dynamic mode of response to resection. BMC Systems Biology, 2019, 13, 9. Constitutive Modelling of Wound Healing. Studies in Mechanobiology, Tissue Engineering and Biomaterials, 2019, , 101-133. The Impact of Stochasticity and Its Control on a Model of the Inflammatory Response. Computation, 90 1.0 8 2019, 7, 3. The Intersection of Regional Anesthesia and Cancer Progression: A Theoretical Framework. Cancer Control, 2020, 27, 107327482096557.

IF ARTICLE CITATIONS # A Turing mechanism in order to explain the patchy nature of Crohn's disease. Journal of Mathematical 92 0.8 3 Biology, 2021, 83, 12. Systems Biology and Inflammation. Methods in Molecular Biology, 2010, 662, 181-201. 0.4 23 94 In Vivo-to-In Silico Iterations to Investigate Aeroallergen-Host Interactions. PLoS ONE, 2008, 3, e2426. 1.1 18 A Patient-Specific in silico Model of Inflammation and Healing Tested in Acute Vocal Fold Injury. PLoS ONE, 2008, 3, e2789. Multi-Scale Modeling and Analysis of Left Ventricular Remodeling Post Myocardial Infarction: 96 2 Integration of Experimental and Computational Approaches., 0,,. Pattern Formation and Transition to Chaos in a Chemotaxis Model of Acute Inflammation. SIAM Journal on Applied Dynamical Systems, 2021, 20, 1844-1881. 99 In Silico Trials and Personalized Therapy for Sepsis and Trauma., 2013, , 159-170. 0 Modeling Hostâ€"Pathogen Interactions in Necrotizing Enterocolitis. , 2013, , 231-264. A Mathematical Model of Aseptic Inflammation Dynamics. Journal of Applied and Industrial 102 0.1 2 Mathematics, 2020, 14, 779-791. Mathematical modelling of autoimmune myocarditis and the effects of immune checkpoint inhibitors. Journal of Theoretical Biology, 2022, 537, 111002. Towards systems immunology of critical illness at scale: from single cell †omics to digital twins. 107 7 2.9 Trends in Ímmunology, 2023, 44, 345-355. An indicator of Crohn's disease severity based on Turing patterns. Chaos, Solitons and Fractals, 2023, 171, 113455. Modelling Keloids Dynamics: A Brief Review and New Mathematical Perspectives. Bulletin of 111 0.9 1 Mathematical Biology, 2023, 85, .