Michael Wannemuehler

List of Publications by Year
in descending order

109 papers	4,097 citations	101384 36 h-index	143772 57 g-index
110 all docs	110 docs citations	110 times ranked	3976 citing authors

#	Article	IF	Citations
1	Vaccine adjuvants: Current challenges and future approaches. Journal of Pharmaceutical Sciences, 2009, 98, 1278-1316.	1.6	218
2	The Altered Schaedler Flora: Continued Applications of a Defined Murine Microbial Community. ILAR Journal, 2015, 56, 169-178.	1.8	173
3	Activation of innate immune responses in a pathogen-mimicking manner by amphiphilic polyanhydride nanoparticle adjuvants. Biomaterials, 2011, 32, 6815-6822.	5.7	124
4	Mannose-Functionalized â€œPathogen-likeâ€•Polyanhydride Nanoparticles Target C-Type Lectin Receptors on Dendritic Cells. Molecular Pharmaceutics, 2011, 8, 1877-1886.	2.3	118
5	Design of a Protective Single-Dose Intranasal Nanoparticle-Based Vaccine Platform for Respiratory Infectious Diseases. PLoS ONE, 2011, 6, e17642.	1.1	115
6	Polyanhydride microparticles enhance dendritic cell antigen presentation and activation. Acta Biomaterialia, 2011, 7, 2857-2864.	4.1	111
7	Single dose vaccine based on biodegradable polyanhydride microspheres can modulate immune response mechanism. Journal of Biomedical Materials Research - Part A, 2006, 76A, 798-810.	2.1	106
8	Helicobacter bilis triggers persistent immune reactivity to antigens derived from the commensal bacteria in gnotobiotic C3H/HeN mice. Gut, 2007, 56, 934-940.	6.1	101
9	Polymer Chemistry Influences Monocytic Uptake of Polyanhydride Nanospheres. Pharmaceutical Research, 2009, 26, 683-690.	1.7	99
10	Protein stability in the presence of polymer degradation products: Consequences for controlled release formulations. Biomaterials, 2006, 27, 3312-3320.	5.7	96
11	Intestinal organoids containing poly(lacticâ€‹coâ€glycolic acid) nanoparticles for the treatment of inflammatory bowel diseases. Journal of Biomedical Materials Research - Part A, 2018, 106, 876-886.	2.1	92
12	Characterization of Treponema phagedenis -Like Spirochetes Isolated from Papillomatous Digital Dermatitis Lesions in Dairy Cattle. Journal of Clinical Microbiology, 2003, 41, 2522-2529.	1.8	86
13	Derivation of adult canine intestinal organoids for translational research in gastroenterology. BMC Biology, 2019, 17, 33.	1.7	82
14	Effect of polymer chemistry and fabrication method on protein release and stability from polyanhydride microspheres. Journal of Biomedical Materials Research - Part B Applied Biomaterials, 2009, 91B, 938-947.	1.6	80
15	Tailoring the immune response by targeting C-type lectin receptors on alveolar macrophages using â€œpathogen-likeâ€•amphiphilic polyanhydride nanoparticles. Biomaterials, 2012, 33, 4762-4772.	5.7	80
16	Emerging trends in the immunotherapy of pancreatic cancer. Cancer Letters, 2018, 417, 35-46.	3.2	77
17	Rational Design of Pathogen-Mimicking Amphiphilic Materials as Nanoadjuvants. Scientific Reports, 2011, 1, 198.	1.6	75
18	Detection of tumor necrosis factor Î± from porcine alveolar macrophages using an L929 fibroblast bioassay. Journal of Immunological Methods, 1991, 140, 15-22.	0.6	74

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19	Encapsulation into amphiphilic polyanhydride microparticles stabilizes Yersinia pestis antigens. Acta Biomaterialia, 2010, 6, 3110-3119.	4.1	74
20	Dietary Conjugated Linoleic Acid Modulates Phenotype and Effector Functions of Porcine CD8+ Lymphocytes. Journal of Nutrition, 2001, 131, 2370-2377.	1.3	70
21	The simultaneous effect of polymer chemistry and device geometry on the in vitro activation of murine dendritic cells. Biomaterials, 2009, 30, 5131-5142.	5.7	65
22	Increased CYP4B1 mRNA Is Associated with the Inhibition of Dextran Sulfate Sodiumâ€"Induced Colitis by Caffeic Acid in Mice. Experimental Biology and Medicine, 2009, 234, 605-616.	1.1	63
23	Evaluation of Biocompatibility and Administration Site Reactogenicity of Polyanhydrideâ€Particleâ€Based Platform for Vaccine Delivery. Advanced Healthcare Materials, 2013, 2, 369-378.	3.9	59
24	Retention of structure, antigenicity, and biological function of pneumococcal surface protein A (PspA) released from polyanhydride nanoparticles. Acta Biomaterialia, 2013, 9, 8262-8271.	4.1	58
25	Impact of Immunizations with Porcine Reproductive and Respiratory Syndrome Virus on Lymphoproliferative Recall Responses of CD8+ T Cells. Viral Immunology, 2004, 17, 25-37.	0.6	54
26	Draft Genome Sequences of the Altered Schaedler Flora, a Defined Bacterial Community from Gnotobiotic Mice. Genome Announcements, 2014, 2, .	0.8	52
27	Gut Organoid as a New Platform to Study Alginate and Chitosan Mediated PLGA Nanoparticles for Drug Delivery. Marine Drugs, 2021, 19, 282.	2.2	51
28	Nanocarriers for pancreatic cancer imaging, treatments, and immunotherapies. Theranostics, 2022, 12, 1030-1060.	4.6	49
29	Cloning of a Beta-Hemolysin Gene ofBrachyspira (Serpulina) hyodysenteriaeand Its Expression in Escherichia coli. Infection and Immunity, 2001, 69, 706-711.	1.0	48
30	Distinct Peripheral Blood RNA Responses to Salmonella in Pigs Differing in Salmonella Shedding Levels: Intersection of IFNG, TLR and miRNA Pathways. PLoS ONE, 2011, 6, e28768.	1.1	47
31	Effect of nanovaccine chemistry on humoral immune response kinetics and maturation. Nanoscale, 2014, 6, 13770-13778.	2.8	47
32	Structural and antigenic stability of H5N1 hemagglutinin trimer upon release from polyanhydride nanoparticles. Journal of Biomedical Materials Research - Part A, 2014, 102, 4161-4168.	2.1	44
33	Functionalization of polyanhydride microparticles with di-mannose influences uptake by and intracellular fate within dendritic cells. Acta Biomaterialia, 2013, 9, 8902-8909.	4.1	41
34	Safety and Biocompatibility of Carbohydrate-Functionalized Polyanhydride Nanoparticles. AAPS Journal, 2015, 17, 256-267.	2.2	41
35	Polyanhydride nanovaccine against swine influenza virus in pigs. Vaccine, 2017, 35, 1124-1131.	1.7	41
36	Single immunization with a suboptimal antigen dose encapsulated into polyanhydride microparticles promotes high titer and avid antibody responses. Journal of Biomedical Materials Research - Part B Applied Biomaterials, 2013, 101B, 91-98.	1.6	40

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37	Induction of differential immune reactivity to members of the flora of gnotobiotic mice following colonization with Helicobacter bilis or Brachyspira hyodysenteriae. Microbes and Infection, 2006, 8, 1602-1610.	1.0	39
38	Salmonella enterica serovar Typhimurium-infected pigs with different shedding levels exhibit distinct clinical, peripheral cytokine and transcriptomic immune response phenotypes. Innate Immunity, 2015, 21, 227-241.	1.1	37
39	Pathogenic and non-pathogenic Escherichia coli colonization and host inflammatory response in a defined microbiota mouse model. DMM Disease Models and Mechanisms, 2018, 11, .	1.2	36
40	Single dose combination nanovaccine provides protection against influenza A virus in young and aged mice. Biomaterials Science, 2019, 7, 809-821.	2.6	36
41	Cellular Internalization Mechanisms of Polyanhydride Particles: Implications for Rational Design of Drug Delivery Vehicles. Journal of Biomedical Nanotechnology, 2016, 12, 1544-1552.	0.5	34
42	Pathogenesis of Treponema hyodysenteriae: induction of interleukin-1 and tumor necrosis factor by a treponemal butanol/water extract (endotoxin). Microbial Pathogenesis, 1989, 7, 279-288.	1.3	33
43	High Throughput Cell-Based Screening of Biodegradable Polyanhydride Libraries. Combinatorial Chemistry and High Throughput Screening, 2009, 12, 634-645.	0.6	33
44	Hemagglutinin-based polyanhydride nanovaccines against H5N1 influenza elicit protective virus neutralizing titers and cell-mediated immunity. International Journal of Nanomedicine, 2015, 10, 229.	3.3	33
45	Combination Nanovaccine Demonstrates Synergistic Enhancement in Efficacy against Influenza. ACS Biomaterials Science and Engineering, 2016, 2, 368-374.	2.6	31
46	CD4+ T-cell responses and distribution at the colonic mucosa during Brachyspira hyodysenteriae-induced colitis in pigs. Immunology, 2005, 115, 127-135.	2.0	30
47	Attenuation of Colitis by Serum-Derived Bovine Immunoglobulin/Protein Isolate in a Defined Microbiota Mouse Model. Digestive Diseases and Sciences, 2015, 60, 3293-3303.	1.1	30
48	Mucosal Immunoregulation: Environmental Lipopolysaccharide and GALT T Lymphocytes Regulate the IgA Response. Microbiology and Immunology, 1984, 28, 261-280.	0.7	29
49	Polyanhydride nanoparticles stabilize pancreatic cancer antigen <scp>MUC4Î²</scp>. Journal of Biomedical Materials Research - Part A, 2021, 109, 893-902.	2.1	29
50	Room Temperature Stable PspA-Based Nanovaccine Induces Protective Immunity. Frontiers in Immunology, 2018, 9, 325.	2.2	28
51	A systems approach to designing next generation vaccines: combining Î±-galactose modified antigens with nanoparticle platforms. Scientific Reports, 2014, 4, 3775.	1.6	27
52	Helicobacter bilis Colonization Enhances Susceptibility to Typhlocolitis Following an Inflammatory Trigger. Digestive Diseases and Sciences, 2011, 56, 2838-2848.	1.1	26
53	Sustained release and stabilization of therapeutic antibodies using amphiphilic polyanhydride nanoparticles. Chemical Engineering Science, 2015, 125, 98-107.	1.9	26
54	Effects of six common dietary nutrients on murine intestinal organoid growth. PLoS ONE, 2018, 13, e0191517.	1.1	26

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55	Cryptosporidium parvum Initiates Inflammatory Bowel Disease in Germfree T Cell Receptor-Î±-Deficient Mice. American Journal of Pathology, 1998, 153, 1717-1722.	1.9	25
56	Nanoparticle Chemistry and Functionalization Differentially Regulates Dendritic Cellâ€“Nanoparticle Interactions and Triggers Dendritic Cell Maturation. Particle and Particle Systems Characterization, 2014, 31, 1269-1280.	1.2	25
57	Lung Deposition and Cellular Uptake Behavior of Pathogenâ€Mimicking Nanovaccines in the First 48 Hours. Advanced Healthcare Materials, 2014, 3, 1071-1077.	3.9	24
58	Transport of artificial virus-like nanocarriers through intestinal monolayers via microfold cells. Nanoscale, 2020, 12, 16339-16347.	2.8	24
59	Polyanhydride nanovaccine platform enhances antigen-specific cytotoxic T cell responses. Technology, 2014, 02, 171-175.	1.4	23
60	Amphiphilic polyanhydride-based recombinant MUC4Î²-nanovaccine activates dendritic cells. Genes and Cancer, 2019, 10, 52-62.	0.6	23
61	Gene expression in intestinal mucosal biopsy specimens obtained from dogs with chronic enteropathy. American Journal of Veterinary Research, 2012, 73, 1219-1229.	0.3	22
62	Single-dose combination nanovaccine induces both rapid and long-lived protection against pneumonic plague. Acta Biomaterialia, 2019, 100, 326-337.	4.1	22
63	Cryptosporidium parvum spermidine/spermine N1-acetyltransferase exhibits different characteristics from the host enzyme. Molecular and Biochemical Parasitology, 2007, 152, 170-180.	0.5	20
64	Chemistry-dependent adsorption of serum proteins onto polyanhydride microparticles differentially influences dendritic cell uptake and activation. Acta Biomaterialia, 2012, 8, 3618-3628.	4.1	20
65	Altered Schaedler flora mice: A defined microbiota animal model to study the microbiota-gut-brain axis. Behavioural Brain Research, 2019, 356, 221-226.	1.2	20
66	Ex Vivo Study of Telluride Nanowires in Minigut. Journal of Biomedical Nanotechnology, 2018, 14, 978-986.	0.5	19
67	STING pathway stimulation results in a differentially activated innate immune phenotype associated with low nitric oxide and enhanced antibody titers in young and aged mice. Vaccine, 2019, 37, 2721-2730.	1.7	19
68	Rules of Engagement: Epithelial-Microbe Interactions and Inflammatory Bowel Disease. Frontiers in Medicine, 2021, 8, 669913.	1.2	19
69	Organic barn dust extract exposure impairs porcine macrophage function in vitro: Implications for respiratory health. Veterinary Immunology and Immunopathology, 2014, 157, 20-30.	0.5	18
70	Pulmonary Biodistribution and Cellular Uptake of Intranasally Administered Monodisperse Particles. Pharmaceutical Research, 2015, 32, 1368-1382.	1.7	18
71	Mouse Genetic Background Affects Transfer of an Antibiotic Resistance Plasmid in the Gastrointestinal Tract. MSphere, 2020, 5, .	1.3	18
72	THE IgA RESPONSE: INDUCTIVE ASPECTS, REGULATORY CELLS, AND EFFECTOR FUNCTIONS. Annals of the New York Academy of Sciences, 1983, 409, 48-71.	1.8	16

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73	Helicobacter bilis Infection Alters Mucosal Bacteria and Modulates Colitis Development in Defined Microbiota Mice. Inflammatory Bowel Diseases, 2016, 22, 2571-2581.	0.9	16
74	Mucosal gene expression profiles following the colonization of immunocompetent defined-flora C3H mice with Helicobacter bilis: a prelude to typhlocolitis. Microbes and Infection, 2009, 11, 374-383.	1.0	15
75	Functionalization promotes pathogenâ€mimicking characteristics of polyanhydride nanoparticle adjuvants. Journal of Biomedical Materials Research - Part A, 2017, 105, 2762-2771.	2.1	14
76	Vitamin C and B₃ as new biomaterials to alter intestinal stem cells. Journal of Biomedical Materials Research - Part A, 2019, 107, 1886-1897.	2.1	14
77	Pathogenicity ofSerpulina hyodysenteriae:in vivoinduction of tumor necrosis factor and interleukin-6 by a serpulinal butanol/water extract (endotoxin). Microbial Pathogenesis, 1997, 23, 181-187.	1.3	13
78	Safety and biocompatibility of injectable vaccine adjuvants composed of thermogelling block copolymer gels. Journal of Biomedical Materials Research - Part A, 2019, 107, 1754-1762.	2.1	13
79	Pentablock Copolymer Micelle Nanoadjuvants Enhance Cytosolic Delivery of Antigen and Improve Vaccine Efficacy while Inducing Low Inflammation. ACS Biomaterials Science and Engineering, 2019, 5, 1332-1342.	2.6	13
80	Intranasal delivery of influenza antigen by nanoparticles, but not NKT-cell adjuvant differentially induces the expression of B-cell activation factors in mice and swine. Cellular Immunology, 2018, 329, 27-30.	1.4	12
81	Polymeric Nanoparticle-Based Vaccine Adjuvants and Delivery Vehicles. Current Topics in Microbiology and Immunology, 2020, 433, 29-76.	0.7	12
82	Manipulate intestinal organoids with niobium carbide nanosheets. Journal of Biomedical Materials Research - Part A, 2021, 109, 479-487.	2.1	12
83	Single-dose combination nanovaccine induces both rapid and durable humoral immunity and toxin neutralizing antibody responses against Bacillus anthracis. Vaccine, 2021, 39, 3862-3870.	1.7	12
84	Reduction in inflammation following blockade of CD18 or CD29 adhesive pathways during the acute phase of a spirochetal-induced colitis in mice. Microbial Pathogenesis, 2000, 29, 289-299.	1.3	11
85	Plasma Caffeic Acid Is Associated with Statistical Clustering of the Anticolitic Efficacy of Caffeic Acid in Dextran Sulfate Sodium-Treated Mice. Journal of Nutrition, 2011, 141, 1989-1995.	1.3	11
86	Activities of dl -Î±-Difluoromethylarginine and Polyamine Analogues against Cryptosporidium parvum Infection in a T-Cell Receptor Alpha-Deficient Mouse Model. Antimicrobial Agents and Chemotherapy, 2007, 51, 1234-1239.	1.4	10
87	Polyanhydride Nanoparticles Induce Low Inflammatory Dendritic Cell Activation Resulting in CD8⁺ T Cell Memory and Delayed Tumor Progression . International Journal of Nanomedicine, 2020, Volume 15, 6579-6592.	3.3	10
88	Bacterial immunogens and protective immunity in swine. Veterinary Immunology and Immunopathology, 1994, 43, 117-126.	0.5	9
89	Harvesting Murine Alveolar Macrophages and Evaluating Cellular Activation Induced by Polyanhydride Nanoparticles. Journal of Visualized Experiments, 2012, , e3883.	0.2	9
90	Orally administered extract fromPrunella vulgarisattenuates spontaneous colitis in mdr1a^{-/-}mice. World Journal of Gastrointestinal Pharmacology and Therapeutics, 2015, 6, 223.	0.6	9

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91	Self-assembling synthetic nanoadjuvant scaffolds cross-link B cell receptors and represent new platform technology for therapeutic antibody production. Science Advances, 2021, 7, .	4.7	9
92	Prophylactic treatment with Hypoxis hemerocallidea corm (African potato) methanolic extract ameliorates Brachyspira hyodysenteriae-induced murine typhlocolitis. Experimental Biology and Medicine, 2010, 235, 222-230.	1.1	8
93	Understanding Luminal Microorganisms and Their Potential Effectiveness in Treating Intestinal Inflammation. Inflammatory Bowel Diseases, 2016, 22, 194-201.	0.9	8
94	Combinatorial evaluation of in vivo distribution of polyanhydride particle-based platforms for vaccine delivery. International Journal of Nanomedicine, 2013, 8, 2213.	3.3	7
95	Vaccine Technologies Against Avian Influenza: Current Approaches and New Directions. Journal of Biomedical Nanotechnology, 2014, 10, 2261-2294.	0.5	7
96	Polyanhydride Nanoparticle Interactions with Host Serum Proteins and Their Effects on Bone Marrow Derived Macrophage Activation. ACS Biomaterials Science and Engineering, 2017, 3, 160-168.	2.6	7
97	TNFÎ± regulates intestinal organoids from mice with both defined and conventional microbiota. International Journal of Biological Macromolecules, 2020, 164, 548-556.	3.6	6
98	Temporal Dynamics of Chronic Inflammation on the Cecal Microbiota in IL-10-/- Mice. Frontiers in Immunology, 2020, 11, 585431.	2.2	6
99	IMMUNE REGULATION OF SUPPRESSION IN OFFSPRING OF ORALLY TOLERIZED MICE. Annals of the New York Academy of Sciences, 1983, 409, 888-889.	1.8	5
100	Persistent enteric mycobacterial infection enhances sensitivity to acute mucosal injury. Experimental Biology and Medicine, 2011, 236, 36-43.	1.1	5
101	Structural Stability and Antigenicity of Universal Equine H3N8 Hemagglutinin Trimer upon Release from Polyanhydride Nanoparticles and Pentablock Copolymer Hydrogels. ACS Biomaterials Science and Engineering, 2022, 8, 2500-2507.	2.6	5
102	Mycobacterium avium paratuberculosis infection augments innate immune responses following intestinal epithelial injury. Experimental Biology and Medicine, 2014, 239, 436-441.	1.1	4
103	Cytotoxic effects of manganese oxide nanoparticles in combination with microbial components on intestinal epithelial cells. F1000Research, 0, 9, 975.	0.8	4
104	Antibody and CD8+ T cell memory response to influenza A/PR/8/34 infection is reduced in treadmill-exercised mice, yet still protective. Journal of Applied Physiology, 2013, 114, 1413-1420.	1.2	3
105	Vertical transmission of attaching and invasive E. coli from the dam to neonatal mice predisposes to more severe colitis following exposure to a colitic insult later in life. PLoS ONE, 2022, 17, e0266005.	1.1	3
106	Campylobacter jejuni persistently colonizes gnotobiotic altered Schaedler flora C3H/HeN mice and induces mild colitis. FEMS Microbiology Letters, 2020, 367, .	0.7	2
107	Biomaterial nanocarrier-driven mechanisms to modulate anti-tumor immunity. Current Opinion in Biomedical Engineering, 2021, 20, 100322.	1.8	1
108	Oral administration of an ethanolic extract of Hypericum gentianoides attenuates spontaneous colitis in mdr1a-/- mice. Functional Foods in Health and Disease, 2016, 6, 246.	0.3	1

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109	Reply. Inflammatory Bowel Diseases, 2016, 22, E27-E28.	0.9	0