

Michael R King

List of Publications by Citations

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116
papers

2,960
citations

32
h-index

50
g-index

132
ext. papers

3,576
ext. citations

5.3
avg, IF

5.77
L-index

#	Paper	IF	Citations
116	Targeted drug delivery to circulating tumor cells via platelet membrane-functionalized particles. <i>Biomaterials</i> , 2016 , 76, 52-65	15.6	169
115	TRAIL-coated leukocytes that kill cancer cells in the circulation. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2014 , 111, 930-5	11.5	143
114	Computational and experimental models of cancer cell response to fluid shear stress. <i>Frontiers in Oncology</i> , 2013 , 3, 44	5.3	125
113	Multiparticle adhesive dynamics. Interactions between stably rolling cells. <i>Biophysical Journal</i> , 2001 , 81, 799-813	2.9	112
112	Fluid Shear Stress Sensitizes Cancer Cells to Receptor-Mediated Apoptosis via Trimeric Death Receptors. <i>New Journal of Physics</i> , 2013 , 15, 015008	2.9	107
111	Cooperative effects of matrix stiffness and fluid shear stress on endothelial cell behavior. <i>Biophysical Journal</i> , 2015 , 108, 471-8	2.9	95
110	Microtube device for selectin-mediated capture of viable circulating tumor cells from blood. <i>Clinical Chemistry</i> , 2012 , 58, 846-53	5.5	85
109	Platelet adhesive dynamics. Part I: characterization of platelet hydrodynamic collisions and wall effects. <i>Biophysical Journal</i> , 2008 , 95, 2539-55	2.9	71
108	E-selectin liposomal and nanotube-targeted delivery of doxorubicin to circulating tumor cells. <i>Journal of Controlled Release</i> , 2012 , 160, 609-17	11.7	64
107	Continuously perfused microbubble array for 3D tumor spheroid model. <i>Biomicrofluidics</i> , 2011 , 5, 241103.2	3.2	63
106	Lamin A/C deficiency reduces circulating tumor cell resistance to fluid shear stress. <i>American Journal of Physiology - Cell Physiology</i> , 2015 , 309, C736-46	5.4	61
105	Mechanical shedding of L-selectin from the neutrophil surface during rolling on sialyl Lewis x under flow. <i>Journal of Biological Chemistry</i> , 2007 , 282, 4812-4820	5.4	60
104	Regulation of ATP utilization during metastatic cell migration by collagen architecture. <i>Molecular Biology of the Cell</i> , 2018 , 29, 1-9	3.5	60
103	Genetic engineering of platelets to neutralize circulating tumor cells. <i>Journal of Controlled Release</i> , 2016 , 228, 38-47	11.7	55
102	Delivery of apoptotic signal to rolling cancer cells: a novel biomimetic technique using immobilized TRAIL and E-selectin. <i>Biotechnology and Bioengineering</i> , 2009 , 102, 1692-702	4.9	55
101	Safe Recombinant Outer Membrane Vesicles that Display M2e Elicit Heterologous Influenza Protection. <i>Molecular Therapy</i> , 2017 , 25, 989-1002	11.7	53
100	Phenotypic switch in blood: effects of pro-inflammatory cytokines on breast cancer cell aggregation and adhesion. <i>PLoS ONE</i> , 2013 , 8, e54959	3.7	53

99	Circulating Tumor Cells: Diagnostic and Therapeutic Applications. <i>Annual Review of Biomedical Engineering</i> , 2018 , 20, 329-352	12	51
98	Nano-to-micro scale dynamics of P-selectin detachment from leukocyte interfaces. III. Numerical simulation of tethering under flow. <i>Biophysical Journal</i> , 2005 , 88, 1676-83	2.9	51
97	Physical biology in cancer. 3. The role of cell glycocalyx in vascular transport of circulating tumor cells. <i>American Journal of Physiology - Cell Physiology</i> , 2014 , 306, C89-97	5.4	50
96	Microenvironment of tumor-draining lymph nodes: opportunities for liposome-based targeted therapy. <i>International Journal of Molecular Sciences</i> , 2014 , 15, 20209-39	6.3	49
95	TRAIL-coated leukocytes that prevent the bloodborne metastasis of prostate cancer. <i>Journal of Controlled Release</i> , 2016 , 223, 215-223	11.7	47
94	Adhesion receptors as therapeutic targets for circulating tumor cells. <i>Frontiers in Oncology</i> , 2012 , 2, 79	5.3	46
93	Three-dimensional simulations of a platelet-shaped spheroid near a wall in shear flow. <i>Physics of Fluids</i> , 2005 , 17, 113302	4.4	46
92	Super natural killer cells that target metastases in the tumor draining lymph nodes. <i>Biomaterials</i> , 2016 , 77, 66-76	15.6	45
91	Fluid shear stress increases neutrophil activation via platelet-activating factor. <i>Biophysical Journal</i> , 2014 , 106, 2243-53	2.9	44
90	Microfabrication of cavities in polydimethylsiloxane using DRIE silicon molds. <i>Lab on A Chip</i> , 2007 , 7, 1669-72	4.2	43
89	A physical sciences network characterization of circulating tumor cell aggregate transport. <i>American Journal of Physiology - Cell Physiology</i> , 2015 , 308, C792-802	5.4	42
88	Engineering of Exosomes to Target Cancer Metastasis. <i>Cellular and Molecular Bioengineering</i> , 2020 , 13, 1-16	3.9	36
87	Surfactant functionalization induces robust, differential adhesion of tumor cells and blood cells to charged nanotube-coated biomaterials under flow. <i>Biomaterials</i> , 2015 , 56, 179-86	15.6	35
86	Nanobiotechnology for the capture and manipulation of circulating tumor cells. <i>Wiley Interdisciplinary Reviews: Nanomedicine and Nanobiotechnology</i> , 2012 , 4, 291-309	9.2	35
85	Circulating tumor cells from prostate cancer patients interact with E-selectin under physiologic blood flow. <i>PLoS ONE</i> , 2013 , 8, e85143	3.7	34
84	Shear-induced resistance to neutrophil activation via the formyl peptide receptor. <i>Biophysical Journal</i> , 2012 , 102, 1804-14	2.9	31
83	Circulating tumor cells: the substrate of personalized medicine?. <i>Frontiers in Oncology</i> , 2012 , 2, 69	5.3	28
82	Effect of homotypic and heterotypic interaction in 3D on the E-selectin mediated adhesive properties of breast cancer cell lines. <i>Biomaterials</i> , 2012 , 33, 9037-48	15.6	28

81	TRAIL-mediated apoptosis in breast cancer cells cultured as 3D spheroids. <i>PLoS ONE</i> , 2014 , 9, e111487	3.7	27
80	Microenvironment induced spheroid to sheeting transition of immortalized human keratinocytes (HaCaT) cultured in microbubbles formed in polydimethylsiloxane. <i>Biomaterials</i> , 2011 , 32, 7159-68	15.6	27
79	Cancer associated fibroblasts confer shear resistance to circulating tumor cells during prostate cancer metastatic progression. <i>Oncotarget</i> , 2020 , 11, 1037-1050	3.3	27
78	Simulation of platelet, thrombus and erythrocyte hydrodynamic interactions in a 3D arteriole with in vivo comparison. <i>PLoS ONE</i> , 2013 , 8, e76949	3.7	26
77	Immobilized surfactant-nanotube complexes support selectin-mediated capture of viable circulating tumor cells in the absence of capture antibodies. <i>Journal of Biomedical Materials Research - Part A</i> , 2015 , 103, 3407-18	5.4	25
76	Nanobiotechnology for the Therapeutic Targeting of Cancer Cells in Blood. <i>Cellular and Molecular Bioengineering</i> , 2015 , 8, 137-150	3.9	25
75	Piperlongumine and immune cytokine TRAIL synergize to promote tumor death. <i>Scientific Reports</i> , 2015 , 5, 9987	4.9	25
74	Minimal dosing of leukocyte targeting TRAIL decreases triple-negative breast cancer metastasis following tumor resection. <i>Science Advances</i> , 2019 , 5, eaaw4197	14.3	24
73	Nanostructured Surfaces to Target and Kill Circulating Tumor Cells While Repelling Leukocytes. <i>Journal of Nanomaterials</i> , 2012 , 2012,	3.2	24
72	Rafting Down the Metastatic Cascade: The Role of Lipid Rafts in Cancer Metastasis, Cell Death, and Clinical Outcomes. <i>Cancer Research</i> , 2021 , 81, 5-17	10.1	24
71	Mechanical heterogeneities in the subendothelial matrix develop with age and decrease with exercise. <i>Journal of Biomechanics</i> , 2016 , 49, 1447-1453	2.9	23
70	Rapid isolation of viable circulating tumor cells from patient blood samples. <i>Journal of Visualized Experiments</i> , 2012 , e4248	1.6	23
69	Inducing apoptosis in rolling cancer cells: a combined therapy with aspirin and immobilized TRAIL and E-selectin. <i>Molecular Pharmaceutics</i> , 2012 , 9, 2219-27	5.6	22
68	Biomolecular Surfaces for the Capture and Reprogramming of Circulating Tumor Cells. <i>Journal of Bionic Engineering</i> , 2009 , 6, 311-317	2.7	22
67	Nanomaterials for the Capture and Therapeutic Targeting of Circulating Tumor Cells. <i>Cellular and Molecular Bioengineering</i> , 2017 , 10, 275-294	3.9	21
66	E-selectin ligand-1 controls circulating prostate cancer cell rolling/adhesion and metastasis. <i>Oncotarget</i> , 2014 , 5, 12097-110	3.3	21
65	Activation of Piezo1 sensitizes cells to TRAIL-mediated apoptosis through mitochondrial outer membrane permeability. <i>Cell Death and Disease</i> , 2019 , 10, 837	9.8	20
64	Rolling dynamics of a neutrophil with redistributed L-selectin. <i>Mathematical Biosciences</i> , 2005 , 194, 71-93	3.9	20

63	Hydrodynamic interactions between rolling leukocytes in vivo. <i>Microcirculation</i> , 2003 , 10, 401-9	2.9	19
62	The Impact of COVID-19 on Cancer Risk and Treatment. <i>Cellular and Molecular Bioengineering</i> , 2020 , 13, 1-7	3.9	18
61	Differential drug responses of circulating tumor cells within patient blood. <i>Cancer Letters</i> , 2014 , 352, 28-35	9.9	18
60	Sweeping lymph node micrometastases off their feet: an engineered model to evaluate natural killer cell mediated therapeutic intervention of circulating tumor cells that disseminate to the lymph nodes. <i>Lab on A Chip</i> , 2014 , 14, 118-27	7.2	17
59	Endothelial retention and phenotype on carbonized cardiovascular implant surfaces. <i>Biomaterials</i> , 2014 , 35, 7714-23	15.6	17
58	The effect of hematocrit and leukocyte adherence on flow direction in the microcirculation. <i>Annals of Biomedical Engineering</i> , 2004 , 32, 803-14	4.7	17
57	Prophylactic Cancer Vaccines Engineered to Elicit Specific Adaptive Immune Response. <i>Frontiers in Oncology</i> , 2021 , 11, 626463	5.3	15
56	Mechanosensitive Ion Channels: TRPV4 and P2X7 in Disseminating Cancer Cells. <i>Cancer Journal (Sudbury, Mass)</i> , 2018 , 24, 84-92	2.2	14
55	Effect of extracellular pH on selectin adhesion: theory and experiment. <i>Biophysical Journal</i> , 2013 , 104, 292-9	2.9	14
54	Apparent 2-D diffusivity in a ruffled cell membrane. <i>Journal of Theoretical Biology</i> , 2004 , 227, 323-6	2.3	14
53	Engineered fluidic systems to understand lymphatic cancer metastasis. <i>Biomicrofluidics</i> , 2020 , 14, 011503	3.2	14
52	Dual nanoparticle drug delivery: the future of anticancer therapies?. <i>Nanomedicine</i> , 2017 , 12, 95-98	5.6	12
51	Two-stage nanoparticle delivery of piperlongumine and tumor necrosis factor-related apoptosis-inducing ligand (TRAIL) anti-cancer therapy. <i>Technology</i> , 2016 , 4, 60-69	3	11
50	Rolling in the deep: therapeutic targeting of circulating tumor cells. <i>Frontiers in Oncology</i> , 2012 , 2, 184	5.3	11
49	Chemotherapy-induced release of circulating-tumor cells into the bloodstream in collective migration units with cancer-associated fibroblasts in metastatic cancer patients. <i>BMC Cancer</i> , 2020 , 20, 873	4.8	11
48	Platelet-Based Drug Delivery for Cancer Applications. <i>Advances in Experimental Medicine and Biology</i> , 2018 , 1092, 235-251	3.6	10
47	Vascular Recruitment of Human Retinoblastoma Cells by Multi-Cellular Adhesive Interactions with Circulating Leukocytes. <i>Cellular and Molecular Bioengineering</i> , 2010 , 3, 361-368	3.9	9
46	Effect of circulating tumor cell aggregate configuration on hemodynamic transport and wall contact. <i>Mathematical Biosciences</i> , 2017 , 294, 181-194	3.9	7

45	Halloysite Nanotube Coatings Suppress Leukocyte Spreading. <i>Langmuir</i> , 2015 , 31, 13553-60	4	7
44	Simulation and Analysis of Tethering Behavior of Neutrophils with Pseudopods. <i>PLoS ONE</i> , 2015 , 10, e0128378	3.7	7
43	Phenotypic Heterogeneity and Metastasis of Breast Cancer Cells. <i>Cancer Research</i> , 2021 , 81, 3649-3663	10.1	7
42	Analysis of early thrombus dynamics in a humanized mouse laser injury model. <i>Biorheology</i> , 2014 , 51, 3-14	1.7	6
41	Surgical intervention and circulating tumor cell count: a commentary. <i>Translational Cancer Research</i> , 2016 , 5, S126-S128	0.3	6
40	Micelle-in-Liposomes for Sustained Delivery of Anticancer Agents That Promote Potent TRAIL-Induced Cancer Cell Apoptosis. <i>Molecules</i> , 2020 , 26,	4.8	6
39	Platelet mediated TRAIL delivery for efficiently targeting circulating tumor cells. <i>Nanoscale Advances</i> , 2020 , 2, 3942-3953	5.1	6
38	Circulating prostate cancer cells have differential resistance to fluid shear stress-induced cell death. <i>Journal of Cell Science</i> , 2021 , 134,	5.3	6
37	Dynamic Switch Between Two Adhesion Phenotypes in Colorectal Cancer Cells. <i>Cellular and Molecular Bioengineering</i> , 2014 , 7, 35-44	3.9	5
36	Comparison of human and mouse E-selectin binding to Sialyl-Lewis(x). <i>BMC Structural Biology</i> , 2016 , 16, 10	2.7	5
35	SCALE INVARIANCE IN SELECTIN-MEDIATED LEUKOCYTE ROLLING. <i>Fractals</i> , 2004 , 12, 235-241	3.2	4
34	Cell-Surface Adhesive Interactions in Microchannels and Microvessels. <i>Microscale Thermophysical Engineering</i> , 2005 , 9, 255-264		4
33	Mass Action Kinetic Model of Apoptosis by TRAIL-Functionalized Leukocytes. <i>Frontiers in Oncology</i> , 2018 , 8, 410	5.3	3
32	Fabrication and Characterization of Tumor Nano-Lysate as a Preventative Vaccine for Breast Cancer. <i>Langmuir</i> , 2020 , 36, 6531-6539	4	2
31	2013 BMES Outstanding Contributions. <i>Cellular and Molecular Bioengineering</i> , 2014 , 7, 171-171	3.9	2
30	Modulation of selectin-mediated adhesion of flowing lymphoma and bone marrow cells by immobilized SDF-1. <i>International Journal of Molecular Sciences</i> , 2014 , 15, 15061-72	6.3	2
29	In Silico Modeling of Angiogenesis at Multiple Scales: From Nanoscale to Organ System 2010 , 287-320		2
28	Channeling the Force: Piezo1 Mechanotransduction in Cancer Metastasis. <i>Cells</i> , 2021 , 10,	7.9	2

27	Overcoming TRAIL-resistance by sensitizing prostate cancer 3D spheroids with taxanes. <i>PLoS ONE</i> , 2021 , 16, e0246733	3.7	2
26	Effect of Pseudopod Extensions on Neutrophil Hemodynamic Transport Near a Wall. <i>Cellular and Molecular Bioengineering</i> , 2016 , 9, 85-95	3.9	2
25	Taxanes Sensitize Prostate Cancer Cells to TRAIL-Induced Apoptotic Synergy via Endoplasmic Reticulum Stress. <i>Molecular Cancer Therapeutics</i> , 2021 , 20, 833-845	6.1	2
24	Fluid shear stress enhances T cell activation through Piezo1.. <i>BMC Biology</i> , 2022 , 20, 61	7.3	2
23	A simplified method for the efficient purification and refolding of recombinant human TRAIL. <i>Biotechnology Progress</i> , 2020 , 36, e3007	2.8	1
22	Unnatural killer cells: TRAIL-coated leukocytes that kill cancer cells in the circulation 2014 ,		1
21	Differentially charged nanomaterials control selectin-mediated adhesion and isolation of cancer cells and leukocytes under flow 2014 ,		1
20	Molecular Dynamics Modeling of Nanodroplets and Nanoparticles 2010 , 151-183		1
19	Supercharged eGFP-TRAIL Decorated NETs to Ensnare and Kill Disseminated Tumor Cells. <i>Cellular and Molecular Bioengineering</i> , 2020 , 13, 359-367	3.9	1
18	Stabilization of the Hinge Region of Human E-selectin Enhances Binding Affinity to Ligands Under Force. <i>Cellular and Molecular Bioengineering</i> , 2021 , 14, 65-74	3.9	1
17	TRAIL-coated leukocytes to kill circulating tumor cells in the flowing blood from prostate cancer patients. <i>BMC Cancer</i> , 2021 , 21, 898	4.8	1
16	Matrix stiffness enhances cancer-macrophage interactions and M2-like macrophage accumulation in the breast tumor microenvironment.. <i>Acta Biomaterialia</i> , 2022 ,	10.8	1
15	Therapeutic Targeting of Circulating Tumor Cells: An Important Problem That Deserves Careful Study. <i>Cellular and Molecular Bioengineering</i> , 2015 , 8, 527-529	3.9	
14	Selectin-Mediated Targeting of Circulating Tumor Cells for Isolation and Treatment 2016 , 267-286		
13	The 2016 Young Innovators of Cellular and Molecular Bioengineering. <i>Cellular and Molecular Bioengineering</i> , 2016 , 9, 303-304	3.9	
12	Cellular and Molecular Bioengineering: A New Editorial Perspective. <i>Cellular and Molecular Bioengineering</i> , 2013 , 6, 118-118	3.9	
11	Large-Scale Simulation of Blood Flow in Microvessels 2010 , 321-339		
10	Molecular to Multicellular Deformation during Adhesion of Immune Cells Under Flow 2010 , 341-368		

- 9 Multiscale Modeling of Nanoscale Aggregation Phenomena: Applications in Semiconductor Materials Processing **2010**, 5-40
- 8 Multiscale Modeling of Rare Events in Self-Assembled Systems **2010**, 41-78
- 7 Continuum Description of Atomic Sheets **2010**, 79-116
- 6 Coulombic Dragging and Mechanical Propelling of Molecules in Nanofluidic Systems **2010**, 117-149
- 5 Modeling the Interactions between Compliant Microcapsules and Patterned Surfaces **2010**, 185-221
- 4 Coarse-Grained and Multiscale Simulations of Lipid Bilayers **2010**, 223-241
- 3 Stochastic Approach to Biochemical Kinetics **2010**, 243-285
- 2 Enrichment of CD34+ Hematopoietic Stem and Progenitor Cells from Human Bone Marrow Using a P-Selectin-Coated Microtube.. *Blood*, **2007**, 110, 1219-1219 2.2
- 1 The 2018 Young Innovators of Cellular and Molecular Bioengineering. *Cellular and Molecular Bioengineering*, **2018**, 11, 307-308 3.9