Geert Schmid-Schoenbein

List of Publications by Year
in descending order

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131 papers	4,508 citations	87723 38 h-index	114278 63 g-index
133 all docs	133 docs citations	133 times ranked	4237 citing authors

#	Article	IF	Citations
1	Microlymphatics and lymph flow. Physiological Reviews, 1990, 70, 987-1028.	13.1	549
2	Leukocyte counts and activation in spontaneously hypertensive and normotensive rats.. Hypertension, 1991, 17, 323-330.	1.3	171
3	Biomechanics: Cell Research and Applications for the Next Decade. Annals of Biomedical Engineering, 2009, 37, 847-859.	1.3	169
4	ANALYSIS OF INFLAMMATION. Annual Review of Biomedical Engineering, 2006, 8, 93-151.	5.7	154
5	Evidence for a second valve system in lymphatics: endothelial microvalves. FASEB Journal, 2001, 15, 1711-1717.	0.2	151
6	Experimental Antileukocyte Interventions in Cerebral Ischemia. Journal of Cerebral Blood Flow and Metabolism, 1996, 16, 1108-1119.	2.4	148
7	The Inflammatory Aspect of the Microcirculation in Hypertension: Oxidative Stress, Leukocytes/Endothelial Interaction, Apoptosis. Microcirculation, 2002, 9, 259-276.	1.0	128
8	G protein-coupled receptors serve as mechanosensors for fluid shear stress in neutrophils. American Journal of Physiology - Cell Physiology, 2006, 290, C1633-C1639.	2.1	100
9	A Mechanism of Oxygen Free Radical Production in the Dahl Hypertensive Rat. Microcirculation, 1999, 6, 179-187.	1.0	97
10	Proteinase Activity and Receptor Cleavage. Hypertension, 2008, 52, 415-423.	1.3	95
11	Characterization of rat LECAM-1 (L-selectin) by the use of monoclonal antibodies and evidence for the presence of soluble LECAM-1 in rat sera. European Journal of Immunology, 1993, 23, 2181-2188.	1.6	87
12	The Second Valve System in Lymphatics. Lymphatic Research and Biology, 2003, 1, 25-31.	0.5	87
13	Biomechanics of skeletal muscle capillaries: Hemodynamic resistance, endothelial distensibility, and pseudopod formation. Annals of Biomedical Engineering, 1995, 23, 226-246.	1.3	86
14	New Advances in the Understanding of the Pathophysiology of Chronic Venous Insufficiency. Angiology, 2001, 52, S27-S34.	0.8	79
15	Pancreatic Trypsin Increases Matrix Metalloproteinase-9 Accumulation and Activation during Acute Intestinal Ischemia-Reperfusion in the Rat. American Journal of Pathology, 2004, 164, 1707-1716.	1.9	79
16	Matrix Metalloproteinases: Discrete Elevations in Essential Hypertension and Hypertensive End-Stage Renal Disease. Clinical and Experimental Hypertension, 2009, 31, 521-533.	0.5	78
17	Role of xanthine oxidase in hydrogen peroxide production. Free Radical Biology and Medicine, 1998, 25, 720-727.	1.3	77
18	Matrix metalloproteinases cleave the Î²₂-adrenergic receptor in spontaneously hypertensive rats. American Journal of Physiology - Heart and Circulatory Physiology, 2010, 299, H25-H35.	1.5	74

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19	Enhanced Matrix Metalloproteinase Activity in the Spontaneously Hypertensive Rat: VEGFR-2 Cleavage, Endothelial Apoptosis, and Capillary Rarefaction. Journal of Vascular Research, 2010, 47, 423-431.	0.6	65
20	Disruption of the Mucosal Barrier During Gut Ischemia Allows Entry of Digestive Enzymes Into the Intestinal Wall. Shock, 2012, 37, 297-305.	1.0	65
21	Contribution of Fluid Shear Response in Leukocytes to Hemodynamic Resistance in the Spontaneously Hypertensive Rat. Circulation Research, 2004, 95, 100-108.	2.0	62
22	Membrane Model of Endothelial Cells and Leukocytes. A Proposal for the Origin of a Cortical Stress. Journal of Biomechanical Engineering, 1995, 117, 171-178.	0.6	59
23	Biomechanics of Microcirculatory Blood Perfusion. Annual Review of Biomedical Engineering, 1999, 1, 73-102.	5.7	57
24	Cellular and molecular basis of Venous insufficiency. Vascular Cell, 2014, 6, 24.	0.2	56
25	Mechanisms causing initial lymphatics to expand and compress to promote lymph flow.. Archives of Histology and Cytology, 1990, 53, 107-114.	0.2	54
26	Modification of leukocyte adhesion in spontaneously hypertensive rats by adrenal corticosteroids. Journal of Leukocyte Biology, 1995, 57, 20-26.	1.5	53
27	Xanthine oxidase activity in the dexamethasone-induced hypertensive rat. Microvascular Research, 2003, 66, 30-37.	1.1	53
28	Microvascular Endothelial Cell Death and Rarefaction in the Glucocorticoid-Induced Hypertensive Rat. Microcirculation, 2001, 8, 129-139.	1.0	51
29	The Primary Valves in the Initial Lymphatics during Inflammation. Lymphatic Research and Biology, 2007, 5, 3-10.	0.5	51
30	Granulocytes as active participants in acute myocardial ischemia and infarction. The American Journal of Cardiovascular Pathology, 1987, 1, 15-30.	0.1	51
31	The Pancreas as a Source of Cardiovascular Cell Activating Factors. Microcirculation, 2000, 7, 183-192.	1.0	49
32	Nitric oxide (NO) side of lymphatic flow and immune surveillance. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 3-4.	3.3	47
33	The Inflammatory Reaction During Venous Hypertension in the Rat. Microcirculation, 2000, 7, 41-52.	1.0	46
34	A New Hypothesis for Microvascular Inflammation in Shock and Multiorgan Failure: Selfâ€Ðigestion by Pancreatic Enzymes. Microcirculation, 2005, 12, 71-82.	1.0	46
35	Cleavage of the leptin receptor by matrix metalloproteinaseâ€“2 promotes leptin resistance and obesity in mice. Science Translational Medicine, 2018, 10, .	5.8	46
36	Enhancement of Glucocorticoid and Mineralocorticoid Receptor Density in the Microcirculation of the Spontaneously Hypertensive Rat. Microcirculation, 2004, 11, 69-78.	1.0	44

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37	Rheology of Leukocytes. Annals of the New York Academy of Sciences, 1987, 516, 333-347.	1.8	43
38	Microvascular Display of Xanthine Oxidase and NADPH Oxidase in the Spontaneously Hypertensive Rat. Microcirculation, 2006, 13, 551-566.	1.0	41
39	The Interaction between Leukocytes and Endothelium in Vivo. Annals of the New York Academy of Sciences, 1987, 516, 348-361.	1.8	38
40	Proteolysis in septic shock patients: plasma peptidomic patterns are associated with mortality. British Journal of Anaesthesia, 2018, 121, 1065-1074.	1.5	37
41	Four-and-a-Half LIM Domains Protein 2 Is a Coactivator of Wnt Signaling in Diabetic Kidney Disease. Journal of the American Society of Nephrology: JASN, 2015, 26, 3072-3084.	3.0	34
42	Effects of induced tolerance to bacterial lipopolysaccharide on myocardial infarct size in rats. Cardiovascular Research, 1996, 31, 73-81.	1.8	33
43	Attenuation of Oxygen Free Radical Formation and Tissue Injury During Experimental Inflammation by Pâ€selectin Blockade. Microcirculation, 1997, 4, 349-357.	1.0	32
44	Receptor cleavage reduces the fluid shear response in neutrophils of the spontaneously hypertensive rat. American Journal of Physiology - Cell Physiology, 2010, 299, C1441-C1449.	2.1	31
45	Microvascular endothelial cell death and rarefaction in the glucocorticoid-induced hypertensive rat. Microcirculation, 2001, 8, 129-39.	1.0	30
46	Chronotropic Response of Cultured Neonatal Rat Ventricular Myocytes to Short-Term Fluid Shear. Cell Biochemistry and Biophysics, 2006, 46, 113-122.	0.9	27
47	The Autodigestion Hypothesis for Shock and Multi-organ Failure. Annals of Biomedical Engineering, 2014, 42, 405-414.	1.3	26
48	Leukocyte kinetics in the microcirculation. Biorheology, 1987, 24, 139-151.	1.2	25
49	Decentralized and adaptive control of nonlinear fluid flow networks. International Journal of Control, 2006, 79, 1495-1504.	1.2	25
50	2008 Landis Award Lecture Inflammation and the Autodigestion Hypothesis. Microcirculation, 2009, 16, 289-306.	1.0	25
51	Transmural Intestinal Wall Permeability in Severe Ischemia after Enteral Protease Inhibition. PLoS ONE, 2014, 9, e96655.	1.1	25
52	Leukocyte fluid shear response in the presence of glucocorticoid. Journal of Leukocyte Biology, 2004, 75, 664-670.	1.5	24
53	New hypothesis for insulin resistance in hypertension due to receptor cleavage. Expert Review of Endocrinology and Metabolism, 2010, 5, 149-158.	1.2	22
54	Spontaneous activation of circulating granulocytes in patients with acute myocardial and cerebral diseases. Biorheology, 1992, 29, 549-561.	1.2	21

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55	Control of overweight and obesity in childhood through education in meal time habits. The â€˜good manners for a healthy futureâ€™ programme. Pediatric Obesity, 2016, 11, 484-490.	1.4	21
56	Transport of colloidal particles in lymphatics and vasculature after subcutaneous injection. Journal of Applied Physiology, 1999, 86, 1381-1387.	1.2	20
57	Matrix Metalloproteinase Activity Causes VEGFRâ€2 Cleavage and Microvascular Rarefaction in Rat Mesentery. Microcirculation, 2011, 18, 228-237.	1.0	20
58	ShockOmics: multiscale approach to the identification of molecular biomarkers in acute heart failure induced by shock. Scandinavian Journal of Trauma, Resuscitation and Emergency Medicine, 2016, 24, 9.	1.1	20
59	Inhibition of Serine Protease Activity Protects Against High Fat Diet-Induced Inflammation and Insulin Resistance. Scientific Reports, 2020, 10, 1725.	1.6	20
60	A Theory of Blood Flow in Skeletal Muscle. Journal of Biomechanical Engineering, 1988, 110, 20-26.	0.6	19
61	Constitutive Expression and Enzymatic Cleavage of ICAM-1 in the Spontaneously Hypertensive Rat. Journal of Vascular Research, 2011, 48, 386-396.	0.6	19
62	Leukocytes in Capillary Flow. International Journal of Microcirculation, Clinical and Experimental, 1995, 15, 255-264.	0.6	18
63	Propagation of Viralâ€Size Particles in Lymph and Blood after Subcutaneous Inoculation. Microcirculation, 2000, 7, 193-200.	1.0	18
64	Acute venous occlusion enhances matrix metalloprotease activity: Implications on endothelial dysfunction. Microvascular Research, 2011, 81, 108-116.	1.1	18
65	Proteolytic Cleavage of the Red Blood Cell Glycocalyx in a Genetic Form of Hypertension. Cellular and Molecular Bioengineering, 2011, 4, 678-692.	1.0	18
66	Fine control of endothelial VEGFR-2 activation: caveolae as fluid shear stress shelters for membrane receptors. Biomechanics and Modeling in Mechanobiology, 2019, 18, 5-16.	1.4	18
67	A Mechanism of Oxygen Free Radical Production in the Dahl Hypertensive Rat. , 1999, 6, 179.		18
68	An Emerging Role of Degrading Proteinases in Hypertension and the Metabolic Syndrome: Autodigestion and Receptor Cleavage. Current Hypertension Reports, 2012, 14, 88-96.	1.5	16
69	Perspectives of leukocyte activation in the microcirculation. Biorheology, 1990, 27, 859-869.	1.2	15
70	Microcirculatory Inflammation in Chronic Venous Insufficiency: Current Status and Future Directions. Microcirculation, 2000, 7, S49.	1.0	15
71	Receptor cleavage and P-selectin-dependent reduction of leukocyte adhesion in the spontaneously hypertensive rat. Journal of Leukocyte Biology, 2012, 92, 183-194.	1.5	15
72	Pancreatic Enzymes and Microvascular Cell Activation in Multiorgan Failure. Microcirculation, 2001, 8, 5-14.	1.0	14

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73	Mechanics of Curved Plasma Membrane Vesicles: Resting Shapes, Membrane Curvature, and In-Plane Shear Elasticity. Journal of Biomechanical Engineering, 2005, 127, 229-236.	0.6	14
74	The Pancreas as a Source of Cardiovascular Cell Activating Factors. , 2000, 7, 183.		14
75	Mechanisms for cell activation and its consequences for biorheology and microcirculation: Multi-organ failure in shock. Biorheology, 2001, 38, 185-201.	1.2	14
76	The oxygen free radicals control MMP-9 and transcription factors expression in the spontaneously hypertensive rat. Microvascular Research, 2013, 90, 154-161.	1.1	13
77	Cell separation in the buffy coat. Biorheology, 1988, 25, 663-673.	1.2	12
78	Leukocyte contribution to parenchymal cell death in an experimental model of inflammation. Journal of Leukocyte Biology, 1997, 62, 163-175.	1.5	11
79	Deformation of leukocytes on a hematological blood film. Biorheology, 1984, 21, 767-781.	1.2	10
80	Internalization of Formyl Peptide Receptor in Leukocytes Subject to Fluid Stresses. Cellular and Molecular Bioengineering, 2010, 3, 20-29.	1.0	10
81	Systematic polymorphism discovery after genome-wide identification of potential susceptibility loci in a hereditary rodent model of human hypertension. Blood Pressure, 2011, 20, 222-231.	0.7	10
82	IGF-1 receptor cleavage in hypertension. Hypertension Research, 2018, 41, 406-413.	1.5	10
83	Chained Vesicles in Vascular Endothelial Cells. Journal of Biomechanical Engineering, 1999, 121, 472-479.	0.6	9
84	Cleavage and reduced CD36 ectodomain density on heart and spleen macrophages in the Spontaneously Hypertensive Rat. Microvascular Research, 2014, 95, 131-142.	1.1	9
85	Proteolytic receptor cleavage in the pathogenesis of blood rheology and co-morbidities in metabolic syndrome. EarlyÂforms of autodigestion. Biorheology, 2016, 52, 337-352.	1.2	9
86	Heart period and blood pressure characteristics in splanchnic arterial occlusion shock-induced collapse. Journal of Clinical Monitoring and Computing, 2017, 31, 167-175.	0.7	7
87	Fluid shear-induced cathepsin B release in the control of Mac1-dependent neutrophil adhesion. Journal of Leukocyte Biology, 2017, 102, 117-126.	1.5	7
88	Biomechanical aspects of the auto-digestion theory. MCB Molecular and Cellular Biomechanics, 2008, 5, 83-95.	0.3	7
89	Mast Cell Degranulation and Parenchymal Cell Injury in the Rat Mesentery. Microcirculation, 1999, 6, 237-244.	1.0	6
90	Transport Processes in Biomedical Systems: A Roadmap for Future Research Directions. Annals of Biomedical Engineering, 2005, 33, 1136-1141.	1.3	6

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91	A journey with Tony Hugli up the inflammatory cascade towards the auto-digestion hypothesis. International Immunopharmacology, 2007, 7, 1845-1851.	1.7	6
92	Preliminary profiling of blood transcriptome in a rat model of hemorrhagic shock. Experimental Biology and Medicine, 2017, 242, 1462-1470.	1.1	6
93	Continuous enteral protease inhibition as a novel treatment for experimental trauma/hemorrhagic shock. European Journal of Trauma and Emergency Surgery, 2022, 48, 1579-1588.	0.8	6
94	Wall structure of arteries and arterioles feeding the spinotrapezius muscle of normotensive and spontaneously hypertensive rats. International Journal of Microcirculation, Clinical and Experimental, 1990, 9, 47-66.	0.6	6
95	Anti-Obesity Effect of Rice Bran Extract on High-Fat Diet-Induced Obese Mice. Preventive Nutrition and Food Science, 2022, 27, 172-179.	0.7	6
96	A high precision dual feedback pump for unsteady perfusion of small organs. Annals of Biomedical Engineering, 1989, 17, 269-278.	1.3	5
97	Mechanisms of Parenchymal Cell Death Inâ€Vivo after Microvascular Hemorrhage. Microcirculation, 2000, 7, 1-11.	1.0	5
98	Granulocyte activation and capillary obstruction. Monographs on Atherosclerosis, 1990, 15, 150-9.	0.0	5
99	An elementary analysis of physiologic shock and multi-organ failure: The Autodigestion Hypothesis. , 2012, 2012, 3114-5.		4
100	Is Matrix Metalloproteinase-8 Activity in the Mucosal Barrier a Requirement for Leakage of Cecal Material in Peritonitis?*. Critical Care Medicine, 2016, 44, 854-855.	0.4	4
101	Pancreatic source of protease activity in the spontaneously hypertensive rat and its reduction during temporary food restriction. Microcirculation, 2019, 26, e12548.	1.0	4
102	Elevated Resting and Postprandial Digestive Proteolytic Activity in Peripheral Blood of Individuals With Type-2 Diabetes Mellitus, With Uncontrolled Cleavage of Insulin Receptors. Journal of the American College of Nutrition, 2019, 38, 485-492.	1.1	4
103	Fluid shear stress-mediated mechanotransduction in circulating leukocytes and its defect in microvascular dysfunction. Journal of Biomechanics, 2021, 120, 110394.	0.9	4
104	Propagation of Viral-Size Particles in Lymph and Blood after Subcutaneous Inoculation. , 2000, 7, 193.		4
105	Therapeutic Management of Chronic Venous Insufficiency: Microcirculation as a Target. Microcirculation, 2000, 7, S23.	1.0	3
106	Microvascular Cell Death in Spontaneously Hypertensive Rats During Experimental Inflammation. Microcirculation, 2002, 9, 397-405.	1.0	3
107	Toll-like receptor signaling mechanisms in hostile neutrophils. Focus on â€œBone marrow MyD88 signaling modulates neutrophil function and ischemic myocardial injuryâ€. American Journal of Physiology - Cell Physiology, 2010, 299, C731-C732.	2.1	3
108	Set up of a protocol for rat plasma peptidomics in hemorrhagic shock model in presence of heparin. EuPA Open Proteomics, 2016, 12, 1-3.	2.5	3

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109	Enhanced intestinal permeability and intestinal co-morbidities in heat strain: A review and case for autodigestion. Temperature, 2021, 8, 223-244.	1.7	3
110	Digestive Enzyme Activity and Protein Degradation in Plasma of Heart Failure Patients. Cellular and Molecular Bioengineering, 2021, 14, 583-596.	1.0	3
111	A Mechanism of Oxygen Free Radical Production in the Dahl Hypertensive Rat. Microcirculation, 1999, 6, 179-187.	1.0	3
112	The Autodigestion Hypothesis in Shock and Multi-Organ Failure: Degrading Protease Activity. Boletim Da Sociedade Portuguesa De Hemorreologia E MicrocirculaÃ§Ã£o, 2011, 26, 6-15.	0.0	3
113	Pancreatic enzymes and microvascular cell activation in multiorgan failure. Microcirculation, 2001, 8, 5-14.	1.0	3
114	Effects of AQA-39 on granulocytes in the microcirculation of rat mesentery. European Heart Journal, 1987, 8, 75-81.	1.0	2
115	Thrombin generation assay in untreated whole human blood. Electrophoresis, 2016, 37, 2248-2256.	1.3	2
116	The autodigestion hypothesis: Proteolytic receptor cleavage in rheological and cardiovascular cell dysfunction1. Biorheology, 2017, 53, 179-191.	1.2	2
117	Can Fishy Odor Be a Risk Factor for Coronary Artery Disease? â^—. Journal of the American College of Cardiology, 2016, 67, 2629-2630.	1.2	1
118	Microvascular Cell Death in Spontaneously Hypertensive Rats During Experimental Inflammation. Microcirculation, 2002, 9, 397-405.	1.0	1
119	Microvascular Network Restructuring Associated with MMP Inhibition in Spontaneously Hypertensive Rats. FASEB Journal, 2008, 22, 732.8.	0.2	1
120	Microcirculation Supplement: Microcirculation and Chronic Venous Insufficiency. Microcirculation, 2000, 7, S1-S2.	1.0	0
121	Lymphatic/Blood Endothelial Cell Connections at the Capillary Level in Adult Rat Mesentery. Anatomical Record, 2010, 293, spc1-spc1.	0.8	0
122	A Lifetime Achievement in Bioengineering: Professor Shu Chien. Annals of Biomedical Engineering, 2019, 47, 2147-2150.	1.3	0
123	CELL ACTIVATION IN THE CIRCULATION. Advanced Series in Biomechanics, 2001, , 185-216.	0.1	0
124	Analysis of primary valve structure along initial lymphatic networks in adult rat mesentery. FASEB Journal, 2007, 21, A490.	0.2	0
125	Contribution of Leukocytes to Capillary Hemostasis in the Spontaneously Hypertensive Rat. FASEB Journal, 2008, 22, 732.5.	0.2	0
126	Enhanced Matrix Metalloproteinase Activity in Microvascular Endothelium of the Spontaneously Hypertensive Rat. FASEB Journal, 2008, 22, 731.5.	0.2	0

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127	Shock survival improved by combined protease and lipase inhibition in the intestinal lumen. FASEB Journal, 2008, 22, .	0.2	0
128	Blockade of Pancreatic Digestive Proteases in Severe Hemorrhagic Shock Enhances Longâ€term Survival Rate. FASEB Journal, 2009, 23, 594.13.	0.2	0
129	Nuclear factorâ€kappa B expression and matrix metalloproteinase activity in hypertension. FASEB Journal, 2010, 24, 592.1.	0.2	0
130	Mucin Protects against Trypsinâ€mediated Increases in Intestinal Epithelial Permeability. FASEB Journal, 2012, 26, 275.8.	0.2	0
131	Proteolyticallyâ€derived inflammatory peptides from the bowel may circulate systemically in shock. FASEB Journal, 2012, 26, 1132.7.	0.2	0