Petri T Kovanen

List of Publications by Year
in descending order

119 papers	11,022 citations	44069 48 h-index	30922 102 g-index
122 all docs	122 docs citations	122 times ranked	12059 citing authors

#	Article	IF	Citations
1	Familial hypercholesterolaemia is underdiagnosed and undertreated in the general population: guidance for clinicians to prevent coronary heart disease: Consensus Statement of the European Atherosclerosis Society. European Heart Journal, 2013, 34, 3478-3490.	2.2	2,132
2	Homozygous familial hypercholesterolaemia: new insights and guidance for clinicians to improve detection and clinical management. A position paper from the Consensus Panel on Familial Hypercholesterolaemia of the European Atherosclerosis Society. European Heart Journal, 2014, 35, 2146-2157.	2.2	835
3	Cholesterol Crystals Activate the NLRP3 Inflammasome in Human Macrophages: A Novel Link between Cholesterol Metabolism and Inflammation. PLoS ONE, 2010, 5, e11765.	2.5	827
4	Inflammation and its resolution in atherosclerosis: mediators and therapeutic opportunities. Nature Reviews Cardiology, 2019, 16, 389-406.	13.7	684
5	Infiltrates of Activated Mast Cells at the Site of Coronary Atheromatous Erosion or Rupture in Myocardial Infarction. Circulation, 1995, 92, 1084-1088.	1.6	426
6	Plant sterols and plant stanols in the management of dyslipidaemia and prevention of cardiovascular disease. Atherosclerosis, 2014, 232, 346-360.	0.8	419
7	Structure of low density lipoprotein (LDL) particles: Basis for understanding molecular changes in modified LDL. Biochimica Et Biophysica Acta - Molecular and Cell Biology of Lipids, 2000, 1488, 189-210.	2.4	332
8	Association Between Myocardial Infarction and the Mast Cells in the Adventitia of the Infarct-Related Coronary Artery. Circulation, 1999, 99, 361-369.	1.6	320
9	Aggregation, fusion, and vesicle formation of modified low density lipoprotein particles: molecular mechanisms and effects on matrix interactions. Journal of Lipid Research, 2000, 41, 1703-1714.	4.2	196
10	Induction of local angiotensin II-producing systems in stenotic aortic valves. Journal of the American College of Cardiology, 2004, 44, 1859-1866.	2.8	186
11	IgE stimulates human and mouse arterial cell apoptosis and cytokine expression and promotes atherogenesis in Apoeâ€“/â€“ mice. Journal of Clinical Investigation, 2011, 121, 3564-3577.	8.2	149
12	Mast cell infiltration in acute coronary syndromes: implications for plaque rupture. Journal of the American College of Cardiology, 1998, 32, 606-612.	2.8	134
13	Mast Cells in Rupture-Prone Areas of Human Coronary Atheromas Produce and Store TNF-Î±. Circulation, 1996, 94, 2787-2792.	1.6	128
14	Susceptibility of low-density lipoprotein particles to aggregate depends on particle lipidome, is modifiable, and associates with future cardiovascular deaths. European Heart Journal, 2018, 39, 2562-2573.	2.2	126
15	Lysosomal Enzymes Are Released From Cultured Human Macrophages, Hydrolyze LDL In Vitro, and Are Present Extracellularly in Human Atherosclerotic Lesions. Arteriosclerosis, Thrombosis, and Vascular Biology, 2003, 23, 1430-1436.	2.4	116
16	Mast cells: multipotent local effector cells in atherothrombosis. Immunological Reviews, 2007, 217, 105-122.	6.0	114
17	Possible role for mast cell-derived cathepsin G in the adverse remodelling of stenotic aortic valves. European Heart Journal, 2006, 27, 1495-1504.	2.2	101
18	Inflammatory angiogenesis in atherogenesisâ€"a double-edged sword. Annals of Medicine, 2008, 40, 606-621.	3.8	101

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19	Mast cells accompany microvessels in human coronary atheromas: implications for intimal neovascularization and hemorrhage. Atherosclerosis, 1996, 123, 123-131.	0.8	100
20	Mast cells in human and experimental cardiometabolic diseases. Nature Reviews Cardiology, 2015, 12, 643-658.	13.7	95
21	Statins for children with familial hypercholesterolemia. The Cochrane Library, 2017, 7, CD006401.	2.8	94
22	Prediction of Myocardial Infarction in Dyslipidemic Men by Elevated Levels of Immunoglobulin Classes A, E, and G, but Not M. Archives of Internal Medicine, 1998, 158, 1434.	3.8	92
23	Mast Cells in Neovascularized Human Coronary Plaques Store and Secrete Basic Fibroblast Growth Factor, a Potent Angiogenic Mediator. Arteriosclerosis, Thrombosis, and Vascular Biology, 2004, 24, 1880-1885.	2.4	91
24	Cysteine Protease Cathepsin F Is Expressed in Human Atherosclerotic Lesions, Is Secreted by Cultured Macrophages, and Modifies Low Density Lipoprotein Particles in Vitro. Journal of Biological Chemistry, 2004, 279, 34776-34784.	3.4	90
25	Inactivation of bradykinin by angiotensin-converting enzyme and by carboxypeptidase N in human plasma. American Journal of Physiology - Heart and Circulatory Physiology, 2000, 278, H1069-H1074.	3.2	87
26	Mast cells in human carotid atherosclerotic plaques are associated with intraplaque microvessel density and the occurrence of future cardiovascular events. European Heart Journal, 2013, 34, 3699-3706.	2.2	85
27	Receptors for the anaphylatoxins C3a and C5a are expressed in human atherosclerotic coronary plaques. Atherosclerosis, 2007, 195, 90-99.	0.8	84
28	Regulation of smooth muscle cell growth, function and death in vitro by activated mast cellsâ€"a potential mechanism for the weakening and rupture of atherosclerotic plaques. Biochemical Pharmacology, 2003, 66, 1493-1498.	4.4	75
29	Statin treatment of children with familial hypercholesterolemia â€" Trying to balance incomplete evidence of long-term safety and clinical accountability: Are we approaching a consensus?. Atherosclerosis, 2013, 226, 315-320.	0.8	74
30	HDL functionality in reverse cholesterol transport â€" Challenges in translating data emerging from mouse models to human disease. Biochimica Et Biophysica Acta - Molecular and Cell Biology of Lipids, 2016, 1861, 566-583.	2.4	73
31	Efferocytosis in atherosclerotic lesions: Malfunctioning regulatory pathways and control mechanisms. , 2018, 188, 12-25.		73
32	Function and regulation of the complement system in cardiovascular diseases. Frontiers in Bioscience - Landmark, 2007, 12, 4696.	3.0	70
33	Cathepsins F and S block HDL3-induced cholesterol efflux from macrophage foam cells. Biochemical and Biophysical Research Communications, 2003, 312, 1019-1024.	2.1	69
34	Activated Mast Cells Induce Endothelial Cell Apoptosis by a Combined Action of Chymase and Tumor Necrosis Factor-Î±. Arteriosclerosis, Thrombosis, and Vascular Biology, 2008, 28, 309-314.	2.4	69
35	Desquamation of human coronary artery endothelium by human mast cell proteases: implications for plaque erosion. Coronary Artery Disease, 2006, 17, 611-621.	0.7	67
36	Fusion of Proteolyzed Low-Density Lipoproteins in the Fluid Phase: A Novel Mechanism Generating Atherogenic Lipoprotein Particles. Biochemistry, 1995, 34, 10120-10129.	2.5	65

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37	Resolvins: Emerging Players in Autoimmune and Inflammatory Diseases. Clinical Reviews in Allergy and Immunology, 2020, 58, 82-91.	6.5	65
38	Three-Dimensional cryoEM Reconstruction of Native LDL Particles to 16Ã… Resolution at Physiological Body Temperature. PLoS ONE, 2011, 6, e18841.	2.5	65
39	Evidence for complement activation in ruptured coronary plaques in acute myocardial infarction. American Journal of Cardiology, 2002, 90, 404-408.	1.6	64
40	Acidification of the intimal fluid: the perfect storm for atherogenesis. Journal of Lipid Research, 2015, 56, 203-214.	4.2	64
41	Mast Cells, Neovascularization, and Microhemorrhages are Associated With Saccular Intracranial Artery Aneurysm Wall Remodeling. Journal of Neuropathology and Experimental Neurology, 2014, 73, 855-864.	1.7	62
42	Mast Cell Chymase Inhibits Smooth Muscle Cell Growth and Collagen Expression In Vitro. Arteriosclerosis, Thrombosis, and Vascular Biology, 2001, 21, 1928-1933.	2.4	60
43	Smooth Muscle Cell Foam Cell Formation, Apolipoproteins, and ABCA1 in Intracranial Aneurysms: Implications for Lipid Accumulation as a Promoter of Aneurysm Wall Rupture. Journal of Neuropathology and Experimental Neurology, 2016, 75, 689-699.	1.7	57
44	Extracellular Lipids Accumulate in Human Carotid Arteries as Distinct Three-Dimensional Structures and Have Proinflammatory Properties. American Journal of Pathology, 2018, 188, 525-538.	3.8	56
45	Mast cell-mediated apoptosis of endothelial cells in vitro: A paracrine mechanism involving TNF-Î±-mediated down-regulation of bcl-2 expression. Journal of Cellular Physiology, 2003, 195, 130-138.	4.1	54
46	Vascular Endothelial Growth Factorâ€“Secreting Mast Cells and Myofibroblasts. Arteriosclerosis, Thrombosis, and Vascular Biology, 2010, 30, 1220-1227.	2.4	54
47	p38Î´ MAPK. Arteriosclerosis, Thrombosis, and Vascular Biology, 2016, 36, 1937-1946.	2.4	54
48	OxLDL-IgG immune complexes induce expression and secretion of proatherogenic cytokines by cultured human mast cells. Atherosclerosis, 2011, 214, 357-363.	0.8	52
49	Native Macromolecular Heparin Proteoglycans Exocytosed From Stimulated Rat Serosal Mast Cells Strongly Inhibit Platelet-Collagen Interactions. Arteriosclerosis, Thrombosis, and Vascular Biology, 1997, 17, 3578-3587.	2.4	51
50	Mast Cells as Potential Accelerators of Human Atherosclerosisâ€"From Early to Late Lesions. International Journal of Molecular Sciences, 2019, 20, 4479.	4.1	51
51	Mast cells in human fatty streaks and atheromas: implications for intimal lipid accumulation. Current Opinion in Lipidology, 1996, 7, 281-286.	2.7	49
52	Cardiac Mast Cells: Underappreciated Immune Cells in Cardiovascular Homeostasis and Disease. Trends in Immunology, 2020, 41, 734-746.	6.8	49
53	Lipolytic Modification of LDL by Phospholipase A ₂ Induces Particle Aggregation in the Absence and Fusion in the Presence of Heparin. Arteriosclerosis, Thrombosis, and Vascular Biology, 1999, 19, 1276-1283.	2.4	47
54	Mast cells in atherosclerotic cardiovascular disease â€" Activators and actions. European Journal of Pharmacology, 2017, 816, 37-46.	3.5	47

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55	Complement system is activated in stenotic aortic valves. Atherosclerosis, 2008, 196, 190-200.	0.8	46
56	Accumulation of cholesterol precursors and plant sterols in human stenotic aortic valves. Journal of Lipid Research, 2008, 49, 1511-1518.	4.2	46
57	C-reactive protein binds to the 3Î²-OH group of cholesterol in LDL particles. Biochemical and Biophysical Research Communications, 2005, 329, 1208-1216.	2.1	45
58	Lipoprotein Lipase (LPL) Strongly Links Native and Oxidized Low Density Lipoprotein Particles to Decorin-coated Collagen. Journal of Biological Chemistry, 2000, 275, 5694-5701.	3.4	44
59	Mast cells and complement system: Ancient interactions between components of innate immunity. Allergy: European Journal of Allergy and Clinical Immunology, 2020, 75, 2818-2828.	5.7	43
60	Extracellular Mast Cell Granules Carry Apolipoprotein B-100â€"Containing Lipoproteins Into Phagocytes in Human Arterial Intima. Arteriosclerosis, Thrombosis, and Vascular Biology, 1995, 15, 2047-2054.	2.4	36
61	Conformational changes of apoB-100 in SMase-modified LDL mediate formation of large aggregates at acidic pH. Journal of Lipid Research, 2012, 53, 1832-1839.	4.2	35
62	Conversion of human M-CSF macrophages into foam cells reduces their proinflammatory responses to classical M1-polarizing activation. Atherosclerosis, 2016, 248, 170-178.	0.8	35
63	Lipid body formation during maturation of human mast cells. Journal of Lipid Research, 2011, 52, 2198-2208.	4.2	33
64	The role of the gut in reverse cholesterol transport â€" Focus on the enterocyte. Progress in Lipid Research, 2013, 52, 317-328.	11.6	33
65	Mast cells in atherogenesis: Actions and reactions. Current Atherosclerosis Reports, 2009, 11, 214-219.	4.8	32
66	High binding affinity of electronegative LDL to human aortic proteoglycans depends on its aggregation level. Journal of Lipid Research, 2009, 50, 446-455.	4.2	31
67	Carboxyl-Terminal Cleavage of Apolipoprotein A-I by Human Mast Cell Chymase Impairs Its Anti-Inflammatory Properties. Arteriosclerosis, Thrombosis, and Vascular Biology, 2016, 36, 274-284.	2.4	31
68	Lipoprotein(a) as a risk factor for calcific aortic valvulopathy in heterozygous familial hypercholesterolemia. Atherosclerosis, 2019, 281, 25-30.	0.8	31
69	Enhanced extracellular lipid accumulation in acidic environments. Current Opinion in Lipidology, 2006, 17, 534-540.	2.7	29
70	Low-Expression Variant of Fatty Acidâ€"Binding Protein 4 Favors Reduced Manifestations of Atherosclerotic Disease and Increased Plaque Stability. Circulation: Cardiovascular Genetics, 2014, 7, 588-598.	5.1	28
71	Lipid droplets in activated mast cells â€" a significant source of triglyceride-derived arachidonic acid for eicosanoid production. European Journal of Pharmacology, 2016, 785, 59-69.	3.5	28
72	Carotid Plaque Mast Cells Associate with Atherogenic Serum Lipids, High Grade Carotid Stenosis and Symptomatic Carotid Artery Disease. Cerebrovascular Diseases, 2005, 19, 291-301.	1.7	27

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73	Lymphangiogenesis in aortic valve stenosisâ€"Novel regulatory roles for valvular myofibroblasts and mast cells. Atherosclerosis, 2012, 221, 366-374.	0.8	26
74	The impact of mast cells on cardiovascular diseases. European Journal of Pharmacology, 2016, 778, 103-115.	3.5	26
75	Myeloperoxidase Associates With Degenerative Remodeling and Rupture of the Saccular Intracranial Aneurysm Wall. Journal of Neuropathology and Experimental Neurology, 2018, 77, 461-468.	1.7	26
76	Spontaneous remodeling of HDL particles at acidic pH enhances their capacity to induce cholesterol efflux from human macrophage foam cells. Journal of Lipid Research, 2012, 53, 2115-2125.	4.2	25
77	Familial hypercholesterolaemia and COVID-19: A two-hit scenario for endothelial dysfunction amenable to treatment. Atherosclerosis, 2021, 320, 53-60.	0.8	25
78	Regulation of the activity of secreted human lung mast cell tryptase by mast cell proteoglycans. Biochimica Et Biophysica Acta - General Subjects, 1998, 1425, 617-627.	2.4	22
79	Extracellular modifications of HDL in vivo and the emerging concept of proteolytic inactivation of preÎ²-HDL. Current Opinion in Lipidology, 2011, 22, 394-402.	2.7	22
80	Macrophage Infiltration in the Saccular Intracranial Aneurysm Wall as a Response to Locally Lysed Erythrocytes That Promote Degeneration. Journal of Neuropathology and Experimental Neurology, 2018, 77, 890-903.	1.7	22
81	Chronic intermittent psychological stress promotes macrophage reverse cholesterol transport by impairing bile acid absorption in mice. Physiological Reports, 2015, 3, e12402.	1.7	21
82	Mast cell tryptase â€" Marker and maker of cardiovascular diseases. , 2019, 199, 91-110.		21
83	Lipid-Laden Macrophages and Inflammation in Atherosclerosis and Cancer: An Integrative View. Frontiers in Cardiovascular Medicine, 2022, 9, 777822.	2.4	21
84	Serum amyloid A (SAA) activates human mast cells which leads into degradation of SAA and generation of an amyloidogenic SAA fragment. Biochimica Et Biophysica Acta - Molecular Basis of Disease, 2006, 1762, 424-430.	3.8	20
85	Apolipoprotein A-I mimetic peptide 4F blocks sphingomyelinase-induced LDL aggregation. Journal of Lipid Research, 2015, 56, 1206-1221.	4.2	20
86	Proteolysis sensitizes LDL particles to phospholipolysis by secretory phospholipase A2 group V and secretory sphingomyelinase. Journal of Lipid Research, 2010, 51, 1801-1809.	4.2	19
87	Human mast cell neutral proteases generate modified LDL particles with increased proteoglycan binding. Atherosclerosis, 2018, 275, 390-399.	0.8	19
88	Plant Stanol Esters Reduce LDL (Low-Density Lipoprotein) Aggregation by Altering LDL Surface Lipids. Arteriosclerosis, Thrombosis, and Vascular Biology, 2020, 40, 2310-2321.	2.4	18
89	Coimmobilized Native Macromolecular Heparin Proteoglycans Strongly Inhibit Platelet-Collagen Interactions in Flowing Blood. Arteriosclerosis, Thrombosis, and Vascular Biology, 2000, 20, E113-9.	2.4	17
90	Acidity and lipolysis by group V secreted phospholipase A2 strongly increase the binding of apoB-100-containing lipoproteins to human aortic proteoglycans. Biochimica Et Biophysica Acta - Molecular and Cell Biology of Lipids, 2012, 1821, 257-267.	2.4	17

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91	Chymase released from hypoxia-activated cardiac mast cells cleaves human apoA-I at Tyr192 and compromises its cardioprotective activity. Journal of Lipid Research, 2018, 59, 945-957.	4.2	17
92	Modified Lipoproteins Induce Arterial Wall Inflammation During Atherogenesis. Frontiers in Cardiovascular Medicine, 2022, 9, 841545.	2.4	17
93	Ca2+ Flux: Searching for a Role in Efferocytosis of Apoptotic Cells in Atherosclerosis. Journal of Clinical Medicine, 2019, 8, 2047.	2.4	16
94	Enhanced vascular permeability facilitates entry of plasma HDL and promotes macrophage-reverse cholesterol transport from skin in mice. Journal of Lipid Research, 2015, 56, 241-253.	4.2	14
95	Initiation of PCSK9 inhibition in patients with heterozygous familial hypercholesterolaemia entering adulthood: a new design for living with a high-risk condition?. European Heart Journal, 2016, 37, 1353-1356.	2.2	14
96	Cholesterol loading suppresses the atheroinflammatory gene polarization of human macrophages induced by colony stimulating factors. Scientific Reports, 2021, 11, 4923.	3.3	14
97	A tale of two therapies lipid-lowering vs. anti-inflammatory therapy: a false dichotomy?. European Heart Journal - Cardiovascular Pharmacotherapy, 2021, 7, 238-241.	3.0	12
98	Aggregation Susceptibility of Low-Density Lipoproteinsâ€"A Novel Modifiable Biomarker of Cardiovascular Risk. Journal of Clinical Medicine, 2021, 10, 1769.	2.4	12
99	Pharmacological evidence for a role of liver X receptors in atheroprotection. FEBS Letters, 2003, 536, 3-5.	2.8	10
100	Coronary artery disease: â€˜goutâ€™ in the artery?. European Heart Journal, 2021, 42, 2761-2764.	2.2	10
101	Dietary plant stanols or sterols neither accumulate in stenotic aortic valves nor influence their structure or inflammatory status. Clinical Nutrition, 2015, 34, 1251-1257.	5.0	9
102	Decreasing the Cholesterol Burden in Heterozygous Familial Hypercholesterolemia Children by Dietary Plant Stanol Esters. Nutrients, 2018, 10, 1842.	4.1	8
103	Acidic extracellular pH promotes accumulation of free cholesterol in human monocyte-derived macrophages via inhibition of ACAT1 activity. Atherosclerosis, 2020, 312, 1-7.	0.8	8
104	Why and how increased plasma ceramides predict future cardiovascular events?. Atherosclerosis, 2020, 314, 71-73.	0.8	7
105	Lowering Low-Density Lipoprotein Cholesterol Concentration with Plant Stanol Esters to Reduce the Risk of Atherosclerotic Cardiovascular Disease Events at a Population Level: A Critical Discussion. Nutrients, 2020, 12, 2346.	4.1	7
106	Rescue therapy with PCSK9 inhibitors for patients with delayed diagnosis of heterozygous familial hypercholesterolemia: Redressing the balance of missed opportunities. Journal of Clinical Lipidology, 2016, 10, 1278-1279.	1.5	5
107	Warfarin Treatment Is Associated to Increased Internal Carotid Artery Calcification. Frontiers in Neurology, 2021, 12, 696244.	2.4	5
108	Serum Amyloid A Is Present in Human Saccular Intracranial Aneurysm Walls and Associates With Aneurysm Rupture. Journal of Neuropathology and Experimental Neurology, 2021, 80, 966-974.	1.7	5

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109	Activated Human Mast Cells Induce LOX-1-Specific Scavenger Receptor Expression in Human Monocyte-Derived Macrophages. PLoS ONE, 2014, 9, e108352.	2.5	5
110	Do statins reduce the incidence of stroke in familial hypercholesterolemia?. Expert Review of Cardiovascular Therapy, 2011, 9, 349-353.	1.5	4
111	Coronary heart disease prediction: Apolipoprotein B shows its might again â€" but still in vain?. European Journal of Preventive Cardiology, 2015, 22, 1317-1320.	1.8	4
112	Congestive heart failure: More common as well as an important cardiovascular outcome - reply. European Heart Journal - Cardiovascular Pharmacotherapy, 2017, 3, pvw050.	3.0	3
113	Lysophosphatidylcholine in phospholipase A2-modified LDL triggers secretion of angiopoietin 2. Atherosclerosis, 2021, 327, 87-99.	0.8	3
114	Continuation of fibrate therapy in patients with metabolic syndrome and COVID-19: a beneficial regime worth pursuing. Annals of Medicine, 2022, 54, 1952-1955.	3.8	3
115	The mast cell, a rich source of neutral proteases in atherosclerotic plaques. International Congress Series, 2004, 1262, 494-497.	0.2	2
116	Elevated Lipoprotein(a) and Cerebral Venous Sinus Thrombosis in COVID-19. Journal of Stroke and Cerebrovascular Diseases, 2021, 30, 105865.	1.6	2
117	Glutamine synthetase in human carotid plaque macrophages associates with features of plaque vulnerability: An immunohistological study. Atherosclerosis, 2022, 352, 18-26.	0.8	2
118	The homeoviscous adaptation to dietary lipids (HADL) hypothesis is probably incorrect. American Journal of Clinical Nutrition, 2021, 113, 1711-1712.	4.7	1
119	Severe Spontaneous Atherosclerosis in two Korat Breed Cats is Comparable to Human Atherosclerosis. Journal of Comparative Pathology, 2021, 188, 52-61.	0.4	1