Richard W Farndale

List of Publications by Year
in descending order

128 papers	11,429 citations	31902 53 h-index	28224 105 g-index
132 all docs	132 docs citations	132 times ranked	12152 citing authors

#	Article	IF	Citations
1	Platelets Amplify Inflammation in Arthritis via Collagen-Dependent Microparticle Production. Science, 2010, 327, 580-583.	6.0	948
2	Structural Basis of Collagen Recognition by Integrin Î±2Î²1. Cell, 2000, 101, 47-56.	13.5	911
3	The Collagen-binding A-domains of Integrins Î±1Î²1 and Î±2Î²1Recognize the Same Specific Amino Acid Sequence, GFOGER, in Native (Triple-helical) Collagens. Journal of Biological Chemistry, 2000, 275, 35-40.	1.6	712
4	Platelets release mitochondria serving as substrate for bactericidal group IIA-secreted phospholipase A2 to promote inflammation. Blood, 2014, 124, 2173-2183.	0.6	513
5	Glycoprotein VI Is a Major Collagen Receptor for Platelet Activation: It Recognizes the Platelet-Activating Quaternary Structure of Collagen, Whereas CD36, Glycoprotein IIb/IIIa, and von Willebrand Factor Do Not. Blood, 1998, 91, 491-499.	0.6	309
6	Evaluation of cell binding to collagen and gelatin: a study of the effect of 2D and 3D architecture and surface chemistry. Journal of Materials Science: Materials in Medicine, 2016, 27, 148.	1.7	309
7	Collagens are functional, high affinity ligands for the inhibitory immune receptor LAIR-1. Journal of Experimental Medicine, 2006, 203, 1419-1425.	4.2	278
8	Glycoprotein VI is the collagen receptor in platelets which underlies tyrosine phosphorylation of the Fc receptor Î³-chain. FEBS Letters, 1997, 413, 255-259.	1.3	266
9	Identification in Collagen Type I of an Integrin Î±2Î²1-binding Site Containing an Essential GER Sequence. Journal of Biological Chemistry, 1998, 273, 33287-33294.	1.6	248
10	Release and activation of platelet latent TGFâ€“Î² in blood clots during dissolution with plasmin. Nature Medicine, 1995, 1, 932-937.	15.2	207
11	Collagenâ€“platelet interaction: Gly-Pro-Hyp is uniquely specific for platelet Gp VI and mediates platelet activation by collagen. Cardiovascular Research, 1999, 41, 450-457.	1.8	199
12	Identification of platelet function defects by multi-parameter assessment of thrombus formation. Nature Communications, 2014, 5, 4257.	5.8	191
13	Structural insights into triple-helical collagen cleavage by matrix metalloproteinase 1. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 12461-12466.	3.3	185
14	Crosslinking and composition influence the surface properties, mechanical stiffness and cell reactivity of collagen-based films. Acta Biomaterialia, 2012, 8, 3080-3090.	4.1	181
15	OSCAR is a collagen receptor that costimulates osteoclastogenesis in DAP12-deficient humans and mice. Journal of Clinical Investigation, 2011, 121, 3505-3516.	3.9	177
16	Platelet receptor interplay regulates collagen-induced thrombus formation in flowing human blood. Blood, 2004, 103, 1333-1341.	0.6	175
17	Characterization of High Affinity Binding Motifs for the Discoidin Domain Receptor DDR2 in Collagen. Journal of Biological Chemistry, 2008, 283, 6861-6868.	1.6	170
18	Cellâ€“collagen interactions: the use of peptide Toolkits to investigate collagenâ€“receptor interactions. Biochemical Society Transactions, 2008, 36, 241-250.	1.6	170

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19	Use of Synthetic Peptides to Locate Novel Integrin Î±2Î²1-binding Motifs in Human Collagen III. Journal of Biological Chemistry, 2006, 281, 3821-3831.	1.6	162
20	A 2-Step Mechanism of Arterial Thrombus Formation Induced by Human Atherosclerotic Plaques. Journal of the American College of Cardiology, 2010, 55, 1147-1158.	1.2	156
21	THE CONCISE GUIDE TO PHARMACOLOGY 2019/20: Catalytic receptors. British Journal of Pharmacology, 2019, 176, S247-S296.	2.7	156
22	Collagen binding specificity of the discoidin domain receptors: Binding sites on collagens II and III and molecular determinants for collagen IV recognition by DDR1. Matrix Biology, 2011, 30, 16-26.	1.5	152
23	THE CONCISE GUIDE TO PHARMACOLOGY 2021/22: Catalytic receptors. British Journal of Pharmacology, 2021, 178, S264-S312.	2.7	148
24	Integrin Activation State Determines Selectivity for Novel Recognition Sites in Fibrillar Collagens. Journal of Biological Chemistry, 2004, 279, 47763-47772.	1.6	144
25	Î±11Î²1 Integrin Recognizes the GFOGER Sequence in Interstitial Collagens. Journal of Biological Chemistry, 2003, 278, 7270-7277.	1.6	143
26	Platelet endothelial cell adhesion molecule-1 is a negative regulator of platelet-collagen interactions. Blood, 2001, 98, 1456-1463.	0.6	124
27	Structure of the Integrin Î±2Î²1-binding Collagen Peptide. Journal of Molecular Biology, 2004, 335, 1019-1028.	2.0	124
28	Structural basis of sequence-specific collagen recognition by SPARC. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 18273-18277.	3.3	123
29	Discoidin Domain Receptors Promote Î±1Î²1- and Î±2Î²1-Integrin Mediated Cell Adhesion to Collagen by Enhancing Integrin Activation. PLoS ONE, 2012, 7, e52209.	1.1	122
30	Crystallographic Insight into Collagen Recognition by Discoidin Domain Receptor 2. Structure, 2009, 17, 1573-1581.	1.6	121
31	Platelet Adhesion Enhances the Glycoprotein VIâ€“Dependent Procoagulant Response. Arteriosclerosis, Thrombosis, and Vascular Biology, 2001, 21, 618-627.	1.1	120
32	Identification of the primary collagen-binding surface on human glycoprotein VI by site-directed mutagenesis and by a blocking phage antibody. Blood, 2004, 103, 903-911.	0.6	116
33	Fundamental insight into the effect of carbodiimide crosslinking on cellular recognition of collagen-based scaffolds. Acta Biomaterialia, 2017, 49, 218-234.	4.1	114
34	Structural Basis for the Platelet-Collagen Interaction. Journal of Biological Chemistry, 2007, 282, 1296-1304.	1.6	113
35	A single high-affinity binding site for von Willebrand factor in collagen III, identified using synthetic triple-helical peptides. Blood, 2006, 108, 3753-3756.	0.6	112
36	New Insights into the DT40 B Cell Receptor Cluster Using a Proteomic Proximity Labeling Assay. Journal of Biological Chemistry, 2014, 289, 14434-14447.	1.6	110

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37	The tyrosine kinase inhibitors methyl 2,5-dihydroxycinnamate and genistein reduce thrombin-evoked tyrosine phosphorylation and Ca2+entry in human platelets. FEBS Letters, 1993, 315, 242-246.	1.3	108
38	Structural Insights into the Interactions between Platelet Receptors and Fibrillar Collagen. Journal of Biological Chemistry, 2009, 284, 19781-19785.	1.6	100
39	Synergism between platelet collagen receptors defined using receptor-specific collagen-mimetic peptide substrata in flowing blood. Blood, 2010, 115, 5069-5079.	0.6	97
40	Collagen-induced platelet activation. Blood Cells, Molecules, and Diseases, 2006, 36, 162-165.	0.6	94
41	Identification of multiple potent binding sites for human leukocyte associated Ig-like receptor LAIR on collagens II and III. Matrix Biology, 2009, 28, 202-210.	1.5	88
42	Mapping of SPARC/BM-40/Osteonectin-binding Sites on Fibrillar Collagens. Journal of Biological Chemistry, 2008, 283, 19551-19560.	1.6	87
43	Constitutive Dimerization of Glycoprotein VI (GPVI) in Resting Platelets Is Essential for Binding to Collagen and Activation in Flowing Blood. Journal of Biological Chemistry, 2012, 287, 30000-30013.	1.6	84
44	NMR Spectroscopy of Native and in Vitro Tissues Implicates PolyADP Ribose in Biomineralization. Science, 2014, 344, 742-746.	6.0	78
45	Identification and structural analysis of type I collagen sites in complex with fibronectin fragments. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 4195-4200.	3.3	77
46	Fibromodulin Interacts with Collagen Cross-linking Sites and Activates Lysyl Oxidase. Journal of Biological Chemistry, 2016, 291, 7951-7960.	1.6	77
47	Optimisation of UV irradiation as a binding site conserving method for crosslinking collagen-based scaffolds. Journal of Materials Science: Materials in Medicine, 2016, 27, 14.	1.7	73
48	Micromolar Ca2+ Concentrations Are Essential for Mg2+-dependent Binding of Collagen by the Integrin Î±2Î²1 in Human Platelets. Journal of Biological Chemistry, 2000, 275, 24560-24564.	1.6	71
49	Thrombospondin-1 promotes matrix homeostasis by interacting with collagen and lysyl oxidase precursors and collagen cross-linking sites. Science Signaling, 2018, 11, .	1.6	70
50	Implications for collagen I chain registry from the structure of the collagen von Willebrand factor A3 domain complex. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 5253-5258.	3.3	69
51	Identification of a major GpVI-binding locus in human type III collagen. Blood, 2008, 111, 4986-4996.	0.6	63
52	Crystal structure and collagen-binding site of immune inhibitory receptor LAIR-1: unexpected implications for collagen binding by platelet receptor GPVI. Blood, 2010, 115, 1364-1373.	0.6	62
53	Mapping of Potent and Specific Binding Motifs, GLOGEN and GVOGEA, for Integrin Î±1Î²1 Using Collagen Toolkits II and III. Journal of Biological Chemistry, 2012, 287, 26019-26028.	1.6	57
54	Monomeric (glycine-proline-hydroxyproline)10 repeat sequence is a partial agonist of the platelet collagen receptor glycoprotein VI. Biochemical Journal, 1999, 339, 413-418.	1.7	56

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55	Prolyl Hydroxylation of Collagen Type I Is Required for Efficient Binding to Integrin Î±1Î²1 and Platelet Glycoprotein VI but Not to Î±2Î²1. Journal of Biological Chemistry, 2003, 278, 29873-29879.	1.6	52
56	Integrin Recognition Motifs in the Human Collagens. Advances in Experimental Medicine and Biology, 2014, 819, 127-142.	0.8	50
57	A role for specific collagen motifs during wound healing and inflammatory response of fibroblasts in the teleost fish gilthead seabream. Molecular Immunology, 2011, 48, 826-834.	1.0	48
58	Differential Inhibition of Human Atherosclerotic Plaqueâ€“Induced Platelet Activation by Dimeric GPVI-Fc and Anti-GPVI Antibodies. Journal of the American College of Cardiology, 2015, 65, 2404-2415.	1.2	47
59	Chondrocyte Aggregation in Suspension Culture Is GFOGER-GPP- and Î²1 Integrin-dependent. Journal of Biological Chemistry, 2008, 283, 31522-31530.	1.6	45
60	Structural basis for collagen recognition by the immune receptor OSCAR. Blood, 2016, 127, 529-537.	0.6	45
61	The Recognition of Collagen and Triple-helical Toolkit Peptides by MMP-13. Journal of Biological Chemistry, 2014, 289, 24091-24101.	1.6	43
62	Collagen-platelet interactions: recognition and signalling. Biochemical Society Symposia, 2003, 70, 81-94.	2.7	43
63	Proline provides site-specific flexibility for in vivo collagen. Scientific Reports, 2018, 8, 13809.	1.6	40
64	A Comprehensive UHPLC Ion Mobility Quadrupole Time-of-Flight Method for Profiling and Quantification of Eicosanoids, Other Oxylipins, and Fatty Acids. Analytical Chemistry, 2019, 91, 8025-8035.	3.2	40
65	The synthesis and coupling of photoreactive collagen-based peptides to restore integrin reactivity to an inert substrate, chemically-crosslinked collagen. Biomaterials, 2016, 85, 65-77.	5.7	38
66	First Analysis of a Bacterial Collagen-Binding Protein with Collagen Toolkits: Promiscuous Binding of YadA to Collagens May Explain How YadA Interferes with Host Processes. Infection and Immunity, 2010, 78, 3226-3236.	1.0	37
67	GPVI surface expression and signalling pathway activation are increased in platelets from obese patients: Elucidating potential anti-atherothrombotic targets in obesity. Atherosclerosis, 2019, 281, 62-70.	0.4	35
68	The Tyrosine Kinase Inhibitors, Genistein and Methyl 2,5-Dihydroxycinnamate, Inhibit the Release of (3H)Arachidonate from Human Platelets Stimulated by Thrombin or Collagen. Thrombosis and Haemostasis, 1994, 72, 634-642.	1.8	34
69	Zinc is a transmembrane agonist that induces platelet activation in a tyrosine phosphorylation-dependent manner. Metallomics, 2016, 8, 91-100.	1.0	33
70	Structural and functional analysis of two small leucine-rich repeat proteoglycans, fibromodulin and chondroadherin. Matrix Biology, 2017, 63, 106-116.	1.5	33
71	Selecting the correct cellular model for assessing of the biological response of collagen-based biomaterials. Acta Biomaterialia, 2018, 65, 88-101.	4.1	33
72	Impact of UV- and carbodiimide-based crosslinking on the integrin-binding properties of collagen-based materials. Acta Biomaterialia, 2019, 100, 280-291.	4.1	33

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73	Structural studies of the MMP-3 interaction with triple-helical collagen introduce new roles for the enzyme in tissue remodelling. Scientific Reports, 2019, 9, 18785.	1.6	31
74	Implications for Collagen Binding from the Crystallographic Structure of Fibronectin 6FnI1â€“2FnII7FnI. Journal of Biological Chemistry, 2010, 285, 33764-33770.	1.6	30
75	Hydroxyproline Ring Pucker Causes Frustration of Helix Parameters in the Collagen Triple Helix. Scientific Reports, 2015, 5, 12556.	1.6	30
76	Recombinant Collagen Engineered to Bind to Discoidin Domain Receptor Functions as a Receptor Inhibitor. Journal of Biological Chemistry, 2016, 291, 4343-4355.	1.6	30
77	Monoclonal antibodies identify residues 199â€“216 of the integrin Î±2 vWFA domain as a functionally important region within Î±2Î²1. Biochemical Journal, 2000, 350, 485-493.	1.7	29
78	An Activating Mutation Reveals a Second Binding Mode of the Integrin Î±2 I Domain to the GFOGER Motif in Collagens. PLoS ONE, 2013, 8, e69833.	1.1	29
79	Role of Platelet Glycoprotein VI and Tyrosine Kinase Syk in Thrombus Formation on Collagen-Like Surfaces. International Journal of Molecular Sciences, 2019, 20, 2788.	1.8	28
80	Selective Blockade of Glycoprotein VI Clustering on Collagen Helices. Journal of Biological Chemistry, 2006, 281, 33505-33510.	1.6	26
81	Collagen Gly missense mutations: Effect of residue identity on collagen structure and integrin binding. Journal of Structural Biology, 2018, 203, 255-262.	1.3	26
82	Chain alignment of collagen I deciphered using computationally designed heterotrimers. Nature Chemical Biology, 2020, 16, 423-429.	3.9	24
83	Nonredundant Roles of Platelet Glycoprotein VI and Integrin Î±IIbÎ²3 in Fibrin-Mediated Microthrombus Formation. Arteriosclerosis, Thrombosis, and Vascular Biology, 2021, 41, e97-e111.	1.1	22
84	Mapping the Effect of Gly Mutations in Collagen on Î±2Î²1 Integrin Binding. Journal of Biological Chemistry, 2016, 291, 19196-19207.	1.6	21
85	Platelet-primed interactions of coagulation and anticoagulation pathways in flow-dependent thrombus formation. Scientific Reports, 2020, 10, 11910.	1.6	21
86	Hydroxyproline-containing collagen analogs trigger the release and activation of collagen-sequestered proMMP-2 by competition with prodomain-derived peptide P33-42. Fibrogenesis and Tissue Repair, 2011, 4, 1.	3.4	20
87	Cellular response to collagen-elastin composite materials. Acta Biomaterialia, 2019, 86, 158-170.	4.1	20
88	Targeted Phosphotyrosine Profiling of Glycoprotein VI Signaling Implicates Oligophrenin-1 in Platelet Filopodia Formation. Arteriosclerosis, Thrombosis, and Vascular Biology, 2013, 33, 1538-1543.	1.1	19
89	Collagen-binding proteins: insights from the Collagen Toolkits. Essays in Biochemistry, 2019, 63, 337-348.	2.1	19
90	Covalent Capture of a Heterotrimeric Collagen Helix. Organic Letters, 2019, 21, 5480-5484.	2.4	17

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91	Coupling of a specific photoreactive triple-helical peptide to crosslinked collagen films restores binding and activation of DDR2 and VWF. Biomaterials, 2018, 182, 21-34.	5.7	16
92	Wortmannin inhibits store-mediated calcium entry and protein tyrosine phosphorylation in human platelets. FEBS Letters, 1996, 381, 249-251.	1.3	15
93	Dynamic analysis of platelet deposition to resolve platelet adhesion receptor activity in whole blood at arterial shear rate. Platelets, 2015, 26, 216-219.	1.1	15
94	Unique charge-dependent constraint on collagen recognition by integrin Î±10Î²1. Matrix Biology, 2017, 59, 80-94.	1.5	15
95	Multimerin 1 supports platelet function in vivo and binds to specific GPAGPOGPX motifs in fibrillar collagens that enhance platelet adhesion. Journal of Thrombosis and Haemostasis, 2021, 19, 547-561.	1.9	15
96	Structural insights into collagen binding by platelet receptor glycoprotein VI. Blood, 2022, 139, 3087-3098.	0.6	15
97	Effects of lipid-lowering treatment on platelet reactivity and platelet-leukocyte aggregation in diabetic patients without and with chronic kidney disease: a randomized trial. Nephrology Dialysis Transplantation, 2012, 27, 3540-3546.	0.4	13
98	Mild hyperlipidemia in mice aggravates platelet responsiveness in thrombus formation and exploration of platelet proteome and lipidome. Scientific Reports, 2020, 10, 21407.	1.6	13
99	Platelet surface receptor glycoprotein VI-dimer is overexpressed in stroke: The Glycoprotein VI in Stroke (GYPSIE) study results. PLoS ONE, 2022, 17, e0262695.	1.1	13
100	Analysis of an ascidian integrin provides new insight into early evolution of collagen recognition. FEBS Letters, 2007, 581, 2434-2440.	1.3	12
101	Platelet receptors: collagen. , 2002, , 158-178.		12
102	The Streptococcal Collagen-binding Protein CNE Specifically Interferes with Î±VÎ²3-mediated Cellular Interactions with Triple Helical Collagen. Journal of Biological Chemistry, 2010, 285, 35803-35813.	1.6	11
103	Collagen scaffolds functionalized with triple-helical peptides support 3D HUVEC culture. International Journal of Energy Production and Management, 2020, 7, 471-482.	1.9	11
104	The effect of purity upon the triple-helical stability of collagenous peptides. Biomaterials, 2011, 32, 6621-6632.	5.7	10
105	The properties conferred upon triple-helical collagen-mimetic peptides by the presence of cysteine residues. Peptides, 2012, 36, 86-93.	1.2	10
106	Anti-thrombotic efficacy of S007-867: Pre-clinical evaluation in experimental models of thrombosis in vivo and in vitro. Biochemical Pharmacology, 2018, 148, 288-297.	2.0	10
107	Dimers of the platelet collagen receptor glycoprotein VI bind specifically to fibrin fibers during clot formation, but not to intact fibrinogen. Journal of Thrombosis and Haemostasis, 2021, 19, 2056-2067.	1.9	10
108	Inhibition of human platelet adenylate cyclase activity by adrenaline, thrombin and collagen: analysis and reinterpretation of experimental data. Biochemical Journal, 1999, 340, 245-253.	1.7	9

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109	A fluorescent approach for identifying P2X1 ligands. Neuropharmacology, 2015, 98, 13-21.	2.0	9
110	Cleavage by MMPâ€13 renders VWF unable to bind to collagen but increases its platelet reactivity. Journal of Thrombosis and Haemostasis, 2020, 18, 942-954.	1.9	9
111	Identification of HSP47 Binding Site on Native Collagen and Its Implications for the Development of HSP47 Inhibitors. Biomolecules, 2021, 11, 983.	1.8	9
112	A Simple Bioconjugate Attachment Protocol for Use in Single Molecule Force Spectroscopy Experiments Based on Mixed Self-Assembled Monolayers. International Journal of Molecular Sciences, 2012, 13, 13521-13541.	1.8	8
113	Measurement of the Interaction Between Recombinant I-domain from Integrin alpha 2 beta 1 and a Triple Helical Collagen Peptide with the GFOGER Binding Motif Using Molecular Force Spectroscopy. International Journal of Molecular Sciences, 2013, 14, 2832-2845.	1.8	8
114	Selectivity of the collagen-binding integrin inhibitors, TC-I-15 and obtustatin. Toxicology and Applied Pharmacology, 2021, 428, 115669.	1.3	8
115	Measurement of Platelet Arachidonic Acid Metabolism. , 2004, 272, 121-134.		6
116	Platelet glycoprotein VI as a mediator of metastasis. Journal of Thrombosis and Haemostasis, 2009, 7, 1711-1712.	1.9	6
117	Tailoring the biofunctionality of collagen biomaterials via tropoelastin incorporation and EDC-crosslinking. Acta Biomaterialia, 2021, 135, 150-163.	4.1	6
118	Modulating hESC-derived cardiomyocyte and endothelial cell function with triple-helical peptides for heart tissue engineering. Biomaterials, 2021, 269, 120612.	5.7	5
119	Factor XIII is a newly identified binding partner for platelet collagen receptor GPVIâ€dimerâ€”An interaction that may modulate fibrin crosslinking. Research and Practice in Thrombosis and Haemostasis, 2022, 6, e12697.	1.0	5
120	Intrinsic local destabilization of the Câ€terminus predisposes integrin Î±1 I domain to a conformational switch induced by collagen binding. Protein Science, 2016, 25, 1672-1681.	3.1	4
121	Data on hyper-activation of GPVI signalling in obese patients: Towards the identification of novel antiplatelet targets in obesity. Data in Brief, 2019, 23, 103784.	0.5	3
122	The voltage-gated K⁺ channel Kv1.3 modulates platelet motility and Î±₂Î²₁ integrin-dependent adhesion to collagen. Platelets, 2022, 33, 1-11.	1.1	3
123	Tyrosine-sulfated dermatopontin shares multiple binding sites and recognition determinants on triple-helical collagens with proteins implicated in cell adhesion and collagen folding, fibrillogenesis, cross-linking, and degradation. Biochimica Et Biophysica Acta - Proteins and Proteomics, 2022, 1870, 140771.	1.1	3
124	The role of Gs in activation of adenylate cyclase. Biochemical Society Transactions, 1987, 15, 19-21.	1.6	2
125	The impact of factor Xa inhibition on axial dependent arterial thrombus formation triggered by a tissue factor rich surface. Journal of Thrombosis and Thrombolysis, 2012, 33, 6-15.	1.0	2
126	Increased Bleeding Tendency in a Patient with Caffey Disease Due to a COL1A1 Mutation and a Defect in Platelet Morphology and Function.. Blood, 2005, 106, 736-736.	0.6	0

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127	Identification of the von Willebrand Factor Binding Site in Collagen Using Triple Helical Peptides.. Blood, 2005, 106, 413-413.	0.6	0
128	Integrins (version 2019.4) in the IUPHAR/BPS Guide to Pharmacology Database. IUPHAR/BPS Guide To Pharmacology CITE, 2019, 2019, .	0.2	0