Karl E Kadler

List of Publications by Citations

178 papers	11,510 citations	56 h-index	104 g-index
194 ext. papers	12,793 ext. citations	6.4 avg, IF	6.11 L-index

#	Paper	IF	Citations
178	Targeted disruption of decorin leads to abnormal collagen fibril morphology and skin fragility. *Journal of Cell Biology*, **1997**, 136, 729-43	7.3	1229
177	Collagen fibril formation. *Biochemical Journal*, **1996**, 316 (Pt 1), 1-11	3.8	1049
176	Collagens at a glance. *Journal of Cell Science*, **2007**, 120, 1955-8	5.3	525
175	Procollagen trafficking, processing and fibrillogenesis. *Journal of Cell Science*, **2005**, 118, 1341-53	5.3	522
174	Collagen fibrillogenesis: fibronectin, integrins, and minor collagens as organizers and nucleators. *Current Opinion in Cell Biology*, **2008**, 20, 495-501	9	492
173	Coalignment of plasma membrane channels and protrusions (fibripositors) specifies the parallelism of tendon. *Journal of Cell Biology*, **2004**, 165, 553-63	7.3	230
172	Assembly of collagen fibrils de novo by cleavage of the type I pC-collagen with procollagen C-proteinase. Assay of critical concentration demonstrates that collagen self-assembly is a classical example of an entropy-driven process.. *Journal of Biological Chemistry*, **1987**, 262, 15696-15701	5.4	228
171	Identification of collagen fibril fusion during vertebrate tendon morphogenesis. The process relies on unipolar fibrils and is regulated by collagen-proteoglycan interaction. *Journal of Molecular Biology*, **2000**, 295, 891-902	6.5	216
170	Corneal collagen fibril structure in three dimensions: Structural insights into fibril assembly, mechanical properties, and tissue organization. *Proceedings of the National Academy of Sciences of the United States of America*, **2001**, 98, 7307-12	11.5	189
169	Assembly of collagen fibrils de novo by cleavage of the type I pC-collagen with procollagen C-proteinase. Assay of critical concentration demonstrates that collagen self-assembly is a classical example of an entropy-driven process. *Journal of Biological Chemistry*, **1987**, 262, 15696-701	5.4	182
168	Using transmission electron microscopy and 3View to determine collagen fibril size and three-dimensional organization. *Nature Protocols*, **2013**, 8, 1433-48	18.8	171
167	Cartilage oligomeric matrix protein interacts with type IX collagen, and disruptions to these interactions identify a pathogenetic mechanism in a bone dysplasia family. *Journal of Biological Chemistry*, **2001**, 276, 6046-55	5.4	160
166	The collagen fibril--a model system for studying the staining and fixation of a protein. *Electron Microscopy Reviews*, **1990**, 3, 143-82		154
165	Transcription factor EGR1 directs tendon differentiation and promotes tendon repair. *Journal of Clinical Investigation*, **2013**, 123, 3564-76	15.9	148
164	The supramolecular organization of fibrillin-rich microfibrils. *Journal of Cell Biology*, **2001**, 152, 1045-56	7.3	136
163	Age-related changes on the surface of vitreous collagen fibrils. *Investigative Ophthalmology and Visual Science*, **2004**, 45, 1041-6		129
162	Tendon functional extracellular matrix. *Journal of Orthopaedic Research*, **2015**, 33, 793-9	3.8	126

161	Collagen fibrils in vitro grow from pointed tips in the C- to N-terminal direction. *Biochemical Journal* , **1990**, 268, 339-43	3.8	109
160	Targeted induction of endoplasmic reticulum stress induces cartilage pathology. *PLoS Genetics*, **2009**, 5, e1000691	6	105
159	Assembly of type I collagen fibrils de novo. Between 37 and 41 degrees C the process is limited by micro-unfolding of monomers.. *Journal of Biological Chemistry*, **1988**, 263, 10517-10523	5.4	103
158	STEM/TEM studies of collagen fibril assembly. *Micron*, **2001**, 32, 273-85	2.3	101
157	Proteinases of the bone morphogenetic protein-1 family convert procollagen VII to mature anchoring fibril collagen. *Journal of Biological Chemistry*, **2002**, 277, 26372-8	5.4	100
156	Actin filaments are required for fibripositor-mediated collagen fibril alignment in tendon. *Journal of Biological Chemistry*, **2006**, 281, 38592-8	5.4	95
155	A substitution of cysteine for glycine 748 of the alpha 1 chain produces a kink at this site in the procollagen I molecule and an altered N-proteinase cleavage site over 225 nm away.. *Journal of Biological Chemistry*, **1988**, 263, 19249-19255	5.4	95
154	Collagen fibril biosynthesis in tendon: a review and recent insights. *Comparative Biochemistry and Physiology Part A, Molecular & Integrative Physiology*, **2002**, 133, 979-85	2.6	94
153	Assembly of type I collagen fibrils de novo. Between 37 and 41 degrees C the process is limited by micro-unfolding of monomers. *Journal of Biological Chemistry*, **1988**, 263, 10517-23	5.4	94
152	The cellular biology of flexor tendon adhesion formation: an old problem in a new paradigm. *American Journal of Pathology*, **2009**, 175, 1938-51	5.8	92
151	A substitution of cysteine for glycine 748 of the alpha 1 chain produces a kink at this site in the procollagen I molecule and an altered N-proteinase cleavage site over 225 nm away. *Journal of Biological Chemistry*, **1988**, 263, 19249-55	5.4	90
150	Scleraxis is required for cell lineage differentiation and extracellular matrix remodeling during murine heart valve formation in vivo. *Circulation Research*, **2008**, 103, 948-56	15.7	87
149	Lysyl Oxidase Activity Is Required for Ordered Collagen Fibrillogenesis by Tendon Cells. *Journal of Biological Chemistry*, **2015**, 290, 16440-50	5.4	86
148	A structure-based extracellular matrix expansion mechanism of fibrous tissue growth. *ELife*, **2015**, 4,	8.9	83
147	The angiogenic inhibitor long pentraxin PTX3 forms an asymmetric octamer with two binding sites for FGF2. *Journal of Biological Chemistry*, **2010**, 285, 17681-92	5.4	83
146	Tension is required for fibripositor formation. *Matrix Biology*, **2008**, 27, 371-5	11.4	83
145	Type I procollagen: the gene-protein system that harbors most of the mutations causing osteogenesis imperfecta and probably more common heritable disorders of connective tissue. *American Journal of Medical Genetics Part A*, **1989**, 34, 60-7		82
144	Growing tips of type I collagen fibrils formed in vitro are near-paraboloidal in shape, implying a reciprocal relationship between accretion and diameter. *Proceedings of the National Academy of Sciences of the United States of America*, **1992**, 89, 9855-9	11.5	81

143	Copolymerization of pNcollagen III and collagen I. pNcollagen III decreases the rate of incorporation of collagen I into fibrils, the amount of collagen I incorporated, and the diameter of the fibrils formed. *Journal of Biological Chemistry*, **1991**, 266, 12703-9	5.4	81
142	Paired basic/Furin-like proprotein convertase cleavage of Pro-BMP-1 in the trans-Golgi network. *Journal of Biological Chemistry*, **2003**, 278, 18478-84	5.4	79
141	3-D ultrastructure and collagen composition of healthy and overloaded human tendon: evidence of tenocyte and matrix buckling. *Journal of Anatomy*, **2014**, 224, 548-55	2.9	78
140	Ageing changes in the tensile properties of tendons: influence of collagen fibril volume fraction. *Journal of Biomechanical Engineering*, **2008**, 130, 021011	2.1	78
139	Reduced cell proliferation and increased apoptosis are significant pathological mechanisms in a murine model of mild pseudoachondroplasia resulting from a mutation in the C-terminal domain of COMP. *Human Molecular Genetics*, **2007**, 16, 2072-88	5.6	78
138	The 10+4 microfibril structure of thin cartilage fibrils. *Proceedings of the National Academy of Sciences of the United States of America*, **2006**, 103, 17249-54	11.5	75
137	Mica sandwich technique for preparing macromolecules for rotary shadowing. *Journal of Ultrastructure Research*, **1985**, 91, 66-76		75
136	Expression of an engineered form of recombinant procollagen in mouse milk. *Nature Biotechnology*, **1999**, 17, 385-9	44.5	74
135	Pleomorphism in type I collagen fibrils produced by persistence of the procollagen N-propeptide. *Journal of Molecular Biology*, **1989**, 210, 337-45	6.5	74
134	The initiation of embryonic-like collagen fibrillogenesis by adult human tendon fibroblasts when cultured under tension. *Biomaterials*, **2010**, 31, 4889-97	15.6	71
133	Tendon development requires regulation of cell condensation and cell shape via cadherin-11-mediated cell-cell junctions. *Molecular and Cellular Biology*, **2007**, 27, 6218-28	4.8	70
132	The fibrillar collagens, collagen VIII, collagen X and the C1q complement proteins share a similar domain in their C-terminal non-collagenous regions. *FEBS Letters*, **1992**, 303, 126-8	3.8	69
131	Bimodal collagen fibril diameter distributions direct age-related variations in tendon resilience and resistance to rupture. *Journal of Applied Physiology*, **2012**, 113, 878-88	3.7	68
130	Circadian control of the secretory pathway maintains collagen homeostasis. *Nature Cell Biology*, **2020**, 22, 74-86	23.4	67
129	Matrix loading: assembly of extracellular matrix collagen fibrils during embryogenesis. *Birth Defects Research Part C: Embryo Today Reviews*, **2004**, 72, 1-11		65
128	Decreased chondrocyte proliferation and dysregulated apoptosis in the cartilage growth plate are key features of a murine model of epiphyseal dysplasia caused by a matn3 mutation. *Human Molecular Genetics*, **2007**, 16, 1728-41	5.6	61
127	Synthesis of embryonic tendon-like tissue by human marrow stromal/mesenchymal stem cells requires a three-dimensional environment and transforming growth factor β. *Matrix Biology*, **2010**, 29, 668-77	11.4	60
126	Tendon is covered by a basement membrane epithelium that is required for cell retention and the prevention of adhesion formation. *PLoS ONE*, **2011**, 6, e16337	3.7	60

125	Bone morphogenetic protein-1 (BMP-1). Identification of the minimal domain structure for procollagen C-proteinase activity. *Journal of Biological Chemistry*, **2003**, 278, 18045-9	5.4	59
124	Nonmuscle myosin II powered transport of newly formed collagen fibrils at the plasma membrane. *Proceedings of the National Academy of Sciences of the United States of America*, **2013**, 110, E4743-52	11.5	57
123	Evidence of structurally continuous collagen fibrils in tendons. *Acta Biomaterialia*, **2017**, 50, 293-301	10.8	56
122	Collagen fibril organisation in mammalian vitreous by freeze etch/rotary shadowing electron microscopy. *Micron*, **2001**, 32, 301-6	2.3	55
121	A type I collagen with substitution of a cysteine for glycine-748 in the alpha 1(I) chain copolymerizes with normal type I collagen and can generate fractallike structures. *Biochemistry*, **1991**, 30, 5081-8	3.2	54
120	Three-dimensional aspects of matrix assembly by cells in the developing cornea. *Proceedings of the National Academy of Sciences of the United States of America*, **2014**, 111, 687-92	11.5	53
119	Tip-mediated fusion involving unipolar collagen fibrils accounts for rapid fibril elongation, the occurrence of fibrillar branched networks in skin and the paucity of collagen fibril ends in vertebrates. *Matrix Biology*, **2000**, 19, 359-65	11.4	52
118	Collagen XXVII is developmentally regulated and forms thin fibrillar structures distinct from those of classical vertebrate fibrillar collagens. *Journal of Biological Chemistry*, **2007**, 282, 12791-5	5.4	51
117	Slow stretching that mimics embryonic growth rate stimulates structural and mechanical development of tendon-like tissue in vitro. *Developmental Dynamics*, **2011**, 240, 2520-8	2.9	50
116	Ehlers Danlos syndrome type VIIB. Incomplete cleavage of abnormal type I procollagen by N-proteinase in vitro results in the formation of copolymers of collagen and partially cleaved pNcollagen that are near circular in cross-section. *Journal of Biological Chemistry*, **1992**, 267, 9093-100	5.4	49
115	Assembly of type I collagen fibrils de novo by the specific enzymic cleavage of pC collagen. The fibrils formed at about 37 degrees C are similar in diameter, roundness, and apparent flexibility to the collagen fibrils seen in connective tissue. *Annals of the New York Academy of Sciences*, **1990**, 580, 214-24	6.5	48
114	Collagen Fibril Assembly and Function. *Current Topics in Developmental Biology*, **2018**, 130, 107-142	5.3	47
113	Simple physical model of collagen fibrillogenesis based on diffusion limited aggregation. *Journal of Molecular Biology*, **1995**, 247, 823-831	6.5	47
112	An experimental model for studying the biomechanics of embryonic tendon: Evidence that the development of mechanical properties depends on the actinomyosin machinery. *Matrix Biology*, **2010**, 29, 678-89	11.4	46
111	Fibroblast-Derived MMP-14 Regulates Collagen Homeostasis in Adult Skin. *Journal of Investigative Dermatology*, **2016**, 136, 1575-1583	4.3	46
110	Simple physical model of collagen fibrillogenesis based on diffusion limited aggregation. *Journal of Molecular Biology*, **1995**, 247, 823-31	6.5	45
109	Chemical chaperone treatment reduces intracellular accumulation of mutant collagen IV and ameliorates the cellular phenotype of a COL4A2 mutation that causes haemorrhagic stroke. *Human Molecular Genetics*, **2014**, 23, 283-92	5.6	44
108	Temporal and spatial expression of collagens during murine atrioventricular heart valve development and maintenance. *Developmental Dynamics*, **2008**, 237, 3051-8	2.9	44

107	Deposition of collagen type I onto skeletal endothelium reveals a new role for blood vessels in regulating bone morphology. *Development (Cambridge)*, **2016**, 143, 3933-3943	6.6	44
106	Collagen fibrils forming in developing tendon show an early and abrupt limitation in diameter at the growing tips. *Journal of Molecular Biology*, **1998**, 283, 1049-58	6.5	43
105	Ehlers-Danlos syndrome type VIIB. Morphology of type I collagen fibrils formed in vivo and in vitro is determined by the conformation of the retained N-propeptide. *Journal of Biological Chemistry*, **1993**, 268, 15758-65	5.4	43
104	Fell Muir Lecture: Collagen fibril formation in vitro and in vivo. *International Journal of Experimental Pathology*, **2017**, 98, 4-16	2.8	42
103	Axial structure of the heterotypic collagen fibrils of vitreous humour and cartilage. *Journal of Molecular Biology*, **2001**, 306, 1011-22	6.5	41
102	Gremlin-2 is a BMP antagonist that is regulated by the circadian clock. *Scientific Reports*, **2014**, 4, 5183	4.9	40
101	Tenocyte contraction induces crimp formation in tendon-like tissue. *Biomechanics and Modeling in Mechanobiology*, **2012**, 11, 449-59	3.8	40
100	Self-assembly into fibrils of a homotrimer of type I collagen. *Matrix Biology*, **1992**, 12, 256-63		40
99	Identification of the minimal domain structure of bone morphogenetic protein-1 (BMP-1) for chordinase activity: chordinase activity is not enhanced by procollagen C-proteinase enhancer-1 (PCPE-1). *Journal of Biological Chemistry*, **2005**, 280, 22616-23	5.4	38
98	Enzymic control of collagen fibril shape. *Journal of Molecular Biology*, **1996**, 261, 93-7	6.5	38
97	Fibrin gels exhibit improved biological, structural, and mechanical properties compared with collagen gels in cell-based tendon tissue-engineered constructs. *Tissue Engineering - Part A*, **2015**, 21, 438-50	3.9	37
96	Electron microscopy of collagen fibril structure in vitro and in vivo including three-dimensional reconstruction. *Methods in Cell Biology*, **2008**, 88, 319-45	1.8	36
95	Analysis of collagen fibril diameter distribution in connective tissues using small-angle X-ray scattering. *Biochimica Et Biophysica Acta - General Subjects*, **2005**, 1722, 183-8	4	36
94	Key Matrix Proteins Within the Pancreatic Islet Basement Membrane Are Differentially Digested During Human Islet Isolation. *American Journal of Transplantation*, **2017**, 17, 451-461	8.7	35
93	Role of dimerization and substrate exclusion in the regulation of bone morphogenetic protein-1 and mammalian tolloid. *Proceedings of the National Academy of Sciences of the United States of America*, **2009**, 106, 8561-6	11.5	35
92	Post-translational modification of bone morphogenetic protein-1 is required for secretion and stability of the protein. *Journal of Biological Chemistry*, **2002**, 277, 43327-34	5.4	35
91	Three-dimensional electron microscopy reveals the evolution of glomerular barrier injury. *Scientific Reports*, **2016**, 6, 35068	4.9	34
90	Collagen XXVII organises the pericellular matrix in the growth plate. *PLoS ONE*, **2011**, 6, e29422	3.7	34

89	Echinoderm collagen fibrils grow by surface-nucleation-and-propagation from both centers and ends. *Journal of Molecular Biology*, **2000**, 300, 531-40	6.5	34
88	Assembly in vitro of thin and thick fibrils of collagen II from recombinant procollagen II. The monomers in the tips of thick fibrils have the opposite orientation from monomers in the growing tips of collagen I fibrils. *Journal of Biological Chemistry*, **1996**, 271, 14864-9	5.4	34
87	Active negative control of collagen fibrillogenesis in vivo. Intracellular cleavage of the type I procollagen propeptides in tendon fibroblasts without intracellular fibrils. *Journal of Biological Chemistry*, **2008**, 283, 12129-35	5.4	33
86	Type I procollagens containing substitutions of aspartate, arginine, and cysteine for glycine in the pro alpha 1 (I) chain are cleaved slowly by N-proteinase, but only the cysteine substitution introduces a kink in the molecule. *Journal of Biological Chemistry*, **1992**, 267, 25521-8	5.4	33
85	A mouse model offers novel insights into the myopathy and tendinopathy often associated with pseudoachondroplasia and multiple epiphyseal dysplasia. *Human Molecular Genetics*, **2010**, 19, 52-64	5.6	30
84	Metaphyseal chondrodysplasia type Schmid mutations are predicted to occur in two distinct three-dimensional clusters within type X collagen NC1 domains that retain the ability to trimerize. *Journal of Biological Chemistry*, **1999**, 274, 3632-41	5.4	29
83	Enhanced Islet Cell Nucleomegaly Defines Diffuse Congenital Hyperinsulinism in Infancy but Not Other Forms of the Disease. *American Journal of Clinical Pathology*, **2016**, 145, 757-68	1.9	29
82	Electron microscope 3D reconstruction of branched collagen fibrils in vivo. *Scandinavian Journal of Medicine and Science in Sports*, **2009**, 19, 547-52	4.6	28
81	The precision of lateral size control in the assembly of corneal collagen fibrils. *Journal of Molecular Biology*, **2005**, 345, 773-84	6.5	28
80	Identification of amino acid residues in bone morphogenetic protein-1 important for procollagen C-proteinase activity. *Journal of Biological Chemistry*, **2001**, 276, 26237-42	5.4	28
79	Ablating hedgehog signaling in tenocytes during development impairs biomechanics and matrix organization of the adult murine patellar tendon enthesis. *Journal of Orthopaedic Research*, **2015**, 33, 1142-51	3.8	25
78	Deletion of epidermal growth factor-like domains converts mammalian tolloid into a chordinase and effective procollagen C-proteinase. *Journal of Biological Chemistry*, **2004**, 279, 49835-41	5.4	25
77	Live imaging of collagen deposition during skin development and repair in a collagen I - GFP fusion transgenic zebrafish line. *Developmental Biology*, **2018**, 441, 4-11	3.1	24
76	Growth of sea cucumber collagen fibrils occurs at the tips and centers in a coordinated manner. *Journal of Molecular Biology*, **1998**, 284, 1417-24	6.5	24
75	ER stress and basement membrane defects combine to cause glomerular and tubular renal disease resulting from Col4a1 mutations in mice. *DMM Disease Models and Mechanisms*, **2016**, 9, 165-76	4.1	23
74	Stepwise proteolytic activation of type I procollagen to collagen within the secretory pathway of tendon fibroblasts in situ. *Biochemical Journal*, **2012**, 441, 707-17	3.8	23
73	Surface located procollagen N-propeptides on dermatosparactic collagen fibrils are not cleaved by procollagen N-proteinase and do not inhibit binding of decorin to the fibril surface. *Journal of Molecular Biology*, **1998**, 278, 195-204	6.5	23
72	Targeting lysyl oxidase reduces peritoneal fibrosis. *PLoS ONE*, **2017**, 12, e0183013	3.7	22

71	Matrix metalloproteinase 14 is required for fibrous tissue expansion. *ELife*, **2015**, 4, e09345	8.9	22
70	The cell biology of suturing tendons. *Matrix Biology*, **2010**, 29, 525-36	11.4	21
69	Self-assembly of rodlike particles in two dimensions: A simple model for collagen fibrillogenesis. *Physical Review E*, **1994**, 50, 2963-2966	2.4	21
68	Structural and functional evidence for a substrate exclusion mechanism in mammalian tolloid like-1 (TLL-1) proteinase. *FEBS Letters*, **2010**, 584, 657-61	3.8	20
67	Design and synthesis of acidic dipeptide hydroxamate inhibitors of procollagen C-proteinase. *Journal of Peptide Science*, **2000**, 6, 489-95	2.1	20
66	Substitutions of aspartic acid for glycine-220 and of arginine for glycine-664 in the triple helix of the pro alpha 1(I) chain of type I procollagen produce lethal osteogenesis imperfecta and disrupt the ability of collagen fibrils to incorporate crystalline hydroxyapatite. *Biochemical Journal*, **1995**, 311 (Pt 3), 815-20	3.8	20
65	Chick tendon fibroblast transcriptome and shape depend on whether the cell has made its own collagen matrix. *Scientific Reports*, **2015**, 5, 13555	4.9	19
64	Three-dimensional reconstructions of extracellular matrix polymers using automated electron tomography. *Journal of Structural Biology*, **2002**, 138, 130-6	3.4	19
63	A tripeptide deletion in the triple-helical domain of the pro alpha 1(I) chain of type I procollagen in a patient with lethal osteogenesis imperfecta does not alter cleavage of the molecule by N-proteinase. *Journal of Biological Chemistry*, **1992**, 267, 25529-34	5.4	16
62	Arhgap28 is a RhoGAP that inactivates RhoA and downregulates stress fibers. *PLoS ONE*, **2014**, 9, e107036	3.7	16
61	First evidence of bone morphogenetic protein 1 expression and activity in sheep ovarian follicles. *Biology of Reproduction*, **2010**, 83, 138-46	3.9	15
60	Molecular cloning, expression and chromosomal localization of a human gene encoding a 33 kDa putative metallopeptidase (PRSM1). *Gene*, **1996**, 174, 135-43	3.8	15
59	Non-muscle myosin IIB (Myh10) is required for epicardial function and coronary vessel formation during mammalian development. *PLoS Genetics*, **2017**, 13, e1007068	6	14
58	Growth of collagen fibril seeds from embryonic tendon: fractured fibril ends nucleate new tip growth. *Journal of Molecular Biology*, **2010**, 399, 9-16	6.5	14
57	Collagen IX: evidence for a structural association between NC4 domains in cartilage and a novel cleavage site in the alpha 1(IX) chain. *Matrix Biology*, **1998**, 16, 497-505	11.4	14
56	Electron microscopy in cell-matrix research. *Methods*, **2008**, 45, 53-64	4.6	14
55	4-Sodium phenyl butyric acid has both efficacy and counter-indicative effects in the treatment of Col4a1 disease. *Human Molecular Genetics*, **2019**, 28, 628-638	5.6	14
54	Preservation of circadian rhythms by the protein folding chaperone, BiP. *FASEB Journal*, **2019**, 33, 7479-7489	3.9	13

53	Modification of the composition of articular cartilage collagen fibrils with increasing age. *Connective Tissue Research*, **2008**, 49, 374-82	3.3	13
52	A complete domain structure of Drosophila tolloid is required for cleavage of short gastrulation. *Journal of Biological Chemistry*, **2006**, 281, 13258-13267	5.4	13
51	Substitution of serine for glycine 883 in the triple helix of the pro alpha 1 (I) chain of type I procollagen produces osteogenesis imperfecta type IV and introduces a structural change in the triple helix that does not alter cleavage of the molecule by procollagen N-proteinase.. *Journal of Biological Chemistry*, **1994**, 269, 30352-30357	5.4	13
50	Importance of the circadian clock in tendon development. *Current Topics in Developmental Biology*, **2019**, 133, 309-342	5.3	13
49	Procollagen C-peptidase: procollagen C-proteinase. *Methods in Enzymology*, **1995**, 248, 771-81	1.7	12
48	Tracing the pathway between mutation and phenotype in osteogenesis imperfecta: isolation of mineralization-specific genes. *American Journal of Medical Genetics Part A*, **1996**, 63, 167-74		11
47	Substitution of serine for glycine 883 in the triple helix of the pro alpha 1 (I) chain of type I procollagen produces osteogenesis imperfecta type IV and introduces a structural change in the triple helix that does not alter cleavage of the molecule by procollagen N-proteinase. *Journal of Biological Chemistry*, **1994**, 269, 30352-7	5.4	11
46	Learning how mutations in type I collagen genes cause connective tissue disease. *International Journal of Experimental Pathology*, **1993**, 74, 319-23	2.8	11
45	Recombinant expression systems for the production of collagen. *Biochemical Society Transactions*, **2000**, 28, 350-3	5.1	11
44	Serial block face-scanning electron microscopy: a tool for studying embryonic development at the cell-matrix interface. *Birth Defects Research Part C: Embryo Today Reviews*, **2015**, 105, 9-18		10
43	On the regulation of collagen-fibril shape and form. *Biochemical Society Transactions*, **1991**, 19, 808-11	5.1	10
42	Collagen Assembly at the Cell Surface: Dogmas Revisited. *Cells*, **2021**, 10,	7.9	9
41	Synchronized mechanical oscillations at the cell-matrix interface in the formation of tensile tissue. *Proceedings of the National Academy of Sciences of the United States of America*, **2018**, 115, E9288-E9297	11.5	9
40	The aromatic zipper: a model for the initial trimerization event in collagen folding. *Biochemical Society Transactions*, **1991**, 19, 365S	5.1	8
39	Collagen assembly and turnover imaged with a CRISPR-Cas9 engineered Dendra2 tag		8
38	Electron cryomicroscopy of fibrillar collagens. *Methods in Molecular Biology*, **2000**, 139, 95-109	1.4	7
37	Procollagen N-peptidases: procollagen N-proteinases. *Methods in Enzymology*, **1995**, 248, 756-71	1.7	7
36	A study of staining for electron microscopy using collagen as a model system VII. The effect of formaldehyde fixation. *Micron and Microscopica Acta*, **1988**, 19, 213-226		7

35	Discovery of re-purposed drugs that slow SARS-CoV-2 replication in human cells. *PLoS Pathogens*, **2021**, 17, e1009840	7.6	7
34	Cellular homeostatic tension and force transmission measured in human engineered tendon. *Journal of Biomechanics*, **2018**, 78, 161-165	2.9	6
33	Protein structure and the specific heat of water. *Nature*, **1987**, 325, 395	50.4	6
32	An Electron Microscope Study of the First-Formed Aggregates in Collagen Fibril Assembly in Vitro. *Annals of the New York Academy of Sciences*, **1985**, 460, 456-460	6.5	6
31	Effects of Mutations that Change Primary Structure of Collagen on the Self-Assembly of the Protein into Fibrils. *Springer Series in Biophysics*, **1989**, 81-89		5
30	Giantin is required for intracellular N-terminal processing of type I procollagen. *Journal of Cell Biology*, **2021**, 220,	7.3	5
29	Circadian time series proteomics reveals daily dynamics in cartilage physiology. *Osteoarthritis and Cartilage*, **2021**, 29, 739-749	6.2	5
28	Changes in S100 Proteins Identified in Healthy Skin following Electrical Stimulation: Relevance for Wound Healing. *Advances in Skin and Wound Care*, **2018**, 31, 322-327	1.5	5
27	Collagen fibril assembly: New approaches to unanswered questions. *Matrix Biology Plus*, **2021**, 12, 100079	3.1	5
26	Material-driven fibronectin assembly rescues matrix defects due to mutations in collagen IV in fibroblasts. *Biomaterials*, **2020**, 252, 120090	15.6	4
25	Age-related dataset on the mechanical properties and collagen fibril structure of tendons from a murine model. *Scientific Data*, **2018**, 5, 180140	8.2	4
24	Dynamic High-Sensitivity Quantitation of Procollagen-I by Endogenous CRISPR-Cas9 NanoLuciferase Tagging. *Cells*, **2020**, 9,	7.9	4
23	The needle in the ECM haystack. *Nature Reviews Molecular Cell Biology*, **2014**, 15, 769	48.7	3
22	Expression of type I procollagen genes. *Novartis Foundation Symposium*, **1988**, 136, 142-60		3
21	Procollagen Processing Control of Type I Collagen Fibril Assembly. *Springer Series in Biophysics*, **1989**, 292-301		3
20	IL-13 deficiency exacerbates lung damage and impairs epithelial-derived type 2 molecules during nematode infection. *Life Science Alliance*, **2021**, 4,	5.8	3
19	Specific glycanforms of type IX collagen accumulate in embryonic chick sterna after 17 days of development. *Glycobiology*, **1998**, 8, 1013-9	5.8	2
18	Matrix fully loaded: Assembly and secretion of collagen fibrils. *Biochemist*, **2003**, 25, 11-13	0.5	2

List of Publications

17	A missense mutation of ErbB2 produces a novel mouse model of stillbirth associated with a cardiac abnormality but lacking abnormalities of placental structure. *PLoS ONE*, **2020**, 15, e0233007	3.7	1
16	Collagen pretzels revealed by electron microscopy. *Biochemical Journal*, **2007**, 404, e7-8	3.8	1
15	Introduction: Collagens folding, FACITS, MULTIPLEXINS, membrane spanning and integrin-collagen interactions. *Seminars in Cell and Developmental Biology*, **1996**, 7, 629-630	7.5	1
14	Dynamic protein quantitation (DyProQ) of procollagen-I by CRISPR-Cas9 NanoLuciferase tagging		1
13	Analysing the Structure of Collagen Fibres in SBFSEM Images **2016**,		1
12	Discovery of re-purposed drugs that slow SARS-CoV-2 replication in human cells **2021**,		1
11	The ins and outs of extracellular matrix assembly. *International Journal of Experimental Pathology*, **2008**, 85, A5-A6	2.8	
10	Bone morphogenetic protein-1 cleaves prodecorin in vitro and in cellulo. *International Journal of Experimental Pathology*, **2008**, 85, A17-A17	2.8	
9	Proteomics of tendon ECM assembly. *International Journal of Experimental Pathology*, **2008**, 85, A18-A18	2.8	
8	Role of the EGF-like domains in mammalian tolloid (mTLD) secretion and procollagen C-proteinase activity. *International Journal of Experimental Pathology*, **2008**, 85, A43-A44	2.8	
7	In Vitro Techniques **2006**, 201-378		
6	Radiolytic destruction of the transition-metal-binding site in concanavalin A. *International Journal of Radiation Biology and Related Studies in Physics, Chemistry, and Medicine*, **1981**, 39, 677-81		
5	Electron microscope studies of collagen fibril formation in cornea, skin and tendon: Implications for collagen fibril assembly and structure in other tissues **2002**, 117-129		
4	Decorin PG-S2, PGII, DCN **1998**, 126-128		
3	Procollagen I N-proteinase procollagen type I/II N-proteinase, procollagen N-terminal proteinase, PNP **1998**, 249-252		
2	Procollagen C-proteinase PCP, procollagen C-terminal peptidase, bone morphogenetic protein-1, BMP-1, mammalian tolloid (mTld), tolloid-like protein (mTll) **1998**, 246-248		
1	The Molecular Basis of Joint Hypermobility **1999**, 23-37		