

Matthias Schieker

List of Publications by Year in descending order

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117
papers

6,236
citations

57758

44
h-index

74163

75
g-index

144
all docs

144
docs citations

144
times ranked

9263
citing authors

#	ARTICLE	IF	CITATIONS
1	Effects of Interleukin-1 ^β Inhibition on Incident Hip and Knee Replacement. <i>Annals of Internal Medicine</i> , 2020, 173, 509-515.	3.9	84
2	Relationship between tendon structure, stiffness, gait patterns and patient reported outcomes during the early stages of recovery after an Achilles tendon rupture. <i>Scientific Reports</i> , 2020, 10, 20757.	3.3	14
3	Bone defect reconstruction with a novel biomaterial containing calcium phosphate and aluminum oxide reinforcement. <i>Journal of Orthopaedic Surgery and Research</i> , 2020, 15, 287.	2.3	11
4	Bone regeneration of minipig mandibular defect by adipose derived mesenchymal stem cells seeded tri-calcium phosphate- poly(D,L-lactide-co-glycolide) scaffolds. <i>Scientific Reports</i> , 2020, 10, 2062.	3.3	59
5	Decreased Expression of the Human Urea Transporter SLC14A1 in Bone is Induced by Cytokines and Stimulates Adipogenesis of Mesenchymal Progenitor Cells. <i>Experimental and Clinical Endocrinology and Diabetes</i> , 2020, 128, 582-595.	1.2	0
6	A laser-cutting-based manufacturing process for the generation of three-dimensional scaffolds for tissue engineering using Polycaprolactone/Hydroxyapatite composite polymer. <i>Journal of Tissue Engineering</i> , 2019, 10, 204173141985915.	5.5	14
7	DigitalROM: Development and validation of a system for assessment of shoulder range of motion. , 2019, 2019, 5498-5501.		0
8	Growth factor-mediated augmentation of long bones: evaluation of a BMP-7 loaded thermoresponsive hydrogel in a murine femoral intramedullary injection model. <i>Journal of Orthopaedic Surgery and Research</i> , 2019, 14, 297.	2.3	6
9	Validity of accelerometry in step detection and gait speed measurement in orthogeriatric patients. <i>PLoS ONE</i> , 2019, 14, e0221732.	2.5	26
10	Longitudinal assessment of cartilage composition by high-field MRI in patients with low-grade knee cartilage injury. <i>Osteoarthritis and Cartilage</i> , 2019, 27, S335.	1.3	1
11	Tenomodulin regulates matrix remodeling of mouse tendon stem/progenitor cells in an ex vivo collagen I gel model. <i>Biochemical and Biophysical Research Communications</i> , 2019, 512, 691-697.	2.1	21
12	Quantifying Functional Difference in Centre of Pressure Post Achilles Tendon Rupture using Sensor Insoles. , 2019, 2019, 3155-3158.		2
13	Characterization of human telomerase reverse transcriptase immortalized anterior cruciate ligament cell lines. <i>Biomedical Journal</i> , 2019, 42, 371-380.	3.1	7
14	Continuous Digital Monitoring of Walking Speed in Frail Elderly Patients: Noninterventional Validation Study and Longitudinal Clinical Trial. <i>JMIR MHealth and UHealth</i> , 2019, 7, e15191.	3.7	39
15	Functionalized thermosensitive hydrogel combined with tendon stem/progenitor cells as injectable cell delivery carrier for tendon tissue engineering. <i>Biomedical Materials (Bristol)</i> , 2018, 13, 034107.	3.3	33
16	Continuous Monitoring of Patient Mobility for 18 Months Using Inertial Sensors following Traumatic Knee Injury: A Case Study. <i>Digital Biomarkers</i> , 2018, 2, 79-89.	4.4	13
17	A Perfusion Bioreactor System for Cell Seeding and Oxygen-Controlled Cultivation of Three-Dimensional Cell Cultures. <i>Tissue Engineering - Part C: Methods</i> , 2018, 24, 585-595.	2.1	50
18	In Vitro Comparison of 2D-Cell Culture and 3D-Cell Sheets of Scleraxis-Programmed Bone Marrow Derived Mesenchymal Stem Cells to Primary Tendon Stem/Progenitor Cells for Tendon Repair. <i>International Journal of Molecular Sciences</i> , 2018, 19, 2272.	4.1	18

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19	Viable adhered Staphylococcus aureus highly reduced on novel antimicrobial sutures using chlorhexidine and octenidine to avoid surgical site infection (SSI). PLoS ONE, 2018, 13, e0190912.	2.5	29
20	IL-6, IL-1 β , and TNF- α only in combination influence the osteoporotic phenotype in Crohn's patients via bone formation and bone resorption. Advances in Clinical and Experimental Medicine, 2018, 27, 45-56.	1.4	43
21	Tenomodulin is Required for Tendon Endurance Running and Collagen I Fibril Adaptation to Mechanical Load. EBioMedicine, 2017, 20, 240-254.	6.1	78
22	Effect of hypoxia on the proliferation of porcine bone marrow-derived mesenchymal stem cells and adipose-derived mesenchymal stem cells in 2- and 3-dimensional culture. Journal of Cranio-Maxillo-Facial Surgery, 2017, 45, 414-419.	1.7	20
23	Oxygen mapping: Probing a novel seeding strategy for bone tissue engineering. Biotechnology and Bioengineering, 2017, 114, 894-902.	3.3	16
24	Tenomodulin is essential for prevention of adipocyte accumulation and fibrovascular scar formation during early tendon healing. Cell Death and Disease, 2017, 8, e3116-e3116.	6.3	83
25	Mechanical and biological effects of infiltration with biopolymers on 3D printed tricalciumphosphate scaffolds. Dental Materials Journal, 2017, 36, 553-559.	1.8	4
26	Scaffold-free Scleraxis-programmed tendon progenitors aid in significantly enhanced repair of full-size Achilles tendon rupture. Nanomedicine, 2016, 11, 1153-1167.	3.3	47
27	Value of a coordinated management of osteoporosis via Fracture Liaison Service for the treatment of orthogeriatric patients. European Journal of Trauma and Emergency Surgery, 2016, 42, 559-564.	1.7	22
28	Structural and mechanical properties of the proliferative zone of the developing murine growth plate cartilage assessed by atomic force microscopy. Matrix Biology, 2016, 50, 1-15.	3.6	97
29	Periodontal ligament cells as alternative source for cell-based therapy of tendon injuries: in vivo study of full-size Achilles tendon defect in a rat model. , 2016, 32, 228-240.		27
30	In vitro evaluation of novel antimicrobial coatings for surgical sutures using octenidine. BMC Microbiology, 2015, 15, 186.	3.3	45
31	Efficacy and safety of extracorporeal shock wave therapy for orthopedic conditions: a systematic review on studies listed in the PEDro database. British Medical Bulletin, 2015, 116, ldv047.	6.9	146
32	Mechanical stimulation of human tendon stem/progenitor cells results in upregulation of matrix proteins, integrins and MMPs, and activation of p38 and ERK1/2 kinases. BMC Molecular Biology, 2015, 16, 6.	3.0	82
33	Loss of Tenomodulin Results in Reduced Self-Renewal and Augmented Senescence of Tendon Stem/Progenitor Cells. Stem Cells and Development, 2015, 24, 597-609.	2.1	88
34	A Novel Cell Seeding Chamber for Tissue Engineering and Regenerative Medicine. Processes, 2014, 2, 361-370.	2.8	1
35	Novel High Efficient Coatings for Anti-Microbial Surgical Sutures Using Chlorhexidine in Fatty Acid Slow-Release Carrier Systems. PLoS ONE, 2014, 9, e101426.	2.5	69
36	Mesenchymal stem cells from osteoporotic patients reveal reduced migration and invasion upon stimulation with BMP-2 or BMP-7. Biochemical and Biophysical Research Communications, 2014, 452, 118-123.	2.1	37

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37	Influence of osteogenic stimulation and VEGF treatment on in vivo bone formation in hMSC-seeded cancellous bone scaffolds. <i>BMC Musculoskeletal Disorders</i> , 2014, 15, 350.	1.9	8
38	Aged human mesenchymal stem cells: the duration of bone morphogenetic protein-2 stimulation determines induction or inhibition of osteogenic differentiation. <i>Orthopedic Reviews</i> , 2014, 6, 5242.	1.3	10
39	In Vivo Mesenchymal Stem Cell Tracking with PET Using the Dopamine Type 2 Receptor and 18F-Fallypride. <i>Journal of Nuclear Medicine</i> , 2014, 55, 1342-1347.	5.0	18
40	Sox2 Is a Potent Inhibitor of Osteogenic and Adipogenic Differentiation in Human Mesenchymal Stem Cells. <i>Cellular Reprogramming</i> , 2014, 16, 355-365.	0.9	17
41	Comparison of Different Strategies for In Vivo Seeding of Prevascularized Scaffolds. <i>Tissue Engineering - Part C: Methods</i> , 2014, 20, 11-18.	2.1	6
42	MicroRNA-23a mediates post-transcriptional regulation of CXCL12 in bone marrow stromal cells. <i>Haematologica</i> , 2014, 99, 997-1005.	3.5	28
43	Study protocol: the effect of whole body vibration on acute unilateral unstable lateral ankle sprain-a biphasic randomized controlled trial. <i>BMC Musculoskeletal Disorders</i> , 2013, 14, 22.	1.9	15
44	Ploxamer-based hydrogels hardening at body core temperature as carriers for cell based therapies: in vitro and in vivo analysis. <i>Journal of Materials Science: Materials in Medicine</i> , 2013, 24, 2223-2234.	3.6	15
45	Comparison of tenocytes and mesenchymal stem cells seeded on biodegradable scaffolds in a full-size tendon defect model. <i>Journal of Materials Science: Materials in Medicine</i> , 2013, 24, 211-220.	3.6	50
46	Polypropylene meshes coated with a polysaccharide based bioadhesive for intra-abdominal mesh fixation in a rabbit model. <i>Surgical Endoscopy and Other Interventional Techniques</i> , 2013, 27, 1991-1996.	2.4	3
47	The role of bisphosphonate type, local concentration and acidic milieu in the pathogenesis of bisphosphonate-related osteonecrosis of the jaw. <i>International Journal of Oral and Maxillofacial Surgery</i> , 2013, 42, 1189.	1.5	0
48	Overexpression of dnIKK in mesenchymal stem cells leads to increased migration and decreased invasion upon TNF α stimulation. <i>Biochemical and Biophysical Research Communications</i> , 2013, 436, 265-270.	2.1	11
49	Mesenchymal stem cells from osteoporotic patients feature impaired signal transduction but sustained osteoinduction in response to BMP-2 stimulation. <i>Biochemical and Biophysical Research Communications</i> , 2013, 440, 617-622.	2.1	56
50	MiR-134-mediated β 1 integrin expression and function in mesenchymal stem cells. <i>Biochimica Et Biophysica Acta - Molecular Cell Research</i> , 2013, 1833, 3396-3404.	4.1	14
51	Uncovering the cellular and molecular changes in tendon stem/progenitor cells attributed to tendon aging and degeneration. <i>Aging Cell</i> , 2013, 12, 988-999.	6.7	169
52	Probing the Interaction Forces of Prostate Cancer Cells with Collagen I and Bone Marrow Derived Stem Cells on the Single Cell Level. <i>PLoS ONE</i> , 2013, 8, e57706.	2.5	20
53	Long-Term Detection of Fluorescently Labeled Human Mesenchymal Stem Cells In Vitro and In Vivo by Semi-Automated Microscopy. <i>Tissue Engineering - Part C: Methods</i> , 2012, 18, 156-165.	2.1	16
54	Cell seeding chamber for bone graft substitutes. <i>Biomedizinische Technik</i> , 2012, 57, .	0.8	1

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55	First inducible transgene expression in porcine large animal models. <i>FASEB Journal</i> , 2012, 26, 1086-1099.	0.5	60
56	Effects of different media on proliferation and differentiation capacity of canine, equine and porcine adipose derived stem cells. <i>Research in Veterinary Science</i> , 2012, 93, 457-462.	1.9	47
57	Increased stemness and migration of human mesenchymal stem cells in hypoxia is associated with altered integrin expression. <i>Biochemical and Biophysical Research Communications</i> , 2012, 423, 379-385.	2.1	86
58	Residual transglutaminase in collagen " Effects, detection, quantification, and removal. <i>European Journal of Pharmaceutics and Biopharmaceutics</i> , 2012, 80, 282-288.	4.3	7
59	Molecular cloning and functional characterization of the porcine extracellular domain of Receptor Activator of NF- κ B Ligand (sRANKL). <i>Gene</i> , 2012, 492, 296-304.	2.2	2
60	Collagen type I and decorin expression in tenocytes depend on the cell isolation method. <i>BMC Musculoskeletal Disorders</i> , 2012, 13, 140.	1.9	34
61	Conversion of Human Bone Marrow-Derived Mesenchymal Stem Cells into Tendon Progenitor Cells by Ectopic Expression of Scleraxis. <i>Stem Cells and Development</i> , 2012, 21, 846-858.	2.1	127
62	Porosity and mechanically optimized PLGA based in situ hardening systems. <i>European Journal of Pharmaceutics and Biopharmaceutics</i> , 2012, 82, 554-562.	4.3	15
63	Overcoming hypoxia in 3D culture systems for tissue engineering of bone in vitro using an automated, oxygen-triggered feedback loop. <i>Journal of Materials Science: Materials in Medicine</i> , 2012, 23, 2793-2801.	3.6	22
64	In situ guided tissue regeneration in musculoskeletal diseases and aging. <i>Cell and Tissue Research</i> , 2012, 347, 725-735.	2.9	24
65	Regulation of β 1-Integrin by Mir-134 in Mesenchymal Stromal Cells " Implications for Mesenchymal Stromal Cell Adherence and Hematopoietic Stem Cell Interaction. <i>Blood</i> , 2012, 120, 3459-3459.	1.4	0
66	Osteoporosis and bisphosphonates-related osteonecrosis of the jaw: Not just a sporadic coincidence " a multi-centre study. <i>Journal of Cranio-Maxillo-Facial Surgery</i> , 2011, 39, 272-277.	1.7	111
67	Integrins β 1 and β 1 regulate the survival of mesenchymal stem cells on collagen I. <i>Cell Death and Disease</i> , 2011, 2, e186-e186.	6.3	134
68	Cyanoacrylate Glue for Intra-abdominal Mesh Fixation of Polypropylene-Polyvinylidene Fluoride Meshes in a Rabbit Model. <i>Journal of Surgical Research</i> , 2011, 167, e157-e162.	1.6	22
69	Inhibition of metastasis-associated gene 1 expression affects proliferation and osteogenic differentiation of immortalized human mesenchymal stem cells. <i>Cell Proliferation</i> , 2011, 44, 128-138.	5.3	9
70	Characterization of adipose-derived equine and canine mesenchymal stem cells after incubation in agarose-hydrogel. <i>Veterinary Research Communications</i> , 2011, 35, 487-499.	1.6	14
71	Impact of Indium-111 Oxine Labelling on Viability of Human Mesenchymal Stem Cells In Vitro, and 3D Cell-Tracking Using SPECT/CT In Vivo. <i>Molecular Imaging and Biology</i> , 2011, 13, 1204-1214.	2.6	68
72	Bupivacaine, ropivacaine, and morphine: comparison of toxicity on human hamstring-derived stem/progenitor cells. <i>Knee Surgery, Sports Traumatology, Arthroscopy</i> , 2011, 19, 2138-2144.	4.2	38

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73	192 INDUCIBLE TRANSGENE EXPRESSION IN PIGS. <i>Reproduction, Fertility and Development</i> , 2011, 23, 196.	0.4	0
74	Projektskizze. , 2011, , 17-46.		0
75	Bisphosphonate-Related Osteonecrosis of the Jaw: Is pH the Missing Part in the Pathogenesis Puzzle?. <i>Journal of Oral and Maxillofacial Surgery</i> , 2010, 68, 1158-1161.	1.2	122
76	Osteonecrosis of the Jaw: Effect of Bisphosphonate Type, Local Concentration, and Acidic Milieu on the Pathomechanism. <i>Journal of Oral and Maxillofacial Surgery</i> , 2010, 68, 2837-2845.	1.2	124
77	Membrane-Based Cultures Generate Scaffold-Free Neocartilage In Vitro: Influence of Growth Factors. <i>Tissue Engineering - Part A</i> , 2010, 16, 513-521.	3.1	21
78	Quantification of Fluorescence Intensity of Labeled Human Mesenchymal Stem Cells and Cell Counting of Unlabeled Cells in Phase-Contrast Imaging: An Open-Source-Based Algorithm. <i>Tissue Engineering - Part C: Methods</i> , 2010, 16, 1277-1285.	2.1	17
79	Effect of collagen I and fibronectin on the adhesion, elasticity and cytoskeletal organization of prostate cancer cells. <i>Biochemical and Biophysical Research Communications</i> , 2010, 402, 361-366.	2.1	50
80	Hypoxic Preconditioning of Human Mesenchymal Stem Cells Overcomes Hypoxia-Induced Inhibition of Osteogenic Differentiation. <i>Tissue Engineering - Part A</i> , 2010, 16, 153-164.	3.1	91
81	Interactions of Human Endothelial and Multipotent Mesenchymal Stem Cells in Cocultures. <i>Open Biomedical Engineering Journal</i> , 2010, 4, 190-198.	0.5	15
82	A small scale cell culture system to analyze mechanobiology using reporter gene constructs and polyurethane dishes. , 2010, 20, 344-355.		20
83	A Short-Term Bioresorbable Bone Filling Material Based on Hydroxyapatite, Chitosan, and Oxidized Starch Tested in a Novel Orthotopic Metaphyseal Mouse Model. <i>Advanced Engineering Materials</i> , 2009, 11, B114.	3.5	4
84	Characterisation of a new bioadhesive system based on polysaccharides with the potential to be used as bone glue. <i>Journal of Materials Science: Materials in Medicine</i> , 2009, 20, 2001-2009.	3.6	67
85	Morphological and immunocytochemical characteristics indicate the yield of early progenitors and represent a quality control for human mesenchymal stem cell culturing. <i>Journal of Anatomy</i> , 2009, 214, 759-767.	1.5	117
86	Three-dimensional structure-engineering to create rapid prototyping/rapid manufacturing-compatible datasets for ceramic scaffolds to reconstruct mandibular defects. <i>International Journal of Oral and Maxillofacial Surgery</i> , 2009, 38, 528-529.	1.5	0
87	Reprogramming of Active and Repressive Histone Modifications following Nuclear Transfer with Rabbit Mesenchymal Stem Cells and Adult Fibroblasts. <i>Cloning and Stem Cells</i> , 2009, 11, 319-329.	2.6	13
88	Current Aspects of Fragility Fracture Repair. <i>European Journal of Trauma and Emergency Surgery</i> , 2008, 34, 535-541.	1.7	6
89	IKK-2 is required for TNF- α -induced invasion and proliferation of human mesenchymal stem cells. <i>Journal of Molecular Medicine</i> , 2008, 86, 1183-1192.	3.9	98
90	Tissue engineering for bone defect healing: An update on a multi-component approach. <i>Injury</i> , 2008, 39, S9-S20.	1.7	184

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91	Researching into the cellular shape, volume and elasticity of mesenchymal stem cells, osteoblasts and osteosarcoma cells by atomic force microscopy. <i>Journal of Cellular and Molecular Medicine</i> , 2008, 12, 537-552.	3.6	172
92	Introducing a single-cell-derived human mesenchymal stem cell line expressing hTERT after lentiviral gene transfer. <i>Journal of Cellular and Molecular Medicine</i> , 2008, 12, 1347-1359.	3.6	177
93	Hypoxia in Static and Dynamic 3D Culture Systems for Tissue Engineering of Bone. <i>Tissue Engineering - Part A</i> , 2008, 14, 1331-1340.	3.1	241
94	Diagnosis of Osteoporosis with Vitamin K as a New Biochemical Marker. <i>Vitamins and Hormones</i> , 2008, 78, 417-434.	1.7	9
95	Do We Need to Include Osteoporosis in Today's Classification of Distal Radius Fractures?. <i>Journal of Orthopaedic Trauma</i> , 2008, 22, S79-S82.	1.4	11
96	Validation of a Femoral Critical Size Defect Model for Orthotopic Evaluation of Bone Healing: A Biomechanical, Veterinary and Trauma Surgical Perspective. <i>Tissue Engineering - Part C: Methods</i> , 2008, 14, 79-88.	2.1	60
97	Mesenchymal Stem Cells and Their Cell Surface Receptors. <i>Current Rheumatology Reviews</i> , 2008, 4, 155-160.	0.8	42
98	Flexible intramedullary nailing for stabilization of displaced midshaft clavicle fractures: Technique and results in 87 patients. <i>Monthly Notices of the Royal Astronomical Society: Letters</i> , 2007, 78, 424-429.	3.3	78
99	Influence of In Vitro Cultivation on the Integration of Cell-Matrix Constructs After Subcutaneous Implantation. <i>Tissue Engineering</i> , 2007, 13, 1059-1067.	4.6	25
100	A new biodegradable bone wax substitute with the potential to be used as a bone filling material. <i>Journal of Materials Chemistry</i> , 2007, 17, 4028.	6.7	35
101	Differentiation of individual human mesenchymal stem cells probed by FTIR microscopic imaging. <i>Analyst</i> , 2007, 132, 647.	3.5	61
102	Quantitative polymerase chain reaction as a reliable method to determine functional lentiviral titer after ex vivo gene transfer in human mesenchymal stem cells. <i>Journal of Gene Medicine</i> , 2007, 9, 585-595.	2.8	20
103	New advances in fluorochrome sequential labelling of teeth using seven different fluorochromes and spectral image analysis. <i>Journal of Anatomy</i> , 2007, 210, 117-121.	1.5	28
104	Human mesenchymal stem cells at the single-cell level: simultaneous seven-colour immunofluorescence. <i>Journal of Anatomy</i> , 2007, 210, 592-599.	1.5	42
105	Human mesenchymal stem cells in contact with their environment: surface characteristics and the integrin system. <i>Journal of Cellular and Molecular Medicine</i> , 2007, 11, 21-38.	3.6	274
106	Frakturheilung bei Osteoporose. <i>Osteologie</i> , 2007, 16, 71-84.	0.1	10
107	Quantitative scanning acoustic microscopy compared to microradiography for assessment of new bone formation. <i>Bone</i> , 2006, 38, 564-570.	2.9	5
108	Biomaterials as Scaffold for Bone Tissue Engineering. <i>European Journal of Trauma and Emergency Surgery</i> , 2006, 32, 114-124.	0.3	164

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109	A Novel Surgical Technique for Transverse Sternal Bone Defects Using Flexible Intramedullary Nailing. <i>Thoracic and Cardiovascular Surgeon</i> , 2006, 54, 564-566.	1.0	2
110	Nonviral genetic modification mediates effective transgene expression and functional RNA interference in human mesenchymal stem cells. <i>Journal of Gene Medicine</i> , 2005, 7, 718-728.	2.8	74
111	Biocompatibility of ceramic scaffolds for bone replacement made by 3D printing. <i>Materialwissenschaft Und Werkstofftechnik</i> , 2005, 36, 781-787.	0.9	52
112	Hydroxyapatite scaffolds for bone tissue engineering made by 3D printing. <i>Journal of Materials Science: Materials in Medicine</i> , 2005, 16, 1121-1124.	3.6	418
113	Polychrome labeling of bone with seven different fluorochromes: Enhancing fluorochrome discrimination by spectral image analysis. <i>Bone</i> , 2005, 37, 441-445.	2.9	110
114	Molecular composition and pathology of entheses on the medial and lateral epicondyles of the humerus: a structural basis for epicondylitis. <i>Annals of the Rheumatic Diseases</i> , 2004, 63, 1015-1021.	0.9	64
115	The use of four-colour immunofluorescence techniques to identify mesenchymal stem cells. <i>Journal of Anatomy</i> , 2004, 204, 133-139.	1.5	39
116	Characterization of osteosarcoma cell lines MG-63, Saos-2 and U-2 OS in comparison to human osteoblasts. <i>Anticancer Research</i> , 2004, 24, 3743-8.	1.1	271
117	An Immunohistochemical Study of the Rabbit Suprapatella, a Sesamoid Fibrocartilage in the Quadriceps Tendon Containing Aggrecan. <i>Journal of Histochemistry and Cytochemistry</i> , 2002, 50, 955-960.	2.5	18