

# Karin Wuertz

## List of Publications by Year in descending order

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Version: 2024-02-01

82  
papers

3,840  
citations

117625

34  
h-index

149698

56  
g-index

87  
all docs

87  
docs citations

87  
times ranked

3919  
citing authors

#	ARTICLE	IF	CITATIONS
1	Inflammatory and catabolic signalling in intervertebral discs: The roles of NF- $\kappa$ B and MAP Kinases. , 2012, 23, 102-120.		181
2	Inflammatory Mediators in Intervertebral Disk Degeneration and Discogenic Pain. Global Spine Journal, 2013, 3, 175-184.	2.3	164
3	Matrix metalloproteinase expression levels suggest distinct enzyme roles during lumbar disc herniation and degeneration. European Spine Journal, 2009, 18, 1573-1586.	2.2	158
4	Behavior of Mesenchymal Stem Cells in the Chemical Microenvironment of the Intervertebral Disc. Spine, 2008, 33, 1843-1849.	2.0	145
5	Stability of (âˆ”)-epigallocatechin gallate and its activity in liquid formulations and delivery systems. Journal of Nutritional Biochemistry, 2016, 37, 1-12.	4.2	140
6	In vivo remodeling of intervertebral discs in response to shortâ€•and longâ€•term dynamic compression. Journal of Orthopaedic Research, 2009, 27, 1235-1242.	2.3	138
7	MicroRNAs in Intervertebral Disc Degeneration, Apoptosis, Inflammation, and Mechanobiology. International Journal of Molecular Sciences, 2020, 21, 3601.	4.1	137
8	Influence of extracellular osmolarity and mechanical stimulation on gene expression of intervertebral disc cells. Journal of Orthopaedic Research, 2007, 25, 1513-1522.	2.3	132
9	Advances in the Biofabrication of 3D Skin in vitro: Healthy and Pathological Models. Frontiers in Bioengineering and Biotechnology, 2018, 6, 154.	4.1	121
10	Age-Related Variation in Cell Density of Human Lumbar Intervertebral Disc. Spine, 2011, 36, 153-159.	2.0	117
11	Immunohistochemical identification of notochordal markers in cells in the aging human lumbar intervertebral disc. European Spine Journal, 2010, 19, 1761-1770.	2.2	101
12	Regulation of gene expression in intervertebral disc cells by low and high hydrostatic pressure. European Spine Journal, 2006, 15, 372-378.	2.2	100
13	MSC response to pH levels found in degenerating intervertebral discs. Biochemical and Biophysical Research Communications, 2009, 379, 824-829.	2.1	98
14	Regenerative Therapies for Equine Degenerative Joint Disease: A Preliminary Study. PLoS ONE, 2014, 9, e85917.	2.5	94
15	The Red Wine Polyphenol Resveratrol Shows Promising Potential for the Treatment of Nucleus Pulposusâ€•Mediated Pain In Vitro and In Vivo. Spine, 2011, 36, E1373-E1384.	2.0	81
16	Hyaluronic acid fragments enhance the inflammatory and catabolic response in human intervertebral disc cells through modulation of toll-like receptor 2 signalling pathways. Arthritis Research and Therapy, 2013, 15, R94.	3.5	81
17	Antimicrobial activity of Lactobacillus salivarius and Lactobacillus fermentum against Staphylococcus aureus. Pathogens and Disease, 2017, 75, .	2.0	76
18	Controversies in regenerative medicine: Should intervertebral disc degeneration be treated with mesenchymal stem cells?. JOR Spine, 2019, 2, e1043.	3.2	74

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19	A three-dimensional collagen matrix as a suitable culture system for the comparison of cyclic strain and hydrostatic pressure effects on intervertebral disc cells. <i>Journal of Neurosurgery: Spine</i> , 2005, 2, 457-465.	1.7	73
20	Expression and regulation of toll-like receptors (TLRs) in human intervertebral disc cells. <i>European Spine Journal</i> , 2014, 23, 1878-1891.	2.2	73
21	Histological analysis of surgical lumbar intervertebral disc tissue provides evidence for an association between disc degeneration and increased body mass index. <i>BMC Research Notes</i> , 2011, 4, 497.	1.4	62
22	Detrimental Role for Human High Temperature Requirement Serine Protease A1 (HTRA1) in the Pathogenesis of Intervertebral Disc (IVD) Degeneration. <i>Journal of Biological Chemistry</i> , 2012, 287, 21335-21345.	3.4	57
23	Age-related changes in human cervical, thoracic and lumbar intervertebral disc exhibit a strong intra-individual correlation. <i>European Spine Journal</i> , 2012, 21, 810-818.	2.2	56
24	Epigallocatechin 3-gallate suppresses interleukin-1 $\beta$ -induced inflammatory responses in intervertebral disc cells in vitro and reduces radiculopathic pain in rats. , 2014, 28, 372-386.		55
25	Curcuma DMSO extracts and curcumin exhibit an anti-inflammatory and anti-catabolic effect on human intervertebral disc cells, possibly by influencing TLR2 expression and JNK activity. <i>Journal of Inflammation</i> , 2012, 9, 29.	3.4	53
26	Allogenic Mesenchymal Stem Cells as a Treatment for Equine Degenerative Joint Disease: A Pilot Study. <i>Current Stem Cell Research and Therapy</i> , 2014, 9, 497-503.	1.3	53
27	Biological Response of the Intervertebral Disc to Repetitive Short-Term Cyclic Torsion. <i>Spine</i> , 2011, 36, 2021-2030.	2.0	50
28	The Natural Polyphenol Epigallocatechin Gallate Protects Intervertebral Disc Cells from Oxidative Stress. <i>Oxidative Medicine and Cellular Longevity</i> , 2016, 2016, 1-17.	4.0	49
29	Peroxynitrite Induces Gene Expression in Intervertebral Disc Cells. <i>Spine</i> , 2009, 34, 1127-1133.	2.0	46
30	Activation of intervertebral disc cells by co-culture with notochordal cells, conditioned medium and hypoxia. <i>BMC Musculoskeletal Disorders</i> , 2014, 15, 422.	1.9	46
31	Inflammation in cervical and lumbar degenerated intervertebral discs: analysis of proinflammatory cytokine and TRP channel expression. <i>European Spine Journal</i> , 2018, 27, 564-577.	2.2	46
32	pH-Responsive Electrospun Nanofibers and Their Applications. <i>Polymer Reviews</i> , 2022, 62, 351-399.	10.9	44
33	Triptolide exhibits anti-inflammatory, anti-catabolic as well as anabolic effects and suppresses TLR expression and MAPK activity in IL-1 $\beta$ treated human intervertebral disc cells. <i>European Spine Journal</i> , 2012, 21, 850-859.	2.2	43
34	Cell-Laden Agarose-Collagen Composite Hydrogels for Mechanotransduction Studies. <i>Frontiers in Bioengineering and Biotechnology</i> , 2020, 8, 346.	4.1	41
35	Stress and Alterations in Bones: An Interdisciplinary Perspective. <i>Frontiers in Endocrinology</i> , 2017, 8, 96.	3.5	38
36	Uncovering the secretome of mesenchymal stromal cells exposed to healthy, traumatic, and degenerative intervertebral discs: a proteomic analysis. <i>Stem Cell Research and Therapy</i> , 2021, 12, 11.	5.5	38

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37	p38 MAPK Facilitates Crosstalk Between Endoplasmic Reticulum Stress and IL-6 Release in the Intervertebral Disc. <i>Frontiers in Immunology</i> , 2018, 9, 1706.	4.8	37
38	Bupivacaineâ€”the deadly friend of intervertebral disc cells?. <i>Spine Journal</i> , 2011, 11, 46-53.	1.3	35
39	Inflammatory Processes Associated with Canine Intervertebral Disc Herniation. <i>Frontiers in Immunology</i> , 2017, 8, 1681.	4.8	35
40	Therapeutic Potential of Extracellular Vesicles in Degenerative Diseases of the Intervertebral Disc. <i>Frontiers in Bioengineering and Biotechnology</i> , 2020, 8, 311.	4.1	34
41	Region-Dependent Aggrecan Degradation Patterns in the Rat Intervertebral Disc Are Affected by Mechanical Loading In Vivo. <i>Spine</i> , 2011, 36, 203-209.	2.0	33
42	Mechanical and Biological Characterization of 3D Printed Lattices. <i>3D Printing and Additive Manufacturing</i> , 2019, 6, 73-81.	2.9	33
43	Osmosensing, osmosignalling and inflammation: how intervertebral disc cells respond to altered osmolarity. , 2018, 36, 231-250.		30
44	The role of transient receptor potential channels in joint diseases. , 2017, 34, 180-201.		30
45	Transient receptor potential vanilloid 2â€”mediated shearâ€”stress responses in C2C12 myoblasts are regulated by serum and extracellular matrix. <i>FASEB Journal</i> , 2015, 29, 4726-4737.	0.5	28
46	pH-Responsive Chitosan/Alginate Polyelectrolyte Complexes on Electrospun PLGA Nanofibers for Controlled Drug Release. <i>Nanomaterials</i> , 2021, 11, 1850.	4.1	28
47	Mechanical Stimulation Alters Pleiotrophin and Aggrecan Expression by Human Intervertebral Disc Cells and Influences Their Capacity to Stimulate Endothelial Cell Migration. <i>Spine</i> , 2009, 34, 663-669.	2.0	27
48	Expression and Activity of TRPA1 and TRPV1 in the Intervertebral Disc: Association with Inflammation and Matrix Remodeling. <i>International Journal of Molecular Sciences</i> , 2019, 20, 1767.	4.1	27
49	Multiscale Regulation of the Intervertebral Disc: Achievements in Experimental, In Silico, and Regenerative Research. <i>International Journal of Molecular Sciences</i> , 2021, 22, 703.	4.1	27
50	The potential of CRISPR/Cas9 genome editing for the study and treatment of intervertebral disc pathologies. <i>JOR Spine</i> , 2018, 1, e1003.	3.2	26
51	An Inflammatory Nucleus Pulposus Tissue Culture Model to Test Molecular Regenerative Therapies: Validation with Epigallocatechin 3-Gallate. <i>International Journal of Molecular Sciences</i> , 2016, 17, 1640.	4.1	23
52	Electrospinning and <sc>3D</sc> bioprinting for intervertebral disc tissue engineering. <i>JOR Spine</i> , 2020, 3, e1117.	3.2	23
53	Decellularized matrix as a building block in bioprinting and electrospinning. <i>Current Opinion in Biomedical Engineering</i> , 2019, 10, 116-122.	3.4	21
54	Magnetic fields modulate metabolism and gut microbiome in correlation with <i>Pgcâ€”1â€”</i> expression: Followâ€”up to an in vitro magnetic mitohormetic study. <i>FASEB Journal</i> , 2020, 34, 11143-11167.	0.5	20

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55	TRPV4 Inhibition and CRISPR-Cas9 Knockout Reduce Inflammation Induced by Hyperphysiological Stretching in Human Annulus Fibrosus Cells. <i>Cells</i> , 2020, 9, 1736.	4.1	20
56	Immuno-Modulatory Effects of Intervertebral Disc Cells. <i>Frontiers in Cell and Developmental Biology</i> , 0, 10, .	3.7	20
57	The Role of Cutibacterium acnes in Intervertebral Disc Inflammation. <i>Biomedicines</i> , 2020, 8, 186.	3.2	18
58	Chondrogenic Priming at Reduced Cell Density Enhances Cartilage Adhesion of Equine Allogeneic MSCs - a Loading Sensitive Phenomenon in an Organ Culture Study with 180 Explants. <i>Cellular Physiology and Biochemistry</i> , 2015, 37, 651-665.	1.6	17
59	Hyaluronan supplementation as a mechanical regulator of cartilage tissue development under joint-kinematic-mimicking loading. <i>Journal of the Royal Society Interface</i> , 2017, 14, 20170255.	3.4	14
60	Electrospray-Based Microencapsulation of Epigallocatechin 3-Gallate for Local Delivery into the Intervertebral Disc. <i>Pharmaceutics</i> , 2019, 11, 435.	4.5	13
61	TRPC6 in simulated microgravity of intervertebral disc cells. <i>European Spine Journal</i> , 2018, 27, 2621-2630.	2.2	12
62	Development of a Novel Automated Cell Isolation, Expansion, and Characterization Platform. <i>Journal of the Association for Laboratory Automation</i> , 2011, 16, 204-213.	2.8	11
63	Clinical and Radiographic Outcome of Patients With Cervical Spondylotic Myelopathy Undergoing Total Disc Replacement. <i>Spine</i> , 2019, 44, 1403-1411.	2.0	11
64	Expression and activity of hyaluronidases HYAL-1, HYAL-2 and HYAL-3 in the human intervertebral disc. <i>European Spine Journal</i> , 2020, 29, 605-615.	2.2	11
65	Human MMP28 expression is unresponsive to inflammatory stimuli and does not correlate to the grade of intervertebral disc degeneration. <i>Journal of Negative Results in BioMedicine</i> , 2011, 10, 9.	1.4	10
66	Inflammaging in the intervertebral disc. <i>Clinical and Translational Neuroscience</i> , 2018, 2, 2514183X1876114.	0.9	9
67	The Pathobiology of the Meniscus: A Comparison Between the Human and Dog. <i>Frontiers in Veterinary Science</i> , 2018, 5, 73.	2.2	9
68	Clinical and Radiological Outcome of a New Total Cervical Disc Replacement Design. <i>Spine</i> , 2019, 44, E202-E210.	2.0	8
69	Implant Design and the Anchoring Mechanism Influence the Incidence of Heterotopic Ossification in Cervical Total Disc Replacement at 2-year Follow-up. <i>Spine</i> , 2019, 44, 1471-1480.	2.0	8
70	Effects of Early Life Stress on Bone Homeostasis in Mice and Humans. <i>International Journal of Molecular Sciences</i> , 2020, 21, 6634.	4.1	8
71	Hypo-Osmotic Loading Induces Expression of IL-6 in Nucleus Pulposus Cells of the Intervertebral Disc Independent of TRPV4 and TRPM7. <i>Frontiers in Pharmacology</i> , 2020, 11, 952.	3.5	8
72	Engineering Advanced In Vitro Models of Systemic Sclerosis for Drug Discovery and Development. <i>Advanced Biology</i> , 2021, 5, e2000168.	2.5	8

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73	<scp>TRPV4</scp> mediates cell damage induced by hyperphysiological compression and regulates <scp>COX2</scp>/<scp>PGE2</scp> in intervertebral discs. JOR Spine, 2021, 4, e1149.	3.2	8
74	Fibronectin Fragments and Inflammation During Canine Intervertebral Disc Disease. Frontiers in Veterinary Science, 2020, 7, 547644.	2.2	8
75	Extracellular Vesicles: Potential Mediators of Psychosocial Stress Contribution to Osteoporosis?. International Journal of Molecular Sciences, 2021, 22, 5846.	4.1	6
76	Alterations in Bone Homeostasis and Microstructure Related to Depression and Allostatic Load. Psychotherapy and Psychosomatics, 2019, 88, 383-385.	8.8	5
77	Hypotonicity differentially affects inflammatory marker production by nucleus pulposus tissue in simulated disc degeneration versus herniation. Journal of Orthopaedic Research, 2019, 37, 1110-1116.	2.3	4
78	Sexual and urinary function following anterior lumbar surgery in females. Neurourology and Urodynamics, 2019, 38, 632-636.	1.5	4
79	Sulfated Hydrogels in Intervertebral Disc and Cartilage Research. Cells, 2021, 10, 3568.	4.1	3
80	Resveratrol Microencapsulation into Electrospayed Polymeric Carriers for the Treatment of Chronic, Non-Healing Wounds. Pharmaceutics, 2022, 14, 853.	4.5	3
81	Acrylonitrile and Pullulan Based Nanofiber Mats as Easily Accessible Scaffolds for 3D Skin Cell Models Containing Primary Cells. Cells, 2022, 11, 445.	4.1	2
82	Effect of BMI on the clinical outcome following microsurgical decompression in over-the-top technique: bi-centric study with an analysis of 744 patients. European Spine Journal, 2021, 30, 936-945.	2.2	1