Gwendolyn A Sowa

List of Publications by Year in Descending Order

90 papers	1,952 citations	23 h-index	42 g-index
95 ext. papers	2,457 ext. citations	3.2 avg, IF	4.66 L-index

#	Paper	IF	Citations
90	ISSLS Prize in Bioengineering Science 2022: low rate cyclic loading as a therapeutic strategy for intervertebral disc regeneration.. *European Spine Journal*, **2022**, 31, 1088-1098	2.7	1
89	Role of autophagy in intervertebral disc degeneration. *Journal of Cellular Physiology*, **2021**,	7	5
88	Pancreatic Pain-Knowledge Gaps and Research Opportunities in Children and Adults: Summary of a National Institute of Diabetes and Digestive and Kidney Diseases Workshop. *Pancreas*, **2021**, 50, 906-915	2.6	1
87	Association of Protein and Genetic Biomarkers With Response to Lumbar Epidural Steroid Injections in Subjects With Axial Low Back Pain. *American Journal of Physical Medicine and Rehabilitation*, **2021**, 100, 48-56	2.6	0
86	Subjective and Objective Measures in Assessing Neck Disability and Pain in Head and Neck Cancer. *Laryngoscope*, **2021**, 131, 2015-2022	3.6	1
85	Stratified care to prevent chronic low back pain in high-risk patients: The TARGET trial. A multi-site pragmatic cluster randomized trial. *EClinicalMedicine*, **2021**, 34, 100795	11.3	8
84	Lactate oxidative phosphorylation by annulus fibrosus cells: evidence for lactate-dependent metabolic symbiosis in intervertebral discs. *Arthritis Research and Therapy*, **2021**, 23, 145	5.7	1
83	Effect of CHRFAM7A 2bp gene variant on secondary inflammation after spinal cord injury. *PLoS ONE*, **2021**, 16, e0251110	3.7	1
82	ISSLS prize in basic science 2021: a novel inducible system to regulate transgene expression of TIMP1. *European Spine Journal*, **2021**, 30, 1098-1107	2.7	1
81	Risk Factors Associated With Transition From Acute to Chronic Low Back Pain in US Patients Seeking Primary Care. *JAMA Network Open*, **2021**, 4, e2037371	10.4	25
80	Use of healthcare resources in patients with low back pain and comorbid depression or anxiety. *Spine Journal*, **2021**, 21, 1440-1449	4	3
79	Attenuation of ataxia telangiectasia mutated signalling mitigates age-associated intervertebral disc degeneration. *Aging Cell*, **2020**, 19, e13162	9.9	6
78	Rabbit Annulus Fibrosus Cells Express Neuropeptide Y, Which Is Influenced by Mechanical and Inflammatory Stress. *Neurospine*, **2020**, 17, 69-76	3.1	3
77	Influences of circulatory factors on intervertebral disc aging phenotype. *Aging*, **2020**, 12, 12285-12304	5.6	3
76	Actions of Prostaglandins on Human Nucleus Pulposus Metabolism Inferred by Cyclooxygenase 2 Inhibition of Cytokine Activated Cells. *Neurospine*, **2020**, 17, 60-68	3.1	1
75	Use of Adipose-Derived Orthobiologics for Musculoskeletal Injuries: A Narrative Review. *PM and R*, **2020**, 12, 805-816	2.2	8
74	Descriptive Analysis of an Interdisciplinary Musculoskeletal Program. *PM and R*, **2020**, 12, 639-646	2.2	2

73	Biomechanical contribution of the alar ligaments to upper cervical stability. *Journal of Biomechanics*, **2020**, 99, 109508	2.9	3
72	Prioritized Research for the Prevention, Treatment, and Reversal of Chronic Disease: Recommendations From the Lifestyle Medicine Research Summit. *Frontiers in Medicine*, **2020**, 7, 585744	4.9	5
71	A Stimulus-Response Framework to Investigate the Influence of Continuous Versus Interval Walking Exercise on Select Serum Biomarkers in Knee Osteoarthritis. *American Journal of Physical Medicine and Rehabilitation*, **2019**, 98, 287-291	2.6	8
70	Study protocol for targeted interventions to prevent chronic low back pain in high-risk patients: A multi-site pragmatic cluster randomized controlled trial (TARGET Trial). *Contemporary Clinical Trials*, **2019**, 82, 66-76	2.3	6
69	Systemic clearance of p16 -positive senescent cells mitigates age-associated intervertebral disc degeneration. *Aging Cell*, **2019**, 18, e12927	9.9	62
68	Optimization of compressive loading parameters to mimic in vivo cervical spine kinematics in vitro. *Journal of Biomechanics*, **2019**, 87, 107-113	2.9	4
67	Serum and nutrient deprivation increase autophagic flux in intervertebral disc annulus fibrosus cells: an in vitro experimental study. *European Spine Journal*, **2019**, 28, 993-1004	2.7	13
66	Association of a Functional Polymorphism in the Gene with Inflammatory Response Mediators and Neuropathic Pain after Spinal Cord Injury. *Journal of Neurotrauma*, **2019**, 36, 3026-3033	5.4	8
65	Effectiveness of Later-Stage Exercise Programs vs Usual Medical Care on Physical Function and Activity After Total Knee Replacement: A Randomized Clinical Trial. *JAMA Network Open*, **2019**, 2, e190018	10.4	9
64	The Role of Type I Diabetes in Intervertebral Disc Degeneration. *Spine*, **2019**, 44, 1177-1185	3.3	12
63	Stabilization exercises combined with neuromuscular electrical stimulation for patients with chronic low back pain: a randomized controlled trial. *Brazilian Journal of Physical Therapy*, **2019**, 23, 506-515	3.7	6
62	Dynamic knee joint stiffness and contralateral knee joint loading during prolonged walking in patients with unilateral knee osteoarthritis. *Gait and Posture*, **2019**, 68, 44-49	2.6	10
61	Effects of the Insulin-like Growth Factor Axis and its Relationship in Nonsurgical Treatments in Patients with Lumbar Spinal Stenosis. *FASEB Journal*, **2018**, 32, 588.24	0.9	
60	Cellular senescence in intervertebral disc aging and degeneration. *Current Molecular Biology Reports*, **2018**, 4, 180-190	2	30
59	Effect of Comprehensive Behavioral and Exercise Intervention on Physical Function and Activity Participation After Total Knee Replacement: A Pilot Randomized Study. *Arthritis Care and Research*, **2017**, 69, 1855-1862	4.7	17
58	Inflammatory Mediators Associated With Pressure Ulcer Development in Individuals With Pneumonia After Traumatic Spinal Cord Injury: A Pilot Study. *Archives of Physical Medicine and Rehabilitation*, **2017**, 98, 1792-1799	2.8	8
57	NSAID use in intervertebral disc degeneration: what are the effects on matrix homeostasis in vivo?. *Spine Journal*, **2017**, 17, 1163-1170	4	6
56	Scoping review to develop common data elements for lumbar spinal stenosis. *Spine Journal*, **2017**, 17, 1045-1057	4	2

55	Biomechanical Evaluation of Transpedicular Nucleotomy With Intact Annulus Fibrosus. *Spine*, **2017**, 42, E193-E201	3.3	18
54	The influence of continuous versus interval walking exercise on knee joint loading and pain in patients with knee osteoarthritis. *Gait and Posture*, **2017**, 56, 129-133	2.6	16
53	Senescent intervertebral disc cells exhibit perturbed matrix homeostasis phenotype. *Mechanisms of Ageing and Development*, **2017**, 166, 16-23	5.6	19
52	Poster 113: Association of Clinical Characteristics and Response to Lumbar Epidural Steroid Injections in Subjects with Axial Low Back Pain. *PM and R*, **2017**, 9, S171	2.2	
51	ADAMTS5 Deficiency Protects Mice From Chronic Tobacco Smoking-induced Intervertebral Disc Degeneration. *Spine*, **2017**, 42, 1521-1528	3.3	12
50	Biologic Treatments in Intervertebral Disc Degeneration: Protein-Based and Cell-Based Therapies. *Operative Techniques in Orthopaedics*, **2016**, 26, 189-197	0.3	1
49	Influence of varying compressive loading methods on physiologic motion patterns in the cervical spine. *Journal of Biomechanics*, **2016**, 49, 167-72	2.9	21
48	NF-B Signaling Pathway in Controlling Intervertebral Disk Cell Response to Inflammatory and Mechanical Stressors. *Physical Therapy*, **2016**, 96, 704-11	3.3	18
47	Early Detection of Pressure Ulcer Development Following Traumatic Spinal Cord Injury Using Inflammatory Mediators. *Archives of Physical Medicine and Rehabilitation*, **2016**, 97, 1656-62	2.8	14
46	Catabolic effects of endothelial cell-derived microparticles on disc cells: Implications in intervertebral disc neovascularization and degeneration. *Journal of Orthopaedic Research*, **2016**, 34, 1466-74	3.8	9
45	Molecular mechanisms of biological aging in intervertebral discs. *Journal of Orthopaedic Research*, **2016**, 34, 1289-306	3.8	195
44	Predictive validity of the Spinal Cord Injury Pressure Ulcer Scale (SCIPUS) in acute care and inpatient rehabilitation in individuals with traumatic spinal cord injury. *NeuroRehabilitation*, **2016**, 38, 401-9	2	11
43	Mechanical role of the posterior column components in the cervical spine. *European Spine Journal*, **2016**, 25, 2129-38	2.7	11
42	Molecular basis of intervertebral disc degeneration and herniations: what are the important translational questions?. *Clinical Orthopaedics and Related Research*, **2015**, 473, 1903-12	2.2	136
41	Needle puncture in rabbit functional spinal units alters rotational biomechanics. *Journal of Spinal Disorders and Techniques*, **2015**, 28, E146-53		7
40	The effects of glucosamine sulfate on intervertebral disc annulus fibrosus cells in vitro. *Spine Journal*, **2015**, 15, 1339-46	4	7
39	The Influence of Continuous Versus Interval Walking Exercise on Joint Loading and Serum Biomarker Profile in Patients with Knee Osteoarthritis. *PM and R*, **2015**, 7, S89-S90	2.2	1
38	Biological responses to flexion/extension in spinal segments ex-vivo. *Journal of Orthopaedic Research*, **2015**, 33, 1255-64	3.8	11

37	A Computational, Tissue-Realistic Model of Pressure Ulcer Formation in Individuals with Spinal Cord Injury. *PLoS Computational Biology*, **2015**, 11, e1004309	5	22
36	Intradiskal steroids: a viable treatment for low back pain?. *PM and R*, **2014**, 6, 547-55	2.2	2
35	Identification of distinct monocyte phenotypes and correlation with circulating cytokine profiles in acute response to spinal cord injury: a pilot study. *PM and R*, **2014**, 6, 332-41	2.2	15
34	Skeletal muscle as a regulator of the longevity protein, Klotho. *Frontiers in Physiology*, **2014**, 5, 189	4.6	36
33	Associations between serum biomarkers and pain and pain-related function in older adults with low back pain: a pilot study. *Journal of the American Geriatrics Society*, **2014**, 62, 2047-55	5.6	26
32	Rehabilomics research: a model for translational rehabilitation and comparative effectiveness rehabilitation research. *American Journal of Physical Medicine and Rehabilitation*, **2014**, 93, 913-6	2.6	9
31	Investigating the role of DNA damage in tobacco smoking-induced spine degeneration. *Spine Journal*, **2014**, 14, 416-23	4	34
30	Biologics for Disk Regeneration **2014**, 1-25		
29	Mechanotransduction as a Tool to Influence Musculoskeletal Tissue Biology **2014**, 1-20		
28	Abnormal Vitamin B6 and Response to Supplementation with Pyridoxal 5-Phosphate (P5P) in Patients with Neuropathic Pain: A Case Series. *PM and R*, **2013**, 5, S216-S216	2.2	2
27	Expression and regulation of metalloproteinases and their inhibitors in intervertebral disc aging and degeneration. *Spine Journal*, **2013**, 13, 331-41	4	226
26	The Identification of Biomarkers That Are Predictive of Response to Interventional Spinal Procedures for Axial Low Back Pain: A Pilot Study. *PM and R*, **2013**, 5, S296-S297	2.2	
25	Using biology to define optimal treatments for low back pain: opportunities for physiatrists. *American Journal of Physical Medicine and Rehabilitation*, **2013**, 92, 841-8	2.6	1
24	Glucosamine supplementation demonstrates a negative effect on intervertebral disc matrix in an animal model of disc degeneration. *Spine*, **2013**, 38, 984-90	3.3	10
23	Mitochondrial-derived reactive oxygen species (ROS) play a causal role in aging-related intervertebral disc degeneration. *Journal of Orthopaedic Research*, **2013**, 31, 1150-7	3.8	115
22	Injection of AAV2-BMP2 and AAV2-TIMP1 into the nucleus pulposus slows the course of intervertebral disc degeneration in an in vivo rabbit model. *Spine Journal*, **2012**, 12, 7-20	4	92
21	Novel ex-vivo mechanobiological intervertebral disc culture system. *Journal of Biomechanics*, **2012**, 45, 382-5	2.9	18
20	Commentary: Do no harm: the potential negative effects of injectates used in spinal intervention. *Spine Journal*, **2012**, 12, 674-5	4	2

19	Fear avoidance beliefs predict disability in older adults with chronic low back pain. *PM and R*, **2012**, 4, 493-7	2.2	30
18	Cells from degenerative intervertebral discs demonstrate unfavorable responses to mechanical and inflammatory stimuli: a pilot study. *American Journal of Physical Medicine and Rehabilitation*, **2012**, 91, 846-55	2.6	15
17	ISSLS prize winner: inhibition of NF-B activity ameliorates age-associated disc degeneration in a mouse model of accelerated aging. *Spine*, **2012**, 37, 1819-25	3.3	55
16	Biomarker development for musculoskeletal diseases. *PM and R*, **2011**, 3, S39-44	2.2	4
15	Biological basis of exercise-based treatments for musculoskeletal conditions. *PM and R*, **2011**, 3, S59-63	2.2	6
14	Why a supplement on biologics in PM&R?. *PM and R*, **2011**, 3, S1-2	2.2	
13	Alterations in gene expression in response to compression of nucleus pulposus cells. *Spine Journal*, **2011**, 11, 36-43	4	29
12	Bupivacaine decreases cell viability and matrix protein synthesis in an intervertebral disc organ model system. *Spine Journal*, **2011**, 11, 139-46	4	38
11	In vitro and in vivo testing of a novel regulatory system for gene therapy for intervertebral disc degeneration. *Spine*, **2011**, 36, E623-8	3.3	25
10	Determination of annulus fibrosus cell response to tensile strain as a function of duration, magnitude, and frequency. *Journal of Orthopaedic Research*, **2011**, 29, 1275-83	3.8	34
9	Effect of bupivacaine on intervertebral disc cell viability. *Spine Journal*, **2010**, 10, 159-66	4	38
8	Emerging technologies for degenerative disk disease: potential synergy between biochemical signaling and spinal biomechanics. *PM and R*, **2009**, 1, 466-70	2.2	2
7	Identification of candidate serum biomarkers for intervertebral disk degeneration in an animal model. *PM and R*, **2009**, 1, 536-40	2.2	6
6	Cyclic tensile stress exerts a protective effect on intervertebral disc cells. *American Journal of Physical Medicine and Rehabilitation*, **2008**, 87, 537-44	2.6	37
5	Characterization of intervertebral disc aging: longitudinal analysis of a rabbit model by magnetic resonance imaging, histology, and gene expression. *Spine*, **2008**, 33, 1821-8	3.3	74
4	Activated macrophage-like THP-1 cells modulate anulus fibrosus cell production of inflammatory mediators in response to cytokines. *Spine*, **2008**, 33, 2253-9	3.3	45
3	p38 MAPK inhibition modulates rabbit nucleus pulposus cell response to IL-1. *Journal of Orthopaedic Research*, **2008**, 26, 991-8	3.8	72
2	Gene therapy for the treatment of degenerative disk disease. *Journal of the American Academy of Orthopaedic Surgeons, The*, **2008**, 16, 312-9	4.5	25

1	Regulation of transgene expression using an inducible system for improved safety of intervertebral disc gene therapy. *Spine*, **2007**, 32, 1381-7	3.3	21