

# Nan-Shan Chang

## List of Publications by Year in descending order

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109  
papers

2,774  
citations

159525

30  
h-index

189801

50  
g-index

111  
all docs

111  
docs citations

111  
times ranked

2275  
citing authors

#	ARTICLE	IF	CITATIONS
1	Hyaluronidase Induction of a WW Domain-containing Oxidoreductase That Enhances Tumor Necrosis Factor Cytotoxicity. <i>Journal of Biological Chemistry</i> , 2001, 276, 3361-3370.	1.6	212
2	WW domain-containing oxidoreductase: a candidate tumor suppressor. <i>Trends in Molecular Medicine</i> , 2007, 13, 12-22.	3.5	129
3	WOX1 Is Essential for Tumor Necrosis Factor-, UV Light-, Staurosporine-, and p53-mediated Cell Death, and Its Tyrosine 33-phosphorylated Form Binds and Stabilizes Serine 46-phosphorylated p53. <i>Journal of Biological Chemistry</i> , 2005, 280, 43100-43108.	1.6	122
4	Complement C1q Activates Tumor Suppressor WWOX to Induce Apoptosis in Prostate Cancer Cells. <i>PLoS ONE</i> , 2009, 4, e5755.	1.1	120
5	JNK1 Physically Interacts with WW Domain-containing Oxidoreductase (WOX1) and Inhibits WOX1-mediated Apoptosis. <i>Journal of Biological Chemistry</i> , 2003, 278, 9195-9202.	1.6	119
6	Down-regulation of WW Domain-containing Oxidoreductase Induces Tau Phosphorylation in Vitro. <i>Journal of Biological Chemistry</i> , 2004, 279, 30498-30506.	1.6	119
7	WW Domain-Containing Proteins YAP and TAZ in the Hippo Pathway as Key Regulators in Stemness Maintenance, Tissue Homeostasis, and Tumorigenesis. <i>Frontiers in Oncology</i> , 2019, 9, 60.	1.3	116
8	Spatiotemporal focusing-based widefield multiphoton microscopy for fast optical sectioning. <i>Optics Express</i> , 2012, 20, 8939.	1.7	97
9	17 $\beta$ -Estradiol upregulates and activates WOX1/WWOXv1 and WOX2/WWOXv2 in vitro: potential role in cancerous progression of breast and prostate to a premetastatic state in vivo. <i>Oncogene</i> , 2005, 24, 714-723.	2.6	93
10	Molecular mechanisms underlying WOX1 activation during apoptotic and stress responses. <i>Biochemical Pharmacology</i> , 2003, 66, 1347-1354.	2.0	80
11	Transforming Growth Factor $\beta$ 21 Signaling via Interaction with Cell Surface Hyal-2 and Recruitment of WWOX/WOX1. <i>Journal of Biological Chemistry</i> , 2009, 284, 16049-16059.	1.6	77
12	WOX1 Is Essential for UVB Irradiation-Induced Apoptosis and Down-Regulated via Translational Blockade in UVB-Induced Cutaneous Squamous Cell Carcinoma In vivo. <i>Clinical Cancer Research</i> , 2005, 11, 5769-5777.	3.2	74
13	Dramatic Co-Activation of WWOX/WOX1 with CREB and NF- $\kappa$ B in Delayed Loss of Small Dorsal Root Ganglion Neurons upon Sciatic Nerve Transection in Rats. <i>PLoS ONE</i> , 2009, 4, e7820.	1.1	52
14	Signaling from membrane receptors to tumor suppressor WW domain-containing oxidoreductase. <i>Experimental Biology and Medicine</i> , 2010, 235, 796-804.	1.1	52
15	WWOX Phosphorylation, Signaling, and Role in Neurodegeneration. <i>Frontiers in Neuroscience</i> , 2018, 12, 563.	1.4	52
16	Trafficking protein particle complex 6A delta (TRAPPC6A $\delta$ ) is an extracellular plaque-forming protein in the brain. <i>Oncotarget</i> , 2015, 6, 3578-3589.	0.8	52
17	The Non-ankyrin C Terminus of $\beta$ 1 Physically Interacts with p53 in Vivo and Dissociates in Response to Apoptotic Stress, Hypoxia, DNA Damage, and Transforming Growth Factor- $\beta$ 1-mediated Growth Suppression. <i>Journal of Biological Chemistry</i> , 2002, 277, 10323-10331.	1.6	49
18	Identification of an In Vivo MEK/WOX1 Complex as a Master Switch for Apoptosis in T Cell Leukemia. <i>Genes and Cancer</i> , 2011, 2, 550-562.	0.6	46

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19	Folate deficiency-induced oxidative stress contributes to neuropathy in young and aged zebrafish " Implication in neural tube defects and Alzheimer's diseases. <i>Neurobiology of Disease</i> , 2014, 71, 234-244.	2.1	45
20	Wwox deficiency leads to neurodevelopmental and degenerative neuropathies and glycogen synthase kinase 3 $\beta$ -mediated epileptic seizure activity in mice. <i>Acta Neuropathologica Communications</i> , 2020, 8, 6.	2.4	45
21	Zfra affects TNF-mediated cell death by interacting with death domain protein TRADD and negatively regulates the activation of NF- $\kappa$ B, JNK1, p53 and WOX1 during stress response. <i>BMC Molecular Biology</i> , 2007, 8, 50.	3.0	43
22	MPP+-induced neuronal death in rats involves tyrosine 33 phosphorylation of WW domain-containing oxidoreductase WOX1. <i>European Journal of Neuroscience</i> , 2008, 27, 1634-1646.	1.2	43
23	Zfra restores memory deficits in Alzheimer's disease triple-transgenic mice by blocking aggregation of TRAPP6A $\beta$ , SH3GLB2, tau, and amyloid $\beta$ , and inflammatory NF- $\kappa$ B activation. <i>Alzheimer's and Dementia: Translational Research and Clinical Interventions</i> , 2017, 3, 189-204.	1.8	43
24	Prc Contributes to Escherichia coli Evasion of Classical Complement-Mediated Serum Killing. <i>Infection and Immunity</i> , 2012, 80, 3399-3409.	1.0	42
25	A potential role of p53 and WOX1 in mitochondrial apoptosis (review). <i>International Journal of Molecular Medicine</i> , 2002, 9, 19-24.	1.8	39
26	WFOX suppresses prostate cancer cell progression through cyclin D1-mediated cell cycle arrest in the G1 phase. <i>Cell Cycle</i> , 2015, 14, 408-416.	1.3	38
27	Transforming growth factor-beta1 blocks the enhancement of tumor necrosis factor cytotoxicity by hyaluronidase Hyal-2 in L929 fibroblasts. , 2002, 3, 8.		35
28	UV irradiation/cold shock-mediated apoptosis is switched to bubbling cell death at low temperatures. <i>Oncotarget</i> , 2015, 6, 8007-8018.	0.8	35
29	Phosphorylation/de-phosphorylation in specific sites of tumor suppressor WFOX and control of distinct biological events. <i>Experimental Biology and Medicine</i> , 2018, 243, 137-147.	1.1	33
30	HYAL-2 "WFOX" SMAD4 Signaling in Cell Death and Anticancer Response. <i>Frontiers in Cell and Developmental Biology</i> , 2016, 4, 141.	1.8	32
31	A p53/TIAF1/WFOX triad exerts cancer suppression but may cause brain protein aggregation due to p53/WFOX functional antagonism. <i>Cell Communication and Signaling</i> , 2019, 17, 76.	2.7	31
32	Hyaluronidase enhancement of TNF-mediated cell death is reversed by TGF- $\beta$ 1. <i>American Journal of Physiology - Cell Physiology</i> , 1997, 273, C1987-C1994.	2.1	30
33	Cloning and Characterization of a Novel Transforming Growth Factor- $\beta$ 1-Induced TIAF1 Protein That Inhibits Tumor Necrosis Factor Cytotoxicity. <i>Biochemical and Biophysical Research Communications</i> , 1998, 253, 743-749.	1.0	30
34	Fabrication of three-dimensional multi-protein microstructures for cell migration and adhesion enhancement. <i>Biomedical Optics Express</i> , 2015, 6, 480.	1.5	30
35	Hyaluronan activates Hyal-2/WFOX/Smad4 signaling and causes bubbling cell death when the signaling complex is overexpressed. <i>Oncotarget</i> , 2017, 8, 19137-19155.	0.8	28
36	Investigation of two-photon excited fluorescence increment via crosslinked bovine serum albumin. <i>Optics Express</i> , 2012, 20, 13669.	1.7	27

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37	Role of WWOX and NF- $\kappa$ B in lung cancer progression. <i>Translational Respiratory Medicine</i> , 2013, 1, 15.	3.8	26
38	Tumor Suppressor WWOX and p53 Alterations and Drug Resistance in Glioblastomas. <i>Frontiers in Oncology</i> , 2013, 3, 43.	1.3	25
39	Strategies by which WWOX-deficient metastatic cancer cells utilize to survive via dodging, compromising, and causing damage to WWOX-positive normal microenvironment. <i>Cell Death Discovery</i> , 2019, 5, 97.	2.0	25
40	Role of WW Domain-containing Oxidoreductase WWOX in Driving T Cell Acute Lymphoblastic Leukemia Maturation. <i>Journal of Biological Chemistry</i> , 2016, 291, 17319-17331.	1.6	24
41	Zfra is an inhibitor of Bcl-2 expression and cytochrome c release from the mitochondria. <i>Cellular Signalling</i> , 2008, 20, 1303-1312.	1.7	21
42	Overexpression of WW domain-containing oxidoreductase WOX1 preferentially induces apoptosis in human glioblastoma cells harboring mutant p53. <i>Biomedicine and Pharmacotherapy</i> , 2012, 66, 433-438.	2.5	21
43	Bubbling cell death: A hot air balloon released from the nucleus in the cold. <i>Experimental Biology and Medicine</i> , 2016, 241, 1306-1315.	1.1	21
44	Zfra activates memory Hyal-2+ CD3 $\alpha^+$ CD19 $\alpha^+$ spleen cells to block cancer growth, stemness, and metastasis in vivo. <i>Oncotarget</i> , 2015, 6, 3737-3751.	0.8	20
45	TIAF1 and p53 Functionally Interact in Mediating Apoptosis and Silencing of TIAF1 Abolishes Nuclear Translocation of Serine 15-Phosphorylated p53. <i>DNA and Cell Biology</i> , 2004, 23, 67-74.	0.9	18
46	Functional role of WW domain-containing proteins in tumor biology and diseases: Insight into the role in ubiquitin-proteasome system. <i>FASEB BioAdvances</i> , 2020, 2, 234-253.	1.3	18
47	Self-aggregating TIAF1 in lung cancer progression. <i>Translational Respiratory Medicine</i> , 2013, 1, 5.	3.8	16
48	Natural zeolite for adsorbing and release of functional materials. <i>Journal of Biomedical Optics</i> , 2018, 23, 1.	1.4	16
49	Cloning and characterization of a small-size peptide Zfra that regulates the cytotoxic function of tumor necrosis factor by interacting with JNK1. <i>Biochemical and Biophysical Research Communications</i> , 2005, 327, 415-423.	1.0	15
50	Introduction to a Thematic Issue for WWOX. <i>Experimental Biology and Medicine</i> , 2015, 240, 281-284.	1.1	15
51	TIAF1 Participates in the Transforming Growth Factor $\beta$ 1-Mediated Growth Regulation. <i>Annals of the New York Academy of Sciences</i> , 2003, 995, 11-21.	1.8	14
52	WW domain-containing oxidoreductase is involved in upregulation of matrix metalloproteinase 9 by Epstein-Barr virus latent membrane protein 2A. <i>Biochemical and Biophysical Research Communications</i> , 2013, 436, 672-676.	1.0	13
53	Chasing the signaling run by tri-molecular time-lapse FRET microscopy. <i>Cell Death Discovery</i> , 2018, 4, 45.	2.0	13
54	Visualization of Subunit Interactions and Ternary Complexes of Protein Phosphatase 2A in Mammalian Cells. <i>PLoS ONE</i> , 2014, 9, e116074.	1.1	13

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55	Zfra is a small wizard in the mitochondrial apoptosis. <i>Aging</i> , 2010, 2, 1023-1029.	1.4	13
56	High-throughput fabrication of gray-level biomicrostructures via temporal focusing excitation and laser pulse control. <i>Journal of Biomedical Optics</i> , 2013, 18, 1.	1.4	12
57	Assessing Current Therapeutic Approaches to Decode Potential Resistance Mechanisms in Glioblastomas. <i>Frontiers in Oncology</i> , 2013, 3, 59.	1.3	11
58	WWOX Possesses N-Terminal Cell Surface-Exposed Epitopes WWOX7-21 and WWOX7-11 for Signaling Cancer Growth Suppression and Prevention In Vivo. <i>Cancers</i> , 2019, 11, 1818.	1.7	10
59	WWOX and Its Binding Proteins in Neurodegeneration. <i>Cells</i> , 2021, 10, 1781.	1.8	10
60	Strategies of oncogenic microbes to deal with WW domain-containing oxidoreductase. <i>Experimental Biology and Medicine</i> , 2015, 240, 329-337.	1.1	9
61	Therapeutic Zfra4-10 or WWOX7-21 Peptide Induces Complex Formation of WWOX with Selective Protein Targets in Organs that Leads to Cancer Suppression and Spleen Cytotoxic Memory Z Cell Activation In Vivo. <i>Cancers</i> , 2020, 12, 2189.	1.7	9
62	Expression of WW domain-containing oxidoreductase WOX1 in human nervous system tumors. <i>Analytical Cellular Pathology</i> , 2013, 36, 133-47.	0.7	9
63	Expression of WW Domain-Containing Oxidoreductase WOX1 in Human Nervous System Tumors. <i>Analytical Cellular Pathology</i> , 2013, 36, 133-147.	0.7	7
64	Editorial: WW Domain Proteins in Signaling, Cancer Growth, Neural Diseases, and Metabolic Disorders. <i>Frontiers in Oncology</i> , 2019, 9, 719.	1.3	7
65	Zfra induction of memory anticancer response via a novel immune cell. <i>Oncolmmunology</i> , 2016, 5, e1213935.	2.1	6
66	Wwox Deficiency Causes Downregulation of Prosurvival ERK Signaling and Abnormal Homeostatic Responses in Mouse Skin. <i>Frontiers in Cell and Developmental Biology</i> , 2020, 8, 558432.	1.8	6
67	Normal cells repel WWOX-negative or -dysfunctional cancer cells via WWOX cell surface epitope 286-299. <i>Communications Biology</i> , 2021, 4, 753.	2.0	6
68	Fast and improved bioimaging via temporal focusing multiphoton excitation microscopy with binary digital-micromirror-device holography. <i>Journal of Biomedical Optics</i> , 2018, 23, 1.	1.4	5
69	Expression of WW domain-containing oxidoreductase WWOX in pterygium. <i>Molecular Vision</i> , 2015, 21, 711-7.	1.1	5
70	WWOX is a Risk Factor for Alzheimer's Disease: How and Why?. <i>Proceedings of the Singapore National Academy of Science</i> , 2020, 14, 31-45.	0.1	3
71	WWOX Controls Cell Survival, Immune Response and Disease Progression by pY33 to pS14 Transition to Alternate Signaling Partners. <i>Cells</i> , 2022, 11, 2137.	1.8	1
72	Zfra and its activated Z cell suppress traumatic brain injury to Alzheimer's disease transition. <i>FASEB Journal</i> , 2021, 35, .	0.2	0

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73	Zfra suppresses seizure and progression of Alzheimer's disease via activated Z lymphocytes. FASEB Journal, 2021, 35, .	0.2	0
74	Cell surface epitope WWOX286-299 in normal cells is responsible for repelling invading WWOX-negative or -dysfunctional cancer cells. FASEB Journal, 2021, 35, .	0.2	0
75	Zfra invokes a novel mitochondrial pathway of cell death bypassing cytochrome c release. FASEB Journal, 2007, 21, A1345.	0.2	0
76	TIAF1 self-aggregation is essential for A $\beta$ plaque formation in the human hippocampus. FASEB Journal, 2010, 24, 1053.1.	0.2	0
77	C1q/WOX1 signaling for superinduction of microvillus cluster formation. FASEB Journal, 2010, 24, 711.2.	0.2	0
78	TIAF1 is an essential partner for tumor suppressors p53 and WWOX-mediated apoptosis. FASEB Journal, 2011, 25, 943.4.	0.2	0
79	TIAF1 self-aggregation causes spontaneous activation of SMAD-responsive promoter in p53-deficient environment and cell death. FASEB Journal, 2012, 26, 797.3.	0.2	0
80	Self-aggregating mutant TRAPPC6A from partial exon 1 gene deletion activates caspases, binds TIAF1, and generates amyloid beta in hippocampus. FASEB Journal, 2012, 26, 752.2.	0.2	0
81	A Copper Complex, ghn-12, as a sensitization of DNA to UVA offers potential for a novel photochemotherapy. FASEB Journal, 2012, 26, 999.5.	0.2	0
82	WWOX/WOX1 is essential in UV irradiation/frostbite-induced membrane bubbling. FASEB Journal, 2012, 26, 798.8.	0.2	0
83	Utilizing Two-Photon Imaging and Tracking Algorithm to Study TGF $\beta$ 1-Regulated SH3GLB2 Protein Assembly. FASEB Journal, 2012, 26, .	0.2	0
84	Evidence for a role of p53, WWOX and TIAF1 as tumor suppression axis. FASEB Journal, 2012, 26, 782.3.	0.2	0
85	Physically modified hyaluronan in cancer prevention. FASEB Journal, 2013, 27, 592.5.	0.2	0
86	Tumor suppressor WWOX participates in cell/cell recognition and migration. FASEB Journal, 2013, 27, 765.1.	0.2	0
87	Immunization against hyaluronidase Hyal-2 provides long-term cancer prevention. FASEB Journal, 2013, 27, 592.4.	0.2	0
88	Role of WWOX and NF $\kappa$ B in lung cancer progression (1049.2). FASEB Journal, 2014, 28, 1049.2.	0.2	0
89	UV irradiation/cold shock-induced NOS2 expression for causing nuclear bubbling is WWOX and p53 dependent (1010.11). FASEB Journal, 2014, 28, 1010.11.	0.2	0
90	WWOX Regulation of Cancer Stem Cell Sphere Formation. FASEB Journal, 2015, 29, 629.1.	0.2	0

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91	Hyaluron antibody mediates cancer suppression via Hyaluron/WWOX/Smad4 signaling. FASEB Journal, 2015, 29, 897.29.	0.2	0
92	Role of WWOX and ERK in Controlling Cancer Cell Migration. FASEB Journal, 2015, 29, 577.3.	0.2	0
93	Abstract A25: WWOX phosphorylation at Ser14 enhances melanoma docking and growth in the lung and liver in mice. , 2015, , .		0
94	WWOX coordinates with type II TGF-beta receptor in regulating cell-to-cell recognition and immune cell differentiation. FASEB Journal, 2016, 30, 1108.9.	0.2	0
95	Hyaluronan signals release and nuclear accumulation of WWOX and Smad from membrane Hyaluron. FASEB Journal, 2016, 30, .	0.2	0
96	Induction of cancer stem cell sphere explosion by UV irradiation/cold shock or therapeutic chemicals: detection of autofluorescence using visible wavelength. FASEB Journal, 2018, 32, 664.4.	0.2	0
97	Converting the tumor suppressor function of WWOX to tumor promoting by Serine 14 phosphorylation. FASEB Journal, 2018, 32, 668.11.	0.2	0
98	TRAPPC6A, TIAF1 and SH3GLB2 are initiators for amyloid beta plaque formation and tau aggregation in vivo. FASEB Journal, 2018, 32, 674.9.	0.2	0
99	Extracellular MIF and Wnt and eph/ephrin signaling are involved in WWOX-regulated cell-cell recognition and migration. FASEB Journal, 2019, 33, 790.2.	0.2	0
100	WWOX drives UV/cold shock-induced bubbling cell death whereas without WWOX cells pop out. FASEB Journal, 2019, 33, 646.4.	0.2	0
101	Role of WWOX and Zfra in limiting neurodegeneration. FASEB Journal, 2019, 33, lb253.	0.2	0
102	A potential role of Zfra in mitigating traumatic brain injury transition to Alzheimer's disease-like symptom in mice. FASEB Journal, 2020, 34, 1-1.	0.2	0
103	Functional antagonism between p53 and WWOX in vivo leads to protein aggregation in the brain. FASEB Journal, 2020, 34, 1-1.	0.2	0
104	Role of Zfra in mitigating epileptic seizure due to WWOX downregulation. FASEB Journal, 2020, 34, 1-1.	0.2	0
105	WWOX possesses N-terminal cell surface-exposed epitopes WWOX721 and WWOX711 for signaling cancer growth suppression and prevention in vivo. FASEB Journal, 2020, 34, 1-1.	0.2	0
106	Conformationally altered hyaluronan mitigates the symptoms of Parkinson disease in mice. FASEB Journal, 2022, 36, .	0.2	0
107	The strength of WWOX binding with protein partners correlates with cancer suppression and potentially with inhibition of Alzheimer's disease progression. FASEB Journal, 2022, 36, .	0.2	0
108	Sonicated hyaluronan is a potent inhibitor of Alzheimer's disease progression. FASEB Journal, 2022, 36, .	0.2	0

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109	WVOX regulates UV/cold shock-mediated calcium influx and nuclear bubbling in frostbite. FASEB Journal, 2022, 36, .	0.2	0