JosÃ© Luis MillÃ¡n

List of Publications by Year
in descending order

101 papers	8,510 citations	57752 44 h-index	45310 90 g-index
124 all docs	124 docs citations	124 times ranked	7167 citing authors

#	Article	IF	Citations
1	TNAP as a therapeutic target for cardiovascular calcification: a discussion of its pleiotropic functions in the body. Cardiovascular Research, 2022, 118, 84-96.	3.8	33
2	Threeâ€dimensional cellâ€laden collagen scaffolds: From biochemistry to bone bioengineering. Journal of Biomedical Materials Research - Part B Applied Biomaterials, 2022, 110, 967-983.	3.4	6
3	The functional role of soluble proteins acquired by extracellular vesicles. , 2022, 1, .		5
4	Chronic Kidney Disease-Induced Arterial Media Calcification in Rats Prevented by Tissue Non-Specific Alkaline Phosphatase Substrate Supplementation Rather Than Inhibition of the Enzyme. Pharmaceutics, 2021, 13, 1138.	4.5	7
5	Treatment with bone maturation and average lifespan of HPP model mice by AAV8-mediated neonatal gene therapy via single muscle injection. Molecular Therapy - Methods and Clinical Development, 2021, 22, 330-337.	4.1	2
6	Prenatal enzyme replacement therapy for Akp2â^'/â^' mice with lethal hypophosphatasia. Regenerative Therapy, 2021, 18, 168-175.	3.0	1
7	Inhibition of tissueâ€nonspecific alkaline phosphatase protects against medial arterial calcification and improves survival probability in the CKDâ€MBD mouse model. Journal of Pathology, 2020, 250, 30-41.	4.5	45
8	Loss of tissue-nonspecific alkaline phosphatase (TNAP) enzyme activity in cerebral microvessels is coupled to persistent neuroinflammation and behavioral deficits in late sepsis. Brain, Behavior, and Immunity, 2020, 84, 115-131.	4.1	13
9	Phosphatidylserine controls calcium phosphate nucleation and growth on lipid monolayers: A physicochemical understanding of matrix vesicle-driven biomineralization. Journal of Structural Biology, 2020, 212, 107607.	2.8	20
10	PHOSPHO1 is a skeletal regulator of insulin resistance and obesity. BMC Biology, 2020, 18, 149.	3.8	13
11	Phosphate Groups in the Lipid A Moiety Determine the Effects of LPS on Hepatic Stellate Cells: A Role for LPS-Dephosphorylating Activity in Liver Fibrosis. Cells, 2020, 9, 2708.	4.1	8
12	Visualization of Mineralâ€Targeted Alkaline Phosphatase Binding to Sites of Calcification In Vivo. Journal of Bone and Mineral Research, 2020, 35, 1765-1771.	2.8	6
13	Localization of Annexin A6 in Matrix Vesicles During Physiological Mineralization. International Journal of Molecular Sciences, 2020, 21, 1367.	4.1	20
14	Pharmacological TNAP inhibition efficiently inhibits arterial media calcification in a warfarin rat model but deserves careful consideration of potential physiological bone formation/mineralization impairment. Bone, 2020, 137, 115392.	2.9	21
15	Matrix vesicle biomimetics harboring Annexin A5 and alkaline phosphatase bind to the native collagen matrix produced by mineralizing vascular smooth muscle cells. Biochimica Et Biophysica Acta - General Subjects, 2020, 1864, 129629.	2.4	22
16	Gene Therapy Using Adeno-Associated Virus Serotype 8 Encoding TNAP-D10 Improves the Skeletal and Dentoalveolar Phenotypes in Alplâ^'/â^' Mice. Journal of Bone and Mineral Research, 2020, 36, 1835-1849.	2.8	14
17	Inhibition of vascular smooth muscle cell calcification by ATP analogues. Purinergic Signalling, 2019, 15, 315-326.	2.2	8
18	Is alkaline phosphatase biomimeticaly immobilized on titanium able to propagate the biomineralization process?. Archives of Biochemistry and Biophysics, 2019, 663, 192-198.	3.0	8

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19	How To Build a Bone: PHOSPHO1, Biomineralization, and Beyond. JBMR Plus, 2019, 3, e10202.	2.7	44
20	Systemic inhibition of tissue-nonspecific alkaline phosphatase alters the brain-immune axis in experimental sepsis. Scientific Reports, 2019, 9, 18788.	3.3	20
21	Lipid microenvironment affects the ability of proteoliposomes harboring TNAP to induce mineralization without nucleators. Journal of Bone and Mineral Metabolism, 2019, 37, 607-613.	2.7	17
22	Enhanced phosphocholine metabolism is essential for terminal erythropoiesis. Blood, 2018, 131, 2955-2966.	1.4	42
23	Matrix vesicles from chondrocytes and osteoblasts: Their biogenesis, properties, functions and biomimetic models. Biochimica Et Biophysica Acta - General Subjects, 2018, 1862, 532-546.	2.4	131
24	Discovery of 5-((5-chloro-2-methoxyphenyl)sulfonamido)nicotinamide (SBI-425), a potent and orally bioavailable tissue-nonspecific alkaline phosphatase (TNAP) inhibitor. Bioorganic and Medicinal Chemistry Letters, 2018, 28, 31-34.	2.2	32
25	A Role of Intestinal Alkaline Phosphatase 3 (Akp3) in Inorganic Phosphate Homeostasis. Kidney and Blood Pressure Research, 2018, 43, 1409-1424.	2.0	12
26	Identification of altered brain metabolites associated with <scp>TNAP</scp> activity in a mouse model of hypophosphatasia using untargeted <scp>NMR</scp>â€based metabolomics analysis. Journal of Neurochemistry, 2017, 140, 919-940.	3.9	34
27	Ectopic calcification in pseudoxanthoma elasticum responds to inhibition of tissue-nonspecific alkaline phosphatase. Science Translational Medicine, 2017, 9, .	12.4	83
28	Bone Alkaline Phosphatase and Tartrate-Resistant Acid Phosphatase: Potential Co-regulators of Bone Mineralization. Calcified Tissue International, 2017, 101, 92-101.	3.1	93
29	A distinctive patchy osteomalacia characterises <i>Phospho1</i>â€deficient mice. Journal of Anatomy, 2017, 231, 298-308.	1.5	21
30	Human alkaline phosphatase dephosphorylates microbial products and is elevated in preterm neonates with a history of late-onset sepsis. PLoS ONE, 2017, 12, e0175936.	2.5	26
31	Overexpression of tissue-nonspecific alkaline phosphatase (TNAP) in endothelial cells accelerates coronary artery disease in a mouse model of familial hypercholesterolemia. PLoS ONE, 2017, 12, e0186426.	2.5	44
32	Neurodevelopmental alterations and seizures developed by mouse model of infantile hypophosphatasia are associated with purinergic signalling deregulation. Human Molecular Genetics, 2016, 25, 4143-4156.	2.9	54
33	Phosphate induces formation of matrix vesicles during odontoblast-initiated mineralization in vitro. Matrix Biology, 2016, 52-54, 284-300.	3.6	52
34	Treatment of hypophosphatasia by muscle-directed expression of bone-targeted alkaline phosphatase via self-complementary AAV8 vector. Molecular Therapy - Methods and Clinical Development, 2016, 3, 15059.	4.1	20
35	PAR2 regulates regeneration, transdifferentiation, and death. Cell Death and Disease, 2016, 7, e2452-e2452.	6.3	16
36	Skeletal Mineralization Deficits and Impaired Biogenesis and Function of Chondrocyte-Derived Matrix Vesicles in <i>Phospho1</i>â€“/â€“ and <i>Phospho1/Pit1</i> Double-Knockout Mice. Journal of Bone and Mineral Research, 2016, 31, 1275-1286.	2.8	53

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37	Pendant-drop method coupled to ultraviolet-visible spectroscopy: A useful tool to investigate interfacial phenomena. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2016, 504, 305-311.	4.7	15
38	Alkaline Phosphatase and Hypophosphatasia. Calcified Tissue International, 2016, 98, 398-416.	3.1	280
39	Effects of etidronate on the Enpp1â^ˆ'/â^ˆ' mouse model of generalized arterial calcification of infancy. International Journal of Molecular Medicine, 2015, 36, 159-165.	4.0	14
40	Prevention of Lethal Murine Hypophosphatasia by Neonatal <i>Ex Vivo</i> Gene Therapy Using Lentivirally Transduced Bone Marrow Cells. Human Gene Therapy, 2015, 26, 801-812.	2.7	23
41	Functional Significance of Calcium Binding to Tissue-Nonspecific Alkaline Phosphatase. PLoS ONE, 2015, 10, e0119874.	2.5	27
42	The critical role of membralin in postnatal motor neuron survival and disease. ELife, 2015, 4, .	6.0	9
43	The functional co-operativity of tissue-nonspecific alkaline phosphatase (TNAP) and PHOSPHO1 during initiation of skeletal mineralization.. Biochemistry and Biophysics Reports, 2015, 4, 196-201.	1.3	26
44	Transgenic Overexpression of Tissueâ€Nonspecific Alkaline Phosphatase (TNAP) in Vascular Endothelium Results in Generalized Arterial Calcification. Journal of the American Heart Association, 2015, 4, .	3.7	68
45	Intestinal Alkaline Phosphatase Deficiency Leads to Lipopolysaccharide Desensitization and Faster Weight Gain. Infection and Immunity, 2015, 83, 247-258.	2.2	19
46	Tissue-nonspecific Alkaline Phosphatase Regulates Purinergic Transmission in the Central Nervous System During Development and Disease. Computational and Structural Biotechnology Journal, 2015, 13, 95-100.	4.1	58
47	Improvement of the skeletal and dental hypophosphatasia phenotype in Alplâˆ'/âˆ' mice by administration of soluble (non-targeted) chimeric alkaline phosphatase. Bone, 2015, 72, 137-147.	2.9	45
48	Enzyme replacement for craniofacial skeletal defects and craniosynostosis in murine hypophosphatasia. Bone, 2015, 78, 203-211.	2.9	26
49	Investigation of quinoline-4-carboxylic acid as a highly potent scaffold for the development of alkaline phosphatase inhibitors: synthesis, SAR analysis and molecular modelling studies. RSC Advances, 2015, 5, 64404-64413.	3.6	32
50	What Can We Learn About the Neural Functions of TNAP from Studies on Other Organs and Tissues?. Sub-Cellular Biochemistry, 2015, 76, 155-166.	2.4	4
51	Proteoliposomes with the ability to transport Ca2+ into the vesicles and hydrolyze phosphosubstrates on their surface. Archives of Biochemistry and Biophysics, 2015, 584, 79-89.	3.0	24
52	Molecular diagnosis of hypophosphatasia and differential diagnosis by targeted Next Generation Sequencing. Molecular Genetics and Metabolism, 2015, 116, 215-220.	1.1	54
53	Pathophysiological Role of Vascular Smooth Muscle Alkaline Phosphatase in Medial Artery Calcification. Journal of Bone and Mineral Research, 2015, 30, 824-836.	2.8	160
54	An Investigation of the Mineral in Ductile and Brittle Cortical Mouse Bone. Journal of Bone and Mineral Research, 2015, 30, 786-795.	2.8	47

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55	A robust transcriptional program in newts undergoing multiple events of lens regeneration throughout their lifespan. ELife, 2015, 4, .	6.0	32
56	Catalytic Signature of a Heat-Stable, Chimeric Human Alkaline Phosphatase with Therapeutic Potential. PLoS ONE, 2014, 9, e89374.	2.5	61
57	Dual Role of the Trps1 Transcription Factor in Dentin Mineralization. Journal of Biological Chemistry, 2014, 289, 27481-27493.	3.4	27
58	Tissue-nonspecific alkaline phosphatase deficiency causes abnormal craniofacial bone development in the Alplâˆ’/âˆ’ mouse model of infantile hypophosphatasia. Bone, 2014, 67, 81-94.	2.9	80
59	Sex-dependent, zinc-induced dephosphorylation of phospholamban by tissue-nonspecific alkaline phosphatase in the cardiac sarcomere. American Journal of Physiology - Heart and Circulatory Physiology, 2014, 307, H933-H938.	3.2	5
60	Mineralisation of collagen rich soft tissues and osteocyte lacunae in Enpp1 mice. Bone, 2014, 69, 139-147.	2.9	57
61	Exonic splicing signals impose constraints upon the evolution of enzymatic activity. Nucleic Acids Research, 2014, 42, 5790-5798.	14.5	8
62	Intestinal alkaline phosphatase promotes gut bacterial growth by reducing the concentration of luminal nucleotide triphosphates. American Journal of Physiology - Renal Physiology, 2014, 306, G826-G838.	3.4	79
63	Design, synthesis and evaluation of benzoisothiazolones as selective inhibitors of PHOSPHO1. Bioorganic and Medicinal Chemistry Letters, 2014, 24, 4308-4311.	2.2	22
64	Reference point indentation is not indicative of whole mouse bone measures of stress intensity fracture toughness. Bone, 2014, 69, 174-179.	2.9	34
65	Identification of a selective inhibitor of murine intestinal alkaline phosphatase (ML260) by concurrent ultra-high throughput screening against human and mouse isozymes. Bioorganic and Medicinal Chemistry Letters, 2014, 24, 1000-1004.	2.2	6
66	Ablation of Osteopontin Improves the Skeletal Phenotype of <i>Phospho1</i> <i>âˆ’/âˆ’</i> Mice. Journal of Bone and Mineral Research, 2014, 29, 2369-2381.	2.8	42
67	Deficiency of the bone mineralization inhibitor NPP1 protects against obesity and diabetes. DMM Disease Models and Mechanisms, 2014, 7, 1341-50.	2.4	21
68	The Role of Phosphatases in the Initiation of Skeletal Mineralization. Calcified Tissue International, 2013, 93, 299-306.	3.1	296
69	Tissue-Nonspecific Alkaline Phosphatase Acts Redundantly with PAP and NT5E to Generate Adenosine in the Dorsal Spinal Cord. Journal of Neuroscience, 2013, 33, 11314-11322.	3.6	71
70	Multisystemic Functions of Alkaline Phosphatases. Methods in Molecular Biology, 2013, 1053, 27-51.	0.9	148
71	Pharmacological inhibition of PHOSPHO1 suppresses vascular smooth muscle cell calcification. Journal of Bone and Mineral Research, 2013, 28, 81-91.	2.8	52
72	In Vivo Overexpression of Tissue-Nonspecific Alkaline Phosphatase Increases Skeletal Mineralization and Affects the Phosphorylation Status of Osteopontin. Journal of Bone and Mineral Research, 2013, 28, 1587-1598.	2.8	112

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73	Soluble Ecto-5â€²-nucleotidase (5â€²-NT), Alkaline Phosphatase, and Adenosine Deaminase (ADA1) Activities in Neonatal Blood Favor Elevated Extracellular Adenosine. Journal of Biological Chemistry, 2013, 288, 27315-27326.	3.4	80
74	Mechanical and biocompatible characterization of a cross-linked collagen-hyaluronic acid wound dressing. Biomatter, 2013, 3, .	2.6	35
75	Successful Gene Therapy <i>in Utero</i> for Lethal Murine Hypophosphatasia. Human Gene Therapy, 2012, 23, 399-406.	2.7	36
76	Enzyme-Replacement Therapy in Life-Threatening Hypophosphatasia. New England Journal of Medicine, 2012, 366, 904-913.	27.0	463
77	Enzyme replacement prevents enamel defects in hypophosphatasia mice. Journal of Bone and Mineral Research, 2012, 27, 1722-1734.	2.8	74
78	Hypophosphatasia - pathophysiology and treatment. Actualizaciones En Osteologia, 2012, 8, 164-182.	0.0	28
79	PHOSPHO1 is essential for mechanically competent mineralization and the avoidance of spontaneous fractures. Bone, 2011, 48, 1066-1074.	2.9	71
80	Dose response of bone-targeted enzyme replacement for murine hypophosphatasia. Bone, 2011, 49, 250-256.	2.9	44
81	Loss of skeletal mineralization by the simultaneous ablation of PHOSPHO1 and alkaline phosphatase function: A unified model of the mechanisms of initiation of skeletal calcification. Journal of Bone and Mineral Research, 2011, 26, 286-297.	2.8	199
82	Prolonged survival and phenotypic correction of <i>Akp2</i>âˆ’<i>/</i>âˆ’ hypophosphatasia mice by lentiviral gene therapy. Journal of Bone and Mineral Research, 2011, 26, 135-142.	2.8	54
83	Rescue of Severe Infantile Hypophosphatasia Mice by AAV-Mediated Sustained Expression of Soluble Alkaline Phosphatase. Human Gene Therapy, 2011, 22, 1355-1364.	2.7	39
84	Kinetic analysis of substrate utilization by native and TNAP-, NPP1-, or PHOSPHO1-deficient matrix vesicles. Journal of Bone and Mineral Research, 2010, 25, 716-723.	2.8	118
85	Proteoliposomes Harboring Alkaline Phosphatase and Nucleotide Pyrophosphatase as Matrix Vesicle Biomimetics. Journal of Biological Chemistry, 2010, 285, 7598-7609.	3.4	49
86	Inorganic pyrophosphatase induces type I collagen in osteoblasts. Bone, 2010, 46, 81-90.	2.9	48
87	Inhibition of PHOSPHO1 activity results in impaired skeletal mineralization during limb development of the chick. Bone, 2010, 46, 1146-1155.	2.9	57
88	Discovery and Validation of a Series of Aryl Sulfonamides as Selective Inhibitors of Tissue-Nonspecific Alkaline Phosphatase (TNAP). Journal of Medicinal Chemistry, 2009, 52, 6919-6925.	6.4	95
89	Enzyme Replacement Therapy for Murine Hypophosphatasia. Journal of Bone and Mineral Research, 2008, 23, 777-787.	2.8	222
90	Functional Involvement of PHOSPHO1 in Matrix Vesicle-Mediated Skeletal Mineralization. Journal of Bone and Mineral Research, 2007, 22, 617-627.	2.8	153

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91	Elevated Skeletal Osteopontin Levels Contribute to the Hypophosphatasia Phenotype in <i>Akp2</i>â^'/â^' Mice. Journal of Bone and Mineral Research, 2006, 21, 1377-1386.	2.8	101
92	Alkaline Phosphatases. Purinergic Signalling, 2006, 2, 335-341.	2.2	486
93	Unique coexpression in osteoblasts of broadly expressed genes accounts for the spatial restriction of ECM mineralization to bone. Genes and Development, 2005, 19, 1093-1104.	5.9	535
94	Impaired Calcification Around Matrix Vesicles of Growth Plate and Bone in Alkaline Phosphatase-Deficient Mice. American Journal of Pathology, 2004, 164, 841-847.	3.8	328
95	Concerted Regulation of Inorganic Pyrophosphate and Osteopontin by Akp2, Enpp1, and Ank. American Journal of Pathology, 2004, 164, 1199-1209.	3.8	450
96	Linked Deficiencies in Extracellular PPi and Osteopontin Mediate Pathologic Calcification Associated With Defective PC-1 and ANK Expression. Journal of Bone and Mineral Research, 2003, 18, 994-1004.	2.8	184
97	Tissue-nonspecific alkaline phosphatase and plasma cell membrane glycoprotein-1 are central antagonistic regulators of bone mineralization. Proceedings of the National Academy of Sciences of the United States of America, 2002, 99, 9445-9449.	7.1	756
98	Abnormal vitamin B6 metabolism in alkaline phosphatase knock-out mice causes multiple abnormalities, but not the impaired bone mineralization. Journal of Pathology, 2001, 193, 125-133.	4.5	100
99	Functional Characterization of Osteoblasts and Osteoclasts from Alkaline Phosphatase Knockout Mice. Journal of Bone and Mineral Research, 2000, 15, 1879-1888.	2.8	214
100	Bispecific antibody-mediated lysis of primary cultures of ovarian carcinoma cells using multiple target antigens. , 1999, 83, 270-277.		9
101	Inactivation of two mouse alkaline phosphatase genes and establishment of a model of infantile hypophosphatasia. Developmental Dynamics, 1997, 208, 432-446.	1.8	334