Francesc Villarroya

List of Publications by Year in descending order

126 papers	8,964 citations	57758 44 h-index	43889 91 g-index
127 all docs	127 docs citations	127 times ranked	11829 citing authors

#	Article	IF	Citations
1	Thermogenic Activation Induces FGF21 Expression and Release in Brown Adipose Tissue. Journal of Biological Chemistry, 2011, 286, 12983-12990.	3.4	512
2	Brown adipose tissue as a secretory organ. Nature Reviews Endocrinology, 2017, 13, 26-35.	9.6	493
3	BMP8B Increases Brown Adipose Tissue Thermogenesis through Both Central and Peripheral Actions. Cell, 2012, 149, 871-885.	28.9	481
4	White, Brown, Beige/Brite: Different Adipose Cells for Different Functions?. Endocrinology, 2013, 154, 2992-3000.	2.8	437
5	GLP-1 Agonism Stimulates Brown Adipose Tissue Thermogenesis and Browning Through Hypothalamic AMPK. Diabetes, 2014, 63, 3346-3358.	0.6	422
6	Hepatic FGF21 Expression Is Induced at Birth via PPARÎ± in Response to Milk Intake and Contributes to Thermogenic Activation of Neonatal Brown Fat. Cell Metabolism, 2010, 11, 206-212.	16.2	326
7	Peroxisome Proliferator-activated Receptor Î± Activates Transcription of the Brown Fat Uncoupling Protein-1 Gene. Journal of Biological Chemistry, 2001, 276, 1486-1493.	3.4	302
8	Fibroblast growth factor 21 protects against cardiac hypertrophy in mice. Nature Communications, 2013, 4, 2019.	12.8	285
9	Sirt1 acts in association with PPARÂ to protect the heart from hypertrophy, metabolic dysregulation, and inflammation. Cardiovascular Research, 2011, 90, 276-284.	3.8	258
10	Fibroblast growth factor 21 protects the heart from oxidative stress. Cardiovascular Research, 2015, 106, 19-31.	3.8	209
11	Beyond the Sympathetic Tone: The New Brown Fat Activators. Cell Metabolism, 2013, 17, 638-643.	16.2	191
12	Inflammation of brown/beige adipose tissues in obesity and metabolic disease. Journal of Internal Medicine, 2018, 284, 492-504.	6.0	189
13	SIRT1 Controls the Transcription of the Peroxisome Proliferator-activated Receptor-Î³ Co-activator-1Î± (PGC-1Î±) Gene in Skeletal Muscle through the PGC-1Î± Autoregulatory Loop and Interaction with MyoD. Journal of Biological Chemistry, 2009, 284, 21872-21880.	3.4	184
14	The lipid sensor GPR120 promotes brown fat activation and FGF21 release from adipocytes. Nature Communications, 2016, 7, 13479.	12.8	180
15	A Novel Regulatory Pathway of Brown Fat Thermogenesis. Journal of Biological Chemistry, 1995, 270, 5666-5673.	3.4	177
16	TNF-Î± Represses Î²-Klotho Expression and Impairs FGF21 Action in Adipose Cells: Involvement of JNK1 in the FGF21 Pathway. Endocrinology, 2012, 153, 4238-4245.	2.8	176
17	Hypothalamic AMPK-ER Stress-JNK1 Axis Mediates the Central Actions of Thyroid Hormones on Energy Balance. Cell Metabolism, 2017, 26, 212-229.e12.	16.2	167
18	Opposite alterations in FGF21 and FGF19 levels and disturbed expression of the receptor machinery for endocrine FGFs in obese patients. International Journal of Obesity, 2015, 39, 121-129.	3.4	165

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19	CXCL14, a Brown Adipokine that Mediates Brown-Fat-to-Macrophage Communication in Thermogenic Adaptation. Cell Metabolism, 2018, 28, 750-763.e6.	16.2	164
20	PPARs in the Control of Uncoupling Proteins Gene Expression. PPAR Research, 2007, 2007, 1-12.	2.4	163
21	Toward an Understanding of How Immune Cells Control Brown and Beige Adipobiology. Cell Metabolism, 2018, 27, 954-961.	16.2	155
22	Fibroblast growth factor-21, energy balance and obesity. Molecular and Cellular Endocrinology, 2015, 418, 66-73.	3.2	144
23	Enhanced fatty acid oxidation in adipocytes and macrophages reduces lipid-induced triglyceride accumulation and inflammation. American Journal of Physiology - Endocrinology and Metabolism, 2015, 308, E756-E769.	3.5	143
24	GDF-15 Is Elevated in Children with Mitochondrial Diseases and Is Induced by Mitochondrial Dysfunction. PLoS ONE, 2016, 11, e0148709.	2.5	133
25	New insights into the secretory functions of brown adipose tissue. Journal of Endocrinology, 2019, 243, R19-R27.	2.6	126
26	FGF19 and FGF21 serum concentrations in human obesity and type 2 diabetes behave differently after diet- or surgically-induced weight loss. Clinical Nutrition, 2017, 36, 861-868.	5.0	123
27	Fibroblast growth factor 15/19 (FGF15/19) protects from diet-induced hepatic steatosis: development of an FGF19-based chimeric molecule to promote fatty liver regeneration. Gut, 2017, 66, 1818-1828.	12.1	118
28	SIRT3-mediated inhibition of FOS through histone H3 deacetylation prevents cardiac fibrosis and inflammation. Signal Transduction and Targeted Therapy, 2020, 5, 14.	17.1	87
29	Retinoids and Retinoid Receptors in the Control of Energy Balance: Novel Pharmacological Strategies in Obesity and Diabetes. Current Medicinal Chemistry, 2004, 11, 795-805.	2.4	81
30	Fibroblast growth factor-21 is expressed in neonatal and pheochromocytoma-induced adult human brown adipose tissue. Metabolism: Clinical and Experimental, 2014, 63, 312-317.	3.4	79
31	Dietary Betaine Supplementation Increases Fgf21 Levels to Improve Glucose Homeostasis and Reduce Hepatic Lipid Accumulation in Mice. Diabetes, 2016, 65, 902-912.	0.6	79
32	Lipodystrophy associated with highly active anti-retroviral therapy for HIV infection: the adipocyte as a target of anti-retroviral-induced mitochondrial toxicity. Trends in Pharmacological Sciences, 2005, 26, 88-93.	8.7	77
33	Transcriptional regulation of the uncoupling protein-1 gene. Biochimie, 2017, 134, 86-92.	2.6	77
34	Hepatic regulation of VLDL receptor by PPARÎ²/Î´ and FGF21 modulates non-alcoholic fatty liver disease. Molecular Metabolism, 2018, 8, 117-131.	6.5	77
35	The Lives and Times of Brown Adipokines. Trends in Endocrinology and Metabolism, 2017, 28, 855-867.	7.1	75
36	Alarmin high-mobility group B1 (HMGB1) is regulated in human adipocytes in insulin resistance and influences insulin secretion in Î²-cells. International Journal of Obesity, 2014, 38, 1545-1554.	3.4	74

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37	The endocrine role of brown adipose tissue: An update on actors and actions. Reviews in Endocrine and Metabolic Disorders, 2022, 23, 31-41.	5.7	70
38	Thermogenic brown and beige/brite adipogenesis in humans. Annals of Medicine, 2015, 47, 169-177.	3.8	68
39	Adipose tissue biology and HIV-infection. Best Practice and Research in Clinical Endocrinology and Metabolism, 2011, 25, 487-499.	4.7	62
40	Brown Adipocytes Secrete GDF15 in Response to Thermogenic Activation. Obesity, 2019, 27, 1606-1616.	3.0	62
41	Lipodystrophy in HIV 1-infected patients: lessons for obesity research. International Journal of Obesity, 2007, 31, 1763-1776.	3.4	60
42	HIV-1 infection alters gene expression in adipose tissue, which contributes to HIV- 1/HAART-associated lipodystrophy. Antiviral Therapy, 2006, 11, 729-40.	1.0	60
43	Differential Effects of Efavirenz and Lopinavir/Ritonavir on Human Adipocyte Differentiation, Gene Expression and Release of Adipokines and Pro-Inflammatory Cytokines.. Current HIV Research, 2010, 8, 545-553.	0.5	48
44	Regulation of mitochondrial biogenesis in brown adipose tissue: nuclear respiratory factor-2/GA-binding protein is responsible for the transcriptional regulation of the gene for the mitochondrial ATP synthase Î² subunit. Biochemical Journal, 1998, 331, 121-127.	3.7	47
45	Peroxisome Proliferator-Activated Receptors-Î± and -Î³, and cAMP-Mediated Pathways, Control Retinol-Binding Protein-4 Gene Expression in Brown Adipose Tissue. Endocrinology, 2012, 153, 1162-1173.	2.8	47
46	Impact of elvitegravir on human adipocytes: Alterations in differentiation, gene expression and release of adipokines and cytokines. Antiviral Research, 2016, 132, 59-65.	4.1	45
47	Thermogenic activation represses autophagy in brown adipose tissue. International Journal of Obesity, 2016, 40, 1591-1599.	3.4	45
48	Small extracellular vesicle-mediated targeting of hypothalamic AMPKÎ±1 corrects obesity through BAT activation. Nature Metabolism, 2021, 3, 1415-1431.	11.9	45
49	Mitochondrial Uncoupling and the Regulation of Glucose Homeostasis. Current Diabetes Reviews, 2017, 13, 386-394.	1.3	44
50	Lipopolysaccharide-binding protein is a negative regulator of adipose tissue browning in mice and humans. Diabetologia, 2016, 59, 2208-2218.	6.3	41
51	Altered glycolipid and glycerophospholipid signaling drive inflammatory cascades in adrenomyeloneuropathy. Human Molecular Genetics, 2015, 24, ddv375.	2.9	37
52	Loss of <scp>SIRT</scp>2 leads to axonal degeneration and locomotor disability associated with redox and energy imbalance. Aging Cell, 2017, 16, 1404-1413.	6.7	36
53	Fibroblast growth factorâ€21 protects against fibrosis in hypertensive heart disease. Journal of Pathology, 2019, 248, 30-40.	4.5	34
54	Cyanidin-3-O-glucoside restores insulin signaling and reduces inflammation in hypertrophic adipocytes. Archives of Biochemistry and Biophysics, 2020, 691, 108488.	3.0	34

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55	Meteorin-like/Meteorin-Î² protects heart against cardiac dysfunction. Journal of Experimental Medicine, 2021, 218, .	8.5	33
56	The Beneficial Effects of Brown Fat Transplantation: Further Evidence of an Endocrine Role of Brown Adipose Tissue. Endocrinology, 2015, 156, 2368-2370.	2.8	32
57	Heme-Regulated eIF2Î± Kinase Modulates Hepatic FGF21 and Is Activated by PPARÎ²/Î´ Deficiency. Diabetes, 2016, 65, 3185-3199.	0.6	31
58	Differential regulation of expression of genes encoding uncoupling proteins 2 and 3 in brown adipose tissue during lactation in mice. Biochemical Journal, 2001, 355, 105-111.	3.7	30
59	Parkin controls brown adipose tissue plasticity in response to adaptive thermogenesis. EMBO Reports, 2019, 20, .	4.5	29
60	Relationship between HIV/Highly Active Antiretroviral Therapy (HAART)â€“Associated Lipodystrophy Syndrome and Stavudineâ€Triphosphate Intracellular Levels in Patients with Stavudineâ€Based Antiretroviral Regimens. Clinical Infectious Diseases, 2010, 50, 1033-1040.	5.8	28
61	Opposite changes in meteorin-like and oncostatin m levels are associated with metabolic improvements after bariatric surgery. International Journal of Obesity, 2018, 42, 919-922.	3.4	28
62	Aging is associated with increased FGF21 levels but unaltered FGF21 responsiveness in adipose tissue. Aging Cell, 2018, 17, e12822.	6.7	28
63	Increasing breast milk betaine modulates Akkermansia abundance in mammalian neonates and improves long-term metabolic health. Science Translational Medicine, 2021, 13, .	12.4	28
64	Cardiokines as Modulators of Stress-Induced Cardiac Disorders. Advances in Protein Chemistry and Structural Biology, 2017, 108, 227-256.	2.3	27
65	Mfn2 localization in the ER is necessary for its bioenergetic function and neuritic development. EMBO Reports, 2021, 22, e51954.	4.5	27
66	Circulating FGF19 and FGF21 surge in early infancy from infra- to supra-adult concentrations. International Journal of Obesity, 2015, 39, 742-746.	3.4	26
67	Brown adipose tissue in prepubertal children: associations with sex, birthweight, and metabolic profile. International Journal of Obesity, 2019, 43, 384-391.	3.4	25
68	BMP8 and activated brown adipose tissue in human newborns. Nature Communications, 2021, 12, 5274.	12.8	24
69	Effects of Switching from Stavudine to Raltegravir on Subcutaneous Adipose Tissue in HIV-Infected Patients with HIV/HAART-Associated Lipodystrophy Syndrome (HALS). A Clinical and Molecular Study. PLoS ONE, 2014, 9, e89088.	2.5	23
70	Altered Expression of Nucleoside Transporter Genes (SLC28 and SLC29) in Adipose Tissue from HIV-1â€“Infected Patients. Antiviral Therapy, 2007, 12, 853-864.	1.0	21
71	Genetic ablation of macrohistone H2A1 leads to increased leanness, glucose tolerance and energy expenditure in mice fed a high-fat diet. International Journal of Obesity, 2015, 39, 331-338.	3.4	20
72	Growth Differentiation Factor 15 is a potential biomarker of therapeutic response for TK2 deficient myopathy. Scientific Reports, 2020, 10, 10111.	3.3	20

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73	Non-sympathetic control of brown adipose tissue. International Journal of Obesity Supplements, 2015, 5, S40-S44.	12.6	19
74	Reduced circulating levels of chemokine CXCL14 in adolescent girls with polycystic ovary syndrome: normalization after insulin sensitization. BMJ Open Diabetes Research and Care, 2020, 8, e001035.	2.8	19
75	Oncostatin m impairs brown adipose tissue thermogenic function and the browning of subcutaneous white adipose tissue. Obesity, 2017, 25, 85-93.	3.0	18
76	The kallikreinâ€“kinin pathway as a mechanism for auto-control of brown adipose tissue activity. Nature Communications, 2020, 11, 2132.	12.8	18
77	FGF15/19 is required for adipose tissue plasticity in response to thermogenic adaptations. Molecular Metabolism, 2021, 43, 101113.	6.5	18
78	Circulating growth-and-differentiation factor-15 in early life: relation to prenatal and postnatal growth and adiposity measurements. Pediatric Research, 2020, 87, 897-902.	2.3	17
79	The chemokine CXCL14 is negatively associated with obesity and concomitant type-2 diabetes in humans. International Journal of Obesity, 2021, 45, 706-710.	3.4	17
80	CERKL, a retinal dystrophy gene, regulates mitochondrial function and dynamics in the mammalian retina. Neurobiology of Disease, 2021, 156, 105405.	4.4	17
81	Infrared Thermography for Estimating Supraclavicular Skin Temperature and BAT Activity in Humans: A Systematic Review. Obesity, 2019, 27, 1932-1949.	3.0	16
82	GDF11 induces mild hepatic fibrosis independent of metabolic health. Aging, 2020, 12, 20024-20046.	3.1	16
83	C/EBPÎ² is required in pregnancy-induced cardiac hypertrophy. International Journal of Cardiology, 2016, 202, 819-828.	1.7	15
84	A Role for Oncostatin M in the Impairment of Glucose Homeostasis in Obesity. Journal of Clinical Endocrinology and Metabolism, 2020, 105, e337-e348.	3.6	15
85	Elevated Levels of Circulating miR-92a Are Associated with Impaired Glucose Homeostasis in Patients with Obesity and Correlate with Metabolic Status After Bariatric Surgery. Obesity Surgery, 2020, 30, 174-179.	2.1	14
86	Levels of Î²-klotho determine the thermogenic responsiveness of adipose tissues: involvement of the autocrine action of FGF21. American Journal of Physiology - Endocrinology and Metabolism, 2021, 320, E822-E834.	3.5	14
87	The Molecular Signature of HIV-1-Associated Lipomatosis Reveals Differential Involvement of Brown and Beige/Brite Adipocyte Cell Lineages. PLoS ONE, 2015, 10, e0136571.	2.5	14
88	Differential Effects of Retinoic Acid on White and Brown Adipose Tissues: An Unexpected Role for Vitamin A Derivatives on Energy Balancea. Annals of the New York Academy of Sciences, 1998, 839, 190-195.	3.8	13
89	Hormonal and nutritional signalling in the control of brown and beige adipose tissue activation and recruitment. Best Practice and Research in Clinical Endocrinology and Metabolism, 2016, 30, 515-525.	4.7	13
90	Effects of docosahexanoic acid supplementation on inflammatory and subcutaneous adipose tissue gene expression in HIV-infected patients on combination antiretroviral therapy (cART). A sub-study of a randomized, double-blind, placebo-controlled study. Cytokine, 2018, 105, 73-79.	3.2	13

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91	BACE-1, PS-1 and sAPPÎ² Levels Are Increased in Plasma from Sporadic Inclusion Body Myositis Patients: Surrogate Biomarkers among Inflammatory Myopathies. Molecular Medicine, 2015, 21, 817-823.	4.4	12
92	GPR120 controls neonatal brown adipose tissue thermogenic induction. American Journal of Physiology - Endocrinology and Metabolism, 2019, 317, E742-E750.	3.5	12
93	Adipose tissue knockdown of lysozyme reduces local inflammation and improves adipogenesis in high-fat diet-fed mice. Pharmacological Research, 2021, 166, 105486.	7.1	12
94	Reciprocal Effects of Antiretroviral Drugs Used To Treat HIV Infection on the Fibroblast Growth Factor 21/Î²-Klotho System. Antimicrobial Agents and Chemotherapy, 2018, 62, .	3.2	11
95	The relative deficit of GDF15 in adolescent girls with PCOS can be changed into an abundance that reduces liver fat. Scientific Reports, 2021, 11, 7018.	3.3	10
96	HIV Type-1 Transgene Expression in Mice Alters Adipose Tissue and Adipokine Levels: Towards a Rodent Model of HIV Type-1 Lipodystrophy. Antiviral Therapy, 2010, 15, 1021-1028.	1.0	9
97	Liver volume and hepatic adiposity in childhood: relations to body growth and visceral fat. International Journal of Obesity, 2018, 42, 65-71.	3.4	8
98	Low-Dose Spironolactone-Pioglitazone-Metformin Normalizes Circulating Fetuin-A Concentrations in Adolescent Girls with Polycystic Ovary Syndrome. International Journal of Endocrinology, 2018, 2018, 1-5.	1.5	8
99	Mechanisms of antiretroviral-induced mitochondrial dysfunction in adipocytes and adipose tissue: in-vitro, animal and human adipose tissue studies. Current Opinion in HIV and AIDS, 2007, 2, 261-267.	3.8	7
100	Nerve Growth Factor Levels in Term Human Infants: Relationship to Prenatal Growth and Early Postnatal Feeding. International Journal of Endocrinology, 2018, 2018, 1-6.	1.5	7
101	ARMCX3 Mediates Susceptibility to Hepatic Tumorigenesis Promoted by Dietary Lipotoxicity. Cancers, 2021, 13, 1110.	3.7	7
102	Complement Factor D (adipsin) Levels Are Elevated in Acquired Partial Lipodystrophy (Barraquerâ€“Simons syndrome). International Journal of Molecular Sciences, 2021, 22, 6608.	4.1	7
103	A Differential Pattern of Batokine Expression in Perivascular Adipose Tissue Depots From Mice. Frontiers in Physiology, 2021, 12, 714530.	2.8	7
104	Lactate induces expression and secretion of fibroblast growth factor-21 by muscle cells. Endocrine, 2018, 61, 165-168.	2.3	6
105	Use of Infrared Thermography to Estimate Brown Fat Activation After a Cooling Protocol in Patients with Severe Obesity That Underwent Bariatric Surgery. Obesity Surgery, 2020, 30, 2375-2381.	2.1	6
106	Modulation of mitochondrial and inflammatory homeostasis through RIP140 is neuroprotective in an adrenoleukodystrophy mouse model. Neuropathology and Applied Neurobiology, 2022, 48, .	3.2	6
107	Posterior Cervical Brown Fat and CXCL14 Levels in the First Year of Life: Sex Differences and Association With Adiposity. Journal of Clinical Endocrinology and Metabolism, 2022, 107, e1148-e1158.	3.6	6
108	Autophagy is Involved in Cardiac Remodeling in Response to Environmental Temperature Change. Frontiers in Physiology, 2022, 13, 864427.	2.8	6

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109	Effects of docosahexanoic acid on metabolic and fat parameters in HIV-infected patients on cART: A randomized, double-blind, placebo-controlled study. Clinical Nutrition, 2018, 37, 1340-1347.	5.0	5
110	Glucocorticoid gene regulation of aquaporin-7. Vitamins and Hormones, 2020, 112, 179-207.	1.7	4
111	Pharmacological and Gene Modification-Based Models for Studying the Impact of Perinatal Metabolic Disturbances in Adult Life. Advances in Experimental Medicine and Biology, 2009, 646, 141-148.	1.6	4
112	Nutritional and metabolic regulation of brown and beige adipose tissues. Journal of Physiology and Biochemistry, 2020, 76, 181-184.	3.0	3
113	In Vitro Effects of Cyanidinâ€3â€•O â€Glucoside on Inflammatory and Insulinâ€Sensitizing Genes in Human Adipocytes Exposed to Palmitic Acid. Chemistry and Biodiversity, 2021, , e2100607.	2.1	3
114	Bone Morphogenetic Protein-8B Levels at Birth and in the First Year of Life: Relation to Metabolic-Endocrine Variables and Brown Adipose Tissue Activity. Frontiers in Pediatrics, 2022, 10, 869581.	1.9	3
115	Effects of ethinylestradiolâ€“cyproterone acetate vs. pioglitazoneâ€“flutamideâ€“metformin on plasma FGF21 levels in adolescent girls with androgen excess. Diabetes and Metabolism, 2016, 42, 196-199.	2.9	2
116	Differential association between S100A4 levels and insulin resistance in prepubertal children and adult subjects with clinically severe obesity. Obesity Science and Practice, 2020, 6, 99-106.	1.9	2
117	White adipose tissue-infiltrated CD11b+ myeloid cells are a source of S100A4, a new potential marker of hepatic damage. European Journal of Endocrinology, 2021, 184, 533-541.	3.7	2
118	Increased Circulating Levels of Growth Differentiation Factor 15 in Association with Metabolic Disorders in People Living with HIV Receiving Combined Antiretroviral Therapy. Journal of Clinical Medicine, 2022, 11, 549.	2.4	2
119	Circulating GDF15 concentrations in girls with low birth weight: effects of prolonged metformin treatment. Pediatric Research, 2023, 93, 964-968.	2.3	2
120	Cardiotrophinâ€1 contributes to metabolic adaptations through the regulation of lipid metabolism and to the fastingâ€induced fatty acid mobilization. FASEB Journal, 2020, 34, 15875-15887.	0.5	1
121	Circulating diazepamâ€binding inhibitor in infancy: Relation to markers of adiposity and metabolic health. Pediatric Obesity, 2021, 16, e12802.	2.8	1
122	Adipose tissue aging partially accounts for fat alterations in HIV lipodystrophy. Adipocyte, 2022, 11, 143-152.	2.8	1
123	Brown fat resolves hepatic inflammation in obesity. Nature Metabolism, 2022, 4, 649-650.	11.9	1
124	P754Involvement of the transcription factor C/EBPbeta in pregnancy-induced cardiac hypertrophy. Cardiovascular Research, 2014, 103, S138.2-S138.	3.8	0
125	MON-029 Polycystic Ovary Syndrome (PCOS) in Adolescent Girls:Toward a Simple On-Treatment Predictor of Post-Treatment Ovulation Rate. Journal of the Endocrine Society, 2020, 4, .	0.2	0
126	The armadillo-repeat containing X-linked protein 3, ARMCX3, is a negative regulator of the browning of adipose tissue associated with obesity. International Journal of Obesity, 0, , .	3.4	0