Grahame Hardie

List of Publications by Citations

287 papers	52,457 citations	112 h-index	228 g-index
331 ext. papers	57,357 ext. citations	9.7 avg, IF	8.34 L-index

#	Paper	IF	Citations
287	AMPK: a nutrient and energy sensor that maintains energy homeostasis. *Nature Reviews Molecular Cell Biology*, **2012**, 13, 251-62	48.7	2712
286	AMP-activated protein kinase: ancient energy gauge provides clues to modern understanding of metabolism. *Cell Metabolism*, **2005**, 1, 15-25	24.6	2257
285	AMP-activated/SNF1 protein kinases: conserved guardians of cellular energy. *Nature Reviews Molecular Cell Biology*, **2007**, 8, 774-85	48.7	1704
284	Complexes between the LKB1 tumor suppressor, STRAD alpha/beta and MO25 alpha/beta are upstream kinases in the AMP-activated protein kinase cascade. *Journal of Biology*, **2003**, 2, 28		1283
283	The AMP-activated/SNF1 protein kinase subfamily: metabolic sensors of the eukaryotic cell?. *Annual Review of Biochemistry*, **1998**, 67, 821-55	29.1	1282
282	Calmodulin-dependent protein kinase kinase-beta is an alternative upstream kinase for AMP-activated protein kinase. *Cell Metabolism*, **2005**, 2, 9-19	24.6	1245
281	AMP-activated protein kinase: an energy sensor that regulates all aspects of cell function. *Genes and Development*, **2011**, 25, 1895-908	12.6	1056
280	LKB1 is a master kinase that activates 13 kinases of the AMPK subfamily, including MARK/PAR-1. *EMBO Journal*, **2004**, 23, 833-43	13	1055
279	The AMP-activated protein kinase--fuel gauge of the mammalian cell?. *FEBS Journal*, **1997**, 246, 259-73		1024
278	AMP-activated protein kinase in metabolic control and insulin signaling. *Circulation Research*, **2007**, 100, 328-41	15.7	997
277	Characterization of the AMP-activated protein kinase kinase from rat liver and identification of threonine 172 as the major site at which it phosphorylates AMP-activated protein kinase. *Journal of Biological Chemistry*, **1996**, 271, 27879-87	5.4	940
276	The AMP-activated protein kinase pathway--new players upstream and downstream. *Journal of Cell Science*, **2004**, 117, 5479-87	5.3	935
275	5-aminoimidazole-4-carboxamide ribonucleoside. A specific method for activating AMP-activated protein kinase in intact cells?. *FEBS Journal*, **1995**, 229, 558-65		929
274	The mechanisms of action of metformin. *Diabetologia*, **2017**, 60, 1577-1585	10.3	870
273	Minireview: the AMP-activated protein kinase cascade: the key sensor of cellular energy status. *Endocrinology*, **2003**, 144, 5179-83	4.8	793
272	Metabolism of inflammation limited by AMPK and pseudo-starvation. *Nature*, **2013**, 493, 346-55	50.4	765
271	AMP-activated protein kinase: the energy charge hypothesis revisited. *BioEssays*, **2001**, 23, 1112-9	4.1	652

270	Management of cellular energy by the AMP-activated protein kinase system. *FEBS Letters*, **2003**, 546, 113-20	3.8	632
269	AMP-activated protein kinase--development of the energy sensor concept. *Journal of Physiology*, **2006**, 574, 7-15	3.9	604
268	Use of cells expressing gamma subunit variants to identify diverse mechanisms of AMPK activation. *Cell Metabolism*, **2010**, 11, 554-65	24.6	565
267	CBS domains form energy-sensing modules whose binding of adenosine ligands is disrupted by disease mutations. *Journal of Clinical Investigation*, **2004**, 113, 274-84	15.9	558
266	The ancient drug salicylate directly activates AMP-activated protein kinase. *Science*, **2012**, 336, 918-22	33.3	539
265	The antidiabetic drug metformin activates the AMP-activated protein kinase cascade via an adenine nucleotide-independent mechanism. *Diabetes*, **2002**, 51, 2420-5	0.9	535
264	AMPK: An Energy-Sensing Pathway with Multiple Inputs and Outputs. *Trends in Cell Biology*, **2016**, 26, 190-201	18.3	508
263	Single phosphorylation sites in Acc1 and Acc2 regulate lipid homeostasis and the insulin-sensitizing effects of metformin. *Nature Medicine*, **2013**, 19, 1649-54	50.5	503
262	AMPK: a key regulator of energy balance in the single cell and the whole organism. *International Journal of Obesity*, **2008**, 32 Suppl 4, S7-12	5.5	501
261	Characterization of AMP-activated protein kinase □subunit isoforms and their role in AMP binding. *Biochemical Journal*, **2000**, 346, 659-669	3.8	472
260	Deficiency of LKB1 in skeletal muscle prevents AMPK activation and glucose uptake during contraction. *EMBO Journal*, **2005**, 24, 1810-20	13	436
259	5PAMP inhibits dephosphorylation, as well as promoting phosphorylation, of the AMP-activated protein kinase. Studies using bacterially expressed human protein phosphatase-2C alpha and native bovine protein phosphatase-2AC. *FEBS Letters*, **1995**, 377, 421-5	3.8	428
258	AMPK: Sensing Glucose as well as Cellular Energy Status. *Cell Metabolism*, **2018**, 27, 299-313	24.6	428
257	Regulation of fatty acid synthesis and oxidation by the AMP-activated protein kinase. *Biochemical Society Transactions*, **2002**, 30, 1064-70	5.1	413
256	Aging-associated reductions in AMP-activated protein kinase activity and mitochondrial biogenesis. *Cell Metabolism*, **2007**, 5, 151-6	24.6	391
255	AMP-activated protein kinase: greater AMP dependence, and preferential nuclear localization, of complexes containing the alpha2 isoform. *Biochemical Journal*, **1998**, 334 (Pt 1), 177-87	3.8	385
254	AMPK--sensing energy while talking to other signaling pathways. *Cell Metabolism*, **2014**, 20, 939-52	24.6	382
253	Tissue distribution of the AMP-activated protein kinase, and lack of activation by cyclic-AMP-dependent protein kinase, studied using a specific and sensitive peptide assay. *FEBS Journal*, **1989**, 186, 123-8		374

252	AMPK: a key sensor of fuel and energy status in skeletal muscle. *Physiology*, **2006**, 21, 48-60	9.8	364
251	Role of the AMP-activated protein kinase in the cellular stress response. *Current Biology*, **1994**, 4, 315-24	6.3	364
250	Cannabinoids and ghrelin have both central and peripheral metabolic and cardiac effects via AMP-activated protein kinase. *Journal of Biological Chemistry*, **2005**, 280, 25196-201	5.4	361
249	AMP-activated protein kinase is activated by low glucose in cell lines derived from pancreatic beta cells, and may regulate insulin release. *Biochemical Journal*, **1998**, 335 (Pt 3), 533-9	3.8	352
248	AMP-activated protein kinase as a drug target. *Annual Review of Pharmacology and Toxicology*, **2007** , 47, 185-210	17.9	345
247	5PAMP activates the AMP-activated protein kinase cascade, and Ca2+/calmodulin activates the calmodulin-dependent protein kinase I cascade, via three independent mechanisms. *Journal of Biological Chemistry*, **1995**, 270, 27186-91	5.4	339
246	AMP is a true physiological regulator of AMP-activated protein kinase by both allosteric activation and enhancing net phosphorylation. *Cell Metabolism*, **2013**, 18, 556-66	24.6	336
245	Purification and characterization of the AMP-activated protein kinase. Copurification of acetyl-CoA carboxylase kinase and 3-hydroxy-3-methylglutaryl-CoA reductase kinase activities. *FEBS Journal*, **1989**, 186, 129-36		333
244	Mechanism of action of A-769662, a valuable tool for activation of AMP-activated protein kinase. *Journal of Biological Chemistry*, **2007**, 282, 32549-60	5.4	329
243	The glycogen-binding domain on the AMPK beta subunit allows the kinase to act as a glycogen sensor. *Cell Metabolism*, **2009**, 9, 23-34	24.6	322
242	Common variants near ATM are associated with glycemic response to metformin in type 2 diabetes. *Nature Genetics*, **2011**, 43, 117-20	36.3	319
241	AMPK: a target for drugs and natural products with effects on both diabetes and cancer. *Diabetes*, **2013**, 62, 2164-72	0.9	313
240	Stearoyl-CoA desaturase 1 deficiency increases fatty acid oxidation by activating AMP-activated protein kinase in liver. *Proceedings of the National Academy of Sciences of the United States of America*, **2004**, 101, 6409-14	11.5	312
239	AMPK: positive and negative regulation, and its role in whole-body energy homeostasis. *Current Opinion in Cell Biology*, **2015**, 33, 1-7	9	306
238	Fructose-1,6-bisphosphate and aldolase mediate glucose sensing by AMPK. *Nature*, **2017**, 548, 112-116	50.4	300
237	AMP-activated protein kinase: an ultrasensitive system for monitoring cellular energy charge. *Biochemical Journal*, **1999**, 338, 717-722	3.8	286
236	AMP-activated protein kinase: a target for drugs both ancient and modern. *Chemistry and Biology*, **2012**, 19, 1222-36		280
235	A novel domain in AMP-activated protein kinase causes glycogen storage bodies similar to those seen in hereditary cardiac arrhythmias. *Current Biology*, **2003**, 13, 861-6	6.3	275

234	Development of protein kinase activators: AMPK as a target in metabolic disorders and cancer. *Biochimica Et Biophysica Acta - Proteins and Proteomics*, **2010**, 1804, 581-91	4	274
233	SNF1-related protein kinases: global regulators of carbon metabolism in plants?. *Plant Molecular Biology*, **1998**, 37, 735-48	4.6	270
232	Regulation of the energy sensor AMP-activated protein kinase by antigen receptor and Ca2+ in T lymphocytes. *Journal of Experimental Medicine*, **2006**, 203, 1665-70	16.6	266
231	Similar substrate recognition motifs for mammalian AMP-activated protein kinase, higher plant HMG-CoA reductase kinase-A, yeast SNF1, and mammalian calmodulin-dependent protein kinase I. *FEBS Letters*, **1995**, 361, 191-5	3.8	265
230	Sensing of energy and nutrients by AMP-activated protein kinase. *American Journal of Clinical Nutrition*, **2011**, 93, 891S-6	7	263
229	Dual regulation of the AMP-activated protein kinase provides a novel mechanism for the control of creatine kinase in skeletal muscle. *EMBO Journal*, **1998**, 17, 1688-99	13	251
228	Activity of LKB1 and AMPK-related kinases in skeletal muscle: effects of contraction, phenformin, and AICAR. *American Journal of Physiology - Endocrinology and Metabolism*, **2004**, 287, E310-7	6	250
227	Regulation of 5′AMP-activated protein kinase activity and substrate utilization in exercising human skeletal muscle. *American Journal of Physiology - Endocrinology and Metabolism*, **2003**, 284, E813-22	6	242
226	The substrate and sequence specificity of the AMP-activated protein kinase. Phosphorylation of glycogen synthase and phosphorylase kinase. *Biochimica Et Biophysica Acta - Molecular Cell Research*, **1989**, 1012, 81-6	4.9	237
225	Phosphorylation of bovine hormone-sensitive lipase by the AMP-activated protein kinase. A possible antilipolytic mechanism. *FEBS Journal*, **1989**, 179, 249-54		229
224	Elm1p is one of three upstream kinases for the Saccharomyces cerevisiae SNF1 complex. *Current Biology*, **2003**, 13, 1299-305	6.3	228
223	LKB1 and AMPK and the cancer-metabolism link - ten years after. *BMC Biology*, **2013**, 11, 36	7.3	225
222	New roles for the LKB1-->AMPK pathway. *Current Opinion in Cell Biology*, **2005**, 17, 167-73	9	223
221	Glycogen-dependent effects of 5-aminoimidazole-4-carboxamide (AICA)-riboside on AMP-activated protein kinase and glycogen synthase activities in rat skeletal muscle. *Diabetes*, **2002**, 51, 284-92	0.9	223
220	Two SNF1-related protein kinases from spinach leaf phosphorylate and inactivate 3-hydroxy-3-methylglutaryl-coenzyme A reductase, nitrate reductase, and sucrose phosphate synthase in vitro. *Plant Physiology*, **1999**, 120, 257-74	6.6	223
219	The alpha1 and alpha2 isoforms of the AMP-activated protein kinase have similar activities in rat liver but exhibit differences in substrate specificity in vitro. *FEBS Letters*, **1996**, 397, 347-51	3.8	219
218	Evidence for biological effects of metformin in operable breast cancer: a pre-operative, window-of-opportunity, randomized trial. *Breast Cancer Research and Treatment*, **2011**, 128, 783-94	4.4	217
217	SnRK1 (SNF1-related kinase 1) has a central role in sugar and ABA signalling in Arabidopsis thaliana. *Plant Journal*, **2009**, 59, 316-28	6.9	217

216	Identification by amino acid sequencing of three major regulatory phosphorylation sites on rat acetyl-CoA carboxylase. *FEBS Journal*, **1988**, 175, 331-8		211
215	Location and function of three sites phosphorylated on rat acetyl-CoA carboxylase by the AMP-activated protein kinase. *FEBS Journal*, **1990**, 187, 183-90		208
214	AMP-activated protein kinase: a cellular energy sensor that comes in 12 flavours. *FEBS Journal*, **2016**, 283, 2987-3001	5.7	204
213	Activation of GLUT1 by metabolic and osmotic stress: potential involvement of AMP-activated protein kinase (AMPK). *Journal of Cell Science*, **2002**, 115, 2433-2442	5.3	198
212	The alpha2-5PAMP-activated protein kinase is a site 2 glycogen synthase kinase in skeletal muscle and is responsive to glucose loading. *Diabetes*, **2004**, 53, 3074-81	0.9	197
211	5PAMP-activated protein kinase phosphorylates IRS-1 on Ser-789 in mouse C2C12 myotubes in response to 5-aminoimidazole-4-carboxamide riboside. *Journal of Biological Chemistry*, **2001**, 276, 46912-6	5.4	195
210	AMP-activated kinase regulates cytoplasmic HuR. *Molecular and Cellular Biology*, **2002**, 22, 3425-36	4.8	190
209	The Na+/Glucose Cotransporter Inhibitor Canagliflozin Activates AMPK by Inhibiting Mitochondrial Function and Increasing Cellular AMP Levels. *Diabetes*, **2016**, 65, 2784-94	0.9	190
208	Activation of GLUT1 by metabolic and osmotic stress: potential involvement of AMP-activated protein kinase (AMPK). *Journal of Cell Science*, **2002**, 115, 2433-42	5.3	189
207	Role of AMP-activated protein kinase in the regulation by glucose of islet beta cell gene expression. *Proceedings of the National Academy of Sciences of the United States of America*, **2000**, 97, 4023-8	11.5	188
206	Evidence that AMP triggers phosphorylation as well as direct allosteric activation of rat liver AMP-activated protein kinase. A sensitive mechanism to protect the cell against ATP depletion. *FEBS Journal*, **1991**, 199, 691-7		186
205	AMP-activated protein kinase: a key regulator of energy balance with many roles in human disease. *Journal of Internal Medicine*, **2014**, 276, 543-59	10.8	180
204	Regulation of spinach SNF1-related (SnRK1) kinases by protein kinases and phosphatases is associated with phosphorylation of the T loop and is regulated by 5PAMP. *Plant Journal*, **1999**, 19, 433-9	6.9	164
203	AMPK and TOR: The Yin and Yang of Cellular Nutrient Sensing and Growth Control. *Cell Metabolism*, **2020**, 31, 472-492	24.6	163
202	Regulation of fatty acid synthesis via phosphorylation of acetyl-CoA carboxylase. *Progress in Lipid Research*, **1989**, 28, 117-46	14.3	160
201	AMP-activated protein kinase: maintaining energy homeostasis at the cellular and whole-body levels. *Annual Review of Nutrition*, **2014**, 34, 31-55	9.9	159
200	The AMP-activated protein kinase: a multisubstrate regulator of lipid metabolism. *Trends in Biochemical Sciences*, **1989**, 14, 20-23	10.3	159
199	Role of AMP-activated protein kinase in the metabolic syndrome and in heart disease. *FEBS Letters*, **2008**, 582, 81-9	3.8	156

198	AMPK: regulating energy balance at the cellular and whole body levels. *Physiology*, **2014**, 29, 99-107	9.8	152
197	AMPK promotes p53 acetylation via phosphorylation and inactivation of SIRT1 in liver cancer cells. *Cancer Research*, **2012**, 72, 4394-404	10.1	152
196	AMPK and autophagy get connected. *EMBO Journal*, **2011**, 30, 634-5	13	148
195	Protein kinase substrate recognition studied using the recombinant catalytic domain of AMP-activated protein kinase and a model substrate. *Journal of Molecular Biology*, **2002**, 317, 309-23	6.5	143
194	Regulation of multisite phosphorylation and 14-3-3 binding of AS160 in response to IGF-1, EGF, PMA and AICAR. *Biochemical Journal*, **2007**, 407, 231-41	3.8	141
193	Does AMP-activated protein kinase couple inhibition of mitochondrial oxidative phosphorylation by hypoxia to calcium signaling in O2-sensing cells?. *Journal of Biological Chemistry*, **2005**, 280, 41504-11	5.4	139
192	Diurnal rhythm of phosphorylation of rat liver acetyl-CoA carboxylase by the AMP-activated protein kinase, demonstrated using freeze-clamping. Effects of high fat diets. *FEBS Journal*, **1992**, 203, 615-23		138
191	Phosphorylation by Akt within the ST loop of AMPK-□ down-regulates its activation in tumour cells. *Biochemical Journal*, **2014**, 459, 275-87	3.8	137
190	AMP-activated protein kinase: also regulated by ADP?. *Trends in Biochemical Sciences*, **2011**, 36, 470-7	10.3	132
189	Physiological role of AMP-activated protein kinase in the heart: graded activation during exercise. *American Journal of Physiology - Endocrinology and Metabolism*, **2003**, 285, E629-36	6	132
188	Characterization of AMP-activated protein kinase □subunit isoforms and their role in AMP binding. *Biochemical Journal*, **2000**, 346, 659	3.8	132
187	AMP-activated protein kinase: a cellular energy sensor with a key role in metabolic disorders and in cancer. *Biochemical Society Transactions*, **2011**, 39, 1-13	5.1	131
186	AMP-activated protein kinase: a key system mediating metabolic responses to exercise. *Medicine and Science in Sports and Exercise*, **2004**, 36, 28-34	1.2	127
185	Phosphorylation control of cardiac acetyl-CoA carboxylase by cAMP-dependent protein kinase and 5PAMP activated protein kinase. *FEBS Journal*, **1999**, 262, 184-90		125
184	Genetic disruption of AMPK signaling abolishes both contraction- and insulin-stimulated TBC1D1 phosphorylation and 14-3-3 binding in mouse skeletal muscle. *American Journal of Physiology - Endocrinology and Metabolism*, **2009**, 297, E665-75	6	123
183	Fatal congenital heart glycogenosis caused by a recurrent activating R531Q mutation in the gamma 2-subunit of AMP-activated protein kinase (PRKAG2), not by phosphorylase kinase deficiency. *American Journal of Human Genetics*, **2005**, 76, 1034-49	11	123
182	5PAMP-activated protein kinase activity and subunit expression in exercise-trained human skeletal muscle. *Journal of Applied Physiology*, **2003**, 94, 631-41	3.7	120
181	Stearoyl-CoA desaturase-1 deficiency reduces ceramide synthesis by downregulating serine palmitoyltransferase and increasing beta-oxidation in skeletal muscle. *American Journal of Physiology - Endocrinology and Metabolism*, **2005**, 288, E599-607	6	120

180	Purification of the AMP-activated protein kinase on ATP-gamma-sepharose and analysis of its subunit structure. *FEBS Journal*, **1994**, 223, 351-7		118
179	5PAMP-activated protein kinase activity and protein expression are regulated by endurance training in human skeletal muscle. *American Journal of Physiology - Endocrinology and Metabolism*, **2004**, 286, E411-7	6	117
178	Analysis of the LKB1-STRAD-MO25 complex. *Journal of Cell Science*, **2004**, 117, 6365-75	5.3	117
177	AMP-Activated Protein Kinase: An Ubiquitous Signaling Pathway With Key Roles in the Cardiovascular System. *Circulation Research*, **2017**, 120, 1825-1841	15.7	116
176	AMP-activated protein kinase mediates carotid body excitation by hypoxia. *Journal of Biological Chemistry*, **2007**, 282, 8092-8	5.4	115
175	AICA riboside both activates AMP-activated protein kinase and competes with adenosine for the nucleoside transporter in the CA1 region of the rat hippocampus. *Journal of Neurochemistry*, **2004**, 88, 1272-82	6	111
174	Enhanced hepatitis C virus genome replication and lipid accumulation mediated by inhibition of AMP-activated protein kinase. *Proceedings of the National Academy of Sciences of the United States of America*, **2010**, 107, 11549-54	11.5	109
173	Increased phosphorylation of skeletal muscle glycogen synthase at NH2-terminal sites during physiological hyperinsulinemia in type 2 diabetes. *Diabetes*, **2003**, 52, 1393-402	0.9	109
172	Bacterial expression of the catalytic domain of 3-hydroxy-3-methylglutaryl-CoA reductase (isoform HMGR1) from Arabidopsis thaliana, and its inactivation by phosphorylation at Ser577 by Brassica oleracea 3-hydroxy-3-methylglutaryl-CoA reductase kinase. *FEBS Journal*, **1995**, 233, 506-13		109
171	Differential regulation by AMP and ADP of AMPK complexes containing different β subunit isoforms. *Biochemical Journal*, **2016**, 473, 189-99	3.8	108
170	AMPK and Raptor: matching cell growth to energy supply. *Molecular Cell*, **2008**, 30, 263-5	17.6	106
169	Molecular Pathways: Is AMPK a Friend or a Foe in Cancer?. *Clinical Cancer Research*, **2015**, 21, 3836-40	12.9	105
168	Reversible phosphorylation and inactivation of acetyl-CoA carboxylase from lactating rat mammary gland by cyclic AMP-dependent protein kinase. *FEBS Journal*, **1980**, 110, 167-77		104
167	Regulation of AMP-activated protein kinase by natural and synthetic activators. *Acta Pharmaceutica Sinica B*, **2016**, 6, 1-19	15.5	103
166	AMPK: a cellular energy sensor primarily regulated by AMP. *Biochemical Society Transactions*, **2014**, 42, 71-5	5.1	100
165	AMP-activated protein kinase: an ultrasensitive system for monitoring cellular energy charge. *Biochemical Journal*, **1999**, 338, 717	3.8	100
164	Energy sensing by the AMP-activated protein kinase and its effects on muscle metabolism. *Proceedings of the Nutrition Society*, **2011**, 70, 92-9	2.9	99
163	Calmodulin-dependent protein kinase kinase-beta activates AMPK without forming a stable complex: synergistic effects of Ca2+ and AMP. *Biochemical Journal*, **2010**, 426, 109-18	3.8	99

162	Effects of endurance training on activity and expression of AMP-activated protein kinase isoforms in rat muscles. *American Journal of Physiology - Endocrinology and Metabolism*, **2002**, 283, E178-86	6	99
161	Evidence for a protein kinase cascade in higher plants. 3-Hydroxy-3-methylglutaryl-CoA reductase kinase. *FEBS Journal*, **1992**, 209, 923-31		96
160	A potential role for AMP-activated protein kinase in meiotic induction in mouse oocytes. *Developmental Biology*, **2002**, 245, 200-12	3.1	95
159	Phosphorylation of the voltage-gated potassium channel Kv2.1 by AMP-activated protein kinase regulates membrane excitability. *Proceedings of the National Academy of Sciences of the United States of America*, **2011**, 108, 18132-7	11.5	90
158	Keeping the home fires burning: AMP-activated protein kinase. *Journal of the Royal Society Interface*, **2018**, 15,	4.1	89
157	Mechanism of action of compound-13: an α1-selective small molecule activator of AMPK. *Chemistry and Biology*, **2014**, 21, 866-79		87
156	Neither LKB1 nor AMPK are the direct targets of metformin. *Gastroenterology*, **2006**, 131, 973; author reply 974-5	13.3	87
155	5-aminoimidazole-4-carboxamide 1-beta-D-ribofuranoside acutely stimulates skeletal muscle 2-deoxyglucose uptake in healthy men. *Diabetes*, **2007**, 56, 2078-84	0.9	86
154	AMP-activated protein kinase: a master switch in glucose and lipid metabolism. *Reviews in Endocrine and Metabolic Disorders*, **2004**, 5, 119-25	10.5	86
153	Glucagon inhibits fatty acid synthesis in isolated hepatocytes via phosphorylation of acetyl-CoA carboxylase by cyclic-AMP-dependent protein kinase. *FEBS Journal*, **1984**, 140, 325-33		86
152	Effect of fiber type and nutritional state on AICAR- and contraction-stimulated glucose transport in rat muscle. *American Journal of Physiology - Endocrinology and Metabolism*, **2002**, 282, E1291-300	6	85
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150	Normal hypertrophy accompanied by phosphoryation and activation of AMP-activated protein kinase alpha1 following overload in LKB1 knockout mice. *Journal of Physiology*, **2008**, 586, 1731-41	3.9	80
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148	AMP-activated protein kinase mediates VEGF-stimulated endothelial NO production. *Biochemical and Biophysical Research Communications*, **2007**, 354, 1084-8	3.4	76
147	A homologue of AMP-activated protein kinase in Drosophila melanogaster is sensitive to AMP and is activated by ATP depletion. *Biochemical Journal*, **2002**, 367, 179-86	3.8	76
146	Analysis of the role of the AMP-activated protein kinase in the response to cellular stress. *Methods in Molecular Biology*, **2000**, 99, 63-74	1.4	75
145	Defining the contribution of AMP-activated protein kinase (AMPK) and protein kinase C (PKC) in regulation of glucose uptake by metformin in skeletal muscle cells. *Journal of Biological Chemistry*, **2012**, 287, 20088-99	5.4	74

144	Sex differences in hormone-sensitive lipase expression, activity, and phosphorylation in skeletal muscle at rest and during exercise. *American Journal of Physiology - Endocrinology and Metabolism*, **2006**, 291, E1106-14	6	74
143	Regulation of hormone-sensitive lipase activity and Ser563 and Ser565 phosphorylation in human skeletal muscle during exercise. *Journal of Physiology*, **2004**, 560, 551-62	3.9	74
142	AMP-activated protein kinase: the guardian of cardiac energy status. *Journal of Clinical Investigation* , **2004**, 114, 465-468	15.9	71
141	Purification and physicochemical properties of ATP citrate (pro-3S) lyase from lactating rat mammary gland and studies of its reversible phosphorylation. *FEBS Journal*, **1981**, 114, 399-405		69
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139	AMPK activity and isoform protein expression are similar in muscle of obese subjects with and without type 2 diabetes. *American Journal of Physiology - Endocrinology and Metabolism*, **2004**, 286, E239-44	6	68
138	A novel short splice variant of the tumour suppressor LKB1 is required for spermiogenesis. *Biochemical Journal*, **2008**, 416, 1-14	3.8	66
137	Biochemical characterization of the tobacco 42-kD protein kinase activated by osmotic stress. *Plant Physiology*, **2004**, 136, 3255-65	6.6	66
136	Activation of rat liver AMP-activated protein kinase by kinase kinase in a purified, reconstituted system. Effects of AMP and AMP analogues. *FEBS Journal*, **1994**, 219, 751-7		66
135	The regulation of fatty acid biosynthesis: simple procedure for the purification of acetyl CoA carboxylase from lactating rabbit mammary gland, and its phosphorylation by endogenous cyclic AMP-dependent and -independent protein kinase activities. *FEBS Letters*, **1978**, 91, 1-7	3.8	65
134	Inhibition of adipose tissue lipolysis increases intramuscular lipid and glycogen use in vivo in humans. *American Journal of Physiology - Endocrinology and Metabolism*, **2005**, 289, E482-93	6	60
133	Counter-modulation of fatty acid-induced pro-inflammatory nuclear factor B signalling in rat skeletal muscle cells by AMP-activated protein kinase. *Biochemical Journal*, **2011**, 435, 463-74	3.8	59
132	AMPK: mediating the metabolic effects of salicylate-based drugs?. *Trends in Endocrinology and Metabolism*, **2013**, 24, 481-7	8.8	58
131	Analysis of sites phosphorylated on acetyl-CoA carboxylase in response to insulin in isolated adipocytes. Comparison with sites phosphorylated by casein kinase-2 and the calmodulin-dependent multiprotein kinase. *FEBS Journal*, **1988**, 175, 347-54		58
130	AMP-activated protein kinase - not just an energy sensor. *F1000Research*, **2017**, 6, 1724	3.6	57
129	The strange case of AMPK and cancer: Dr Jekyll or Mr Hyde?. *Open Biology*, **2019**, 9, 190099	7	56
128	Possible involvement of AMP-activated protein kinase in obesity resistance induced by respiratory uncoupling in white fat. *FEBS Letters*, **2004**, 569, 245-8	3.8	56
127	Phenformin and 5-aminoimidazole-4-carboxamide-1-beta-D-ribofuranoside (AICAR) activation of AMP-activated protein kinase inhibits transepithelial Na+ transport across H441 lung cells. *Journal of Physiology*, **2005**, 566, 781-92	3.9	56

126	PD98059 and U0126 activate AMP-activated protein kinase by increasing the cellular AMP:ATP ratio and not via inhibition of the MAP kinase pathway. *FEBS Letters*, **2005**, 579, 236-40	3.8	55
125	Hierarchical activation of compartmentalized pools of AMPK depends on severity of nutrient or energy stress. *Cell Research*, **2019**, 29, 460-473	24.7	54
124	The LKB1-AMPK pathway-friend or foe in cancer?. *Cancer Cell*, **2013**, 23, 131-2	24.3	53
123	Methotrexate promotes glucose uptake and lipid oxidation in skeletal muscle via AMPK activation. *Diabetes*, **2015**, 64, 360-9	0.9	52
122	C-terminal phosphorylation of LKB1 is not required for regulation of AMP-activated protein kinase, BRSK1, BRSK2, or cell cycle arrest. *Journal of Biological Chemistry*, **2009**, 284, 77-84	5.4	51
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120	Purification and physicochemical properties of fatty acid synthetase and acetyl-CoA carboxylase from lactating rabbit mammary gland. *FEBS Journal*, **1978**, 92, 25-34		50
119	Hypoxic pulmonary vasoconstriction: mechanisms of oxygen-sensing. *Current Opinion in Anaesthesiology*, **2011**, 24, 13-20	2.9	49
118	AMP-activated protein kinase--an archetypal protein kinase cascade?. *BioEssays*, **1992**, 14, 699-704	4.1	48
117	Fatal infantile cardiac glycogenosis with phosphorylase kinase deficiency and a mutation in the gamma2-subunit of AMP-activated protein kinase. *Pediatric Research*, **2007**, 62, 499-504	3.2	47
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